Chapter III :

STRUCTURE OF IMPORTS

INTRODUCTION :

Foreign trade occupies a place of strategic importance in the Indian economy. It indicates through imports what types of goods a country lacks and how much of them it needs or is able to buy.

To start on the path of progress, underdeveloped countries need large imports of capital goods, intermediate goods and even consumer goods for subsistence. Until 1947 India had a pattern of trade which was substantially that of a colonial and agricultural country. However, with the impressive industrial development since independence, India's foreign trade has undergone a complete metamorphosis and is no longer confined to a few countries trading in a few commodities. With the dawn of independence, India has been importing all these commodities i.e. consumer goods, capital goods and intermediate goods for setting up of economic infrastructure, heavy industries and import substitution.

It becomes, therefore necessary to examine, the extent

to which magnitude of imports as well as the structure of imports have undergone a change.

Magnitude of Imports :-

With regard to the magnitude of imports, the use of current price figure or the constant price figure is not a matter of indifference. In fact, if the imports of different commodity groups at one point of time are compared with those of another, the use of current price figure is bound to conceal the true story because the current price figure would include the effects of inter commodity variations in the price movements over the period of time.

It is interesting in the light of this discussion to compare the magnitude of imports at current prices (i.e. in money terms) with that at constant prices (i.e. real terms). The total imports of India turn out to be Rs.1025.01 crores in 1950-51 while the same turn out to be Rs.5015 crores of rupees in 1976-77 at current prices. It should be noted here that the total imports have increased at current prices from Rs.1025.1 crores in 1950-51 to Rs.2218.4 crores in 1965-66. The year 1965-66 seems to be a turning year and imports starts falling. But again 1972-73 proves the turning year and imports have increased from Rs.1867.4 crores in 1972-73 to Rs.5015 crores in 1976-77. However, removal of the effect of price changes

bring about an entirely reverse picture regarding the magnitude of imports. Total imports amounted to 3295.87 crores of rupees during 1950-51 at (1970-71 price level) constant prices, whereas during 1976-77 imports amounted to 1940.3 crores of rupees (at 1970-71 price level) at constant prices. The consideration of imports in real terms, shows a clear cut decline of imports over a period of 27 years by 55.88% or at an average annual rate of 2.07%.

However, it must be mentioned that trends in total imports of a country resulted from the trends in the imports of different commodities in a country. Total imports comprise mainly of four divisions i.e. (1) consumer goods, (2) Intermediate goods and raw materials for producing consumer goods. (3) Intermediate goods and raw materials for producing capital goods and (4) capital goods.

It becomes evident from the table 3.1 and 3.2 that the imports of consumer goods show an increase by 975.5 crores over a period of 27 years or by 363.31% in money terms while in the real terms it has increased by ₨111.64 crores i.e. by 26.7 % over the period under consideration. Similarly, imports of intermediate goods and capital goods have increased by ₨. 2243.08 crores (409.01%) and ₨771.45 crores (370.8%) respectively in money terms. If this is considered in real terms, the

direction of intermediate goods is the same as that in money terms. It has increased by Rs.435.11 crores (66.98%) in real terms during the 27 years, while magnitude of capital goods shows divergence in real terms than in money terms. It has declined by Rs.1901.11 crores (85.44%) over the period under consideration.

The further discussion of the magnitude of other individual items belonging to the different groups of commodity imports both in real terms as well as in money terms seems unnecessary since the Tables 3.1 and 3.2 are self-explanatory.

From the above discussion, it may be concluded that the consideration of imports in real terms shows a declining trend against the increasing trend in money terms.

Structural Changes: Meaning and Methods of Measurement :

The structure of imports can be looked upon from the following two aspects :

(i) Macro (aggregated) and (ii) Micro (disaggregated).[1]

Macro aspects of structural charges :

In the macro analysis, the prominent features of imports and changes in them should be studied with the following parameters :

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1 V.R. Panchmukhi proposes to distinguish the macro and micro aspects of trade structure and in its changes, vide Panchmukhi, V.R.: Trade policies of India, a Quantitative Analysis, p.20. Concept Publishing Company, Delhi, 1978.

Table 3.1

Indian Imports : Current Prices

Post-devaluation (Crores of rupees)

Sr. No.	Commodities	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	I. Consumer Goods	268.5	493.1	352.0	220.2	256.1	213.3	184.3	253.9	374.7	352.8	417.5	313.0	386.2	451.9	624.5
	1. Food Articles	208.06	403.0	286.0	153.1	169.2	83.3	65.0	147.7	296.7	284.5	336.8	231.7	282.5	337.7	524.0
	(a) Cereals	163.8	352.8	249.1	106.0	121.4	27.9	12.4	94.3	250.6	235.2	285.3	182.2	227.1	282.9	444.3
	(b) Dairy Products	12.45	9.7	6.1	10.0	10.6	11.8	11.3	15.0	9.6	12.0	9.8	15.1	13.9	14.8	16.2
	(c) Fruits, nuts and vegetables	23.94	31.0	27.2	26.5	26.0	29.9	30.7	31.5	27.6	27.8	32.1	23.0	28.4	29.6	40.3
	(d) Spices	3.3	6.1	1.1	4.1	3.3	3.2	4.3	4.1	5.0	3.8	2.8	2.7	2.8	1.1	0.6
	(e) Other Food Items	9.77	3.8	2.4	6.5	7.9	11.0	6.3	2.8	3.9	5.8	6.8	8.7	10.4	9.3	22.6
	2. Non-food consumer Articles	60.48	90.1	66.0	67.1	86.9	129.5	119.2	106.2	78.0	68.3	80.8	81.3	103.6	114.2	97.5
	(a) Beverages & Tobacco manufactured	2.2	2.8	2.8	2.7	2.7	2.5	2.5	1.1	0.8	0.8	0.8	0.8	0.5	0.5	0.6
	(b) Medical & Pharmaceutical products	17.01	26.1	19.4	20.9	22.4	25.0	26.0	27.1	14.6	15.3	16.5	17.8	14.6	13.5	12.9
	(c) Paper & Paper board	15.9	22.7	18.6	18.3	20.0	24.1	21.9	19.1	12.6	17.6	19.1	24.6	21.4	19.8	20.0
	i) News print	8.5	9.0	7.9	8.3	9.9	10.5	8.5	8.8	8.2	10.4	9.5	15.3	12.0	11.0	11.7
	(d) Scientific medical Optical measuring and photographic instruments.	5.8	6.6	4.1	4.9	5.7	8.2	10.1	9.3	10.1	7.7	9.1	12.9	12.8	12.8	16.1
	(e) Textile Fabrics	3.0	5.8	3.9	3.3	3.6	7.4	6.8	4.7	2.5	4.1	2.0	1.6	0.2	0.2	0.03
	i) Cotton fabrics	2.04	3.8	2.0	1.6	1.1	3.0	3.6	3.0	1.7	1.9	1.1	0.6	0.2	0.2	0.03
	ii) Silken fabrics	0.63	1.3	0.5	0.8	1.4	3.0	1.9	0.5	0.8	1.7	0.6	0.6	-	-	-
	iii) Woollen Fabrics	0.33	0.7	1.4	0.9	1.1	1.4	1.3	1.2	-	0.5	0.3	0.3	-	-	-
	(f) Others	16.53	26.0	17.2	17.0	32.6	62.2	52.0	44.9	37.3	22.7	33.2	23.6	54.2	50.4	38.4
	II. Raw Materials and Intermediates Goods for Producing Consumer Goods	353.12	549.5	258.3	253.4	291.8	284.8	287.4	280.7	214.0	285.7	336.7	324.0	333.4	316.3	312.1
	1. Asbestos Raw	1.73	1.9	1.7	0.8	1.6	2.5	3.5	3.8	3.5	4.6	4.2	3.9	3.6	6.5	6.3
	2. Chemicals	15.44	31.5	20.0	20.0	28.2	33.5	41.3	43.5	48.7	69.8	62.1	56.1	60.0	50.5	53.6
	(a) Acetic acid	0.32	0.5	0.3	0.3	0.5	0.03	0.6	1.4	0.9	0.8	2.2	0.5	0.5	0.1	0.9
	(b) Bleaching Powder	0.32	0.6	0.3	0.3	0.5	0.5	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.1	0.3
	(c) Calcium carbide	0.32	1.1	0.6	0.6	0.8	0.6	0.6	0.8	0.6	0.6	0.3	0.2	-	-	-
	(d) D.D.T.	-	-	-	-	-	-	-	2.0	6.0	7.1	14.6	5.2	6.6	3.6	2.0
	(e) Caustic soda	1.58	4.2	2.4	4.6	4.7	5.5	8.8	5.4	7.9	14.0	3.2	2.7	9.0	4.6	5.2
	(f) Soda ash	1.58	4.4	3.9	1.9	4.6	2.7	3.3	3.0	1.6	4.2	2.8	1.1	1.1	0.6	0.9
	(g) Sodium hydrosulphite	1.41	1.6	0.8	0.6	1.3	2.0	1.9	1.4	2.7	4.9	3.2	2.7	0.9	1.4	0.9

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Table 3.1 (contd.)

Sr. No.	Commodities	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	(h) Others.	9.92	17.3	11.7	11.7	15.9	21.3	25.7	29.3	28.5	38.0	35.6	43.5	41.6	40.1	43.4
3.	Copra & coconut kernel	1.89	2.5	3.2	5.7	11.0	12.4	14.8	19.1	16.7	17 2	18.3	14.6	15.8	13.9	10.1
4.	Dying, tanning and colouring materials	23.0	30.4	16.4	29.8	30.4	27.7	25.4	20.0	14.8	15.8	20.3	22.8	19.2	13.0	14.5
5.	Fertilizers	10.37	9.9	3.2	5.4	2.8	3.5	7.4	11.5	17.3	29.5	19.1	23.5	46.8	59.2	46.1
6.	Gums, Resins & Lac	2.36	2.2	1.4	1.4	1.6	2.4	2.2	2.5	3.2	2.8	3.0	1.7	1.4	0.9	1.7
7.	Hides & skin undressed	3.94	2.2	1.3	1.7	2.0	3.2	2.4	1.7	2.2	1.4	3.9	3.5	4.4	5.4	4.9
8.	Textile fabrics, yarn and thread	244.28	394.4	177.2	151.0	158.1	168.7	154.4	122.2	84.3	104.3	176.1	152.1	140.2	125.7	123.1
	(a) Artificial silk yarn	23.15	27.2	7.9	18.9	20.0	24.3	28.0	17.5	16.2	16.1	17.5	22.7	22.8	19.1	4.4
	(b) Cotton raw	158.76	220.2	120.8	83.2	92.0	90.2	81.1	64.1	44.6	65.0	128.7	97.8	80.6	77.2	91.4
	(c) Cotton twist, yarn and thread	1.3	5.8	5.5	3.5	2.5	4.4	4.7	4.7	2.5	1.1	0.8	0.5	0.3	0.2	-
	(d) Jute raw	43.31	105.7	26.0	22.5	20.5	30.4	13.7	10.7	4.3	5.4	12.0	9.9	6.8	3.2	11.5
	(e) Silk raw	3.78	2.5	1.1	0.9	1.7	0.8	0.6	0.9	0.3	0.9	0.3	0.9	1.3	1.3	0.5
	(f) Staple fibre, yarn and thread	3.47	11.8	2.2	6.6	6.3	3.0	7.6	2.0	-	0.2	0.3	-	-	-	-
	(g) Wool & Wool tops	8.82	12.4	7.4	13.4	12.9	14.0	16.7	20.5	15.9	15.3	16.4	19.2	19.2	24.7	15.3
	(h) Woollen Yarn and knitting wool.	1.73	2.7	1.7	2.0	2.2	1.6	1.9	1.7	0.5	0.3	0.2	0.2	-	-	-
9.	Tobacco unmanufactured	4.1	3.0	2.7	0.9	1.6	2.0	1.7	1.9	2.7	1.1	0.3	1.7	2.2	1.3	0.6
10.	Vegetable oil-non-essential	5.20	9.8	5.8	10.4	9.3	10.4	8.2	7.7	5.2	6.5	5.8	8.5	6.3	6.6	7.6
	(a) Coconut oil	5.04	9.3	4.9	6.1	5.7	4.7	4.6	3.8	1.7	1.1	0.2	0.3	0.9	0.03	0.04
11.	Others	31.82	61.7	25.5	26.3	45.2	18.4	26.3	46.8	15.6	33.1	23.6	35.3	33.5	33.3	49.6
III.	Raw Materials and Intermediate Goods for Producing Capital Goods	195.3	223.3	223.2	225.2	274.1	264.6	466.0	607.3	372.6	434.1	487.3	501.2	452.3	472.2	436.0
1.	Metal & Metal manufactures	83.79	81.7	75.8	67.9	99.2	157.2	293.9	322.9	225.1	232.2	303.2	274.1	260.0	258.1	283.4
(a)	Iron & Steel	39.21	48.6	38.9	45.0	58.0	116.9	230.4	243.8	170.1	171.0	229.0	196.1	173.3	171.5	192.2
(b)	Non-ferrous metal	44.57	33.1	30.6	22.8	41.3	40.3	63.5	80.6	55.0	61.0	74.2	78.0	86.8	86.6	91.2
	i) Aluminium	4.58	5.0	3.8	2.8	5.7	7.6	9.3	13.2	8.5	9.8	12.1	12.4	16.5	11.3	10.2
	ii) Copper	13.39	3.2	12.0	4.3	13.9	13.7	25.4	26.0	20.2	27.9	34.5	37.0	39.8	41.6	38.4
	iii) Tin	6.46	7.7	3.9	4.6	6.0	5.7	7.4	6.6	7.1	8.3	6.1	9.1	8.9	12.4	12.4
	iv) Zinc	10.4	11.7	7.1	5.7	8.3	6.6	9.0	12.6	8.7	9.1	14.5	11.5	14.2	17.6	17.6
	v) Others	9.77	5.5	3.8	5.5	7.4	6.8	12.8	22.2	10.6	6.0	7.1	7.9	8.2	3.7	12.8

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Table 3.1 (contd.)

Sr. No.	Commodities	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2.	Petroleum and Petroleum products	88.52	111.7	123.0	133.1	129.6	86.5	119.4	171.8	112.6	136.7	128.5	150.7	138.1	164.4	107.9
(a)	Petroleum crude & Partly refined	-	-	-	-	-	14.2	38.3	53.5	18.4	27.7	50.9	66.8	47.5	72.8	42.8
(b)	Petroleum products	88.52	111.7	123.0	133.1	129.8	72.3	81.1	118.3	94.2	109.0	68.2	83.9	90.6	91.7	65.0
i)	Motor spirit	28.19	38.4	39.7	48.6	39.4	14.3	7.9	9.9	4.7	5.5	5.7	6.6	6.5	4.4	3.3
ii)	Kerosene	27.88	30.2	36.1	43.3	41.3	30.7	34.7	39.4	32.1	37.2	35.9	43.9	50.9	40.0	25.0
iii)	Diesel Oil	10.87	14.2	14.8	17.2	20.3	8.5	18.6	42.2	41.3	39.7	8.5	11.0	10.4	12.6	13.4
iv)	Lubricating oil	11.03	17.3	20.6	9.5	13.1	12.8	14.5	21.3	11.2	22.5	24.1	20.5	18.3	29.3	21.6
v)	Others	10.55	11.5	11.8	14.5	12.1	6.0	5.5	10.2	4.9	4.0	3.5	1.9	4.6	5.4	1.7
3.	Rubber: Raw & Manufactured	5.36	4.9	2.4	0.9	2.5	3.9	10.1	9.9	7.7	13.9	22.2	21.4	18.9	18.6	10.7
(a)	Natural, Reclaimed & synthetic	4.73	3.9	1.5	0.2	1.6	3.0	5.0	5.2	5.8	11.6	17.0	15.9	16.1	15.4	8.5
(b)	Manufactured	0.63	1.0	0.9	0.8	0.9	0.9	5.0	4.7	1.9	2.3	5.2	5.5	2.8	3.2	2.2
4.	Others	17.64	25.0	22.1	23.3	42.5	17.0	42.9	102.7	27.2	51.3	33.4	5.5	35.4	31.9	34.0
IV.	Capital Goods	208.05	263.0	218.1	194.2	212.0	306.8	399.3	489.0	391.1	440.0	524.4	578.6	610.2	688.3	752.4
1.	Machinery	143.96	187.9	160.5	153.4	148.6	206.8	281.8	379.1	286.3	327.6	410.4	477.1	496.6	576.3	636.6
(a)	Electrical	37.49	51.3	54.2	52.1	44.9	59.1	77.6	99.4	75.1	83.8	90.1	103.8	102.1	133.6	143.6
(b)	Machinery other than electrical	106.63	136.6	106.3	101.3	101.7	147.7	204.1	279.6	211.2	243.8	320.4	373.3	394.5	442.7	493.0
2.	Transport Equipment	64.1	75.1	57.6	40.8	65.4	100.0	117.5	109.9	105.7	112.5	114.0	101.7	113.5	112.0	115.8
(a)	Railway locomotives & wagons	24.57	19.2	15.3	7.6	13.7	20.5	30.2	44.1	47.1	37.3	40.0	24.4	42.7	42.8	34.8
(b)	Road motor Vehicles	27.88	40.3	24.7	22.2	34.5	54.3	70.6	52.4	36.4	48.2	54.3	52.0	42.7	44.6	52.1
(c)	Bicycles	3.78	6.8	5.5	3.0	4.1	5.4	6.5	3.6	1.4	1.3	2.7	1.9	0.6	0.6	0.8
(d)	Air crafts	4.10	4.6	7.6	5.2	6.0	15.6	5.8	8.0	9.9	23.2	15.9	20.4	24.7	18.1	13.4
(e)	Others	3.78	4.3	4.6	3.0	7.0	4.3	4.4	0.9	10.9	2.5	1.9	3.0	2..	5.8	5.4
TOTAL IMPORTS		1025.01	1529.00	1051.6	893.0	1034.0	1069.4	1337.0	1630.9	1353.4	1513.4	1766.5	1716.9	1782.1	1925.9	2124.7

Note: With effect from 6th June 1966, Govt. of India has devalued the rupee by 36.5% by reducing its par value from 0.186621 gramme of gold to 0.118489 gramme of gold. As a result import value was increased by 57.5%. In order to make comparable import value before and after June 1966, we have increased the value of imports by 57.5% for the years 1950-51 to May 1966.

