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# Welfare Effects of Government Intervention in Education

# WELFARE EFFECTS OF GOVERNMENT INTERVENTION IN EDUCATION

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*Distortive effects of government intervention, especially in international trade, have received considerable attention. But not much literature exists on similar effects of public policies toward education. This paper provides a review of government intervention in education and its likely effects on economic growth and equity. Although governments may act with good intentions, educational policies often have adverse effects on social welfare. Less government involvement in education might actually lead to greater and more equally distributed real income, especially in developing countries.*

*Section I of this paper identifies and documents the extent of government-induced distortions directly or indirectly related to education. Section II assesses the likely effect of such distortions on social welfare. The final section discusses the role of government in education.*

## I. AN OMNIBUS OF DISTORTIONS

Government intervention in education can be *direct* (e.g., regulation of teacher salaries) or *indirect* (e.g., minimum-wage legislation, which eventually affects human capital formation). It can be implemented in terms of *prices* (e.g., subsidies covering the private cost of education) or in terms of *quantities* (e.g., admission quotas to schools). Or it can be expressed by means of *institutions* (e.g., establishment of a student loan program). These distinctions are not clear-cut. For example, indirect institutional intervention can affect prices, which eventually can affect quantities. However, for purposes of analysis, such overlapping areas of government intervention are considered separately here as "independent variables," so that their likely effects on a set of social welfare "dependent variables" can be discussed. Economic growth, equity, and employment are treated as dependent variables, but again these variables are neither *sanctum sanctorum* nor mutually exclusive.

### A. Subsidies to Education

Subsidies to education traditionally have been favored by recipients and politicians alike. On the surface, they appear highly desirable. A popular view is that education is a basic need or human right and that it should be provided

\*The World Bank, Washington, D.C. The views expressed here are those of the author and should not be attributed to the World Bank. An earlier version of this paper was presented at the Fifty-ninth Annual Western Economic Association International Conference, Las Vegas, Nev., June 1984, in a session organized by Simon Rottenberg, University of Massachusetts.

free, financed by the state. Yet, indiscriminate subsidization, which is practiced in many countries today, can have perverse social welfare effects, contrary to those intended by policymakers.

On the efficiency side, educational subsidies create a difference between the private and social costs of education; hence, resources may not be allocated according to social optimality. User fees cover only a small proportion of the social cost of education, and they decrease as the educational level increases (Jimenez, forthcoming 1987, table 2.2). For example, primary school students and their families in Burkina (formerly Upper Volta) bear a CFA 20,000 *cost* per year, whereas secondary and university students get a net *subsidy* of CFA 42,000 and CFA 372,000, respectively (Psacharopoulos 1982). In Tanzania, the private cost of secondary-school attendance is one quarter of the social cost (Tan 1985).

On the equity side, educational subsidies can be socially unjust on two counts: first, general taxpayers, a large percentage of whom may be poor, finance the education of those who attend school, including higher levels of school; second, those who eventually graduate with advanced degrees enjoy greater rewards over their lifetime than those without such degrees. The first proposition has been extensively documented in developing countries. Jallade (1974) found that secondary and higher education in Colombia are financed in a way which results in a redistribution from poor to middle-class families. A similar result has been reported by Selowsky (1979), regarding the financing of higher education in the same country. In another study, Selowsky (1981) reports that the higher-education subsidy in Colombia are more unequally distributed relative to personal income. The second proposition is evidenced by mean earnings ratios of the more-educated relative to the less-educated in developing countries. In Malaysia and Colombia, for example, the structure of earnings by level of education is reported in table 1.

Heavy subsidies to higher education result in substantial differences between private and social rates of return in many countries, and thus prevent optimal resource allocation. Examples of these differences are reported in table 2. On the other hand, in the Philippines—where educational subsidies are the exception rather than the rule—the private and social rates of return are 10 and 9 percent, respectively.

