Public Finance and Social Policy—Explanation of Trends and Developments

The Case of Developing Countries
Public Finance and Social Policy—Explanation of Trends and Developments: The Case of Developing Countries

Bela Balassa

I. Social Progress, the Government Budget, and Economic Growth

Health and Education in Developing Countries, 1960–1980

Health indicators show considerable progress in developing countries over the last two decades. By 1980, low-income developing countries closely approached—and India surpassed—the 1960 results for middle-income countries as regards life expectancy, infant mortality, and child death rates. This has occurred notwithstanding the fact that 1980 per capita incomes in low-income countries ($230) and in India ($240) were much below 1960 incomes per head in middle-income countries ($660) [40: 110].

The rate of improvement during the 1960–80 period was, however, greater in middle-income countries than in low-income countries. Average life expectancy at birth increased by about one-fifth in low-income countries, in India, and in middle-income countries alike; infant mortality rates fell by 21 percent in low-income countries, 25 percent in India, and 36 percent in middle-income countries; and death rates for children between 1 and 4 years of age decreased by 29 percent in low-income countries, 35 percent in India, and 52 percent in middle-income countries (Table 1).

The observed differences may find their origin in the differential availability of health services and nutrition. Between 1960 and 1977, the number of people per physician decreased by 39 percent in low-income countries, 27 percent in India, and 66 percent in middle-income countries; the corresponding figures for nursing persons are 38 percent, 48 percent, and 59...
percent, respectively. And, while the share of the population with access to safe water reached 50 percent in middle-income countries in 1975, the corresponding figures were only 29 percent in low-income countries and 33 percent in India.

Middle-income countries also experienced larger increases (11 percent between 1961 and 1979) in calorie supply per head than low-income countries and India (slightly over 2 percent in both cases). By 1979, average daily calorie intake in middle-income countries surpassed minimum requirements by 10 percent whereas low-income countries experienced a shortfall of 8 percent and India of 10 percent. In turn, protein supply per head rose by 8 percent in middle-income countries, declined by 2 percent in India, and remained stationary in low-income countries.

As regards educational achievements, between 1960 and 1977 adult literacy rates rose by 11 percentage points in low-income countries, 8 percentage points in India, and 16 percentage points in middle-income countries. But, despite the progress made, adult literacy rates in low-income countries (34 percent) and in India (36 percent) remained much below the average level reached in middle-income countries in 1960 (49 percent).

In turn, the rise in primary school enrollment ratios (the number enrolled in primary school expressed as a percentage of the age group) was greater in low-income countries, with an increase from 37 to 64 percent between 1960 and 1979, compared to 21 percentage points in middle-income countries, without however reaching the 1960 ratio in middle-income countries (76 percent). India represents a special case, inasmuch as it had a relatively high primary school enrollment ratio in 1960 and reached a ratio of 78 percent in 1979, although it experienced smaller increases than either of the two groups of countries.

The secondary school enrollment ratio (the number enrolled in secondary schools expressed as a percentage of the age group) nearly tripled in low-income countries and increased one-and-a-half times in middle-income countries between 1960 and 1979. Rapid increases in low-income countries permitted them to surpass, by 1979, the average ratio middle-income countries had reached in 1960 (17 vs. 15 percent). India is again a special case, inasmuch as it had a higher secondary school enrollment ratio (20 percent) than middle-income countries in 1960, but fell much behind these countries by 1979 (27 vs. 39 percent).

Finally, the higher education enrollment ratio (the number enrolled in higher educational institutions expressed as a percentage of population aged 20–24) increased from 1 percent in 1960 to 2 percent in 1978 in low-income countries, but this average is based on relatively few data points. In the same period, the ratio increased from 3 percent to 8 percent in India and from 4 percent to 11 percent in middle-income countries.
Public Expenditures on Health and Education

Having examined the progress made in developing countries in health and education, public expenditures on health and education need next be considered. The data of Table 1 show central government expenditures to the exclusion of local and, in the case of federal states, state expenditures; moreover, private expenditures on health and education are not included. This fact reduces the comparability of the data as the relative importance of the central government in health and education varies from country to country. Nevertheless, they provide an indication of trends over time.