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Table 3.1 (contd.)

Sr. No.	Commodities	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	18	19	20	21	22	23	24	25	26	27	28	29
I.	Consumer Goods	676.5	824.7	731.5	567.0	470.7	392.2	322.5	281.4	665.5	1036.82	1602.7	1244.2
1.	Food Articles	507.6	705.3	579.2	403.0	320.7	271.8	196.9	159.7	547.1	855.2	1428.9	963.7
a)	Cereals	443.4	651.0	518.0	336.6	261.0	213.0	131.2	80.8	473.2	763.8	1342.8	878.6
b)	Dairy products	10.7	22.5	14.2	15.0	12.0	10.6	20.8	21.3	18.7	24.8	27.3	39.2
c)	Fruits, nuts & vegetables	29.6	30.2	39.3	46.4	43.6	43.1	37.8	53.3	48.4	60.9	53.4	40.4
d)	Spices	0.6	0.3	1.0	0.6	0.7	0.5	0.9	0.8	0.9	0.9	1.1	1.2
e)	Other food articles	23.9	1.1	6.7	4.4	3.4	4.6	6.2	2.7	5.9	4.8	4.3	4.3
2.	Non-food consumer articles	118.9	119.4	152.3	164.8	150.0	120.4	125.6	111.9	121.1	171.04	173.8	280.5
a)	Beverages and Tobacco manufactured	0.3	0.03	0.04	0.7	0.5	0.3	0.2	0.2	0.3	0.9	0.9	0.5
b)	Medical & Pharmaceutical products	13.7	17.4	17.5	18.0	18.0	24.3	27.0	23.2	26.0	34.2	36.2	42.1
c)	Paper & Paper board	21.3	21.2	17.7	18.0	24.0	25.1	25.0	31.3	29.0	59.5	56.2	61.1
	i) News print	9.8	12.4	9.0	13.0	19.0	16.0	28.0	21.0	19.0	45.0	38.3	
d)	Scientific, medical, optical, measuring & photographic instruments	11.8	9.5	12.3	9.9	8.6	13.7	12.7	15.4	16.6	20.8	23.0	25.0
e)	Textile fabrics	0.04	0.01	0.03	6.0	0.01	0.021	0.04	0.07	9.4	0.04	0.1	0.02
	i) Cotton fabrics	-	-	0.02	-	-	0.001	-	-	1.2	-	0.1	-
	ii) Silken fabrics	-	-	0.01	3.8	0.01	-	0.03	0.01	6.1	0.03	0.04	0.01
	iii) Woollen fabrics	0.01	0.01	-	2.2	-	0.02	0.01	0.007	2.1	0.01	Negli.	0.01
f)	Others	65.8	70.0	104.4	112.2	98.0	57.0	50.7	51.6	37.0	65.64	57.4	151.8
II.	Raw Materials and Intermediate Goods for Producing Consumer Goods	309.3	361.8	419.7	449.6	368.5	381.9	432.8	432.1	627.3	875.69	936.57	844.6
1.	Asbestos raw	4.6	4.9	5.4	4.2	6.4	7.5	7.8	10.2	9.3	11.9	12.2	17.7
2.	Chemicals	56.4	54.1	77.4	82.7	67.4	91.4	91.4	91.4	109.7	186.2	180.2	137.2
a)	Acetic acid	-	-	0.01	.003	.009	0.03	0.01	0.02	.006	0.02	0.02	.007
b)	Bleaching Powder	0.1	.01	.08	.2	.006	.005	.001	-	-	-	-	-
c)	Calcium carbide	0.3	-	-	-	-	.001	0.7	0.4	0.2	1.19	-	0.02
d)	D.D.T.	2.2	0.5	1.2	2.4	0.1	0.3	1.9	0.9	1.8	1.92	2.3	1.9
e)	Caustic soda	6.3	1.0	6.1	0.1	.002	-	65.6	0.1	0.5	0.2	Negli.	0.08
f)	Soda ash	1.1	.01	.06	-	-	.02	.04	1.1	0.1	0.3	-	-
g)	Sodium hydrosulphite	1.3	1.1	1.0	0.2	0.8	1.3	0.8	0.4	.07	.006	-	-
h)	Others	45.1	51.5	75.0	79.8	66.4	89.8	22.0	88.5	107.0	-	177.88	135.2

...contd.

Table 3.1 (contd.)

Sr. No.	Commodities	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	18	19	20	21	22	23	1	25	26	27	28	29
3.	Copra & cocoanut kernels	9.9	4.2	4.4	2.6	2.8	1.6	1.7	0.7	0.01	-	-	-
4	Dying, tanning & colouring materials	10.4	8.9	7.8	8.9	7.1	9.2	8.4	9.1	10.4	11.4	11.6	15.1
5.	Fertilizers	62.4	103.0	144.0	150.0	75.8	73.5	31.7	107.5	211.1	486.2	498.3	222.7
6.	Gums, resins & lac	1.9	1.6	1.4	1.5	1.4	1.6	1.5	1.1	2.6	2.0	2.1	2.4
7.	Hides & skin undressed	3.8	1.8	1.3	1.7	1.7	1.5	1.3	1.0	0.8	0.8	0.5	0.5
8.	Textile Fabrics, Yarn and thread	82.9	89.3	97.1	125.9	132.2	115.6	128.0	104.4	101.5	71.51	69.23	194.8
(a)	Artificial silk yarn	0.2	-	-	-	-	-	-	-	-	9.9	9.5	-
(b)	Cotton raw	72.8	56.4	83.5	90.2	82.8	98.8	113.4	90.9	52.1	27.4	28.2	129.5
(c)	Cotton twist, yarn and thread	-	0.01	0.08	14.3	32.4	-	-	-	16.0	0.04	0.03	-
(d)	Jute raw	14.5	20.6	1.8	9.3	1.0	0.1	-	1.1	12.2	3.8	3.3	6.8
(e)	Silk raw	0.5	0.5	-	0.9	0.8	0.7	0.4	0.5	0.09	0.67	1.7	1.04
(f)	Staple fibre yarn and thread	-	-	-	-	-	-	-	-	-	2.2	5.5	29.5
(g)	Wool & wool taps	8.2	11.8	11.8	11.2	17.2	16.0	14.2	11.9	21.0	27.5	21.0	28.0
(h)	Woollen Yarn and knitting wool.	-	-	.005	0.01	-	-	-	-	0.08	-	-	-
9.	Tobacco unmanufactured	0.03	0.2	1.3	0.4	0.5	.009	.02	.08	.02	.02	.04	.1
10.	Vegetable oil - non-essential	7.4	9.9	15.6	9.6	17.2	23.0	28.1	15.5	56.9	12.3	15.5	18.2
(a)	Coconut oil	-	-	-	-	-	4.7	-	-	-	-	-	0.1
11.	Others	44.3	84.4	64.0	61.6	56.0	57.0	72.9	90.7	114.1	92.64	146.9	235.9
III.	Raw materials and Intermediate goods for Producing Capital Goods	451.6	315.4	353.3	325.5	347.9	465.1	599.2	621.9	1010.9	1910.58	1791.1	1947.1
1.	Metal and metal manufactures	290.4	200.9	209.1	188.6	162.9	275.8	350.8	353.7	410.9	630.0	445.4	277.1
(a)	Iron & Steel	182.7	115.2	120.2	99.7	88.4	156.2	249.0	244.6	271.3	451.3	345.0	248.4
(b)	Non-ferrous metal	107.7	85.7	88.9	88.9	74.5	119.6	101.8	109.1	139.6	178.7	100.4	159.8
i)	Aluminium	8.3	15.2	17.7	4.5	1.5	3.4	9.3	2.8	2.8	3.0	9.9	2.3
ii)	Copper	43.9	39.1	35.5	39.2	47.3	60.2	51.2	51.9	70.4	73.0	21.8	46.2
iii)	Tin	8.7	6.9	9.5	11.5	6.3	8.8	4.8	7.8	12.5	9.6	14.2	20.4
iv)	Zinc	15.8	10.9	14.3	19.9	8.2	21.9	17.7	22.9	27.7	55.4	21.3	35.6
v)	Others	12.1	13.6	11.9	13.8	11.2	25.3	18.8	23.7	26.2	-	-	-

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Table 3.1 (contd.)

Sr. No.	Commodities	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	18	19	20	21	22	23	24	25	26	27	28	29
2.	Petroleum and Petroleum products.	107.6	63.1	74.8	83.7	137.5	135.0	194.1	204.0	560.2	1156.9	1225.7	1412.1
(a)	Petroleum crude & partly refined.	55.0	36.1	59.7	54.3	96.3	105.9	147.4	144.8	417.1	954.9	1051.8	1151.6
(b)	Petroleum Products	52.6	27.0	15.1	29.4	41.2	30.0	46.7	59.2	143.1	202.0	173.9	260
i)	Motor spirit	-	-	-	-	21.2	1.2	3.4	3.4	9.6	-	7.9	-
ii)	Kerosene	-	-	-	-	-	7.4	31.5	29.2	77.8	-	112.7	-
iii)	Diesel Oil	-	-	-	-	-	-	-			-	-	-
iv)	Lubricating oil	-	-	-	-	-	7.9				-	-	-
v)	Others	-	-	-	-	-	-				-		-
3.	Rubber 'Raw & manufactured	7.1	13.0	6.2	7.3	13.1	6.3	6.6	7.3	9.5	13.9	14.2	14.9
(a)	Natural, reclaimed and synthetic	5.7	11.7	4.4	4.9	9.6	3.8	3.6	3.7	3.8	7.0	7.0	8.4
(b)	Manufactured	1.4	1.3	1.8	2.9	3.5	2.5	3.0	3.6	5.7	6.3	7.2	6.5
4.	Others	52.5	39.5	63.0	44.9	34.4	47.0	47.7	56.9	30.3	109.66	105.8	111.9
IV.	Capital Goods	775.0	576.1	503.1	516.0	395.0	395.0	470.0	532.0	651.6	695.7	934.6	979.1
1.	Machinery	664.0	513.9	422.2	451.0	344.0	328.0	376.0	431.9	556.6	564.5	777.5	831.7
(a)	Electrical	138.3	105.9	85.6	81.0	64.0	70.0	105.0	134.0	130.0	161.0	200.8	173.0
(b)	Machinery other than electrical	525.7	408.0	336.6	370.0	280.0	258.0	271.0	297.9	426.6	403.5	576.7	653.7
2.	Transport Equipments	111.0	62.2	80.9	65.0	51.0	67.0	94.0	100.0	95.0	131.2	157.1	147.4
(a)	Railway locomotives and wagons	35.0	16.4	22.7	16.0	12.0	14.0	19.9	25.3	25.3	25.5	34.2	17.5
(b)	Road, motor vehicles	43.6	30.5	33.3	30.9	21.0	22.8	37.7	37.0	30.4	50.3	57.6	42.1
(c)	Bicycles	1.3	0.4	0.3	1.3	0.2	0.07	0.1	0.1	0.5	20.7	0.3	0.2
(d)	Air crafts	9.5	11.9	18.5	13.2	9.8	19.2	35.1	34.7	26.7	53.6	59.8	85.4
(e)	Others	6.3	3.1	6.2	4.3	7.2	1.9	2.0	3.0	5.4	1.6	5.2	2.3
TOTAL IMPORTS		2218.4	2078.6	2007.6	1858.9	1582.1	1634.2	1824.5	1867.4	2955.4	4518.8	5265.0	5015.0

Source: 1. Monthly Statistics of Foreign Trade of India, Vol.II: Imports, Directorate General of Commercial Intelligence and Statistics, Govt. of India.
2. Accounts Relating to Foreign Trade and Navigation of India, Department of Commercial Intelligence and Statistics, Govt. of India.
3. Accounts Relating to Foreign Trade of India, by Land With Foreign Countries, Department of Commercial Intelligence and Statistics, Govt. of India.

Table 3.2

Imports at Constant Price - 1970-71

(Crores of rupees)

Sr. No.	Commodities	1950-51	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
I.	CONSUMER GOODS	420.6	782 52	1899.09	874.42	1119.36	108.3	1242.95	457.23	392.2	306.23	225.59	516.36	484.32	647.37	531.70
1.	Food articles	215.18	466.79	322.53	458.09	740.99	570.4	363.06	293.57	271.8	168.47	86.89	323.18	374.02	551.25	329.91
	a) Cereals	162.28	5.86	275.51	442.39	716.30	541.5	326.48	261.1	213.0	131.91	62.33	293.94	346.26	519.75	308.54
	b) Dairy products	5.05	306.23	7.3	9.06	13.22	9.4	16.32	9.33	10.6	19.97	13.32	10.23	12.68	15.02	10.78
	c) Fruits, nuts and vegetables	14.26	46.83	10.53	0.78	10.32	11.99	16.12	18.85	43.1	9.73	5.37	9.17	9.59	10.8	7.39
	d) Spices	24.50	23.11	0.93	0.88	0.17	0.93	0.64	0.65	0.05	0.53	0.82	0.80	0.56	0.66	0.82
	e) Other Food Items	9.09	84.76	28.26	4.98	0.98	7.19	5.56	3.32	4.5	6.33	5.05	9.34	4.93	5.02	2.38
2.	Non-food consumer Articles.	204.88	315.73	1576.56	416.33	378.37	127.59	879.90	163.69	120.4	138.15	138.70	192.88	110.30	96.12	201.79
(	a) Beverages and Tobacco Mfgs.	6.10	8.67	0.94	0.68	0.36	0.45	0.68	0.54	0.3	0.24	0.18	0.22	0.57	0.46	0.32
	b) Medicinal & Pharmaceutical products	28.92	14.06	1489.09	18.26	31.88	7.25	14.40	19.87	24.3	36.61	43.43	28.70	32.55	16.52	32.82
	c) Paper & Paper board	45.90	62.53	15.56	28.39	22.71	17.56	20.84	25.61	23.1	32.73	29.01	22.53	22.43	8.13	22.44
	d) Scientific, medical, optical measuring & photographic instruments	0.214	0.32	1.56	203.04	130.72	115.29	36.23	16.99	13.70	14.30	18.92	27.56	17.55	10.16	12.98
	e) Textile Fabrics	1.18	5.61	0.54	0.05	0.14	0.06	0.01	0.01	0.02	0.03	0.01	0.01	0.02	0.03	0.02
	f) Others	122.57	224.54	68.97	137.92	192.56	357.00	807.74	100.64	57.00	54.24	47.14	113.86	37.17	60.81	133.20
II.	RAW MATERIAL AND INTERMEDIATE GOODS FOR PRODUCING CONSUMER GOODS	243.49	263.86	355.53	559.15	956.99	549.49	420.27	351.04	381.9	428.5	424.72	683.51	364.5	378.52	553.35
1.	Asbestos raw	2.28	2.40	33.01	5.34	6.00	5.44	4.22	6.95	7.5	8.12	9.87	8.42	9.25	7.51	8.97
2.	Chemicals	73.47	51.28	53.18	78.85	59.37	103.37	104.01	76.50	91.40	64.51	67.36	99.92	65.12	70.70	61.84
3.	Copra & coconut Kernel				8.91	5.26	4.55	2.71	3.24	1.60	1.90	1.05	0.01			0.93
4.	Dyeing, tanning & colouring materials	39.47	00.50	18.36	18.62	24.74	15.37	17.22	11.37	9.2	11.05	12.66	16.75	6.62	7.96	10.07
5.	Fertilizers	0.41	0.79	4.56	79.51	117.90	142.47	50.36	06.33	73.50	100.68	101.69	117.96	155.48	105.48	106.78
6.	Gums, resins and lac.	2.4	-	2.38	2.14	1.99	1.90	1.43	1.44	1.60	1.39	1.24	1.77	0.92	0.63	0.73
7.	Hides and skin undressed	1.01	2.08	4.30	3.57	1.65	0.13	1.73	1.70	1.50	1.22	0.97	0.45	0.33	0.34	0.17
8.	Textile Fibres, Yarn and thread	186.57	167.33	183.57	95.34	87.28	115.97	111.27	15.04	115.6	135.87	98.17	57.90	25.32	46.67	84.70
	a) Artificial silk yarn	26.70	42.75	-	1.93	0.09	0.04	0.15	0.03	-	0.38	0.09	0.03	0.04	0.45	1.07
	b) Cotton raw	152.69	84.00	168.52	77.09	65.82	101.40	92.70	8.48	98.8	113.10	80.08	40.67	9.78	25.82	51.46

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Table 3.2 (contd.)

