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Net vs. Gross Devaluation in June 1966

On June 6, 1966, the rupee was devalued by 57.5 percent, computed as the increase from Rs. 4.76 to Rs. 7.50 in the official rate on the dollar.[1] The devaluation was accomplished by various other measures including, in particular, a removal of the major export subsidy device—the import entitlement schemes—and a significant reduction in import duties.

It is the purpose of this chapter to quantify the degree of effective devaluation, when the parity change is adjusted for these and other changes in trade subsidies and tariffs. We thus distinguish between the pure parity change, which·may be described as the "de jure," "gross," devaluation, and the "de facto," "net" devaluation. Remember that we are adjusting *only* for the simultaneous changes in trade taxes and subsidies and *not* for the effects of other measures such as import liberalization in the shape of larger (maintenance) aid flows.

It is also necessary to note that the export subsidies were soon to be revised and steadily increased through 1966–70, a process which we describe and whose magnitude and effects we seek to quantify in later chapters. In the present chapter, we confine our statistical analysis to the net devaluation as of June 6, 1966, when the formal parity change and the changes in the export subsidization schemes and import duties were announced by the government of India.

Exports.

Among the changes in export subsidies and duties which accompanied the devaluation were:

1. the imposition of a number of countervailing export duties on "traditional" exports, aimed at partially or wholly neutralizing the effect of devaluation thereon on the assumption that India had monopoly power in trade in these items;

2. the elimination of the import entitlement schemes, described in Chapter 3, as well as the tax credits which had been granted in the 1963, 1964 and 1965 budgets; and

3. the elimination of a few cash subsidies which had been introduced in the year preceding the devaluation on selected engineering goods.

EXPORT DUTIES

We analyze initially the impact of the imposition of the export duties. Table 6–1 lists the exports on which the duties were levied at the time of the devaluation. It is interesting to note that duties were levied on exports amounting to as much as 62–63 percent of the overall export values. Thus an effort was made to offset devaluation on a *very* wide front.

Table 6–1 lists, in columns (4) and (5), export duties before and on the date of devaluation. Since the duties were, for the most part, specific, they had to be converted into effective *ad valorem* equivalents. The only way to do this, in practice, is to take appropriate export unit values, f.o.b., for each product and to relate the specific duty to them, converting the duty into an *ad valorem* figure. We did this, using the average export unit values in dollars for the relevant items for the two years 1964–65 and 1965–66, in column (3). This estimate of the export unit value was multiplied by the pre-devaluation rupee-dollar rate of 4.76, the pre-devaluation export duty (nil) then being deducted therefrom to arrive in column (6) at the net f.o.b. earning (in rupees) from the unit export of each item. The same procedure, for the post-devaluation situation, involved multiplying these unit export values by the post-devaluation parity rate of 7.5 and subtracting the new duties in column (5), to arrive in column (7) at the net realization (in rupees) from the unit export of each item after the devaluation. The proportionate increment in this net realization from unit export, in column (8), represents, then, the estimated *ad valorem* change in export incentives thanks to both the parity change and the export duty.[2]

Note that the net devaluation on these export items, constituting over 60 percent of the total, was still positive. The net export incentive effect amounted to a negative number only in the case of jute waste (which represents, however, 14–15 percent of jute exports in 1964–65 and 1965–66). We will shortly weight the incentive changes in different exports by their export shares. Prior to that, however, we proceed to analyze the effects of the change in the export subsidy schemes.