The data indicate that public expenditures on health have been stagnant in low-income countries, rarely exceeding 2 dollars per head in 1975 prices in the late seventies. And, while these expenditures have increased over time in middle-income countries, they have remained low compared to other forms of public spending and, in particular, defense expenditures. At the same time, questions have been raised concerning the efficiency and the allocation of health expenditures.

According to a World Bank report on health, "the present health policies are not only inefficient, but also inequitable in most developing countries. Large number of people living in the countryside or city slums are allowed to remain beyond the reach of the modern medical sector" [37:38]. In some countries as little as 10 percent of the population has access to modern health services; these services often do not meet minimum standards; curative care is emphasized while prevention and early treatment are neglected; and health services are not based or focused in the community.

Improvements in the allocation of resources devoted to health could be made by giving greater emphasis to primary health care, involving community participation, combined with improvements in water supply and sanitation as well as improved nutrition. Primary health care, with its reliance on community health workers who have had limited training, would need to be supported, however, by referral services (physicians and hospitals).

Public expenditures on education increased more rapidly than GNP in the developing countries during the sixties, followed by stagnation in low-income countries and by further increases in middle-income countries. At the same time, in the allocation of these expenditures, there has been a tendency to favor secondary education and, in particular, higher education over primary education. In 1975, higher education with 3.0 percent of enrollment received 31.8 percent of the budget in the developing countries,
Table 1

Social Indicators

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<td>Life expectancy at birth</td>
<td>years</td>
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<td>48</td>
<td>54</td>
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<td>Child mortality rate (age 1-4)</td>
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<td>26</td>
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<td>Population per physician</td>
<td>thousand</td>
<td>11.0</td>
<td>14.9</td>
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<td>6.1</td>
<td>4.3</td>
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<tr>
<td>Population per nurse</td>
<td>thousand</td>
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<td>5.8</td>
<td>5.1</td>
<td>3.6</td>
<td>2.9</td>
<td>1.2</td>
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<td>Population with access to safe water</td>
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<tr>
<td>Daily calorie supply</td>
<td>per head</td>
<td>2019</td>
<td>1972</td>
<td>2047</td>
<td>2003</td>
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<tr>
<td>Daily protein supply</td>
<td>grams per head</td>
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<td>39.6</td>
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Educational Indicators

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<td>Adult literacy rate</td>
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<td>34</td>
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<td>36</td>
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Government Expenditures

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<td>152</td>
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<td>Defense</td>
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<td>4</td>
<td>26</td>
<td>39</td>
<td>301</td>
<td>283</td>
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on the average, while the corresponding figures were 21.9 percent and 27.0 percent for secondary education and 75.1 percent and 41.2 percent for primary education. Developed countries devoted the same share of educational expenditure to higher education, although they had a much higher proportion of students enrolled at this level [38: 103, 122–23].

These differences reflect considerable disparities in per capita spending on education at different levels. Thus, while the ratio of public spending per student in higher education to that in primary education averaged 19.4 in the developing countries in 1975, it was only 3.4 in the developed countries. And, the ratio was the highest in low-income countries, averaging 20.5 in countries with per capita incomes below 265 dollars in 1975 [38: 69, 103, 122–23].

At the same time, in a sample of 30 developing countries, the social rate of return in primary education (24.2 percent) much exceeds that in secondary (15.4 percent) and, to an even greater extent, in higher education (12.3 percent). The differences are greater than the average in low-income countries (27.3, 17.2, and 12.1 percent), although considerable disparities are shown in middle-income countries (22.2, 14.3 and 12.4 percent) as well [39: 49]. Private returns, however, tend to be relatively high in secondary and, in particular, in higher education, reflecting in part the “certification syndrome” that has led to increasingly high educational qualifications, however irrelevant to the job in question, and has contributed to rural-urban migration.