Sr. No.	Commodities	1950-51	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	c) Cotton twist,yarn and thread	-	-	-	0.02	0.01	0.01	0.01	0.01	-	-	-	0.001	0.02	0.005	0.004
	d) Jute raw	0.13	35.10	13.21	6.80	10.09	1.24	5.84	0.68	0.10	-	1.01	7.86	3.18	2.99	6.23
	e) Silk raw	-	-	0.74	0.92	1.08	0-71	0.70	0.74	0.70	0.41	0.53	-	0.46	1.40	0.97
	f) Staple fibre & yarn	3.15	-	0.16	1.46	0.37	1.77	1.07	1.37	-	5.11	5.34	2.21	1.33	3.50	13.75
	g) Wool & Wool tops	3.9	5.48	1.94	7.12	9.52	10.80	10.80	3.73	16.0	16.87	11.12	7.13	10.51	12.50	11.24
	(h)															
9.	Tobacco Unmanufactured	0.393	0.24	0.03	0.02	0.02	0.09	0.07	0.04	0.01	0.01	0.02	0.02	0.01	0.02	0.02
10.	Vegetable oils - non-essential	27.16	45.79	10.02	15.38	11.24	15.10	12.73	21.01	23.00	29.96	14.77	130.09	7.67	16.41	61.26
11.	Others	96.89	160.78	45.12	251.47	602.45	142.10	114.52	117.42	57.00	73.79	116.92	250.22	93.17	122.79	325.56
III.	RAW MATERIALS AND INTERMEDIATE GOODS FOR PRODUCING CAPITAL GOODS	406.15	573.24	484.68	688.51	418.94	604.09	815.74	397.48	465.1	634.34	716.56	773.38	903.12	423.53	531.22
1.	Metals and Metal manufactures	302.13	305.05	351.98	488.34	252.44	312.87	280.59	206.99	275.80	456.02	454.58	443.06	492.38	296.33	263.03
	a) Iron & Steel	173.29	237.40	207.83	337.34	126.99	153.32	129.59	102.15	156.2	313.02	292.51	280.29	328.72	256.36	144.71
	b) Non-ferrous metals	128.84	67.65	144.15	151.00	125.45	157.55	159.00	104.84	119.6	143.00	162.07	162.77	163.66	39.97	118.32
	i) Aluminium	1.36	2.47	19.18	17.59	26.62	24.68	5.50	1.5	3.4	10.99	1.36	1.47	1.25	4.54	0.95
	ii) Copper	91.54	29.42	72.69	63.49	13.60	49.00	51.33	54.00	60.20	65.18	62.85	60.54	47.92	1.78	36.44
	iii) Tin	12.54	11.10	10.04	11.06	11.93	10.70	13.56	6.71	8.8	4.97	6.39	8.17	3.96	1.88	0.2
	iv) Zinc	12.28	7.64	17.60	13.95	8.2	16.16	21.87	9.05	21.9	1.69	18.63	15.35	16.02	7.61	12.56
	v) Others	11.53	17.03	88.31	38.91	35.10	57.01	66.74	33.58	25.30	441.08	72.84	77.24	94.51	24.16	68.17
2.	Petroleum & petroleum products	36.33	234.08	24.54	62.37	76.23	227.51	322.38	122.09	135.9	172.02	185.92	210.45	176.19	57.43	191.02
	a) Petroleum crude and partly refined	-	122.14	24.54	50.09	46.77	90.35	55.09	100.37	105.9	117.90	109.16	126.69	131.62	12.86	126.31
	b) Petroleum products	36.33	11.94	-	12.28	29.46	137.16	267.29	21.72	30.00	54.12	76.76	83.76	44.57	44.57	64.71
3.	Rubber,raw and manufactured	2.68	3.39	15.65	53.80	14.85	7.06	7.68	10.80	6.3	13.37	13.74	9.56	7.34	8.94	7.98
	a) Natural,Reclaimed & synthetic	2.68	3.38	15.62	8.12	13.26	4.86	5.22	9.61	3.8	7.51	3.66	3.56	4.30	3.70	4.50
	b) Manufactured	-	0.01	0.03	45.68	1.59	2.20	2.46	1.19	2.5	5.86	10.08	6.00	3.04	5.24	3.48
4.	Others	65.00	30.72	92.50	84.00	75.42	56.65	197.09	57.60	47.00	64.19	62.32	110.31	227.32	60.83	69.19

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Table 3.2 (contd.)

Sr. No.	Commodities	1950-51	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
IV.	CAPITAL GOODS	2229.1	2083.0	1299.8	2310.8	1241.0	560.82	465.80	1078.7	395.0	1409.6	474.9	536.31	480.27	388.18	324.03
1.	Machinery	1381.2	1993.8	1028.8	2145.3	1159.6	460.65	442.75	935.31	328.0	1276.6	377.88	439.03	404.57	306.36	273.70
a)	Electrical	827.19	1555.6	115.20	822.39	323.18	142.61	89.57	183.02	70.00	928.11	193.53	158.95	85.76	112.24	84.57
b)	Machinery other than electrical	554.01	438.18	913.6	1323.41	816.42	318.02	365.18	752.79	258.0	348.49	184.35	280.08	318.81	194.12	189.13
2.	Transport Equipments	843.94	89.18	271.06	164.92	101.44	100.19	23.05	143.40	67.00	133.05	97.04	97.28	75.70	82.12	50.33
a)	Railway locomotives and wagons	686.82	28.45	108.56	95.02	55.56	54.66	1.53	33.30	14.0	85.11	66.19	69.10	67.35	49.48	39.93
b)	Road motor vehicles	30.42	47.93	158.59	59.49	39.97	40.28	3.03	60.67	22.8	41.17	24.36	22.15	4.86	28.34	2.38
c)	Bicycles	36.74	3.25	3.51	0.87	0.47	0.46	1.29	0.57	1.07	0.75	0.26	1.09	0.58	0.21	0.32
d)	Air craft	34.05	9.54	0.4	4.73	4.17	3.23	12.94	28.15	19.2	5.20	2.07	2.13	2.60	3.10	4.38
e)	Others	-	-	-	4.81	1.26	1.56	4 25	20.72	1.9	0.84	0.66	2.75	0.31	0.99	3.33
Total Imports		5095.87	3702.65	4039.17	4405.25	3736.36	2812.59	2944.76	2284.46	1634.2	2779.14	1841.79	2509.56	2252.2	1857.90	1940.30

Source: 1. Estimated on the basis of data available in -

1. Monthly Statistics of Foreign Trade of India, Vol.II: Imports, Directorate General of Commercial Intelligence and Statistics, Government of India.
2. Accounts Relating to Foreign Trade and Navigation of India, Department of Commercial Intelligence and Statistics, Government of India.
3. Accounts Relating Foreign Trade of India by Land with Foreign Countries, Department of Commercial Intelligence and Statistics, Government of India.

i) Share of imports in NNP.

ii) Share of imports in world imports.

iii) Growth rate of imports.

iv) Instability coefficients for imports.

(i) Share of imports to NNP : It has often been said that economic development of a country reduces its dependence on foreign trade and that the speed of industrialization throughout the world tends to diminish the importance of international trade by reducing those differences in economic structure and skill which are the basis for profitable exchange. D.H. Robertson who considered it evident observes that "we must learn to accommodate ourselves permanently to a smaller relative volume of international trade...". The fact that "the scope for advantageous exchange between nation is narrowing "would not only diminish the relative volume of international trade but also encourage trade restrictions" because the "narrowing of the gap of comparative advantage" would make welfare loss from a reduction in imports less important compared in advantages in terms of export stability.[2]

Imports in India have generally played a close correspondence with movements in national income at current prices (i.e. money terms). Both show a rising trend over a period of

2 Robertson, D.H. : "The Future of International Trade", Economic Journal, March 1938.

time under consideration. National income has increased by 532.67% over a period of 27 years, while import payments has increased by 363.31%. A closer examination of data, however reveals that proportion of imports to national income has a declining trend. The average annual proportion of imports to national income during the first plan period amounted to 11.21% which during the following quinquennium increased to 12.21%. But during the third plan period, it has fallen to 11.29% which has again declined to 4.99% during the fourth plan period. But this ratio has increased to 7.5% on an average of the first three years of the Fifth Plan (i.e. 1974-75 to 1976-77). The above given discussion makes it clear that this ratio of imports to national income has declined from 11.21% to 7.5% i.e. by 34%.

Table 3.3

Imports - Net National Product Ratio (Current Prices)

(Percentages)

Year	Ratio	Year	Ratio
1	2	1	2
1950-51	6.83	1964-65	10.62
1951-52	15.33	1965-66	10.75
1952-53	10.71	1966-67	8.72
1953-54	8.52	1967-68	7.16
1954-55	10.76	1968-69	5.88
1955-56	10.71	1969-70	5.01
1956-57	11.82	1970-71	4.74
1957-58	14.31	1971-72	4.50
1958-59	10.74	1972-73	4.71
1959-60	11.69	1973-74	5.98
1960-61	12.49	1974-75	7.15
1961-62	11.60	1975-76	8.10
1962-63	11.57	1976-77	7.26
1963-64	11.34		

Source: 1. Table 3.1. 2. Economic Survey. Various issues, Ministry of Finance, Govt. of India.

The behaviour of the imports to national income ratio is strikingly different when constant price figures are used.

Table 3.4

Imports as percentage of Net National Product (NNP)

(Constant prices)

Year	Imports as % of NNP	Year	Imports as % of NNP
1950-51	19.34	1970-71	4.74
1955-56	17.62	1971-72	7.47
1960-61	16.87	1972-73	5.01
1965-66	16.19	1973-74	6.48
1966-67	13.61	1974-75	5.74
1967-68	9.47	1975-76	4.36
1968-69	9.63	1976-77	4.52
1969-70	7.03		

Source: Table 3.5

When the effect of price change is removed, a very different picture emerges between the movements in national income and total imports in India. It has been already noted that imports have played a close correspondence with movements in national income in India. However, at constant prices, imports in India have a declining trend i.e. total imports have fallen from Rs.3295.87 crores in 1950-51 to

Table 3.5

NNP and Imports of India at Constant Prices
(1970-71) (In crores of Rs.)

Year	Imports	N.I.	Year	Imports	N.I.
1950-51	3295.87	17039	1970-71	1634.2	36654
1955-56	3702.65	21010	1971-72	2779.14	37202
1960-61	4039.17	23936	1972-73	1841.39	36788
1965-66	4405.25	27218	1973-74	2509.56	38701
1966-67	3736.36	27462	1974-75	2232.2	38889
1967-68	2812.93	29709	1975-76	1837.90	42200
1968-69	2944.76	30570	1976-77	1940.30	42887
1969-70	2284.48	32513			

Source: 1. Table 3.2.
2. Economic Survey, various issues. Ministry of Finance, Govt. of India.

Rs.1940.30 crores in 1976-77 at 1970-71 price level, while national income has increased from Rs.17039 crores during 1950-51 to Rs.42887 crores during 1976-77 at constant prices. In other words, we can say that total imports have declined by 70.7% during the period of 27 years, while the national income has increased by 151.70% i.e. more than double. Thus, in the case of constant prices, percentage of imports to national income is bound to fall because of inverse movement in the numerator and the denominator of a ratio, i.e. the numerator

has a declining trend, while the denominator has an increasing trend.

From a glance at the above given tables 3.3 and 3.4, it becomes clear that this ratio is higher at constant prices than at current prices.

The ratio of imports to national income has declined by 74.5% from 1950-51 to an average of 1974-75 to 1976-77 which is double than that of decline at current prices.

On the basis of this falling ratio, both at current prices as well as at constant prices, it may therefore, be suggested that Indian economy is now becoming self-reliant and less dependent on world economy.

However, according to kindelberger and other economists, in a developing economy, the ratio of imports to national income rises unless restrained by commercial policy, for a number of reasons.[3] Growth brings new needs which can not be initially supplied locally such as raw materials and capital equipments, new appetites through demonstration effect and rising income and frequently new capacity to import through capital borrowings. As far as India is concerned, it has a number of advalorem and specific duties on imports and also quantitative restrictions. This import restriction policy

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3 Kindleberger, C.P. : Foreign Trade and National Economy, New Haven & London, Yale University Press, 1962, p.184.

may be responsible for declining trend.

Proportion of Imports to National Income :

We have already seen that the proportion of imports to national income has declined both in real terms and in money terms over a period of time as far as India is concerned. In other words, the proportion of imports to national income has a falling tendency with the process of development of a country. In the light of this proposition, this study has attempted to examine the same with respect to different countries at a point of time. We have examined this proposition for the years 1950, 1955, 1960, 1965, 1970, 1975 and 1978 considering only those countries for which C.I.F. value of imports are available. It is not possible to include the countries mentioned in table 3.6 for all these years because C.I.F. values are not available for each and every year. For example, import value of U.S.A. are available in F.O.B. term for the years 1950, 1955, 1960, 1965 and 1970. However this value is available in C.I.F. term only for the years 1975 and 1978. National income refers in this study to the national income at market prices. Hence the estimation about the proportion of imports to national income is possible for those countries during different years for which import values are available in C.I.F.

term and national income at market price, simultaneously. Not only that but these two i.e. C.I.F. value of imports and national income at market price should be available in single currency. For certain countries value of national income at market price is available in terms of domestic currency, while import data are available in terms of U.S. dollars, e.g. for Indonesia, value of national income at market price is available in terms of Indonesia's Rupiahs, while value of imports are available in terms of U.S. dollars. Another example is that of Spain. Import data are available in terms of U.S. dollars, while national income data are available in terms of Spain's Pesetas during 1950 and 1955. Under such circumstances, though the data are available for C.I.F. imports and national income at market price, it is rather difficult to estimate about the proportion of imports to national income during different years. Hence the present study has attempted to estimate the proportion of imports to national income during different years only for those countries for which value of c.i.f. imports and national income at market price are available in terms of single currency.

It is seen from the table 3.6 that during 1950, proportion of imports to national income was lowest in the case of Brazil (8.028) which is classified as the underdeveloped

country of the world. However, it was highest during 1950 in the case of Newzealand (74.021) which is classified as the developed country of the world. Brazil, the representative of underdeveloped countries indicate the lowest proportion of imports to national income, while reverse was represented by the developed country viz., Newzealand. But from this it is not possible to deduct that this proportion is lower in underdeveloped countries as compared to the developed countries of the world. This proportion was lower also in the case of developed countries like Japan, Italy, France, Germany etc. having the proportion of imports to national income to be 10.296, 13.432, 14.630 and 15.866 respectively. However, it should be noted here that the proportion of imports to national income was not higher in the case of underdeveloped countries like developed countries of the world during 1950.