TABLE 6–1

Net Change in Export Realization from Devaluation and Export Duty Imposition

Items (1)	Unit (2)	Average (1964–66) Unit Value of Exports (value divided by quantity) U.S. $ (3)	Export Duty (Rs. per unit) just before 6/6/66 (4)	Export Duty (Rs. per unit) as of 6/6/66 (5)	Old Export EER (3) × 4.76 minus (4) (6)	New Export EER (3) × 7.5 minus (5) (7)	(7) − (6) (8)
1. Jute manufactures	m. ton	397.4	nil	900	1891.6		
a. Carpet backing	m. ton	604.6	nil	900	2877.9	3634.5	26.3
b. Hessian	m. ton	440.2	nil	900	2095.4	2401.5	14.6
c. Sacking and other products	m. ton	309.4	nil	600	1472.7	1720.5	16.8
d. Cotton bagging	m. ton	226.4	nil	600	1077.7	1098.0	1.9
e. Jute waste	m. ton	98.6	nil	600	469.3	139.5	−70.3
2. Tea	Kg.	1.2	nil	2	5.7	7.0	22.8
3. Coffee	Kg.	1.0	nil	0.50	4.8	7.0	45.8
4. Black pepper	Kg.	0.8	nil	1.25	3.8	4.8	26.3
5. Oilcakes other than copra cakes	m. ton	87.2	nil	125	415.1	529.0	27.4
6. Raw cotton	m. ton	519.8	nil	1000	2474.2	2898.3	17.2
7. Cotton waste	Kg.	0.2	nil	0.30	1.0	1.2	20.0
8. Raw wool	Kg.	1.2	nil	1.00	5.7	8.0	40.4
9. Tobacco (unmanufactured)	Kg.	0.7	nil	0.75	3.3	4.5	36.4
10. Mica	Kg.	0.6	nil	0.50	2.9	4.0	37.9
11. Hides, skins and leather, tanned or untanned	Kg.	2.9	nil	10% a.v.	13.8	19.6	42.0
12. Coir and coir manufactures	Kg.	0.3	nil	10% a.v.	1.4	2.0	42.8
13. Manganese ore	m. ton	17.5	nil	7.00 to 20.00	83.3	124.2 / 111.2	49.1 / 33.5
14. Iron ore and concentrates	m. ton	7.3	nil	5.00 to 10.00	34.7	49.8 / 44.8	43.5 / 29.1

a.v. = ad valorem

EXPORT SUBSIDIES

We have already seen that the major method of export subsidization prior to the devaluation was the import entitlement schemes. Under these schemes, the eligible exporters were entitled to retain a prespecified part of their f.o.b. value of export earnings. These entitlements, given the exchange control regime, had a market premium, so that they could be construed as export subsidies and reduced to equivalent *ad valorem* rates by calculating the proportionate increment in net realization from unit f.o.b. export earnings that they provided.[3]

The diversity of the entitlement rates, as well as their variability and plasticity in manipulation, make it nearly impossible to measure their net impact on export subsidization during 1966 with any reliability. It is clear, however, that by June 1966 the import premium had risen dramatically on a number of entitlements; and premia of the order of 100 percent do not appear to have been exceptional if we base our judgment on interviews. Indeed, in certain markets such as rayon piece goods, the premium on the entitlements was as high as 400 percent and thereabouts by mid-1965 and until the devaluation.

In the absence of reliable data on the premium on entitlements in each of the entitlement schemes, as of the months preceding the devaluation, we have calculated the effective export subsidy arising from the different import entitlement schemes, on the assumption of a premium on entitlements of 100 percent except in the case of engineering goods, rayon (where we reliably know it to have been around 400 percent) and cotton textiles.[4]

Table 6–2 presents the calculations of the resulting export subsidy for each scheme, stating explicitly the assumptions made regarding the entitlement rates and the premia for the period immediately prior to the devaluation. They also represent therefore the extent to which the elimination of these schemes offset the devaluation. The "net" effect of the devaluation, allowing for the removal of the entitlements, is thus given as the difference between these estimates in column (4) and 57.5 percent, which was the formal devaluation. This is recorded in column (5). It is thus clear that the devaluation was more than offset (as of June 6, 1966) by the elimination of the entitlement schemes on a sizable fraction of the exports in this area.