Available evidence thus points to underinvestment in primary education as compared to post-primary education in developing countries. The resulting welfare cost to the national economy has been estimated to vary between 0.4 percent (Mexico) to 9.7 percent (Venezuela) of the gross domestic product in a study covering 17 countries [6: 454].

At the same time, the quality of primary education would need to be improved. According to a World Bank report on education, “inefficiencies keep both the number of students in school and the quality of education they receive much below what the available funds might permit. As a result, only half of those who enter primary school reach the fourth grade, repeaters occupy 15 percent to 20 percent of school places, and academic achievement is far below desired levels” [38: 22].

Improvements in basic educational opportunities are of particular importance in rural areas that are disadvantaged in terms of both the quantity and the quality of education. It would further appear desirable to promote technical and vocational education in secondary schools and to foster on-the-job training. Finally, on the post-secondary level, there would be need for a change in emphasis to better conform to the needs of developing countries for technical and managerial expertise.
Investment in Human Capital and Economic Growth

There have been a number of studies, utilizing Denison's growth accounting framework and Solow's production function approach, to estimate the contribution of investment in human capital to economic growth in the United States and in other developed countries. Furthermore, utilizing the production function approach, Anne Krueger concluded that "the difference in human resources between the United States and the less-developed countries accounts for more of the difference in per capita income than all other factors combined" [14: 658].

The production function approach has been employed in several studies to estimate the contribution of investment in human capital to economic growth in developing countries. Hector Correa concluded that improvements in health (measured in terms of reductions in death rates and in work-days lost) and nutrition (measured in terms of increases in calorie intake) added .12 to .93 percentage points, with a median of .43, and improvements in education (measured as the average level of education of the working force) added .05 to .53 percentage points, with a median of .20, to the rate of economic growth in nine Latin American countries during the 1950-62 period [5: 24-27]. In turn, in a cross-section analysis of 83 countries, Norman Hicks estimated that a ten-year increase in life expectancy (taken as a measure of health) would raise per capita GDP growth rates by 1.1 percentage points and that a 10 percentage point increase in literacy rates (taken as a measure of education) would raise per capita income growth rates by .3 percentage points, although the estimated effects of literacy rates are reduced if this is combined with life expectancy in the same equation [11: 21-22]. Finally, Hayami and Ruttan found that differences in educational levels explained 25 to 45 percent of the difference in agricultural labor productivity between the United States, on the one hand, and Colombia, Egypt, India, and the Philippines, on the other [9: 906].

The cited studies do not allow for the inverse relationship, i.e. the effects of economic growth on health and education. David Wheeler and Robin Marris set out to remedy this shortcoming by the use of a simultaneous equation framework in estimating a cross-sectional model for developing countries. Wheeler performed a number of experiments utilizing data for 88 developing countries for the years 1960-70 and 1970-73, as well as pooled data for the entire period. In turn, Marris made estimates for 37 middle-income and for 29 low-income countries for the 1965-73 and the 1973-78 periods.

Wheeler found that intercountry differences in nutrition levels (calorie intake) and in literacy rates significantly affect differences in rates of economic growth. This was not the case, however, for life expectancy that was...
taken as a measure of health. The results were obtained by estimating production functions in the framework of "closed" and "open" economy models, with the latter including an export growth variable. The educational variable was statistically significant at the 5 percent level in all the variants and the regression coefficients, indicating the effects of a one percent change in adult literacy rates on the rate of economic growth, were in the .008 to .016 range. In turn, a one percentage point difference in calorie intake was associated with intercountry differences in GDP growth rates ranging from .56 to 1.01 percentage points in the closed economy regressions, statistically significant at the 5 percent level; apart from the 1960–70 period, where the regression coefficient was 1.52, the coefficients were not significant in the open economy model, however [35: 19–20, 31–32].