Similar picture emerges during the year 1955 just as the year 1950. Lowest proportion of imports to national income was represented by an underdeveloped country viz., Turkey having this proportion to be 7.848, followed by Brazil showing this proportion to be 19.920. Furthermore, Netherland was the country (developed country) which has shown the highest proportion of imports to national income i.e. 51.214 during 1955.

It must be mentioned here that during 1950 and 1955,

except few underdeveloped countries, the table 3.6 represents the comparison for this proportion among the developed countries rather than among the developed and underdeveloped countries.

Years 1960, 1965, 1970 and 1975 were similar to those of the years 1950 and 1955. The year 1960 differs from the years 1950 and 1955 with respect to the fact that though this proportion was highest in a developed country viz., Netherland i.e. 48.981, such a high proportion of imports to national income was represented by an underdeveloped country like Malaysia (45.678) etc. Moreover, during 1965 highest proportion of import to national income was indicated by an underdeveloped country viz., Trinidand and Tobago i.e. 82.617 as against the situation during years 1950, 1955 and 1960, followed by Malta (72.149), followed by Guyana having this proportion to be 63.752 and so on. The year 1970 was similar to the year 1965. During 1970, Belgium had the highest proportion of imports to national income i.e. 55.805, however, there were certain underdeveloped countries which have also shown such a high proportion of imports to national income. These countries are as follows : Costarica, Iceland, Jamaica and so on.

During the year 1975, the picture is entirely reverse than all those previous years which we have considered. Lowest

proportion of imports to national income was represented by thehighly developed country viz., USA (7.5638), while it was highest for the underdeveloped country like Malta 80.875, followed by Guyana 73.132, followed by Jordan 70.167 and so on.

As far as the year 1978 was concerned, highest and lowest proportion of imports were represented by the less developed countries of the world i.e. to say the lowest proportion of imports to national income was represented by Brazil (4.680) and highest by Jordan (65.112).

The classification of above countries into highly developed, intermediate and underdeveloped countries shows that the proportion of imports to net national product has a rising trend in the case of underdeveloped countries and intermediate countries. For underdeveloped countries, this proportion has increased from 8.863% during 1950 to 28.286% during 1978. In other words, this proportion has increased by 219.1% during the period under consideration.Moreover, this proportion has increased by 55.4% over a period of time i.e. it has increased from 20.409% during 1950 to 31.729% during 1978 in the case of intermediate countries. However, this share has declined in the case of highly developed countries during the period under consideration.

It should be mentioned here that this proportion was

highest for highly developed countries followed by intermediate and underdeveloped countries during the years 1950, 1955, 1960 and 1970. However, during the year 1975, the picture is entirely reversed i.e. this proportion is lowest for highly developed countries and highest for underdeveloped countries.

This it is obvious from table 3.6 that the gap between the highly developed and underdeveloped countries with regard to the proportion of imports to net national product has been narrowing down over a period of time. This proportion was more or less equal during the year 1978 for highly developed and for underdeveloped countries as against the large difference in this matter between these two groups of countries during the year 1950.

Thus this study supports the argument provided by Kindleberger and other economists, in a developing economy, the ratio of imports to nationalincome rises unless restrained by commercial policy for a number of reasons.[4] Among the underdeveloped countries, India is an exceptional country which shows a falling trend in the proportion of imports to NNP due to the import restriction policy.

In order to examine the same proposition, the present study has also attempted here to examine the proposition over

4 Kindleberger, C.P., op.cit., p.184.

a period of time for a single country as against among different countries for a single year.

It is obvious from the table 3.6 that certain countries have shown the falling tendency in this proportion over a period of time under consideration i.e.1950 to 1978. These countries are as follows : Australia, Brazil, Colombia, Denmark, Iceland, Jordan, Netherland, Newzealand, South Africa, Switzerland, Zambia, Tanzania, Peru, Papua New Guinea, Kenya, Kuwait, and Equador, while rest of the countries have shown the increasing trend. These countries are as follows : USA, UK, Austria, Belgium, Canada, Costa Rica, Cyprus, Dominican Republic, Finland, France, Germany, Greece, Gautemala, Guyana, Honduras, Israel, Mauritius, Italy, Jamaica, Japan, Korea, Libya, Malawi, Malta, Morocco, Nicaragua, Norway, Pakistan, Panama, Paraguay, Philippines, Portugal, Sierra Leone, Spain, Sudan, Sweden, Thailand and Tunisia. Thus it is clear that out of 55 countries, only 17 countries have shown the falling tendency in this proportion over a period of time, while for the rest of the countries i.e. 38 countries, reverse is the case. Hence the majority of the countries have shown the rising tendency with the development of a country.

Considering the time series analysis it may be argued that the proportion of imports to national income and the

process of development of a country are positively related, though this proposition is not supported by cross-section analysis.

Countries Grouped by Level of Economic Development :

(A) Highly Developed.

Australia	Germany	Sweden
Belgium	Israel	Switzerland
Canada	Japan	USSR
Czechoslovakia	Kuwait	United Kingdom
Denmark	Netherland	United States
Finland	New Zealand	
France	Norway	

(B) Intermediate

Argentina	Ireland	Portugal
Austria	Italy	Pureto Rico
Bulgaria	Jamaica	Republic of South Africa
Chile	Lebanon	Rumania
Costa Rica	Libya	Singapore
Cuba	Mexico	Spain
Greece	Panama	Uruguay
Hungary	Poland	Venezuela
		Yugoslavia

(C) Underdeveloped

Africa :
Algeria
Angola
Cameroon
Chad
Congo
Dahomey
Ethiopia.
Ghana
Guinea
Ivory Costa.
Kenya
Liberia.
Malagasy Republic
Malawi
Mali
Morocco
Mozambique
Niger
Nigeria
Rhodesia
Rwanda
Senegal
Sudan
Tanzania
Tanzania
Togo
Tunisia
Uganda
United Arab Republic
Upper Volta
Zambia

Americas :
Bolivia
Brazil
British West Indies
Colombia
Dominican Republic
Ecuador
El Salvador
Guatemala
Haiti
Honduras
Nicaragua
Paraguay
Peru

Asia
Afghanistan
Burma
Cambodia
Ceylon
China
Formosa
India
Indonesia
Iran
Iraq
Jordan
Laos
Malaysia
Nepal
North Korea
Pakistan
Philippines
Saudi Arabia
South Korea
Syria
Thailand
Turkey
Vietnam
Yemen
Europe: Albania.

Source: United Nations Statistical Office, Center for International Studies, 1971.

Table 3.6

Proportion of Imports to National Income for Different Countries of the World

Countries	1950	1955	1960	1965	1970	1975	1978
1. U.S.A.	-	-	-	-	-	-	-
2. U.K.	24.523	25.468	22.320	20.062	23.396	26.300	28.536
3. Australia	-	21.707	19.221	19.034	17.009	13.790	15.464
4. Austria	21.978	28.656	29.450	31.187	27.576	28.496	31.549
5. Belgium	32.893	-	43.340	47.976	55.805	53.294	49.918
6. Brazil	8.028	10.920	10.573	6.487	-	14.373	4.680
7. Canada	-	-	-	-	-	25.042	25.810
8. China Republic of	-	-	-	-	-	43.897	-
9. Colombia	-	-	15.673	8.725	14.632	13.654	-
10. Costa Rica	-	-	28.787	36.298	41.195	38.696	37.102

cont...

Table 3.6 (contd.)

Countries	1950	1955	1960	1965	1970	1975	1978
11. Cyprus	-	-	-	41.468	-	44.522	58.090
12. Denmark	31.941	34.487	37.703	36.363	37.627	30.318	29.322
13. Dominican Republic	-	-	15.236	10.858	-	27.545	-
14. Ecuador	-	-	-	-	-	9.260	9.1060
15. Finland	21.550	23.077	24.441	22.715	28.666	31.922	27.155
16. France	14.630	12.960	13.656	13.938	16.842	17.815	19.383
17. Germany	15.866	19.297	18.468	19.676	20.731	20.079	21.325
18. Greece	25.816	20.838	23.824	23.392	26.122	-	-
19. Iceland	-	-	-	37.096	47.969	10.457	5.60002
20. Gautemala	-	-	15.511	19.887	-	-	-
21. Guyana	-	-	-	63.752	-	73.132	-
22. Haiti	-	-	-	-	-	18.650	-
23. Honduras	-	-	21.449	27.810	35.560	39.244	43.513
24. Israel	-	-	26.471	29.523	33.882	57.943	-
25. Maurities	-	-	-	45.798	46.603	-	-
26. Italy	13.432	15.710	17.625	15.543	19.832	22.418	24.138
27. Jamaica	-	-	40.554	30.355	48.133	-	-
28. Japan	10.296	13.587	12.909	11.528	11.888	13.268	-
29. Jordan	-	-	-	-	-	70.167	65.112
30. Kenya	-	-	-	30.969	30.922	-	-
31. Korea	-	-	-	12.229	26.497	39.102	34.072
32. Kuwait	-	-	-	24.314	-	20.911	-
33. Liberia	-	-	-	-	-	53.841	-
34. Libya	-	-	-	29.811	-	31.435	-
35. Malawi	-	-	-	17.287	-	38.294	40.757
36. Malaysia	-	-	45.678	-	-	-	-
37. Malta	-	-	-	72.149	-	80.879	-
38. Morocco	-	-	26.092	19.008	20.742	28.692	-
39. Netherland	50.199	51.214	48.981	47.500	52.436	47.508	45.264
40. Newzealand	74.021	29.798	25.182	24.125	24.018	24.880	-

cont...

(contd.) Table 3.6 (contd.)

Countries	1950	1955	1960	1965	1970	1975	1978
41. Nicaragua	-	-	-	31.489	26.054	35.350	-
42. Norway	38.332	40.813	42.325	40.846	44.674	40.224	-
43. Pakistan	-	-	10.621	11.729	7.3741	20.168	19.363
44. Panama	-	-	32.221	35.448	38.627	51.510	46.068
45. Papua New Guinea	-	-	-	-	-	50.139	46.698
46. Paraguay	8.833	11.277	12.806	11.421	11.605	14.376	20.633
47. Peru	-	-	21.108	18.735	-	17.903	-
48. Philippines	-	-	13.566	17.812	22.423	26.583	24.229
49. Portugal	-	25.280	24.671	26.140	-	27.268	31.022
50. Sierra Leone	-	-	-	-	-	32.134	39.752
51. South Africa	-	-	-	25.614	23.714	26.923	20.496
52. Spain	-	-	10.037	14.917	15.756	17.208	-
53. Sri Lanka	-	-	-	-	-	22.927	-
54. Sudan	-	-	18.793	16.811	-	24.129	-
55. Suriname	-	-	-	-	-	59.733	-
56. Sweeden	-	-	-	23.926	23.507	28.157	-
57. Switzerland	52.744	27.717	30.801	31.712	37.504	26.484	30.063
58. Tanzania	-	-	-	-	-	31.634	19.172
59. Thailand	-	-	19.550	22.224	-	24.217	26.735
60. Triniland & Tobago	-	-	-	82.617	-	-	-
61. Tunisia	-	-	28.330	31.819	31.618	34.883	-
62. Turkey	9.728	7.848	-	7.521	8.0064	-	-
63. Zaire	-	-	-	-	-	32.640	-
64. Zambia	-	-	-	45.331	-	58.425	32.571
65. Asia	9.728	7.848	22.354	27.073	22.181	40.072	33.902
66. Africa	-	-	24.405	29.94	27.761	40.657	29.965
67. Highly developed countries	33.363	27.284	28.139	27.552	30.570	28.558	27.438

cont..

Table 3.6 (contd.)

Countries	1950	1955	1960	1965	1970	1975	1978
68. Intermediate countries	20.409	22.621	25.896	28.457	30.120	30.360	31.729
69. Under developed countries	8.863	10.015	19.642	24.995	23.503	34.382	28.286

*Calculated on the basis of data available in International Financial Statistics, published by International Monetary Fund, Geneva.

Table 3.7

World Imports and Indian Imports

(Millions of US dollars)

Year	World	India	Year	World	India
1951	82157	1793	1965	175200	2925
1952	80696	1696	1966	192500	2731
1953	75969	1208	1967	202600	2807
1954	80009	1297	1968	225400	2509
1955	89513	1413	1969	257100	2213
1956	98853	1725	1970	294600	2125
1957	108382	2243	1971	329000	2421
1958	100820	1815	1972	385870	2263
1959	105800	1824	1973	528691	3007
1960	119400	2327	1974	784200	5046
1961	124600	2277	1975	814400	6376
1962	132400	2361	1976	923200	5665
1963	143500	2477	1977	1059000	6386
1964	160900	2876	1978	1230900	6254

Source: International Financial Statistics, Various issues. International Monetary Fund, Geneva.

Table 3.8

India's Percentage share to world Imports

Year	%age share	Year	%age share	Year	%age share
1951	2.1	1961	1.83	1971	0.74
1952	2.1	1962	1.78	1972	0.59
1953	1.56	1963	1.73	1973	0.57
1954	1.62	1964	1.79	1974	0.64
1955	1.58	1965	1.67	1975	0.78
1956	1.75	1966	1.43	1976	0.61
1957	2.07	1967	1.39	1977	0.60
1958	1.80	1968	1.11	1978	0.51
1959	1.72	1969	0.86		
1960	1.95	1970	0.73		

Source: Table 3.7

From a glance at the total world imports, it becomes obvious that total world imports have increased by 1398.23% during the period of 28 years while Indian imports have increased by 248.80%. Hence it shows precipitous decline in India's share of world imports over a period of 28 years i.e. the same has declined from 2.1% in 1951 to 0.51% in 1978.

Growth Rate of Imports : While considering the structure of imports at the macro level, the growth rate of different

commodity imports is also one of the important parameters that requires to be examined and it is therefore in this study an attempt is made to calculate continuous compound rate of growth of imports. In other words, we have fitted the semilog functions to the imports of different commodities at three digit level of RITC group 1965 at constant prices from 1965-66 to 1976-77 except those commodities which are not continuously imported. Algebraically, it may be written as :

$$Y = ae^{bt}$$

where Y, t and b denote the imports of different commodities, time and the growth coefficient respectively.

In this formula b measures the constant relative or proportionate change in imports of different commodities for a given absolute change in t. In short, with this formula, it is observed that for a given absolute change in t, imports of different commodities change by a constant percentage amount. Thus this model has been used to measure constant rate of growth over time of imports of different commodities.

In this study, an attempt is made to calculate, the constant rate of growth of imports only in real terms because the trend of imports in money terms and in real terms diverges and as a result there of, there is bound to be a divergence between trend rate of growth of imports in real terms and that in money terms.

It may be mentioned that Padma Desai[4a] has calculated trend rate of growth of imports in physical units for 84 different commodities for the year 1950-51 to 1964-65 and it is found that out of 85 different commodities growth rate is positive for 35 commodities. These commodities mainly refer to machineries, chemicals like caustic soda and amonium sulphate, non-ferrous metals like copper, brass sheets and tubes etc. which play a significant role in the industrial development of a country.

At three digit level of RITC group, an attempt is made here to calculate continuous growth rateof 155 commodities of the RITC group for the period 1965-66 to 1976-77 and a glance at the table 3.10 makes it clear that around 2/3 of commodities of imports show the negative growth rate of imports. However, it should be mentioned here that out of 155 commodities, growth rate of imports is significant at 5% level for 49 commodities and at 10% level for 11 commodities. Following commodities show the growth rate to be significant at 5% level. 001, 023, 025, 032,048, 054, 211, 221, 231, 243, 265, 266, 273, 291, 292, 331, 341, 431, 521, 533, 534, 561, 581, 632, 653, 655, 657, 663, 667, 671, 681, 684, 694, 696, 697, 714, 715, 717, 719, 723, 725, 726, 729, 731, 733, 812, 831, 861 and 862.

4a Desai, Padma : Import Substitution in the Indian Economy, 1951-63. Hindustan Publishing Corporation, Delhi, 1972, pp.38-100.

Moreover, commodities, whose growth rate is significant at 10% level are as follows : 041, 241, 275, 422, 513, 641, 712, 724, 732, 893, and 897.

It is obvious that for more than 75% of the commodities belonging to section 7 (i.e. Machinery and Transport Equipment). growth rate is significant, i.e. out of 18 various commodities, 13 commodities have significant growth rate of imports. In other words, imports of 11 various commodities belonging to machinery and transport equipment is gradually declining, while it is increasing gradually for 731 and 733.