TAX CREDITS

We next make adjustment for the removal of the tax credits. Introduced in the Finance Act, 1963, and amended through the 1964 and 1965 Finance Acts, the pre-devaluation tax credits applied at differential rates (2–15 percent) to a number of eligible industries.[5] Since these were rebates on income tax, related to f.o.b. export value, and since the tax amounted to 50 percent of the profits, the equivalent *ad valorem* export subsidy implied by these re-

TABLE 6–2

Net Devaluation on Exports Previously under Import Entitlement Schemes, June 6, 1966

(percent)

Groups (1)	Average Entitlement Rate[a] (2)	Estimated Premium[b] (3)	Effective Devaluation before June 6, 1966 (4)	Net Change after June 6, 1966 (5)
1. Engineering goods	60	125	75	−17.5
2. Chemicals and allied products	75	100	75	−17.5
3. Plastics and linoleum goods	50	100	50	7.5
4. Certain natural essential oils	30	100	30	27.5
5. Handicrafts	50	100	50	7.5
6. Finished leather and leather products	35	100	35	22.5
7. Woolen carpets, rugs and druggets	35	100	35	22.5
8. Silk fabrics and ready-made garments from silk fabrics	45	100	45	12.5
9. Cotton textiles[c]	—	—	50	7.5
10. Books, journals, paper and paper products	75	100	75	−17.5
11. Fish and fish products	15	100	15	42.5
12. Processed foods	15	100	15	42.5
13. Coir yarn and coir products	6	100	6	61.5
14. Tanned hide and skins	19	100	19	38.5
15. Cashew kernels				

16. Pearls, precious stones, diamonds, imitation jewelry, etc.	80	100	−22.5
17. Gold jewelry and gold articles	50	100	7.5
18. Wooden manufactures and timber	75	100	−17.5
19. Fabrics of synthetic fiber and spun glass (including art silk fabrics)		400	
20. Vanaspati—hydrogenated oils and refined vegetable oils; refined castor oil, groundnut oil, cottonseed oil, etc.	70	100	−12.5
21. Cinematographic films and other films	75	100	−17.5
22. Agarbattis and chandon dhoop	25	100	32.5

a. The entitlement rate within each group varies, as indicated in Table 6–3. We have put down here an average figure, based on interviews. This has to be treated as only an "approximation," especially because the rates were "adjustable" upward on executive discretion in many instances.

b. The premium estimate is also "approximate," based on market interviews for some major groups (1, 2, 3, 6, 7, 9, 19) at the time prior to the devaluation and generalized to other groups. Cotton textiles had a complicated premium structure: see Bhagwati and Desai, *India*, p. 420; we have taken the simple average of the net incentive in row (8) in Table 19.5 in Bhagwati and Desai, which works out to 49.3 percent and put it down as 50 percent above in row (9), column (4).

c. See Note b.

bates was *twice* the stated rates. Note also that the tax credits were to be abolished on both the exports which lost the entitlements and the exports on which duties were levied with the devaluation. The net effect of the elimination of tax credits on these industries can thus be estimated as in Table 6–3 (which lists all the items in the import entitlement schemes and a few other minor items as well).

CASH SUBSIDIES ON ENGINEERING GOODS

In the year preceding the devaluation, a few cash subsidies on engineering goods had been introduced at different rates. Steel carried 5 percent, steel pipes and tubes 20 percent, iron castings 4 percent, bicycles 39 percent, bicycle parts 30 percent and wire nails and screws 4 percent. Between them, the 1965–66 exports of these items were only $20.2 million. The export-share weighted average cash subsidy on engineering goods amounted to about 3.3 percent.[6] In Table 6–3, we therefore adjust the entry for this item in column (5) downward by 3.3 percent to allow for the withdrawal of these subsidies on June 6, 1966.

OVERALL ESTIMATE OF "NET" DEVALUATION ON EXPORTS

For the items which overlap those affected by the import entitlement schemes and the export duty changes of June 6, 1966, therefore, we can *subtract* the estimated reduction in export subsidy due to tax-credit elimination in Table 6–3 from the "net" devaluation estimates in Table 6–1, column (8) and Table 6–2, column (5), respectively, to arrive at our *final* estimate of the net devaluation on all these items when the export duties and removal of the entitlements, tax credits and cash subsidies are *all* taken into account. These estimates are presented in Table 6–3, column (5). The net devaluation on exports can then be estimated as the weighted average of these net devaluation rates on each of the listed items. We have weighted these rates by the share of the exports of these items in total exports during 1964–66, to arrive at the total figure of 21.6 percent in row (52), column (5) of Table 6–3.[7]

Invisible Earnings.