Marris found that intercountry differences in primary education enrollment ratios significantly affect the rate of growth of per capita incomes and that increases in life expectancy and family planning efforts have such an impact through reductions in the rate of growth of population [20: 28–33]. The results were obtained in a production function framework that also comprised exports and investment as variables; a variable for nutrition was not included.

Marris' estimates for the two groups of countries and for the two periods were generally similar. A one percentage point difference in primary school enrollment ratios was found to be associated with intercountry differences in per capita income growth rates of approximately .035 percentage points, the exception being low-income countries in the 1973–79 period where the coefficient was .014; in turn, the coefficients for life expectancy and family planning varied over a wide range [20: 40].

Marris also estimated benefit-cost ratios from his model, defining benefits as the gain in per capita incomes and costs as the income loss associated with the use of resources in the particular activity. In the 1965–73 and 1973–79 periods, benefit-cost ratios for primary education enrollment were 7.4 and 6.4 in middle-income countries, compared with 7.1 and 3.4 in low-income countries; the corresponding results for family planning were 5.6 and 1.2 in middle income countries and 0.9 and 0.3 in low-income countries for apart from a ratio of 0.9 for middle-income countries in the 1965–73 period, they were practically nil for life expectancy. By comparison, benefit-cost ratios for physical investment were 1.0 and 0.4 in middle-income and low-income countries, respectively, in 1965–73; they were 0.7 in low-income countries in 1973–79, for which comparable estimates in middle-income countries are not available [20: 42].

The estimates for primary education generally conform to the social return calculations made in a partial equilibrium framework that were cited earlier. They point to the desirability of increasing expenditures on primary education not only within the educational budget but also vis-a-vis invest-
ment in physical capital. It should be added, however, the simulations made by Wheeler did not give similarly strong results [35: 72].

While estimation in a simultaneous equation framework represents an important advance over single-equation estimation, problems remain with the definition of the variables utilized for health, nutrition, and education that can only approximate investments in human capital. George Psacharopoulos put forth several reasons for which the effects of education on economic growth would be underestimated, emphasizing in particular the importance of maintenance expenditures [26].

II. Social Policies and Economic Efficiency

Social Security Systems

Social security systems in developing countries generally rely on employer and employee contributions to finance old-age pensions, health care, maternity benefits, and family allowances; there are practically no unemployment compensation schemes in these countries. The question arises if the financing of social security schemes from employer and employee contributions introduces distortions in labor markets. In an early discussion of economic integration, the author suggested that "under perfect price and wage mobility, any increase in social changes would be shifted to the wage earners if they regarded the corresponding social benefits as part of their earnings" [1:218-19]. The latter assumption was tested in the United States, where it was found that the elasticity of substitution was 7.7 between wages and non-wage benefits but only 1.6 between wages and health insurance benefits alone [36: 178].

However, the stated assumptions are much less likely to be fulfilled in developing countries than in developed countries [30: 118]. In fact, in countries where the supply of labor is infinitely elastic in terms of the real wage (excluding social benefits), social charges will increase the cost of labor by their full amount, irrespective of whether they are paid by employers or employees, with adverse effects on employment. And while this may be a rather extreme case, according to Carmelo Mesa-Lago "accumulated evidence in Latin America . . . indicates that social security systems financed by contributions upon wages have a negative effect on employment" [23: 16].

Thus, it would appear that social security schemes in developing countries distort labor markets by raising the cost of labor, where the extent of the distortion will depend on the ratio of social charges to wage payments. Data collected by the U.S. Department of Health and Human Services
Social Security Administration shows social charges to exceed 20 percent of wages in India and to range between 15 and 45 percent in most Latin American countries [33]. Carmelo Mesa-Lago further reports that employer and employee contributions, taken together, were in the 55–65 percent range for blue- and white-collar workers in industry and commerce in 1969 in Uruguay; the ratio reached 46 percent for blue-collar workers and 65 percent for white-collar workers in 1968 in Chile that, however, subsequently privatized its social security system [22: 50, 96].