Another important commodity i.e. 561 (manufactured fertilizers) is increasing at a constant rate and its growth rate is statistically significant at 5% level.

Moreover, growth rate of imports of petroleum crude, is also positive and significant at 5% level.

While grouping the three digit level of different commodities into various commodity groups, the majority of commodity groups show negative growth rate of imports. Iron and Steel, Petroleum Products, and Fertilizers only show the positive growth rate of imports. Positive growth of iron and steel imports is quite obvious because of the rapid industrialization taking place in the Indian Economy; however the growth rate of total imports turns out to be negative.

Table 3.9

Growth Rate of Imports (Physical Units)

Commodities		R^2	Period covered
1. Sugar	6.7894-05412t	0.4803	1954-55 to 1964-65
2. Biscuits	3.5897-0.2864t	0.8041	1953-54 to 1964-65
3. Footwear(rubber)	4.5853-0.5206t	0.4355	1956-57 to 1964-65
4. Matches	0.5983-0.3699t	0.7036	1950-51 to 1964-65
5. Soap	3.4014-0.1224t	0.8465	1956-57 to 1964-65
6. Cigarettees	2.3329-0.1204t	0.5920	1956-57 to 1964-65
7. Razor blades	5.3615-0.5601t	0.5729	1956-57 to 1964-65
8. Type writers	5.4460-0.2026t	0.5257	1956-57 to 1964-65
9. Stoves	7.4091-0.4376t	0.7689	1956-57 to 1964-65
10. Sewing machine	4.7000-0.1200t	0.6957	1950-51 to 1964-65
[illegible]	5.0177-0.1479t	0.4446	1956-57 to 1964-65
11. Domestic refrigerators	4.1469-0.1004t	0.5168	1956-57 to 1964-65
12. Automobiles	6.0430-0.2293t	0.9179	1957-58 to 1964-65
13. Bicycles	6.0245-0.2454t	0.8256	1950-51 to 1964-65
	6.5451-0.2932t	0.6570	1956-57 to 1964-65
14. Pencils	6.8236-0.3137t	0.7549	1958-59 to 1964-65
15. Motor cycles and scooters	3.2302+0.0852t	0.8442	1950-51 to 1960-61
16. Woollen worsted fabrics	7.6445-0.2268t	0.8836	1957-58 to 1964-65
17. Woollen worsted yarn	2.5150+0.0940t	0.5038	1950-51 to 1957-58
	7.6895-0.5474t	0.8779	1957-58 to 1964-65

cont..

Table 3.9 (contd.)

Commodities		R^2	Period covered
18. Cork sheets	3.2440-0.1158t	0.5846	1950-51 to 1964-65
19. Cork stoppers	4.4831-0.2816t	0.7618	1950-51 to 1964-65
20. Leather Belting	5.4043-0.3260t	0.8227	1950-51 to 1964-65
21. Cycle tyres	7.9088-0.2952t	0.7813	1954-55 to 1960-61
22. Cycle tubes	2.4191+0.3245t	0.7960	1950-51 to 1957-58
23. Copper sulphate	12.5732-0.9441t	0.9131	1956-57 to 1964-65
24. Rayon Viscose yarn	5.2566-0.1188t	0.7090	1950-51 to 1964-65
25. Calcium carbide	13.8552-0.9738t	0.7241	1958-59 to 1964-65
26. Solubilized vats	3.7492-0.2034t	0.6599	1950-51 to 1964-65
27. Potassium chlorate	4.4989-0.3455t	0.5757	1950-51 to 1964-65
	9.1651-0.7413t	0.6157	1957-58 to 1964-65
28. Amonium chloride	5.3350-0.3529t	0.8005	1950-51 to 1964-65
29. Urea formuladehyde Moulding powder	4.3195-0.1763t	0.6175	1950-51 to 1964-65
30. Acetic acid	2.8610+0.0633t	0.6801	1950-51 to 1957-58
	5.4917-0.2195t	0.6823	1957-58 to 1964-65
31. Sanitary wares	4.5917-0.2149t	0.6002	1950-51 to 1964-65
32. Glazed tiles	2.5370+0.1489t	0.7278	1950-51 to 1955-56
	6.5598-0.5002t	0.6288	1955-56 to 1964-65
33. Refractories	5.0822-0.0621t	0.5549	1950-51 to 1964-65
34. Coated abrasives	4.1479-0.1759t	0.9028	1950-51 to 1964-65
35. Wood screws	1.1544+0.1562t	0.5809	1950-51 to 1951-58
	4.9242-0.2679t	0.9082	1957-58 to 1964-65

cont..

Table 3.9 (contd.)

Commodities		R^2	Period covered
36. Enamel ware	0.9877+0.1022t	0.6596	1950-51 to 1957-58
	1.5495-0.2971t	0.6792	1957-58 to 1964-65
37. Bandsaw Blades	4.5016-0.2184t	0.8887	1950-51 to 1964-65
38. Hachsaw blades	2.6141-0.0722t	0.4999	1950-51 to 1964-65
39. Milling cutters.	5.2809-0.1220t	0.5340	1950-51 to 1964-65
40. Electrical lamps	5.8227+0.1362t	0.6916	1950-51 to 1956-57
	7.6517-0.1381t	0.5668	1956-57 to 1964-65
41. Aluminium conductors	7.683-0.8535t	0.4826	1957-58 to 1964-65
42. Rubber & Plastic insulated cables and Flexibles	2.1429-0.1297t	0.7541	1957-58 to 1964-65
43. Bicycle spareparts and accessories	0.9437+0.0554t	0.6331	1950-51 to 1956-57
	3.1522-0.2281t	0.8132	1957-58 to 1964-65
44. Motor Omnibuses	3.4625+0.0753t	0.6697	1950-51 to 1957-58
Motor vans & Motor Lories	6.8351-0.3103t	0.9010	1957-58 to 1964-65
45. Power driven pumps	4.3066-0.4791t	0.8040	1950-51 to 1964-65
46. Twist drills	7.8669-0.3045t	0.6817	1950-51 to 1964-65
47. Carding Engines	4.5817-0.2395t	0.5969	1950-51 to 1964-65
48. Steel files	8.4286-0.1999t	0.7953	1950-51 to 1964-65
49. Sugar Mill machinery	0.5017+0.1600t	0.6985	1950-51 to 1957-58
	3.3717-0.2223t	0.5344	1957-58 to 1964-65
50. Plywood teachests	5.7822-0.7258t	0.8421	1950-51 to 1964-65
51. Pickers	2.3605-0.2675t	0.4344	1950-51 to 1964-65
	5.7976-0.5581t	0.4904	1954-55 to 1964-65
52. Sulphur blach	3.4491-0.1767t	0.8833	1950-51 to 1964-65
	3.5482-0.1855t	0.8778	1953-54 to 1964-65

Table 3.9 (contd.)

Commodities		R^2	Period covered
53. Sheet Glass	5.3966-0.117t	0.5760	1950-51 to 1964-65
54. Paper board	3.9794-0.0544t	0.5091	1955-56 to 1964-65
55. Caustic soda	4.4060+0.0631t	0.6410	1950-51 to 1959-60
56. Soda ash	6.4913-0.1434t	0.7434	1959-60 to 1964-65
57. Bleaching powder	3.8127-0.396t	0.5884	1950-51 to 1964-65
58. Paints & varnishes	4.3636-0.0552t	0.5248	1955-56 to 1964-65
59. Calcium carbonate	2.7358+0.0702t	0.8207	1954-55 to 1960-61
60. Lathe tools	0.2655-0.0414t	0.4864	1959-51 to 1964-65
61. Machine tools	1.1585+0.0828t	0.8957	1950-51 to 1964-65
62. Weighing machinery	1.1729-0.0673t	0.5971	1950-51 to 1964-65
63. Motor tyres	5.8299-0.1467t	0.6447	1956-57 to 1964-65
64. Glue	1.5801+0.1032t	0.8358	1953-54 to 1960-61
65. Ferro Alloys	1.2568+0.2227t	0.9452	1950-51 to 1961-62
66. Arc welding electrodes	2.0151+0.0693t	0.3961	1950-51 to 1964-65
67. Chrome Tanned Hides	1.8807+0.0821t	0.6801	1950-51 to 1964-65
68. Motor cycle and scooter tubes	2.6949+0.0977t	0.6716	1950-51 to 1964-65
69. Ebonite sheets,rods and tubes	0.1646+0.0853t	0.4333	1950-51 to 1964-65
70. Latex foam sponge	-2.2012+0.2759t	0.8558	1950-51 to 1964-65
71. Ammonium sulphate	2.4851+0.2494t	0.5686	1954-55 to 1964-65
72. Bromine	-3.4289+0.4071t	0.6331	1950-51 to 1964-65
73. Aluminium virgin metal	2.8407+0.1031t	0.7447	1953-54 to 1962-63

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Table 3.9 (contd.)

Commodities		R^2	Period covered
74. Aluminium wire rods (ACSK)and Aluminium Rods and sections (extruded)	3.1403+0.0760t	0.5750	1950-51 to 1964-65
75. Copper virgin metal	2.2753+0.1715t	0.5733	1955-56 to 1964-65
76. Copper pipes & tube	1.5846+0.0975t	0.7278	1950-51 to 1964-65
77. Copper sheets and circles	1.6551+0.0898t	0.7910	1950-51 to 1964-65
78. Lead virgin metal	3.5833 + 0.0729t	0.8564	1952-53 to 1964-65
79. Brass pipes & tubes	2.0333+0.0804t	0.8370	1950-51 to 1964-65
80. Brass sheets and circles	1.5616+0.0819t	0.6748	1950-51 to 1964-65
81. Ball bearings	2.5862+0.0603t	0.6593	1950-51 to 1964-65
82. Conduit pipes	2.6050+0.0865t	0.6386	1950-51 to 1964-65
83. Power Alcohol	4.4893+0.1626t	0.8973	1950-51 to 1964-65
84. Parts & accessories of Machine tools.	0.1539+1046t	0.8403	1950-51 to 1964-65

Source: Desai Padma, op.cit., pp.38-100.

Table 3.10

Growth Rate of Imports : 1965-66 to 1976-77

(Constant Prices)

Sr. No.	Commodity Code No.	α	B	R^2
1.	001	14.582239 (3.8344676)	0.17384 (4.0407385)	0.62017
2.	013	8.5886234 (22.417309)	-0.0055261* (0.032405)	0.00010509
3.	023	16.6899099 (3.0094372)	0.21805 (6.64196)	0.81520
4.	024	13.283584 (6.5097164)	0.069307* (1.1380812)	0.11467
5.	025	10.048459 (12.852935)	0.39834 (3.5888201)	0.56293
6.	031	13.069444 (14.813626)	0.39604* (1.3895205)	0.16183
7.	032	12.217489 (9.2756375)	0.20032 (2.5541513)	0.39430
8.	041	21.512124 (20.016873)	-0.050585* (0.76959)	0.055916
9.	042	18.7959 (27.421057)	-0.16655** (1.893781)	0.26397
10.	044	14.911508 (72.997148)	0.020723* (0.11036)	0.0012166
11.	045	18.357437 (23.07137)	-0.14919* (0.57783)	0.032316
12.	047	15.528599 (64.671847)	0.0092103^{2}* (0.53590)	0.000319
13.	048	16.972317 (41.40771)	0.27630 (2.3149241)	0.34891
14.	052	17.2481626 (104.79195)	0.14045* (0.75385)	0.53771

cont...

Table 3.10 (contd.)

Sr. No.	Commodity Code No.	α	β	R^2
15.	053	10.230362 (13.471891)	-0.096708* (1.0249061)	0.095058
16.	054	14.98519 (0.74598)	-0.041446 (2.2744027)	0.34093
17.	055	12.486891 (9.7709567)	-0.027630* (0.34987)	0.012093
18.	061	15.731226 (9.4470581)	-0.034538* (0.56145)	0.030356
19.	072	15.144068 (6.3979501)	0.050656* (0.95983)	0.084356
20.	073	11.747763 (86.137458)	-0.23946* (0.98496)	0.088436
21.	075	15.629913 (4.3249452)	0.034538* (0.82122)	0.06318
22.	081	15.201633 (2.115711)	0.034538* (1.1417237)	0.11532
23.	099	15.362813 (64.142669)	-0.0759985* (0.46409)	0.021084
24.	112	15.068083 (2.5189396)	-0.043749* (1.3138603)	0.14721
25.	121	12.279659 (6.9830619)	-0.075985* (1.1188199)	0.11125
26.	122	12.35311 (12.627186)	-0.055261* (0.60950)	0.035819
27.	211	15.837392 (13.521755)	-0.17505 (2.3889817)	0.36335
28.	212	10.3082 (47.582638)	-0.367993* (1.9333396)	0.29344
29.	221	17.61902 (4.8513381)	-0.11848 (2.9987384)	0.47347

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Table 3.10 (contd.)

Sr. No.	Commodity Code No.	α	β	R^2
30.	231	17.816063 (2.7273796)	-0.074296 (2.53519)	0.39125
31.	241	13.44312 (14.281041)	-0.15416** (1.7400058)	0.23240
32.	242	15.427466 (9.7607212)	-0.13732** (2.1457056)	0.31562
33.	243	14.94913 (8.5068822)	-0.1695 (2.7521201)	0.43098
34.	244	14.99416 (1.2217735)	-0.052061 * (1.5487063)	0.19345
35.	251	14.893409 (14.636161)	-0.021471* (0.32257)	0.010130
36.	262	18.415292 (3.7978178)	0.02977* (0.88977)	0.073362
37.	263	20.009857 (20.967873)	-0.092593* (1.280661)	0.14090
38.	264	16.371715 (142.37422)	-0.026988* (0.11844)	0.0014009
39.	265	17.940296 (26.731053)	-0.58833 (6.5065937)	0.80892
40.	266	17.047752 (159.1168)	0.77762 (3.3993347)	0.53608
41.	267	16.610002 (9.1525486)	0.065572* (0.93171)	0.079875
42.	271	18.68142 (1.8682194)	-0.032931* (1.4234364)	0.16848
43.	273	12.944398 (13.828212)	-0.31826* (3.5261455)	0.55424
44.	274	18.417627 (15.77948)	0.015363 * (0.22543)	0.0050563

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Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	B	R^2
45.	275	16.899632 (25.249532)	-0.17682** (1.885205)	0.26221
46.	276	18.631421 (6.1668371)	0.065098* (1.5450315)	0.19271
47.	282	16.263423 (2.6029594)	0.058073** (1.8517436)	0.25534
48.	283	18.095001 (11.844214)	0.018025* (0.29989)	0.0089135
49.	284	16.224838 (16.690632)	0.093130* (1.17145)	0.12067
50.	291	14.903688 (4.6123425)	-0.13008 (2.8574541)	0.44949
51.	292	17.090339 (0.93916)	-0.075246 (4.1970047)	0.63787
52.	321	14.712219 (19.478729)	-0.036058^{4}* (0.42015)	0.017347
53.	331	20.65334 (1.0302339)	0.092439 (5.9490015)	0.77969
54.	332	20.0684 (20.322297)	0.044446* (0.62617)	0.37730
55.	341	11.584661 (31.790368)	-0.38559 (2.5469669)	0.39346
56.	411	18.335724 (38.76696)	-0.077002* (0.7186)	0.049104
57.	421	19.021801 (17.960308)	0.066765* (0.94675)	0.082236
58.	422	14.953301 (42.760663)	0.26990** (2.1151594)	0.30910
59.	431	15.173601 (1.2234135)	0.094176 (4.0435271)	0.62049

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Table 3.10 (contd.)

Sr. No.	Commodity Code No.	α	B	R^2
60.	512	20.234263 (17.292146)	0.086132* (1.3262873)	0.14959
61	513	18.785374 (3.2912356)	-0.054089** (1.771493)	0.23886
62	514	17.991606 (20.109313)	-0.049141* (0.62417)	0.037499
63	521	16.746702 (0.4688350	0.35954 (25.461817)	0.98480
64.	532	17.792407 (3.1270091)	0.022583* (0.71867)	0.049113
65.	533	16.569705 (8.1827112)	-0.22847 (4.1924236)	0.63737
66.	534	17.582178 (1.4465605)	-0.080076 (3.7025357)	0.57821
67.	541	19.259726 (5.6257883)	0.060309* (1.5490545)	0.19352
68.	551	17.302543 (4.9731241)	-0.0015659* (0.38201)	0.014384
69.	553	12.20266 (4.2120828)	-0.0033283* (0.067986)	0.00046209
70.	554	13.812832 (2.892089)	-0.024411* (0.62729)	0.037860
71.	561	20.571372 (2.6263621)	0.55296 (2.2198862)	0.33011
72.	571	15.271445 (9.9909072)	-0.065985* (1.0090547)	0.092410
73.	581	18.894416 (2.8070031)	0.24732 (8.8301628)	0.88632
74.	599	19.376542 (12.122529)	0.074345* (1.3091899)	0.14632

Table 3.10 (contd.)

