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Developments in the International Distribution of Income

by Hans-Peter Nissen, Paderborn*

The question of income distribution played a very important role in practical and theoretical development policy during the seventies. World market conditions were blamed for the fact that the income gap between industrialised countries and developing countries was widening. The demands to which this has given rise range from calls for "greater reliance on market forces", "modification of the market form" and "greater market intervention" to insistence on the complete abolition of free market relationships. How has the relative income position of various groups of developing countries evolved in the last few decades?

The concrete phenomenon of the "world market" influences the international distribution of income to a varying degree, depending on the manner and extent to which individual countries are integrated into it. The average per capita income in the various countries is usually taken as an initial approximation. However, international comparisons based on conversion of the figures into current US dollars are subject to a wide margin of error, mainly owing to the unsuitability of official exchange rates as a means of depicting developments in purchasing power parities. This shortcoming can be overcome by using purchasing power parity indices (Kravis). If domestic income distribution in individual countries is considered as well as income distribution at the international level, in other words if individuals replace nations as the reference variable, a global Lorenz curve of personal income distribution can be produced. The data in question are set out in Table 1.

The three Gini coefficients of global income distribution calculated by these various methods display different levels but similar trends over time – global income distribution improved in the fifties and deteriorated in the sixties. Whereas the unweighted index shows a further slight rise between 1972 and 1977, the indices weighted to take account of purchasing power parity and domestic income distribution indicate a slight levelling-off¹.

The significance of these global figures is limited, however, as they conceal differences in GNP growth, the degree of integration in the world market and

population growth, to name but a few of the important factors at play. For example, in the sixties the above-average rates of growth of per capita GNP in the countries of the European Community contributed to an accentuation of the inequalities in global income distribution. Japan, which was a middle-income country in the fifties, initially had a somewhat moderating effect but later exacerbated the overall disparities. The United States recorded the highest per capita income for many years, but in the sixties and seventies it achieved below-average growth rates and thus had a levelling effect on global income distribution. On the other hand, the above-average population growth rate in the poorer developing countries aggravated the situation.

If the Gini coefficient that takes account of domestic income distribution is broken down further, the income shares of particular groups of the world population can be calculated². The global development of personal income distribution is calculated on the basis of income distribution data collected, for the most part, around the year 1970; changes in domestic income distribution in developing countries are ignored.

Table 2 reveals the following information:

- In 1977 the top 5 per cent of income recipients in non-socialist countries commanded almost the same share of income as in 1950. However, in the intervening period this group saw their share of income fall by 0.7 per cent

¹ It should also be noted that income is much more evenly distributed within the group of industrialised countries than it is in the group of developing countries in terms of both average per capita income and personal income distribution.

² With regard to the method of calculation see F. Bourguignon, A. Berry, C. Morrisson: *The World Distribution of Incomes between 1950 and 1977*. Paper presented to the Symposium "From Income Distribution Research to Income Distribution Policy in LDCs", University of Paderborn, 8-10 April 1981.

* University of Paderborn. Extract from a paper prepared for the Congress of the Verein für Socialpolitik (Society for Social Policy), Committee on Developing Countries, held in Munich on 27 and 28 November 1981.

of world income and by 2 per cent of their 1950 income share.

□ The income share of the bottom 40 per cent of the world population contracted continuously between 1950 and 1977. During the period they lost more than 14 per cent of their original income share, or 0.7 per cent of world income.

Table 1
Global Income Distribution –
Per Capita Income

	1950	1960	1970	1972	1977
Gini ¹	0.53	0.52 ^a	0.60	0.62	0.63
Gini ²	0.557	0.552	0.560	0.567	0.563
Gini ³	0.671	0.669	0.677	0.683	0.681

¹ Per capita income of all countries (including socialist countries) expressed in US dollars at current exchange rates. Source: M. D. Ward: Changing Patterns of Inequality in a Changing Global Order, 1980.

² Non-socialist countries only. Per capita income corrected by application of the Kravis purchasing power parity index. Source: F. Bourguignon, A. Berry, C. Morrison: The World Distribution of Income between 1950 and 1977.

³ Non-socialist countries only. Per capita income expressed in ICP dollars. Includes domestic income inequalities but ignores changes in domestic income distribution. Source: *ibid.*

^a 1959. The figure for 1960 is 0.56.

Table 2
Overall Income Distribution in Non-socialist
Countries for Selected Years

	1950	1960	1970	1972	1977
Percentage shares					
Bottom 40 %	4.9	4.8	4.3	4.1	4.2
Bottom 60 %	11.6	11.5	10.4	10.0	10.3
Middle 30 % ^a	36.3	37.2	38.6	38.5	38.1
Top 40 %	88.4	88.5	89.6	90.0	89.7
Top 10 %	52.1	51.3	51.0	51.5	51.6
Top 5 %	34.5	33.8	33.8	34.2	34.3

^a 7th to 9th deciles.