Minimum Wage Legislation

Labor costs may also be raised by the statutory determination of minimum wages. In this connection, one needs to consider the extent to which raising minimum wages leads to increases in the entire wage structure as well as the effects of the resulting wage increases on employment.

The classic study of the effects of minimum wage legislation on wages and employment is Wages, Productivity, and Industrialization in Puerto Rico by Lloyd Reynolds and Peter Gregory. The authors note that “the closeness of actual hourly earnings in most industries to the legal minimum, the parallelism in the timing of upward movements, and the tendency for the minimum to encroach gradually on the actual earnings level all suggest that it is minimum wage awards which have been forcing the pace of wage advance in Puerto Rico since 1950” [27: 60]. On the basis of an econometric estimate, they further conclude that “a change in the wage could be expected to be associated with an approximately equal proportionate change in employment in the reverse direction, with the wage bill remaining roughly constant” [27: 100].

It has been suggested that Puerto Rico is a special case because of its close association with the United States and its superior administrative machinery [34: 347], as well as because of its relatively high per capita income, its small labor force, and the high share of the labor force engaged in non-agricultural occupations in the mid-fifties [30: 111]. However, one may doubt the relevance for the problem at hand of Puerto Rico’s association with the United States and the superior skills of its administration. Also, there were a number of developing countries with urban incomes exceeding that of Puerto Rico in the early fifties when minimum wage legislation was introduced there, and more countries have since surpassed this level. Finally, the size of the labor force is of little importance for the effectiveness of minimum wage legislation.

In fact, according to an ILO report, “the evidence . . . suggests that conditions in which increases in minimum wages exert a substantial influ-
ence on wages actually paid are widely encountered. This influence is particularly strong where minimum rates are the going rates for large numbers of workers, which seems to be the case in most African and in many other (but not all) developing countries" [12: 19]. And, while the evidence provided on this point in a subsequent ILO report is inconclusive [31: 160–84], it should be recognized that minimum wage legislation may have adverse economic effects even if it does not lead to proportionate increases in the wage structure. To begin with, the narrowing of wage differences will discourage socially profitable investments in human capital as incentives for such investment are reduced. Also, distortions are introduced in the choice between labor and physical capital, between unskilled labor and skilled labor, as well as between labor in the formal sector and the informal sector, where minimum wage regulations are rarely applied.

There is evidence on the effects of minimum wage legislation in several countries. In Argentina, minimum wage legislation is reported to have increased unskilled wages by 25 percent [17: 131]. In the Ivory Coast, a 20 percent increase in the wages of unskilled labor through minimum wage legislation is said to have led to a commensurate decline in employment [24: 273–74]. Finally, in Canada the rate of unemployment is shown to have increased in the same proportion as the minimum wage [28: 97].

This is not to say that minimum wage legislation would have had a pervasive influence in developing countries. In some countries, such as Brazil, its effects have been largely eroded by inflation [17: 132]. By contrast, minimum wages are particularly high in socialist-oriented countries [34: 354]. Thus, The Economist (April 30, 1983) reports in regard to Tanzania that "in the towns minimum wages in some industries were set three times as high as India's, whose labor productivity was three times higher."

According to a recent ILO report, "the problem [of setting minimum wages] is essentially viewed as one of striking a balance between the social gains to be made, in the form of improvement in the relative wage position of the lowest paid, and any costs these might entail in the form of reduced employment, slower growth and increased inflation" [31: 153]. An attempt to measure these effects has been made in the United States. It has been found that the income distributional effects of minimum wage legislation are very weak and "even if the elasticity of demand for low-wage labor is as low as 0.2, the reduction in national income is as large as the entire gain to the lower half of the income distribution when marginal taxation effects are ignored, and the reduction in national income is about twice as large as the net gain to the lower half of the income distribution when they are incorporated" [13: 211]. Also, to the extent that minimum wage legislation benefits a privileged urban labor group, the social gains themselves may be open to question. According to one observer, "this is directly contrary to the initial objective of minimum wage legislation, i.e. the protection of unorganized
workers whose wages are exceptionally low" [34: 356]. Yet, as noted in an ILO report, "for Latin America it has been estimated that 80 percent of the urban workers receiving incomes below the legal minimum wage belong to the informal sector" and "the enforcement of minimum wages in developing countries encounters its most serious obstacles in traditional agriculture, outside the larger plantations and modernized farms" [31:140].