Sr. No.	Commodity Code No.	α	β	R^2
75.	612	12.453887 (8.5805934)	-0.023824* (0.32098)	0.010198
76.	621	15.135263 (13.082506)	-0.020703* (0.27436)	0.0074712
77.	629	13.543945 (25.150407)	-0.0021623* (0.08177)	0.0000563
78.	631	12.919972 (25.778412)	-0.022929* (0.18551)	0.0034298
79.	632	13.654886 (4.1915571)	-0.19227 (4.0619961)	0.62274
80.	633	13.165237 (50.482348)	0.095398* (0.56547)	0.030985
81.	641	19.173591 (2.6036411)	-0.36037** (1.954544)	0.27808
82.	642	14.957609 (2.9914936)	-0.022763* (0.62274)	0.037333
83.	651	17.481812 (8.2454102)	-0.068193* (1.3136517)	0.14717
84.	653	13.86491 (8.8745899)	-0.17890 (2.8645183)	0.45071
85.	655	16.497601 (3.208094)	-0.16291 (4.7487123)	0.69281
86.	656	13.879696 (20.382417)	0.078462* (0.76541)	0.055344
87.	657	9.6191687 (24.848843)	-0.75280 (5.2136)	0.73105
88.	658	15.196555 (27.490041)	0.13158* (1.2033627)	0.12715
89.	659	14.230285 (94.152333)	0.021601* (0.10150)	0.0010292

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Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	B	R^2
90.	661	16.931357 (63.531159)	-0.051444* (0.34715)	0.011908
91.	662	17.038182 (3.323571)	0.041174* (0.35932)	0.012747
92.	663	17.266987 (6.5335083)	-0.10530 (2.24512)	0.33513
93.	664	16.573688 (3.9013937)	-0.0478817* (1.3626889)	0.15661
94.	665	15.048398 (17.236975)	0.16088** (1.8489196)	0.25436
95.	666	12.123336 (6.6604501)	-0.063843* (0.95026)	0.082882
96.	667	20.018576 (9.4420208)	0.17038 (3.5128292)	0.55237
97.	671	17.579242 (18.974672)	-0.25779 (3.2979455)	0.52099
98.	672	17.77264 (24.575176)	0.063979* (0.72635)	0.050115
99.	673	19.557628 (8.4101102)	0.015869* (0.33858)	0.011331
100.	674	20.475423 (9.0084949)	0.041805* (0.90214)	0.075262
101.	675	18.312877 (9.695143)	0.0020527* (0.038186)	0.00014587
102.	676	13.679314 (64.892077)	-0.14556* (0.79055)	0.058822
103.	677	17.361477 (13.819872)	-0.079727* (1.1786196)	0.12197
104.	678	18.972455 (2.4543211)	0.036804* (1.4094491)	0.16573

cont...

Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	B	R^2
105.	679	17.706183 (4.0270104)	-0.22046* (0.61526)	0.036476
106.	681	15.962401 (2.7582399)	0.14972 (4.5540444)	0.67468
107.	682	19.810652 (28.929243)	-0.051146* (0.59640)	0.34348
108.	683	19.918284 (25.582152)	0.064932* (0.83486)	0.065086
109.	684	17.572647 (15.101794)	-0.26072 (3.7365561)	0.58267
110.	685	18.103743 (13.683347)	-0.070138* (1.0863658)	0.10556
111.	686	18.63034 (12.748868)	-0.039710* (0.65611)	0.41215
112.	687	17.745504 (31.684837)	-0.023612* (0.23584)	0.0055314
113.	689	17.145497 (5.5301302)	0.054179* (1.2496578)	0.13507
114.	691	17.489948 (36.845591)	0.13313* (1.2162343)	0.12886
115.	692	17.816283 (6.4879883)	0.065784* (1.3463013)	0.15344
116.	693	15.223131 (140.90599)	-0.26108* (1.0764991)	0.10385
117.	694	15.422018 (6.4363857)	-0.13664 (2.6296072)	0.40880
118.	695	17.009632 (71.726619)	0.23937* (1.5297221)	0.18963
119.	696	12.378184 (3.0021574)	-0.15948 (3.6091224)	0.5657

cont..

Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	β	R^2
120.	697	13.1956 (10.158956)	-0.42079 (5.552968)	0.75511
121.	698	17.94238 (21.849419)	-0.075695* (0.92005)	0.078044
122.	711	19.92682 (7.5035876)	-0.063939* (1.4715548)	0.17800
123.	712	18.793335 (12.857415)	-0.12760** (2.1166074)	0.30941
124.	714	17.70026 (0.89632)	-0.055865 (3.3032334)	0.52179
125.	715	19.614186 (2.5004551)	-0.15986 (6.2735557)	0.79739
126.	717	19.216273 (5.437167)	-0.14818 (3.8638989)	0.59887
127.	718	19.596905 (2.9298811)	-0.037495* (1.3576343)	0.15563
128.	719	21.382331 (9.6284114)	-0.16389 (3.5735532)	0.56083
129.	722	20.413024 (24.917776)	-0.025137* (0.32532)	0.010473
130.	723	18.356355 (11.659251)	-0.31437 (3.6494863)	0.57116
131.	724	19.407709 (13.246834)	-0.11323** (1.9107517)	0.26745
132.	725	16.619511 (2.9784021)	-0.0877026 (3.1840599)	0.50343
133.	726	16.516177 (3.1550434)	-0.087852 (2.5593502)	0.39589
134.	729	19.611451 (18.725488)	-0.16370 (2.3488012)	0.35554

cont...

Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	B	R^2
135.	731	19.961263 (2.4017015)	0.15010 (6.1163626)	0.78907
136.	732	19.086279 (26.81206)	-0.15921** (1.8587589)	0.25678
137	733	15.337677 (3.600496)	0.67824 (2.3432807)	0.65739
138	734	17.855551 (14.942399)	-0.070663* (1.0331599)	0.096447
139	735	16.769079 (22.800945)	-0.10824* (1.2043913)	0.12668
140.	812	14.893657 (28.521214)	-0.29129 (2.5834486)	0.40027
141.	821	14.505753 (13.884433)	-0.082052* (1.012168)	0.092928
142.	831	11.778157 (27.338091)	-0.27818 (2.0059097)	0.28692
143.	841	13.657265 (9.2487711)	-0.10910* (1.5362633)	0.19418
144.	861	19.603887 (6.3826547)	-0.41619 (7.7727985)	0.85798
145.	862	18.084964 (2.5682318)	-0.085805 (3.0629007)	0.48404
146.	863	17.107919 (33.647022)	-0.091113* (0.85189)	0.067662
147.	864	16.014078 (6.8862489)	0.0039288* (0.075857)	0.00057519
148.	891	15.667514 (11.986093)	0.090797* (1.3011212)	0.14478
149.	892	17.965554 (0.29605)	0.15653* (1.6343911)	0.21081

cont...

Table 3.10 (contd.)

Sr. No.	Commodities Code No.	α	B	R^2
150.	893	16.659647 (40.343772)	-0.24863** (2.0665109)	0.29925
151.	894	13.573923 (6.9406513)	-0.077265* (1.2606492)	0.13713
152.	895	14.568066 (9.9843395)	0.077666* (1.1339863)	0.11394
153.	896	12.612638 (9.2223881)	-0.10482* (1.3801854)	0.16001
154.	897	13.739494 (17.779667)	-0.20118** (2.0816954)	0.30233
155.	899	15.892044 (2.6294218)	-0.050785* (1.5743666)	0.19863

1. 1966-67 to 1976-77
2. 1966-67 to 1976-77
3. 1965-66 to 1975-76
4. 1965-66 to 1975-76

Note:

1. Figures in the brackets refer to value of t_{α} and t_{B} respectively.
2. Commodity marked with an asterik (*) is not statistically significant.
3. Commodity marked with double asterik (**) is statistically significant at 10% level, while rest of the commodities are statistically significant at 5% level.

Table 3.11 (1965-66 to 1976-77)
Growth Rate of Imports (Constant Prices)

Sr. No.	Commodities	α	B	R^2
1.	Total Imports	7.832741	-0.048566 (2.4874288)	0.38223
2.	Consumer goods	6.40783	-0.06696 (1.9091396)	0.26712
3.	Non-food consumer goods	5.3835825 (2.2529298)	-0.122 (2.5199208)	0.39026
4.	Intermediate goods for producing consumer goods	6.2579519	-0.0052959* (0.17732)	0.0031345
5.	Intermediate goods for producing capital goods	6.429941	-0.0085195* (0.29605)	0.0086888
6.	Capital goods	6.4932756	-0.11766 (2.9530889)	0.46583
7.	Food articles	5.8057252	-0.048814* (0.98269)	0.088065
8.	Chemicals	4.5358523	-0.096017 (2.0148946)	0.28875
9.	Iron and Steel	5.3014601	0.035229* (0.24014)	0.0057339
10.	Non-ferrous metals	4.8430925	-0.032467* (0.98423)	0.088317
11.	Fertilizers	4.6065436	0.026871* (1.0772513)	0.10398
12.	Textile fabrics, yarn and thread	4.0997436	-0.052729* (0.44740)	0.019624
13.	Petroleum and petroleum products	4.9652835	0.025558* (0.54908)	0.029267
14.	Machinery	6.3399237	-0.12871 (3.1049501)	0.43085
15.	Transport Equipment	4.4446901	-0.035689* (0.79559)	0.059529

Instability in Imports :

Import instability is here defined as short term fluctuations in import payments corrected for trend. However, some form of trend corrections is essential in order to avoid an interpretation of a constant year to year increase or decrease as indicating instability.

There are four main different methods for measuring instability index which are as follows :

1. The average of percentage deviations from the least square trend line through the actual annual values.
2. The UN measure of the average annual percentage changes dividing always by the higher figure.[5]
3. MacBean measure of the average annual deviations from a five year moving averages.[6]
4. Coppock log variance method.[7]

As far as the second method is concerned, it has some deficiencies, e.g. a steady increase of 10 per cent per year in the values of a series such as 100, 110, 121 etc. would according to the United Nations Systems, yield fractions like

5. United Nations Secretariat: Instability in Export Markets of Underdeveloped countries, UN Department of Economic Affairs, 1952.
6. MacBean A.I.: Export Instability and Economic Development, p.34. George Allen & Unwin Ltd.,London,1966.
7. Coppock, J.D.: International Economic Instability, p.24 McGraw-Hill Book Co.,New York,1962.

10/110, 11/121, etc. which when averaged would be less than the conventional 10 per cent, but the resulting percentage would indicate considerable instability where in reality there would be none at all.[8]

The third measure viz., MacBean's measure, it suffers from the disadvantage of losing two years from the beginning and end of the time series.[9]

The first method involves constant absolute changes from year to year while Coppock's method involves constant percentage trend.

The method that involves a constant percentage changes from year to year is a better measure than the constant absolute changes from year to year and it is for this reason that Coppock's method is followed here.

The instability index according to Coppock equals the antilog of the square root of the logarithmic variance of the series which is given by

$$V \log = \frac{1}{N-1} \sum \left[\log X_{t+1} - \log X_t - \frac{1}{N-1} \sum (\log X_{t+1} - \log x_t) \right]^2$$

Where N and X is the number of years and value of import payments respectively and subscripts indicate the date.

The process of measuring this index is as follows :[10]

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8 Coppock, J.D.: op.cit. P 24
9 MacBean A.I. : op.cit. P. 34
10 Coppock, J.D.: op.cit. P. 24

1. Logarithms are obtained for each annual value of a variable, for example total imports for year 1, year 2 etc.
2. The logarithms of the value for year 1 is subtracted from the logarithm of the value for year 2 etc. in order to get first differences of logarithms.
3. The arithmetic mean of the logarithmic first differences is then obtained.
4. This logarithmic mean is substracted from each year to year logarithmic first difference in order to obtain the logarithmic difference between the actual and average (or trend) year-to-year logarithmic differences.
5. These logarithmic differences from trend - some positive and some negative - are then squared, summed up and divided by the number of years minus one. The resulting number is referred to as 'log variance'.
6. The next step is to take the square root of the log variance and obtain the antilog of the square root value. Unity is substracted from the antilog and decimal moved to two places to the right. The resulting "instability index" is a close approximation of the average year to year percentage variation adjusted for trend.

The instability index for different groups of commodity imports in India is calculated here both in money terms as

well as in real terms. It is evident from table 3.13 that the total imports and even the different commodity imports are more stable in current rupee rather than in constant rupee except the imports of fertilizers. Fertilizer turn out to be more stable with an index of 54.9 at constant prices than at current prices with an instability index of 61.934.

Table 3.13 sets out the fact that the consumer goods are more unstable with an index of 42.88 than the intermediate goods (with an instability index 17.94 and 31.39) and capital goods (with an instability index of 19.89) when the instability index at current prices is considered. Within consumer goods it is worthwhile to distinguish between food articles and non-food consumer articles. Import instability tends to be greater in food articles than in non-food consumer articles at current prices.

The most noticeable fact is that when we examine fluctuations in imports of different groups of commodities at constant prices, results turn out to be strikingly different than at current prices. This may be due to variations in the fluctuations in the unit price of imports of different commodities. Import instability index lies between 41.358 for total imports to 160.421 for textile fabrics. However, it is revealed from table 3.13 that capital goods have been more unstable than the intermediate goods and consumer goods.

Table 3.12

Instability Index of Imports of Different Commodities at Current Prices

Sr. No.	Commodities	1950-51 to 1976-77	1950-51 to 1964-65
1.	Consumer goods	37.682	33.342
2.	Food articles	59.429	60.352
3.	Non-food consumer goods	1.962	25.087
4.	Intermediate goods for producing consumer goods	25.503	30.218
5.	Intermediate goods for producing capital goods	27.821	76.350
6.	Chemicals	27.363	30.68
7.	Iron & Steel	35.223	34.314
8.	Non-ferrous metal	31.058	30.173
9.	Fertilizers	12.073	73.964
10.	Textile fibre, yarn and thread	42.008	40.836
11.	Petroleum	39.714	29.291
12.	Capital goods	17.762	18.375
13.	Machinery	20.294	19.130
14.	Transport Equipment	27.178	24.143
15.	Total Imports	20.018	20.825

Table 3.13

Instability Index of Imports of Different Commodities : 1965-66 to 1976-77

Sr. No.	Commodities	Constant prices	Current prices
1.	Consumer goods	42.897	42.88
2.	Food articles	73.576	61.998
3.	Non-food consumer articles	86.397	23.013
4.	Intermediate goods for producing consumer goods	53.968	17.938
5.	Intermediate goods for producing capital goods	61.899	31.389
6.	Chemicals	150.27	25.795
7.	Iron and Steel	54.698	40.031
8.	Non-ferrous metal	75.56	32.047
9.	Fertilizers	54.90	61.994
10.	Textile fibres yarn and thread	160.421	40.737
11.	Petroleum	96.342	55.702
12.	Capital goods	100.49	19.886
13.	Machinery	108.857	20.298
14.	Transport Equipments	125.565	31.84
15.	Total Imports	34.605	21.221

Moreover the crawford Report states, "Primary commodity markets clearly continued to be permeated by a degree of instability appreciably greater than is evident in markets for other products."[11]

11 United Nations Secretariat: Instability in Export Market of Underdeveloped countries. United Nations, Dept. of Economic Affairs, 1952.

It is significant to note that the present study also yields similar results when instability index is calculated at current prices.

J.D. Coppock has calculated instability indices of total value of world trade in primary commodities and in manufacturing commodities (1948 to 1958). These show manufactures to have been more unstable with an index of 6.8 compared with an index of 3.8 for other commodities. Considering the instability index in constant rupee, our results of the present study also move in the same direction.