**TABLE 1**  
Structure of Earnings Level by Level of Education  
for Malaysia and Colombia, 1983

<u>Educational Level</u>	<u>Earnings Ratio Index</u>	
	<u>Colombia</u>	<u>Malaysia</u>
Primary	1.0	1.0
Secondary	2.3	1.6
University	7.7	6.1

*Source:* Psacharopoulos (1983).

**TABLE 2**  
Rates of Return to Higher Education for Selected Countries

<u>Country</u>	<u>Percent Rate of Return</u>	
	<u>Private</u>	<u>Social</u>
Ethiopia	27	10
Ghana	37	17
Kenya	31	9
Nigeria	34	17
India	16	10

Source: Psacharopoulos (1981).

Perverse effects of public subsidies to education also are evidenced by the backlog of unsatisfied demand for education—the many frustrated aspirants seeking university or even secondary-school entry. This is the case, for example, when only 4 percent of the relevant age group enrolls in secondary education in Tanzania, or less than 15 percent of applicants get access to university education in Iran (Psacharopoulos 1977).

Clearly, the provision of education at or near zero private cost in many poor countries is inconsistent with the ability of the state to satisfy the level of demand generated by the low price. Hence, a nonprice rationing mechanism, such as admission quotas validated by stiff entrance examinations, must be implemented. Neglect of schooling in the countryside is another result. Such rationing mechanisms often are inefficient, since investment to the socially optimum point does not take place. They also are inequitable, because it is the poor who are more likely to be excluded or crowded into schools of inferior quality in the process.

#### B. Minimum-Wage Legislation

This is another government intervention which can have adverse efficiency and equity effects. First, it is extensively documented in general literature on advanced countries that legal minimum wages create unemployment among the youth. Some who would be willing to work at a lower wage than the minimum cannot legally be hired by the employer (Welch 1974, Mincer 1976). This must be true to a greater extent in developing countries where the difference between competitive wages in the countryside and minimum wages in urban areas is much greater. For example, Gregory (1975) reports minimum wages in the urban sector of Uruguay and the Ivory Coast to be more than 60 percent greater than the agricultural wage. Also, artificially high urban wages increase migration among those who expect to find a job in the city and thus increase the number of unemployed. Such unemployment hits the least-educated.

Another major education-related connection exists between minimum wages and social welfare. Legal minimum wages compress earnings differentials between the least- and the more-educated urban workers at the lower end of

the schooling ladder. Thus, they create a disincentive for human-capital formation. This argument is based on the plausible assumption that minimum wages directly affect mainly the lower end of the education spectrum (say, the illiterates) and that earnings of those with primary education are determined more competitively. Under such circumstances, individuals have less incentive to acquire primary education, which is socially the most efficient form of investment in human capital. Or, if they do go to primary school, they tend to seek more advanced education to realize higher private returns.

A popular myth is that legal minimum wages are equitable because they compress the earnings dispersion. In fact, in developing countries, where the majority of the population lives and works in rural areas (not subject to the legal minimum), minimum wages tend to accentuate overall income disparities. Of course, minimum wages do tend to reduce the dispersion among the select groups of workers employed in the urban sector.