Labor Policy

Another important channel through which the government may affect the wage structure is public sector employment and wages. Heller and Tait have found that in thirty-eight developing countries, on the average, public jobs account for 44 percent of nonagricultural employment. This ratio is inversely correlated with per capita incomes in the countries of the sample; regional averages are 59 percent in Africa, 36 percent in Asia, 27 percent in Latin America, compared with 24 percent in the developed countries. Also, the ratio tends to be higher in the countries that, at one time or another, adopted a socialist orientation; it is 87 percent in Benin, 81 percent in Zambia, 78 percent in Tanzania, 72 percent in India and 74 percent in Ghana [10: 7, 42–43].

As the authors suggest, "the clear message from these statistics is the significant impact that government policy on wages and salaries is likely to have on the overall remuneration of employees in the nonagricultural sector in developing countries" [10: 7]. In this connection, note that the ratio of the average central government wage to GDP per capita is inversely correlated with per capita incomes; it is 6.05 in Africa, 2.90 in Asia, 2.94 in Latin America, and 1.74 in the developed countries [10:18].

According to the same authors, "this situation is not necessarily surprising, as, in poorer countries, the educational requirements of public sector employment are often much higher than that of private sector employment" [10: 18]. Differences in educational requirements provide only a partial explanation for public-private wage differentials, however. For example, in 1971, average wages were 16 percent higher in the government and 23 percent higher in parastatals than in the private sector in Tanzania, if adjustment is made for differences in occupational composition. Moreover, the scope of fringe benefits was considerably greater in the government and in parastatals than in the private sector [19: 141–43]. Available information indicates that fringe benefits are more prevalent in the public than in the private sector in other developing countries as well.

Wages in the public sector exceed wages in the private sector at lower,
although not at higher, levels of education in Brazil, Colombia, Greece, Malaysia, and Portugal. In contributing to higher wages for the less-educated worker, public sector wage policies tend to compress the wage distribution, thereby creating distortions in resource allocation as noted above. Distortions are created also between the private and the public sectors as rates of return to education are generally higher in the former than in the latter [25]. Finally, it has been reported that in Pakistan increases in public wages spilled over to the private sector [8: 325–26].

Labor costs may also be raised by labor legislation aimed at reducing unemployment in the form of redundancy payments or outright prohibitions of discharging workers. Redundancy payments are extensively used in the Southern countries of Latin America where they may exceed twelve months of pay; Turkey is a recent example of prohibiting the dismissal of workers.

The effects of these schemes have been analyzed by Laidler who noted that, apart from creating inefficiencies, redundancy schemes may increase rather than reduce unemployment:

—They discourage workers from quitting voluntarily to search for other employment.
—They make it expensive for an otherwise viable firm to close down a particular loss-making operation . . .
—Moreover, they inhibit employers from taking on new workers because of the prospective cost of declaring them redundant at some time in the future. Such schemes inhibit resource mobility, slow down the pace of economic change, and increase unemployment. They do not serve simply to redistribute wealth, but to reduce the total amount of wealth available for redistribution [18: 81].

Finally, labor costs may be raised by the high taxation of wage incomes as labor attempts to shift income taxes to the entrepreneur. An extreme case was provided by Turkey in 1980, when minimum wage income was subject to a tax of 28 percent. Under the new schedule introduced on January 1, 1981, the minimum wage is not subject to tax but the marginal tax rate is 40 percent on incomes immediately above this level. In turn, the marginal tax rate is 75 percent on incomes in the 75–100 thousand dollar range [3: 177–79].