Per capita income may be taken as a rough indicator of the stage of economic development. It is generally held that fluctuations in imports are much greater for underdeveloped countries than for developed countries, hence it is necessary to examine, whether this index has declined or not with the process of development. In order to examine this relationship, instability index of different groups of commodity imports is calculated both in current rupee as well as in constant rupee for the years 1965-66 to 1970-71 and 1971-72 to 1976-77 and for 1950-51 to 1976-77 in current rupee. From the earlier study it becomes clear that per capita income has increased at constant prices and at current prices. When the instability index is examined in real terms 9 groups out of 14 commodity

groups imports show the fall in instability index. Moreover four commodity groups out of 14 commodity group show the fall in this index in money terms. Thus if we remove the impact of price changes instability index of some of the import commodities tends to decline with the process of development.

Table 3.14

Instability Index of Imports of Different Commodities at Constant Prices

Sr. No.	Commodities	1965-66 to 1970-71	1971-72 to 1976-77
1.	Consumer goods	55.426	50.897
2.	Food articles	37.228	103.128
3.	Non-food consumer articles	116.87	55.035
4.	Intermediate goods for producing consumer goods	44.553	66.987
5.	Intermediate goods for producing capital goods	55.756	46.363
6.	Chemicals	37.614	271.539
7.	Iron & Steel	61.091	27.839
8.	Non-ferrous metal	25.957	121.82
9.	Fertilizers	81.148	24.989
10.	Textile fibre, yarn and thread	161.626	80.782
11.	Petroleum products	93.84	109.983
12.	Capital goods	92.431	51.257
13.	Machinery	93.375	60.763
14.	Transport Equipment	203.251	23.328
15.	Total Imports	14.342	34.458

Table 3.15

Instability Index of Imports of Different Commodities at Current Prices

Sr. No.	Commodities	1965-66 to 1970-71	1971-72 to 1976-77
1.	Consumer Goods	17.264	50.863
2.	Food articles	22.253	78.467
3.	Non-food consumer articles	16.953	26.982
4.	Intermediate goods for producing consumer goods	13.779	20.64
5.	Intermediate goods for producing capital goods	24.877	31.551
6.	Chemicals	23.48	30.564
7.	Iron & Steel	40.704	34.991
8.	Non-ferrous metal	28.10	42.785
9.	Fertilizers	50.168	78.188
10.	Textile fibre,yarn and thread	13.33	63.268
11.	Petroleum Products	39.831	73.06
12.	Capital goods	24.138	9.641
13.	Machinery	13.908	12.051
14.	Transport Equipment	38.684	15.750
15.	Total Imports	6.485	22.914

Micro Aspects of Structural Changes :

Over and above the macro level, structural changes should also be studied at micro level. This micro aspects would mainly refer to (a) commodity composition of imports.

In regard to structural changes in the commodity composition, the following two questions need to be analysed :-

(i) What is the degree of concentration in the commodity composition of imports? Has there been any change in the degree of concentration over time?

(ii) Is there any shift in the shares of the consumer goods, intermediate goods and capital goods in the total imports of a country?

(i) Commodity concentration index :

This index is useful to analyse as to what extent the economic fortune of a country depends on one or few commodities. Following Michaely Michael[12], commodity concentration Index is defined as $C = \sqrt{\sum (x_i/x)^2} \cdot 100$ where x_i refers to imports of i^{th} item in India and x refers to total imports in India in some specified year. The value of the concentration coefficient will be lower, more evenly imports are distributed over the various possible categories and viceversa. As Michaely has pointed out that the value of concentration index depends

12 Michaely Michael, "Concentration of Exports and Imports, An International Comparison", The Economic Journal, Dec. 1958. PP. 722-736

in an important way on what commodity classification scheme is employed.[13] In particular, concentration index will be higher, greater the level of aggregation over the commodities, for at a higher level of aggregation products which are relatively dissimilar are classified together. Massel[14] has calculated commodity concentration index at one digit level and three digit level of SITC group for different countries of the world and he has also come to the conclusion that concentration index is higher at one digit level than at three digit level of SITC group.

In this study, an attempt is made to calculate commodity concentration index both at current prices as well as at constant prices at the three digit level of RITC 1965 group.

Table 3.16

Commodity concentration Index in Money Terms and in Real Terms

Year	Money term	Real term	Year	Money term	Real term
1950-51	23.30	34.18	1970-71	22.78	22.78
1955-56	10.82	31.27	1971-72	16.52	30.07
1960-61	35.00	40.60	1972-73	18.69	18.40
1965-66	31.73	29.41	1973-74	22.09	18.59
1966-67	25.62	27.35	1974-75	29.17	26.88
1967-68	23.45	34.30	1975-76	33.65	26.73
1968-69	23.01	41.18	1976-77	18.35	23.55
1969-70	21.26	25.89			

13 Michaely Michael, op.cit. PP 722-736

14 Massell Benton F., "Export concentration and fluctuations in Export Earnings: A Cross section analysis", American Economic Review, March 1964. PP. 47-63

It is interesting to examine the trends in the commodity concentration index in money terms and in real terms. A close examination of data representating concentration index in real terms and in money terms shows that there is no clear-cut relationship between these two i.e. to say we can not conclude that the concentration index is greater or smaller in current rupee than that index in constant rupee. For the years 1966-67, 1967-68, 1968-69, 1969-70, 1971-72, and 1976-77, imports are more diversified at current prices than at constant prices, while for 1965-66, 1972-73, 1973-74, 1974-75 and 1975-76 diversification of imports is greater at constant prices than at current prices.

What we can conclude from the above discussion is that, even though with the fluctuations in concentration index both at current prices as well as at constant prices, it indicates a fair increase in the diversification of imports over a period of 27 years. It becomes evident from the above table (i.e. Table 3.16) that imports are much more diversified in real terms than in money terms over the period under consideration, because the same index in money terms has declined by 21% while it has declined by 31% in real terms over a period of 27 years.

Commodity Composition of Imports :

Before examining the commodity composition of imports, one question to which an attention should be paid first concerns, trends in relative prices. Divergence in relative price of different commodity groups could thus result in shifts in commodity shares. It is thus very pertinent to inquire about the share of commodity groups to total imports both in money terms as well as in real terms.

Table 3.17

Triennial averages of the percentage share of imports of different commodity group to total imports (Current Prices)

Triennium	Consumer goods	Intermediate goods for producing consumer goods	Intermediate goods for producing capital goods	Capital goods
1	2	3	4	5
1950-51 to 1952-53	30.63	31.65	18.28	19.43
1953-54 to 1955-56	23.10	27.73	25.53	23.64
1956-57 to 1958-59	18.97	18.13	33.30	29.60
1959-60 to 1961-62	21.73	18.93	28.50	30.84
1962-63 to 1964-65	24.83	16.60	23.47	35.10
1965-66 to 1967-68	35.53	17.40	17.80	29.27
1968-69 to 1970-71	28.10	23.63	22.67	25.60
1971-72 to 1973-74	18.43	22.67	33.43	25.47
1974-75 to 1976-77	26.07	18.00	38.37	17.56

Source: Table 3.1

Table 3.18

Triennial averages of the percentage share of imports of different commodity group to total imports (Constant Prices)

Triennium	Consumer goods	Raw-materials for producing consumer goods	Raw materials for producing capital goods	Capital goods
1	2	3	4	5
1950-51	12.75	7.39	12.32	67.51
1955-56	21.13	7.13	15.48	56.26
1960-61	47.02	8.80	12.00	32.18
1965-66 to 1967-68	36.95	17.17	13.74	32.14
1968-69 to 1970-71	28.74	17.68	24.53	29.05
1971-72 to 1973-74	14.11	21.18	34.45	30.26
1974-75 to 1976-77	26.60	27.62	27.49	18.29

Source: Table 3.2

It is evident from the above given tables i.e. 3.17 and 3.18 that the share of consumer goods imports to total imports are more or less equal both in real terms as well as in money terms. The share of consumer goods imports in total imports has declined inmoney terms. In real terms it has increased from 12.75% in 1950-51 to 26.6% in the triennium 1974-75 to 1976-77 i.e. it has increased by 116.6%. While in money terms the same has declined from 30.63% during the triennial average of 1950-51 to 1952-53 to 26.07% during the triennial average

of 1974-75 to 1976-77, i.e. it has declined by 14.89%. Hence we can see that the share of consumer goods imports to total imports has declined in current rupee while reverse is the case in constant rupee.

While the share of intermediate goods for producing capital goods to total imports increased quite markedly. The share of intermediate goods for producing capital goods has increased by 109.9% and 125.0% in money terms and in real terms during the period of 27 years respectively. However the share of capital goods imports to total imports has declined by 9.62% and 73.1% in money terms and in real terms respectively.

The diversification emerges with regard to the share of the raw material and the intermediate goods for producing consumer goods to total imports in real terms and inmoney terms. Inmoney terms the same has declined by 43.13% while in real terms it has increased by 285.7% during the period under consideration.

It is argued that the development of the economy generally affects the pattern of imports of a country. In order to find out whether there is or not a relationship between the share of different commodity imports to total imports and the level of development of a country, we have fitted a bivariate linear regression model of the Form $Y=a + bx$ (where Y

and x denote the percentage share of commodity imports to total imports and per capita income respectively) to the time series data for the year 1965-66 to 1976-77 on current year basis and constant year basis for different groups of commodity imports i.e. consumer goods, intermediate goods for producing consumer goods, intermediate goods for producing capital goods, capital goods and food articles. The purpose of carrying out the bivariate analysis is to find out the total explanation of the dependent variable (percentage share of imports of different commodity groups to total imports) by the explanatory variable (per capita income).

Regression Analysis :

At current prices.

(1) Consumer goods :-

$Y = 36.969199 - 0.013941x$

$R^2 = 0.17854$

$t_B = 1.4742615$ Significant at 10% level.

(2) Intermediate goods for producing consumer goods.

$Y = 21.820126 - 0.0019575x$

$R^2 = 0.016349$

$t_B = 0.40768$

(3) Intermediate goods for producing capital goods.

$Y = 1.507119 + 0.0372268x$

$R^2 = 0.79038$

$t_B = 6.1404699$ Significant at 1% level.

(4) Capital goods.

$Y = 39.702484 - 0.21368x$

$R^2 = 0.77470$

$t_B = 5.8638949$ Significant at 1% level.

(5) Food articles

$Y = 25.631249 - 0.0070874x$

$R^2 = 0.04626$

$t_B = 0.69644$

<u>At Constant Prices</u>

(1) Consumer Goods

$Y = 84.984789 - 0.095499x$

$R^2 = 0.059093$

$t_B = 0.79249$

(2) Intermediate goods for producing consumer goods

$Y = -23.79942 + 0.073117x$

$R^2 = 0.11692$

$t_B = 1.150653$ Significant at 10% level

(3) Intermediate goods for producing capital goods.

$Y = -63.459588 + 0.14477x$

$R^2 = 0.30744$

$t_B = 2.1069366$ Significant at 5% level

(4) Capital goods

$Y = 102.24123 - 0.12235x$

$R^2 = 0.10316$

$t_B = 1.0725021$

(5) Food articles

$Y = -22.831854 + 0.060375x$

$R^2 = 0.089768$

$t_B = 0.99308$

Out of 10 regression analyses, only three turn out to be significant, on current year basis, intermediate goods for producing capital goods and capital goods turn out to be significant at 1% level with R^2 0.79 and 0.77 respectively. However at constant prices, intermediate goods for producing capital goods turn out to be significant at 5% level with R^2 0.30. The correlation coefficient between percentage share of imports of food articles in total imports and per capita income seems to be very low both in money terms and in real terms but it also turns out to be insignificant.

The positive association between the share of intermediate goods in total imports and level of development is fully consistent with expectations. These are required for use in manufacturing industries and it is well known that the

share of manufacturing in national product increases as the income increases. Thus as the income rises, the demand for these goods increased and the imports evidently play an important role in meeting this demand.

The significant items the share of which in total imports has fallen during 1950-51 to 1976-77 are dyeing tanning and colouring materials, machinery and transport equipment at the current prices and at the constant prices, commodities are food articles, non-food consumer articles, dyeing tanning and colouring materials, textile fibre yarn and thread, non-ferrous metal and transport equipments. However, the share of food articles, non-food consumer articles, chemicals, fertilizers, Iron & Steel, non-ferrous metal, petroleum products has increased in real terms while at current prices chemical goods, fertilizers and petroleum products show their increased share in total imports.

Thus, it may be concluded that divergences in relative price movements have resulted in shifts in commodity shares. When the impact of price change is removed, it shows an entirely reverse trend of shares of some of the commodity groups to total imports.

Table 3.19

Imports of major commodity group (Percentage distribution)

Constant Prices

Year	Consumer goods	Intermediate goods for producing consumer goods	Intermediate goods for producing capital goods	Total of intermediate goods	Capital goods
1	2	3	4	5	6
1950-51	12.75	7.39	12.32	19.71	67.51
1955-56	21.13	7.13	15.48	22.61	56.26
1960-61	47.02	8.80	12.00	20.80	32.18
1965-66	19.85	12.69	15.63	28.32	52.46
1966-67	29.96	25.61	11.21	36.82	33.22
1967-68	39.06	19.54	21.48	41.02	19.94
1968-69	42.21	14.27	27.70	41.97	15.82
1969-70	20.01	15.37	17.40	32.77	47.22
1970-71	24.00	23.40	28.50	51.90	24.10
1971-72	11.03	15.42	22.83	38.25	50.72
1972-73	12.25	23.06	38.91	61.97	25.78
1973-74	20.58	27.24	30.82	50.06	21.36
1974-75	21.70	16.33	40.46	56.79	21.52
1975-76	35.22	20.60	23.04	43.64	21.14
1976-77	27.40	28.53	27.38	55.91	16.69

Source: Table 3.2

Table 3.20

Imports of Various commodity Groups (Percentage Distribution)

(Current Prices)

Year	Consumer goods	Intermediate goods for producing consumer goods	Intermediate goods for producing capital goods	Total of Intermediate goods	Capital goods
1	2	3	4	5	6
1950-51	26.19	34.45	19.05	53.50	20.30
1951-52	32.20	35.90	14.60	50.50	17.30
1952-53	33.50	24.60	21.20	45.80	20.70
1953-54	24.70	28.40	25.20	53.60	21.70
1954-55	24.70	28.20	26.60	54.80	20.50
1955-56	19.90	26.60	24.80	51.40	28.70
1956-57	13.80	21.40	35.00	56.40	29.80
1957-58	15.50	17.20	37.30	54.50	30.00
1958-59	27.60	15.80	27.60	43.40	29.00
1959-60	23.30	18.90	28.70	47.60	29.10
1960-61	23.70	19.00	27.60	46.60	29.70
1961-62	18.20	18.90	29.20	48.10	33.70
1962-63	21.70	18.70	25.40	44.10	34.20
1963-64	23.40	16.40	24.50	40.90	35.70
1964-65	29.40	14.70	20.50	35.20	35.40
1965-66	30.50	13.90	20.60	34.50	35.00
1966-67	39.70	17.40	15.20	32.60	27.70
1967-68	36.40	20.90	17.60	38.50	25.10
1968-69	30.50	24.20	17.50	41.70	27.80
1969-70	29.80	23.30	22.00	45.30	24.90
1970-71	24.00	23.40	28.50	51.90	24.10
1971-72	17.70	23.70	32.80	56.50	25.80
1972-73	15.10	23.10	33.30	56.40	28.50
1973-74	22.50	21.20	34.20	55.40	22.10
1974-75	22.95	19.37	42.28	61.65	15.40
1975-76	30.44	17.79	34.02	51.81	17.75
1976-77	24.81	16.84	38.82	55.66	19.53

Source: Table 3.1

Table 3.21

India's Imports of Principle Commodities: 1950-51 to 1976-77

(At Current Prices) (Percentage distribution)

Year	Food articles	Non-food articles (Consumer)	Chemicals	Dyeing, tanning & colouring materials	Fertilizers	Textile fibre Yarn & thread	Iron & Steel	Non-ferrous metal	Petroleum products	Machinery	Transport equipment
1	2	3	4	5	6	7	8	9	10	11	12
1950-51	20.3	5.9	1.51	2.24	1.89	23.83	3.83	4.35	8.64	14.04	6.25
1951-52	26.3	5.9	2.1	2.0	0.6	25.8	3.20	2.2	17.3	12.3	4.9
1952-53	27.2	6.3	1.9	1.6	0.3	16.9	3.70	2.9	11.7	15.2	5.5
1953-54	17.1	7.5	2.2	3.3	0.3	16.9	5.0	2.6	14.9	17.1	4.6
1954-55	16.4	8.4	2.7	2.9	0.3	15.3	5.6	4.0	12.5	14.1	6.3
1955-56	7.8	12.1	3.1	2.6	0.3	15.8	10.9	3.8	8.1	19.3	9.4
1956-57	4.8	8.9	3.1	1.9	0.6	11.5	17.2	4.7	8.9	21.0	8.8
1957-58	9.1	6.5	2.7	1.2	0.7	7.5	14.9	4.9	10.5	23.2	6.7
1958-59	21.9	5.8	3.6	1.1	1.3	6.2	12.5	4.1	8.3	21.2	7.8
1959-60	18.7	4.5	4.6	1.0	1.9	6.9	11.2	4.0	6.0	21.6	7.4
1960-61	19.1	4.5	3.5	1.1	1.1	9.9	13.0	4.2	7.3	23.2	6.4
1961-62	13.5	4.7	3.3	1.3	1.4	8.8	11.4	4.5	8.8	27.7	5.9
1962-63	15.8	5.8	3.4	1.1	2.6	7.9	9.7	4.9	7.7	27.8	6.4
1963-64	17.5	5.9	2.6	0.7	3.1	6.5	8.9	4.4	8.5	29.9	5.8
1964-65	24.6	4.6	2.6	0.7	2.1	5.8	9.0	4.3	5.1	29.9	5.5
1965-66	22.8	5.4	2.5	0.4	2.8	3.7	7.3	4.0	4.9	29.9	5.0
1966-67	34.2	5.7	2.6	0.4	5.0	4.3	5.6	4.2	3.0	24.9	3.0

cont...