The formal devaluation changed the effective rate on all invisible earnings by an identical amount with one significant exception, namely, the National Defense Remittance (NDR) scheme which had been instituted in October 1965 and which was formally abolished with the devaluation.

The devaluation was thus offset on remittances by the removal of the subsidy implicit in the NDR scheme. If we take the effective subsidy *via* the NDR scheme as the *average* of all the quotations during May, June and July 1966, this comes to 110 percent.[8] Subtracting 57.5 percent as the parity

TABLE 6–3

Net Devaluation in June 1966 after Adjusting for All Changes in Export Subsidies and Duties

Product or Product Group (1)	F.o.b. Value of Exports in 1964–65 plus 1965–66 (Rs. millions) (2)	Net Devaluation Based on Parity Change, Imposition of Export Duties and Elimination of Entitlement Schemes (3)	Effect of Tax Credit Elimination (4)	Full Net Devaluation Adjusted for All Changes (5)
1. Jute manufactures				
a. Carpet backing	306	26.3%	−13%	13.3%
b. Hessian	1,979	14.6	−7	7.6
c. Sacking and other products	1,023	16.8	−7	9.8
d. Cotton backing	132	1.9	−7	−5.1
e. Jute waste	3	−70.3	−7	−77.3
2. Tea	2,395	22.8	−5	17.8
3. Coffee	266	45.8	−1	44.8
4. Black pepper	178	26.3	−1	25.3
5. Oil cakes other than copra cakes	730	27.5	−1	26.5
6. Raw cotton	203	17.2	−1	16.2
7. Cotton waste	61	20.0	−1	19.0
8. Raw wool	141	40.4	−1	39.4
9. Tobacco (manufactured)	445	36.4	−1	35.4
10. Mica	210	37.9	−1	36.9
11. Hides, skins (raw)	186	42.0	−5	37.0
12. Coir and coir manufactures	222	36.8	−7	29.8
13. Manganese ore	242	33.5 to 49.2	−31	2.5 to 18.2
14. Iron ore and concentrates	799	29.1 to 43.5	−21	8.1 to 22.5
15. Engineering goods	312	−17.5	−7	−27.8[a]
16. Chemicals and allied products	153	−17.5	−7	−24.5
17. Plastic and linoleum goods	8	7.5	−3	4.5
18. Certain natural essential oils	56	27.5	−3	24.5

TABLE 6–3 (concluded)

Product or Product Group (1)	F.o.b. Value of Exports in 1964–65 plus 1965–66 (Rs. millions) (2)	Net Devaluation Based on Parity Change, Imposition of Export Duties and Elimination of Entitlement Schemes (3)	Effect of Tax Credit Elimination (4)	Full Net Devaluation Adjusted for All Changes (5)
19. Handicrafts	201	7.5	−1	6.5
20. Finished leather and leather products	4	22.5	−7	15.5
21. Woolen carpets, rugs and druggets	99	22.5	−3	19.5
22. Silk fabrics and ready-made garments made of silk fabrics	52	12.5	−7	5.5
23. Cotton textiles	1,128	7.5	−7	0.5
24. Books, journals, paper and paperboard	23	−17.5	−1	−18.5
25. Fish and fish products	136	42.5	−3	39.5
26. Processed food	25	42.5	−7	35.5
27. Coir yarn and coir products				
28. Tanned hides and skins	554	23.0	−7	16.0
29. Cashew kernels	564	57.5	−5	52.5
30. Pearls, precious stones, diamonds, imitation jewelry, etc.	279	−22.5	−1	−23.5
31. Gold jewelry and gold articles	31	7.5	−1	6.5
32. Wooden manufactures and timber	45	−17.5	−7	−24.5
33. Fabrics of synthetic fiber and spun glass (including art silk fabrics)	144	57.5	−7	50.5
34. Vanaspati—hydrogenated oils and refined vegetable oils, refined castor oils, groundnut oil, cottonseed oil, etc.	167	−12.5	−7	−19.5
35. Agarbattis and chandon dhoop	6	32.5	−3	29.5
36. Fresh fruits and vegetables	152	57.5	−21	36.5
37. Coal	71	57.5	−21	36.5
38. Crushed bones	54	57.5	−21	36.5