All in all, social security schemes, minimum wage legislation, wage determination in the public sector, and labor legislation tend to raise wages in developing countries, contributing to losses in efficiency and in employment. Additional distortions are created through differences in labor costs between the formal and informal sectors, owing to the fact that these schemes are rarely applied, or are evaded, in the informal sector.
Distortions in Wage/Rental Ratios

While policy-imposed labor market distortions tend to increase the cost of labor, government policies also tend to reduce capital costs in the developing countries. The price of capital may be lowered as a result of credit policies, with the government setting interest rates at levels where these are negative in real terms or are below equilibrium levels; through tax policies, involving accelerated depreciation provisions and tax holidays; as well as through trade policies, entailing the overvaluation of the exchange rate and lower than average tariffs on capital goods.

The results of a comparative study directed by Anne Krueger show that policy-imposed distortions in wage/rental ratios are the largest in countries pursuing import substitution-oriented policies; followed by countries that have reduced but not eliminated the bias against exports; while they are negligible in export-oriented economies. In the years 1968 to 1973 (1961–66 for Pakistan), these distortions were estimated to have raised the wage/rental ratio by 316 percent in Pakistan, 87 percent in Tunisia, 45 percent in the Ivory Coast, 38 percent in Argentina, 31 percent in Brazil, 11 percent in Korea, and nil in Hong Kong [17: 150]. The data refer to manufacturing industries in the formal sector; comparable data on differences between the formal and informal sectors in the individual countries are not available.

In the Krueger project, estimates were made of the employment effects of eliminating distortions in wage/rental ratios, due to policy-imposed factor market distortions as well as the lowering of the cost of capital through trade policy. The estimates incorporate elasticities of substitution between labor and capital clustering around 1 that have been derived by Jere Behrman on the basis of 1723 observations from twenty-seven three-digit industries of seventy countries for the 1967–73 period [4: 186].

The results for the individual countries are: Argentina, 16–25 percent and −6 percent; Brazil, 15 percent and n.a.; Chile n.a. and 7 percent; Ivory Coast 25 percent and nil; Pakistan 271 percent and nil; Korea 8 and nil; and Tunisia 17 percent and 38 percent [17: 178–79]. The estimates show increases in labor input coefficients in the event that average distortions in wage/rental ratios in the manufacturing sector are eliminated. They do not, however, take account of the employment effects of factor market distortions within the manufacturing sector or between manufacturing and primary activities.

The employment effects of eliminating interindustry differences in protection rates among import-substituting and among export industries in the manufacturing sector were also estimated. In the first case, labor input
coefficients would rise by 66 percent in Indonesia, 51 percent in Tunisia, 12 percent in the Ivory Coast, and 10 percent in Colombia; in the second case, gains in employment would be 60 percent in Chile and 24 percent in Colombia [17: 178-79].

In turn, estimates of the efficiency gains obtainable through the elimination of policy imposed distortions in wage/rental ratios were made in several studies. For Colombia, Dougherty and Selowsky estimated these losses to be no more than one or two percent of GNP in a partial equilibrium framework [7: 398]. However, also for Colombia, Jaime de Melo obtained estimates of 5.7 percent of GNP with capital immobile, and 13.3 percent of GNP with capital mobile, in a general equilibrium framework, which allows for interactions of product and factor markets as well as for sectoral interdependence [21: 402]. Finally, Moshe Syrquin estimated the cost of misallocation of labor and capital due to distortions in the markets for these factors at 15.5 percent of output in the Mexican manufacturing sector [32: 664].

These estimates pertain to efficiency losses associated with interindustry differences in factor rewards within the manufacturing sector, but do not differentiate between policy-imposed and endogenous distortions in factor markets. At the same time, in interpreting the estimates, reference may be made to results obtained by Paul Schultz who found factor rewards to be higher in protected than in unprotected industries in Colombia [29]. The resulting distortions in wage/rental ratios are additional to those resulting from overvalued exchange rates, lower than average tariffs on capital goods, and the variability of tariffs among import-substituting and among export industries.