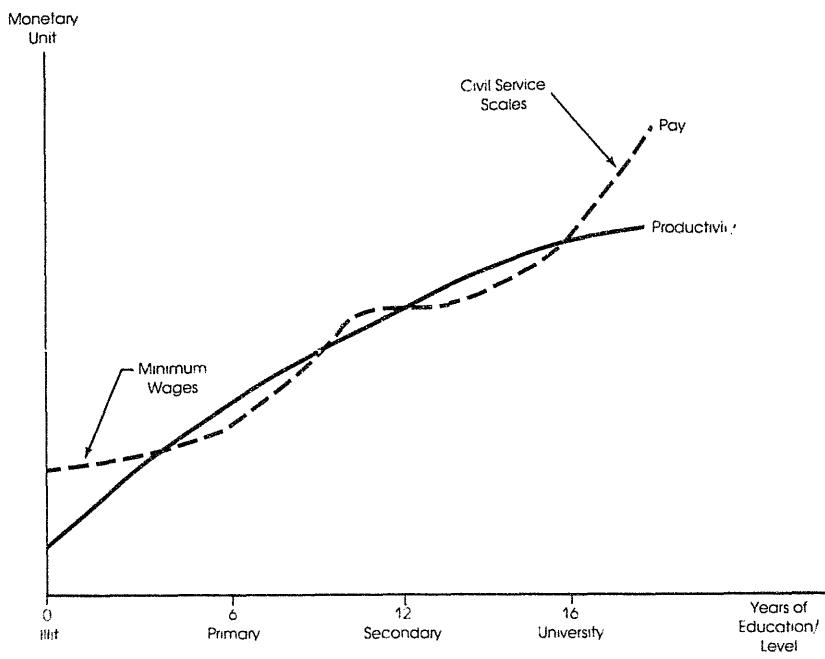
### C. Civil Service Pay Scales

Civil service pay scales affect the whole spectrum of wages and salaries, and hence educational levels. They tend to reduce earnings disparities within the public sector, and to distort relationships between earnings and productivity. For example, Psacharopoulos (1983) reports substantial wage differentials between the private and public sectors in Brazil, Colombia, and Malaysia—even for employees with the same level of education. Similar evidence is reported by Bennell (1981). Again, the beneficial equity effects are questionable when reference is made to developing countries and the magnitude of wage leadership, as well as coverage, of the public sector. Public employment shares in excess of 70 percent of the nonagricultural labor force have been reported in some developing countries (e.g., Ghana and Zambia), and the share of the educated employed by the public sector is sometimes even higher (Lindauer 1981, Heller and Tait 1983). Civil service pay scales, based on criteria that are not necessarily competitive, largely determine the remuneration of university graduates. This raises more questions about the social efficiency of human capital investments which result from distorted signals. Rates of return estimated on the basis of public sector remuneration typically are less than those estimated on the basis of private sector, competitive earnings. (See Psacharopoulos 1983 for such contrast in Brazil, Malaysia, and Colombia; see Edwards 1983 for that in Chile.) To the extent that fringe benefits increase with the level of education and basic pecuniary pay, another wedge is driven between wages and productivity. Gregory (1974) reports that fringe benefits amount to more than 60 percent of the payroll in countries such as Brazil, Chile, Colombia, and Venezuela.

These considerations suggest that the relationship between pay and productivity in developing countries is as depicted in figure 1. The productivity curve is concave to the horizontal axis because of the assumed diminishing returns to every additional year of schooling. Although the exact position and shape of the pay curve are unknown, evidence from developing countries

### FIGURE 1

The Relationship Between Pay and Productivity Because of Government Intervention



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indicates that major discrepancies exist at the lower and higher educational levels (in the direction shown in figure 1). Because of minimum-wage legislation and civil service pay scales, wages exceed productivity at each end of the spectrum. This is socially inefficient and unjust, for the reasons mentioned earlier.

Such productivity and pay distortions contribute to a misallocation of labor between economic sectors. Too many people enter or queue to enter the protected low-productivity sector because pay is higher than in the unprotected sector. Also, too many students prepare to enter high-paying government positions, rather than educating themselves for socially more productive occupations. Evidence is provided by the level of expected returns to education. In Greece, for example the expected private rate of return from university graduation is about 35 percent, while the social rate of return to the same level of education is only 8 percent (Psacharopoulos and Soumelis 1979, Psacharopoulos 1982).

#### D. Teacher Salaries

Teacher salaries are set and financed mostly by the public sector in all countries, and especially so in less-developed ones. Government intervention is important on several counts. First, since teacher salaries typically represent 70 percent of the direct cost of education (Jimenez, forthcoming 1987, appendix table 0.2), any decision on their level directly affects the amount of resources the state can devote to education and the number of schools it can offer. Second, the level of teacher salaries can affect the level of government expenditure on other priority social sectors. This seems to have been the case in the Ivory Coast, where the ratio of teacher salaries to per-capita income is 7.5 (contrasted to, say, Asia's 2.5). As a result, 45 percent of the Ivory Coast state budget is spent on education, which effectively limits further expansion of other sectors (Mingat and Psacharopoulos 1985).