39. Tiles and earthen wares[b]	7	57.5	−21	36.5
40. All mineral ores other than iron and manganese ores	40	57.5	−31	26.5
41. Ferro manganese	102	57.5	−31	26.5
42. Alcoholic beverages	0.1	57.5	−31	26.5
43. Processed mica powder[c]	1	57.5	−31	26.5
44. Sugar	333	57.5	−7	50.5
45. Rubber goods[d]	39	57.5	−7	50.5
46. Glass	10	57.5	−7	50.5
47. Cement and gypsum products[e]	7	57.5	−7	50.5
48. Cigarettes	21	57.5	−7	50.5
49. Deoiled rice bran[f]	18	57.5	−5	52.5
50. Calcium magnite	16	57.5	−11	46.5
51. Other products[g]	1,910	57.5	−1	56.5
52. All commodities	16,258	—	—	21.6[h]

NOTE: Just before the devaluation, export industries were being accorded incentives in the form of relief from direct taxation. A number of export industries, mainly the traditional ones, were given tax credit certificates at varying rates subject to a maximum of 15 percent of the f.o.b. value of exports. Besides the relief in the form of tax credit certificates, 10 percent of profits attributable to exports could be deducted by exporters of *all* products from their taxable income. In the case of certain specified industries (those figuring in the First Schedule of the Industries (Development and Regulation Act 1951) a further deduction—to the extent of 2 percent of f.o.b. value of exports—from taxable income was permitted. All these forms of tax incentives were abolished when the rupee was devalued. The effect of the elimination of tax incentives thus equals $(2t_c + 2 + .10\pi)$, where t_c is the rate of tax credit certificates and π is the rate of profit as a proportion of f.o.b. value. This formula assumes a 50 percent tax on profits and applies only to industries which were eligible for all the three tax incentives, with appropriate modifications being made for industries not eligible for all the three incentives. The figures in column (4) assume a value of 10 for π.

    a. This figure includes −3.3 percent for cash-subsidy elimination as explained in the text.

    b. Red earthen tiles.

    c. Mica powder.

    d. Rubber manufactures not elsewhere specified.

    e. Cement.

    f. Rice bran.

    g. This includes refractories, guar splits, ceramics, timber products, arms and ammunitions, surgical cotton and dressings and cinematographic films and other films.

    h. This figure is 16.9 percent when "Other products" are not included.

TABLE 6–4
Changes in Import Duties as of June 6, 1966

(1)	Effective *Ad Valorem* Duty[a] (percent)		Effective Devaluation (percent) (4)	Share in Total Imports (1964–66) (percent)
	Pre-Devalu-ation (2)	Post-Devalu-ation (3)		
1. Iron and steel	63.6	49.6	44.0	9.99
2. Metals other than iron and steel and silver	22.7	19.3	53.1	6.26
3. Machinery	37.4	26.1	44.5	40.67
4. Motor cars, cycles, scooters, chassis, omnibuses, vans, lorries and parts thereof	78.9	63.2	43.7	3.52
5. Chemicals	37.6	25.1	43.2	6.48
6. Petroleum products	204.7	132.2	16.7	4.40
7. Raw cotton	12.9	3.2	43.9	5.14
8. Artificial silk yarn and thread	217.0	176.7	37.5	0.91
9. Wood pulp, paper and stationery	51.1	50.9	57.3	1.99
10. Cinematographic films	66.4	37.0	29.7	0.26
11. Spirits and liquors	537.8	929.6	154.3	0.04
12. Spices	68.3	—	−7.0	0.05
13. Tobacco	1330.0	600.0	−31.3	0.03
14. All others	67.0	57.1	48.3	20.26
15. Total	53.9	39.6	42.3[b]	100.00

SOURCES: Directorate General of Commercial Intelligence and Statistics, and Ministry of Petroleum and Chemicals, Government of India, New Delhi.