Table 3.21 (contd.

Year	1	2	3	4	5	6	7	8	9	10	11
1967-68	28.8	7.6	3.8	0.4	7.1	4.8	6.0	4.4	3.7	21.03	4.0
1968-69	21.3	8.9	4.3	0.5	7.9	6.8	5.2	4.7	4.4	23.8	3.4
1969-70	20.2	9.5	4.2	0.4	4.8	8.3	5.5	4.7	8.6	21.7	3.2
1970-71	16.6	7.4	5.5	0.6	4.5	7.1	9.6	7.3	8.3	20.0	4.1
1971-72	10.7	6.9	5.0	0.5	5.0	7.0	13.6	5.6	10.6	20.6	5.2
1972-73	8.56	5.99	4.89	0.48	5.76	5.59	13.1	5.84	7.75	23.1	5.4
1973-74	18.51	4.1	3.71	0.35	7.14	0.34	9.18	4.72	18.96	21.5	3.2
1974-75	18.93	4.02	4.12	0.25	10.76	1.58	9.99	3.95	25.6	12.5	2.8
1975-76	27.14	3.3	3.42	0.22	9.46	1.31	6.55	1.91	23.28	14.77	2.98
1976-77	19.22	5.53	2.74	0.30	4.44	3.88	4.95	3.19	28.16	16.58	2.94

Source: Table 3.1

Table 3.22

India's Imports of Principal Commodities - Constant Price

(Percentage distribution)

Year	Food articles	Non-food articles (Consumer)	Chemicals	Dyeing, tanning & colouring materials	Fertilizers	Textile fibre Yarn & thread	Iron & Steel	Non-ferrous metal	Petroleum products	Machinery	Transport equipment
1950-51	6.53	6.22	2.23	1.20	0.012	5.66	5.26	3.91	1.10	41.91	25.61
1955-56	12.61	8.53	1.38	0.013	0.021	4.52	6.41	1.83	3.02	53.85	2.41
1960-61	7.99	39.03	1.32	0.454	0.11	4.57	5.15	3.57	0.61	25.37	6.71
1965-66	10.40	9.45	1.78	0.42	1.81	2.16	7.66	3.43	1.42	48.69	3.74
1966-67	19.83	10.13	1.59	0.162	3.16	2.33	3.40	3.36	2.04	30.50	2.71
1967-68	20.30	18.76	3.67	0.55	5.06	4.12	5.45	5.61	8.09	16.38	3.56
1968-69	12.33	29.88	3.53	0.584	1.71	3.78	4.40	5.40	10.95	15.04	0.782
1969-70	12.85	7.17	3.35	0.498	4.22	0.66	4.47	4.59	5.34	40.94	6.28
1970-71	16.6	7.4	5.5	0.60	4.5	7.1	9.6	7.3	8.3	20.0	4.1
1971-72	6.06	4.97	2.32	0.39	3.62	4.89	11.26	5.15	6.19	45.94	4.79
1972-73	4.72	7.53	3.66	0.687	5.52	5.33	15.88	8.80	10.09	20.52	5.27
1973-74	12.89	7.69	3.98	0.667	4.70	2.31	11.17	6.49	8.39	17.49	3.88
1974-75	16.76	16.35	2.92	0.296	6.97	1.13	14.73	7.33	5.89	18.12	3.39
1975-76	29.99	10.98	3.85	0.433	5.74	2.54	13.95	2.17	3.12	16.67	4.47
1976-77	17.00	10.40	3.19	0.519	5.55	4.37	7.46	6.10	9.85	14.11	2.59

Source: Table 3.2

Adams, N.A.[15] has examined the association between per capita income and shares of major commodity groups in total imports.

With the cross section analysis of 49 countries for the average of four years 1955-1958, he came to conclusion that, as income level rises, share of intermediate goods in total imports rises quite markedly from an average 9.2% in the lowest income class to 27.3% in the highest income class. Correspondingly share of consumer goods falls from 64.4% in the lowest income class to 46.4% in the highest income class. For capital goods, however no association appears evident from the table 3.23.

He has classified consumer goods into two groups: Food Articles and Manufactured Goods. A study by him shows that there is no sensible relationship between share of food products and per capita income, for manufactured consumer goods there is a distinct negative association, the shares falling at higher levels of income.

Considering the time series analysis of different countries (viz., Denmark, Sweden, Japan, Canada, Australia), it will be noted that for all countries shown the secular trend reflects a fall in the share of consumer goods and a

15 Adams, N.A.: "Import Structure and Economic Growth: A Comparison of Cross-Section and Time Series Data", Economic Development and Cultural Change, January, 1967. pp. 143-162

corresponding rise in the share of intermediate goods.

This analysis of commodity shares has been based on current price data. However he had pointed out that the divergence in the relative prices of different commodity groups could result in shifts in commodity shares.

Table 3.23

Percentage Share of Major Commodity Groups in Total Imports

1955-58 average

Sr. No.	Income Class	Country	Capital goods	Intermediate goods	Consumer goods		
					Food	Manufactured	Total
1	2	3	4	5	6	7	8
1.	E	United Kingdom	11.6	36.9	35.5	16.0	51.5
2.	E	United States	11.8	34.3	26.2	27.6	53.8
3.	E	Netherlands	25.2	32.6	13.7	28.5	42.2
4.	E	Sweden	27.8	26.9	12.7	32.5	45.2
5.	A	India@	40.1	21.3	14.5	24.2	38.7
6.	A	Indonesia	15.2	13.7	17.3	53.7	71.0
7.	B	Ghana	19.5	4.7	19.2	56.6	75.8
8.	C	Greece	29.4	24.2	18.7	27.6	46.3
9.	C	Turkey	44.3	16.2	8.2	31.3	39.5
10.	C	Brazil	37.5	27.6	12.3	22.6	34.9
11.	A	Br.East Africa	25.9	7.4	6.5	60.2	66.7
12.	C	Colombia	36.1	15.5	6.4	41.9	48.3
13.	A	Nigeria	24.7	3.5	13.2	58.5	71.7

cont...

Table 3.23 (contd.)

Sr. No.	Income Class	Country	Capital goods	Inter-mediate goods	Consumer goods		
					Food	Manu-factured	Total
1	2	3	4	5	6	7	8
14.	A	Thailand	23.1	7.3	9.2	60.4	69.6
15.	B	Jamaica	22.8	12.7	19.7	44.8	64.5
16.	E	Australia	26.6	20.2	4.9	48.3	53.2
17.	D	Austria	23.2	28.7	16.1	32.0	48.1
18.	E	Belgium and Luxembourg	22.3	35.2	13.8	28.7	42.5
19.	A	Burma	28.0	7.1	10.7	54.2	64.9
20.	E	Canada	33.3	18.9	9.7	48.1	57.8
21.	B	Ceylon	12.0	11.4	40.9	35.7	76.6
22.	C	Costa Rica	28.5	11.4	13.4	46.6	60.0
23.	B	Ecuador	34.5	6.6	9.6	49.2	58.8
24.	E	Finland	31.6	24.9	16.7	26.9	43.5
25.	D	Germany(West)	15.6	38.9	25.8	19.7	45.5
26.	B	Honduras	20.4	9.6	11.8	58.2	70.(
27.	D	Ireland	18.5	21.5	16.7	43.3	60.(
28.	D	Italy	19.3	51.1	15.3	14.2	29.5
29.	B	Japan	10.7	64.6	17.3	7.4	24.
30.	C	Mexico	47.0	15.5	6.4	31.1	37.
31.	E	Newzealand	33.5	9.0	9.2	48.3	57.
32.	E	Norway	46.7	18.6	11.6	23.1	34.
33.	C	Panama	19.0	4.4	16.4	60.1	76.
34.	B	Philippines	26.4	9.4	17.4	46.7	64
35.	C	Portugal	29.9	32.9	10.2	36.9	37

cont...

Table 3.23 (contd.)

Sr. No.	Income Class	Countries	Capital goods	Inter-mediate goods	Consumer goods		
					Food	Manu-factured	Total
1	2	3	4	5	6	7	8
36.	B	Rhodesia and Nyasaland	35.4	7.8	8.4	48.4	56.8
37.	C	Spain	29.7	44.0	9.4	16.8	26.2
38.	B	U.A.R.(Egypt)	27.9	24.3	17.2	30.5	47.7
39.	A	Liberia	27.2	4.1	19.6	49.2	68.6
40.	E	Denmark	24.4	29.2	14.7	31.6	46.3
41.	A	South Korea[c]	15.7	37.9	18.4	27.9	46.3
42.	B	El Salvador	23.0	14.3	15.0	47.6	62.6
43.	B	Nicaragua[c]	24.9	6.3	8.6	60.2	68.8
44.	B	Paraguay[d]	23.6	2.5	25.4	48.4	73.8
45.	D	Argentina	43.2	35.4	6.1	15.3	21.4
46.	C	South Africa[e]	31.4	12.5	4.1	52.0	56.1
47.	D	Venezuela	46.0	5.3	12.8	35.9	48.7
48.	E	France	18.4	46.7	22.9	11.9	34.9
49.	D	Israel[a]	31.8	24.3	19.8	24.1	43.9

Source: Adams N.A., op.cit., p.161.

* a = Import data for 1958 only.
c = Import data for 1955-57 only.
d = import data for 1956 and 1957 only.
e = Import data for 1957 and 1958 only.

Note: Countries are grouped into income classes according to per capita income at or around 1954. Figures are per capita income in US dollars.

Class A	0-99
Class B	100-199
Class C	200-299
Class D	300-399
Class E	700 and above.

Income classes A, B, and C (per capita Income below $300)are classified as underdeveloped and income classes D and E as developed.

Table 3.24 :

Shares of Major Commodity Groups in Imports of Selected Years of Periods 1870-1930 and 1955-58

	Percentage shares			Total
	Consumer goods	Intermediate goods	Capital goods	
1	2	3	4	5
Japan				
1868-1872	87.4	8.2	2.7	100
1883-1887	66.8	19.4	12.5	100
1895-1897	45.4	35.0	19.1	100
1908-1912	27.2	54.0	18.3	100
1923-1927	26.6	59.2	13.6	100
1955-1958	24.7	64.6	10.7	100
Denmark				
1874-1876	60.0	29.8	10.1	100
1884-1886	63.6	26.4	9.9	100
1895-1897	64.6	23.2	12.0	100
1907-1909	62.1	26.9	11.0	100
1910-1912	59.4	28.9	11.7	100
1919-1921	48.4	37.1	14.4	100
1928-1930	57.0	30.4	12.7	100
1955-1958	46.3	29.2	24.4	100
Sweden				
1871	79.4	13.5	7.1	100
1880	76.7	16.6	6.5	100
1890	68.1	21.6	10.4	100
1900	55.4	29.4	15.2	100
1910	57.2	27.4	15.6	100
1920	49.8	29.8	19.9	100

cont...

Table 3.24 (contd.)

	Percentage shares			Total
	Consumer goods	Intermediate goods	Capital goods	
1	2	3	4	5
1930	48.9	25.5	25.6	100
1955-1958	45.2	26.9	27.8	100
Australia				
1873	n.a.	n.a.	11.2	100
1886	n.a.	n.a.	16.6	100
1901-1903	64.3	13.5	22.2	100
1903-1913	59.9	14.6	26.4	100
1919-1920	59.6	17.5	22.7	100
1928-1929	50.4	19.5	30.0	100
1955-1958	53.2	20.2	26.6	100
Canada				
1880-1882	67.4	16.7	15.8	100
1892-1894	62.8	23.5	13.5	100
1897	60.8	25.1	14.0	100
1911	54.1	21.6	24.2	100
1919-1920	52.4	25.5	22.0	100
1955-1958	47.8	18.9	33.3	100

Source: Adams N.A., op.cit., p.153.

Colonial Imports before Independence:

Trade is widely held to have been the goal of colonialism. One school of thought, which may be traced from Hobson via Lenin and down to latter day Marxist thinkers, regarded it as the prime mover of imperialist expansion.[16] Other authors, emphasising the political, military or idealistic grounds for colonialism may have argued that the trade was the result rather than the cause of colonialism. But they did not dispute the actual existence of an association between the two.

As far as India is concerned, it may be possible to argue that colonialism was the result of trade rather than other way round. It should be noted here that from mere traders, Britishers became rulers after the bettle of Plassey in 1757. India had trade relations with Britain ever before 1757. It was Akbar who encouraged the trade activities with Britishers. Jehangir also encouraged the Britishers. The activities of Foreigners resulted in a widened market for Indian commodities and an increase in prices. But the share of Indians in India's trade was seriously curtailed. The uncertainty and instability following a fracticidal war in 1657 resulted in a deterioration of India's trade specially after the death of Aurangzeb in 1707. The operation of the forces of disintegration following the death of Aurangzeb

16 Kleiman E.: "Trade and Decline of Colonialism", Economic Journal, September 1976. pp. 459-479

in 1707 coupled with foreign invasions played havoc with Indian industries and internal production declined. Moreover, the English began to penetrate into Indian politics after the weakening of the central authority and in 1757, by the battle of Plassey, they became sovereign power in Bengal. Thus from mere traders, they became rulers as well. Hence it can be argued that it is trade which has resulted into colonialism in India.

Statements connecting colonialism with trade amount, in fact, to the claim that a country's trade with territories politically dependent on it, is more profitable than its trade with the rest of the world. This implies some monopolisation of colonial trade. Forcing the colony's population to buy their imports for more and to sell their exports for less than going world prices. In so far as the trade monopolies were granted to individuals they need not, in theory at least, have affected the colony's choice of trade partners. But the growing internal democratisation and the colonial powers required some such special status to be extended to all their nationals, in the forms of preferential treatment of goods originating in or desired for the markets of the metropolitan country. Thus a trade structure biased towards the metropolitan country became a necessary condition for the economic exploration of the colonial territories through trade.17

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17. Kleiman E. Trade and the decline of colonialism, op.cit. pp.453-473

With regard to the share of U.K. in Indian imports during 1919-20 to 1923-24, U.K. accounted for 57.6% on an average of Indian imports, considering the British empire i.e. U.K., Burma, Ceylon Australia, Canada, Kenya, Zanzibar and Pemba this share was 65.2%. In other words, we can say that, about 2/3r commodities were imported from the British empire during this period. However this share has gradually declined from 65.2% to 42.3% during 1945-46 for the British Empire and from 57.6% to 25.4% in 1945-46 for U.K. It should be noted here that even after the independence this share has not declined at a higher rate. The share of U.K. in Indian imports during the years 1950-51 and 1952-53 were 20.81% and 22.82% respectively. But it has increased to 26.65% during 1953-54. Moreover, with fluctuations, this share has declined to 6.33% during 1976. Thus it is obvious that this share has declined by 76.9% after independence gradually.

Kleiman has presented the shares of metropolitan countries in the exports and imports of their former colonies in the year 1960-1962 arranged by the period at which the latter became independent and he came to the conclusion that "Colonial Bilateralism was the less evident the longer the period which elapsed since the attainment of independence". Thus this time interval is the only factor affecting the metropolitan trade shares, As far as this study is concerned, it also coinsides with the argument provided by Kleiman with regard to metropolitan share in colonies' trade.