#### E. Educational "Planning"

Historically, education has evolved from, and has been provided by, the recipients involved in using the product (the family, the church, or the firm by apprenticeship on the shop floor). Today, education in many parts of the world—especially in advanced industrial countries—is shaped by the demands of households for certain types and levels of education, as well as by firms' demands for skilled manpower.

In many developing countries, however, mainly the state determines the types and levels of education that are offered. The argument is that the state knows best what the country "needs" in terms of education and skilled manpower, and that coordinated and planned education leads to a better allocation of scarce resources. Although the rationale for educational planning is instinctively appealing, the state involvement with planning in developing countries leaves much to be desired.

There exists one main reason for this apparent paradox: Planning units in developing countries almost always adopt the "manpower forecasting" technique to assess future enrollment in schools. (For a discussion of this issue, see Psacharopoulos 1984.) This has led to the neglect of unit costs in allocating resources to education and to policies which expand universities and vocational schools to meet future "high-level and technical manpower needs." For example, Bertrand and Griffin (1984) report that the cost of a university place in Kenya is 78 times that of a primary-school place. This policy often has been adopted amid widespread illiteracy. Utilization of another technique to assess future investment priorities, such as cost-benefit analysis, would result in the promotion of primary schools. For example, Orivel (1982) reports that the 4,300 students at the University of Burkina (formerly Upper Volta) cost more to the nation than the entire primary-school population of 200,000. Elimination of student grants alone would enable primary-school enrollments to expand by 130,000. This reallocation of funds would be both efficient and equitable, as evidenced by the declining social rate of return structure as the educational level rises in developing countries (Psacharopoulos 1981).

**TABLE 3**  
Effects of Labor-Market Distortion on Growth Rates

<b>Labor-Market Distortion</b>	<b>Growth Rate (%)</b>
Low	5.9
High	4.5

Source: Agarwala (1983).

#### F. State-Managed Schools

Educational planning in poor countries inevitably is linked to the provision of schooling by the state and to the management of schools by headmasters who are civil servants rather than entrepreneurs. These features result in two major limitations. First, the number of school places provided is determined by the limited tax base on which schools are financed. Second, management of schools by persons who have no direct incentive to maintain quality of service can lead to extreme inefficiencies and pillage.<sup>1</sup> For example, Heyne-man (1975) reports that after the state took over production and distribution of textbooks in Uganda, *fewer* books actually reached the poorest students in the countryside.

#### II. WELFARE IMPLICATIONS

What are the welfare implications of these government-induced distortions? Although the literature on welfare effects of interventions in international trade and prices in general has been rather prolific, there are few empirical estimates on the welfare effects of education-specific distortions. Typically, reported losses (in terms of GNP) related to tariffs or monopolies are less than 1 percent in advanced countries and only a few percentage points higher in developing countries (Agarwala 1983).

Dougherty and Selowsky (1973), however, report a 1.7-percent static loss of GNP associated with wage differentials between equally educated workers in different sectors of the Colombian economy. According to de Melo (1977), the estimated welfare loss is greater in a general equilibrium framework.

More recently, Agarwala (1988) used a crude index of labor-market distortion—the extent to which real wages in manufacturing rose significantly faster than productivity—and found that such distortions explain 10 percent of the variance in growth rates between countries (table 3).

Dougherty and Psacharopoulos (1977) report that the welfare cost of mis-allocation of the state budget—e.g., toward higher educational levels which exhibit low social rates of return—can amount to 2 percent of GNP. In another study, Psacharopoulos (1977) used Iranian data to estimate the separate effects

1. This type of X-inefficiency might be as important or more important than allocative inefficiencies already discussed. X-inefficiency arises when a monopoly engages in high-cost internal practices which result in resources receiving compensation greater than their opportunity costs (see Leibenstein 1966).

on three social-welfare indicators of reallocating the education budget away from higher education and toward primary education. The total gain from such a reshuffle was equivalent to 3.3 percent of GNP—divided nearly equally between gains in efficiency, equity, and employment.