Source: F. Bourguignon et. al. and calculations by the author.

□ The middle income group (7th to 9th deciles) was able to increase its share of income by about 2 per cent during the period under review.

Altogether, it can be seen that the rise in the income of the middle groups (which in fact form part of the top 40 per cent) occurred mostly at the expense of the top income group until 1960 and primarily at the expense of the poorest 60 per cent between 1960 and 1970, thus causing the Gini coefficient first to fall and then to rise again. Further insight can be gained by transposing these results to individual countries or country groups. Table 3 shows the shares that individual countries and country groups had in various deciles of world income in 1950 and 1977.

The most important indications are the following:

□ The country group "Indian subcontinent, Nigeria and Indonesia" accounts for more than 60 per cent of the income segment defined as absolute poverty. Whereas the Indian subcontinent, which is only marginally integrated into the world economy, increased its already disproportionately large share of this group still further, Nigeria and Indonesia significantly reduced the proportion of the population groups living in absolute poverty for which they account. They were able to do so primarily because of the above-average rise in oil revenues from 1973 onwards.

□ The newly industrialising countries significantly increased their share of the uppermost decile (the top 10 per cent) and, especially, that of the middle deciles and reduced their share of the bottom 60 per cent by more than one third in spite of having the highest population growth rate of all developing countries.

□ As was to be expected, the most striking change in global income distribution was recorded by the oil-exporting countries; their shares in the middle and top income groups, especially the latter, increased substantially.

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□ The remaining developing countries, which are integrated in world markets chiefly via their exports of raw materials, maintained their absolute shares in the top decile (3.4 %) and in the bottom group (12.1 %), but in view of their substantially above-average population growth rates their relative share in both these groups declined by about 20 per cent.

Viewed in terms of income distribution and world market relationships, the above data may be summarised as follows:

□ Thanks to the change in the market form (from a one-sided monopsony to a bilateral monopoly), the oil-producing countries were able to bring about an international redistribution of income in their favour and thus greatly increase their shares in the top 10 and 40 per cent deciles. In the light of this experience, raw material cartels are much in vogue among developing countries as global "engines of redistribution".

Relationships governed by the world market are considered acceptable, but the market form must be right!

□ By diversifying their product range and manufacturing structure, the newly industrialising countries have been able to introduce new export goods on world markets and exploit the advantages of free market trade to strengthen their position in the upper income deciles. This group more than any other is, logically, pushing for a further liberalisation of international trade.

□ Those countries whose world market relationships are based mainly on raw materials were unable to maintain their share of the top income group. As a result, they have concluded that world market influences on their exports should be reduced and that raw materials programmes – cartels, if possible – should be established.

Table 3
World Income Distribution of Non-socialist Countries by Population Groups (Deciles), 1950 and 1977
(in %)

	Absolute poverty (Y < \$200)		Bottom 60 %		Middle 30 % (7th to 9th deciles)		Top 10 %		Proportion of world population		Cumulative deviation from the average rate of growth of world population, W _p 1950-1977
	1950	1977	1950	1977	1950	1977	1950	1977	1950	1977	
Poor developing countries											
Indian subcontinent	46.4 (+ 14)* + 8**	53.0	42.6 (+ 11) + 5	47.2	8.7 (- 44) - 47	4.9	-	-	27.9	29.5	5.7
Nigeria and Indonesia	13.8 (- 20) - 24	11.0	11.6 (+ 6) - 6	12.3	1.6 (+ 13) + 6	1.8	-	-	7.3	7.8	6.8
Others	14.6 (+ 19) + 11	17.4	12.2 (+ 9) + 1.5	13.3	1.9 (- 16) - 24	1.6	-	-	7.8	8.4	7.7
Developing countries	12.2 (± 0) - 19	12.1	13.6 (+ 16) - 5	15.8	9.1 (+ 44) + 18	13.1	3.4 (± 0) - 20	3.4	11.2	13.7	22.3
Newly industrialising countries	5.9 (- 36) - 49	3.8	8.1 (- 20) - 37	6.5	6.2 (+ 144) + 91	15.1	2.7 (+ 44) + 65	3.9	6.9	8.8	27.5
Oil-exporting countries	3.2 (- 50) - 60	1.6	3.1 (- 20) - 35	2.5	2.3 (+ 139) + 89	5.5	0.4 (+ 425) + 236	1.7	2.6	3.3	26.9

* Absolute percentage change in share: $\left(\frac{\text{share}_{77}}{\text{share}_{50}} - 1 \right) 100$

** Relative percentage change in share, weighted in terms of population growth: $\left(\frac{\text{share}_{77}}{\text{share}_{50} \left(1 + \frac{W_p}{100} \right)} - 1 \right) 100$

Source: F. Bourguignon, *ibid.*, pp. 17 and 19, and calculations by the author.