Trade policies further affect employment and the efficiency of resource allocation through the incentives they provide to exports as against import substitution. On the whole, developing countries have a comparative advantage in labor-intensive sectors, so that the protection of capital-intensive sectors will give rise to losses in employment and in allocative efficiency [2: 1036].

These considerations indicate the interdependence of distortions in factor and in product markets. In turn, simultaneously removing distortions in factor and in product markets will reinforce the effects of each, taken separately. For example, the favorable impact of trade liberalization will be enhanced if capital markets are liberalized so that capital can flow to the sectors in which the country has a comparative advantage.

Reducing distortions in factor and in product markets would have budgetary repercussions, however. While the proposed changes in regard to labor and capital tend to be mutually offsetting, as taxes would be reduced on labor and increased in capital, lowering protection would decrease fiscal
revenues. The resulting loss in revenues would need to be offset by taxes that minimize distortions, such as a value-added tax.

**Summary and Conclusions**

This paper has examined the progress made in health and education in developing countries during the last two decades. It has further indicated that a more rational allocation of expenditures would bring further improvements in the future. At the same time, investment in human capital in the form of improvements in health and education has been shown to contribute to economic growth.

The paper has further considered the employment and the efficiency effects of social policies. It appears that social security schemes, minimum wage legislation, wage determination in the public sector, labor legislation, and the taxation of labor incomes have increased the cost of labor in the formal sector of developing countries. At the same time, policy-imposed distortions in capital markets have reduced the cost of capital, thereby further raising wage/rental ratios.

The rise of wage/rental ratios, in turn, has tended to discourage employment in the formal sector and has created distortions in the allocation of resources. Employment has also been adversely affected by protection that has further reduced the cost of capital and has generally favored capital-intensive industries. At the same time, distortions in product and factor markets are interrelated, and removing these distortions simultaneously would reinforce the effects of each.

**Notes**

1. The author is indebted to Peter Heller, George Psacharopoulos, Richard Sabot, Vito Tanzi, and Manuel Zymelman for helpful comments. However, the author alone is responsible for the contents of the paper that should not be interpreted to reflect the views of the World Bank.

2. Following *World Development Report, 1982*, low-income countries have been defined as countries having per capita income of $410 or less and middle-income countries as having per capita income in the $420–$4500 range in 1980 [40: 110]. The averages have been calculated weighting individual country observations by population. In view of its size, the results for India, that would otherwise be included in the low-income group, are shown separately in Table 1. For comparability, the table also provides information on industrial market economies and on industrial non-market (socialist) economies. It excludes China, for which 1960 data in most instances are not available.
References


Résumé

Cet article étudie les progrès accomplis au cours des deux dernières décennies par les pays en développement dans les domaines de la santé et de l'éducation. Il exprime par ailleurs l'idée qu'une répartition plus rationnelle des dépenses conduirait à de nouveaux progrès dans l'avenir. En même temps, il montre qu'un investissement en capital humain, prenant la forme d'améliorations dans les domaines de la santé et de l'éducation, contribue à la croissance économique.

L'article examine aussi les effets de mesures sociales sur l'emploi et l'efficience de l'économie. Il semble que les systèmes de sécurité sociale, la législation sur le salaire minimum, la détermination des traitements dans le secteur public, le droit du travail et la fiscalité des revenus tirés du travail ont augmenté le coût de la main d'œuvre dans le secteur formel des économies.

Cette hausse du rapport salaire/coût du capital a contribué à défavoriser l'emploi dans le secteur formel et a créé des distorsions dans l'affectation des ressources. Le protectionnisme, qui a encore diminué le coût du capital et qui a généralement encouragé les activités à forte intensité capitaliste, a également eu des effets défavorables sur l'emploi. En outre, les distorsions sur les marchés des produits et des facteurs se conjuguent, si bien qu'une suppression simultanée de ces distorsions améliorerait l'efficacité de chacun de ces marchés.