In a more subtle analysis, Pinera and Selowsky (1981) found that rationing school places by factors other than student ability (which enhances learning) amounts to a drop in GNP of between 3 and 7 percent in a number of developing countries. The present system of allocation of places or access excludes some poor but academically able students who would enroll if another finance system prevailed; therefore, the present system is suboptimal.

### III. THE APPROPRIATE GOVERNMENT ROLE

Given these government-induced distortions and the adverse welfare effects which result, one wonders what the role of government should be in education. To answer this question, let us initially abstract from political considerations that might override rational economic calculus.

It is easier to determine what a government should *not* do than what it should do in education. Also, the list of "do nots" would be much longer than that of the "dos." For the former, one should simply reverse the statements made in section I: i.e., governments should not provide as many subsidies, especially in higher education; should not set minimum wages at unrealistically high levels relative to the free-market wage for lower-skilled labor; should not set civil service pay scales at levels which bear no relationship to remuneration for high-level manpower in the private sector of the economy; should not plan the educational system according to mechanical manpower forecasts; and should not attempt directly to provide or manage schooling services.

What Friedman (1955) wrote 30 years ago to address this issue still remains valid today, and may have been reinforced by evidence that has since accumulated. The key to his argument (also see West 1970) lies in two sharp distinctions that often are forgotten in discussions of educational policy—the difference between basic and vocational schooling, and the difference between the finance of and direct provision of schooling:

... The role of government in education . . . has been unbalanced. Government has appropriately financed general education for citizenship, but in the process it has been led also to administer most of the schools that provide such education . . . largely in the form of making it available free or at a low price at governmentally operated schools. It reflects primarily the failure to separate sharply the question what activities it is appropriate for government to finance from the question what activities it is appropriate for government to administer—a distinction that is important in other areas of government activity as well.

The alternative arrangements . . . distinguish sharply between the financing of education and the operation of educational institutions, and between education for citizenship or leadership and for greater economic productivity. They center attention on the person rather than the institution. Government, preferably local governmental units, would give each child, through

his parents, a specified sum to be used solely in paying for his general education; the parents would be free to spend this sum at a school of their own choice.

For vocational education, the government, . . . might likewise deal directly with the individual seeking such education. If it did so, it would make funds available to him to finance his education, not as a subsidy but as "equity" capital. In return, he would obligate himself to pay the state a specified fraction of his earnings above some minimum. Such a program would eliminate existing imperfections in the capital market and so widen the opportunity of individuals to make productive investments in themselves while at the same time assuring that the costs are borne by those who benefit most directly rather than by the population at large.

The result of these measures would be a sizable reduction in the direct activities of government, yet a great widening in the educational opportunities open to our children. They would bring a healthy increase in the variety of educational institutions available and in competition among them. Private initiative and enterprise would quicken the pace of progress in this area as it has in so many others. Government would serve its proper function of improving the operation of the invisible hand without substituting the dead hand of bureaucracy.

Beyond paternalistic, merit-good arguments and externalities, there exists one major rationale for government intervention in economies of contemporary developing countries. This concerns imperfections in the capital market for investment in schooling, and marginal-cost pricing for efficiency and equity.

At present, there is underinvestment in education—especially at the lower levels in developing countries—as evidenced by a social rate of return to primary education which is several times that of other investment alternatives. This underinvestment can be explained partly by the inability of state-financed systems to raise enough tax revenue for investment to reach its socially optimum level. Although the investment is privately attractive, potential students might be deterred because of their own financial inability to enroll. Even if education is "free," the individual must be able to afford loss of earnings (or loss of part of his father's agricultural product) to attend school.