Explanatory Memorandum to the Central Government Budget, Government of India, New Delhi, for data on duty collections.

a. The effective duty rates reported in columns (2) and (3) are obtained by dividing duty collection by the value of imports. Though devaluation took place on June 6, 1966, the effective rate for the year 1965–66, ending on March 31, 1966, has been identified with the pre-devaluation rate and that for the year 1966–67, starting from April 1, 1966, with the post-devaluation rate. To the extent that the pre-devaluation rates were higher than post-devaluation rates, this procedure will overstate the pre-devaluation rates. Even though this procedure yields a weighted average rate for each group of items, the weights are not the same in the two years—each year's rates are weighted by that year's imports.

b. The figure in column (4) is obtained as follows: $\dfrac{157.5\,[1 + \text{col. (3)}]}{[1 + \text{col. (2)}]}$. If we compute it instead as: $57.5 - [\text{col. (2)} - \text{col. (3)}]$, the total figure changes only to 43.2 percent.

change, we then arrive at −52.5 percent as the *reduction* in the incentive to remit.

Since (inward) remittances during 1964–66 were 30.8 percent of the invisible earnings and since invisible earnings other than remitttances had not been subsidized in any way prior to the devaluation, we can arrive at a weighted, net devaluation figure of 25.6 percent for invisibles (earnings).

Imports.

We must now adjust the estimate of the devaluation on the side of imports by netting out the effect of the reduction in import duties.

A number of tariffs were reduced at the time of the devaluation. There were changes in standard as well as preferential tariff rates. However, data on imports are not readily available according to the duty rates applicable. We have therefore used the ratio of duty collected to the value of imports as an approximate measure of effective duty rates.

We then quantify the change in the degree of effective devaluation. due to these tariff changes by weighting the duty reductions by the share of these items in total imports during 1964–66. We have done this in Table 6–4. The resulting weighted-net-devaluation is 42.3 percent for imports, adjusted for both the duty changes and the parity change.

If we bring in also the invisibles (payments), to which only the parity change was relevant, the net devaluation figure (for the *entire* current account payments) rises to 44.8 percent.

Total Net Devaluation.

The total net devaluation on the (visible) trade account therefore may be approximated as amounting to: 21.6 percent for exports and 42.3 percent for imports. For the entire current account (including invisibles), the estimates are: 22.3 percent for receipts and 44.8 percent for payments.[9]

NOTES

1. Conversely, computed as the decrease in the dollar value of the rupee, the devaluation was 36.5 percent.

2. Remember that we are *not* estimating the net change in the incentive *in toto*. To do so we would have to allow for the effects of changes in import costs of raw materials, for example, as well as for macro-effects on the price level.

3. For a detailed discussion of these schemes and the limitations of calculating *ad valorem* rates in the manner described above, see Chapter 3. See also Bhagwati and Desai, *India*, pp. 396–450.

4. We should warn the reader that owing to the suspension of aid, these premia

were exceptionally high. We adjust for this fact in assessing the impact of the devaluation on export performance, etc., in later chapters.

5. See Tables 19.7 and 19.8, Bhagwati and Desai, *India,* p. 433.

6. See Mark Frankena, "Export of Engineering Goods from India" (Ph.D. dissertation, MIT, 1971), Table III–8, for details of these subsidies.

7. Note that we have ignored the very small entitlements that were received prior to devaluation by some of the commodities in (1)–(14). For example, tea had an entitlement rate of 1 percent of f.o.b. value prior to devaluation. No significant error in our estimates would occur from these procedures. We should re-emphasize, however, that our estimates conceal much variation among *individual* exports *within* the 51 groups listed.

8. The basic data are in Bhagwati and Desai, *India,* pp. 469–470.

9. In Table 6–3 we have treated all items for which no explicit export promotion schemes were operating prior to devaluation as items for which full parity change (except for tax credit elimination) is applicable. If we exclude these items from total exports, the net devaluation on exports goes down to 16.9 percent and on total current account receipts to 18.7 percent.