Compare the typical scenario described above with the following alternative. Fees are charged at the upper end of the educational ladder, and proceeds are used either to expand the number of primary schools in the countryside or to improve the quality of existing schools. In addition, free meals at primary schools might be provided to attract more students. A system of educational loans is instituted for those seeking to borrow and to enroll at the university. Furthermore, the state need not provide the increased schooling services at the primary level; instead, a system of vouchers could allow students and their families to spend the money at the schools of their choice.

Would such a scheme be unrealistic for any government to adopt? Perhaps. But this system would be socially efficient, since investment would occur at the level which exhibits the highest profitability. And the system would be equitable, since university graduates who enjoy higher rewards in life would

eventually bear the cost of their education by repaying their loans.<sup>2</sup> Although it is politically unpalatable to charge fees, this practice can have beneficial socioeconomic effects. In a theoretical paper, Thobani (1983) established that when there is excess demand for a social service—such as education provided at nominal cost to the user—charging fees and using the proceeds to expand the system lead to higher efficiency (less discrepancy between marginal benefit and cost).

Tan, Lee, and Mingat (1984) have empirically documented this proposition in the case of a poor African country. Given the conditions of excess demand for secondary education in Malawi and the estimated low responsiveness of families to fee increases, it would be possible to increase fees up to 67 percent of the current unit cost. Under the assumption that the added revenue would remain in the educational system, the increase in fees would allow a 144 percent increase in the supply of secondary-school places if we consider only the quantity of students enrolled. The increase would be 100 percent if simultaneously a bursary scheme were developed to avoid any dropout of students who could not afford to pay the increased fees (Mingat and Tan 1984).

Given the relatively small share of private education in most countries, the allocation of resources to and within education in the near future will depend on the political will of governments. The role of the economist is not to dictate what governments should do, but politicians often are influenced by comparisons of the outcomes of alternative policies. I hope this essay will contribute to this end.

2. In addition, the scheme would lead to substantial gains in X-efficiency, because schools would ultimately be managed by those who use them and not by those who allocate the state budget to remote districts.

### REFERENCES

- Agarwala, R., *Price Distortions and Growth in Developing Countries*, World Bank Staff Working Paper, No. 575, IBRD, Washington, D.C., 1983.
- Bennell, P. J., "Earnings Differentials Between Public and Private Sectors in Africa: The Cases of Ghana, Kenya and Nigeria," *Labour and Society*, July-September 1981, 6, 223-241.
- Bertrand, T. J., and R. Griffin, "The Economics of Financing Education: A Case Study of Kenya," Country Policy Department, The World Bank, Washington, D.C., 1984.
- De Melo, J. A. P., "Distortions in the Factor Market: Some General Equilibrium Estimates," *Review of Economics and Statistics*, November 1977, 59, 398-405.
- Dougherty, C. R. S., and M. Selowsky, "Measuring the Effects of the Misallocation of Labor," *Review of Economics and Statistics*, 1973, 386-390.
- Dougherty, C. R. S., and G. Psacharopoulos, "Measuring the Cost of Misallocation of Investment in Education," *Journal of Human Resources*, Fall 1977, 12, 446-459.
- Edwards, A. C., "Wage Indexation, Real Wages and Unemployment," Development Research Department, The World Bank, Washington, D.C., 1983.
- Friedman, M., "The Role of Government in Education," in R. Solo, ed., *Economics and the Public Interest*, Rutgers University Press, 1955.
- Gregory, P., "Wage Structures in Latin America," *Journal of Developing Areas*, July 1974, 8, 557-580.
- Gregory, P., "The Impact of Institutional Factors on Urban Labour Markets," *Studies in Employment and Rural Development*, No. 27, IBRD, Washington, 1975.
- Heyneman, S., "Changes in Efficiency and in Equity Accruing from Government Involvement in Ugandan Primary Education," *African Studies Review*, April 1975, 51-60.
- Isbister, J., "Urban Employment and Wages in a Developing Country: The Case of Mexico," *Economic Development and Cultural Change*, (1), October 1971, 20, 24-47.
- Jallade, J. P., *Public Expenditures on Education and Income Distribution in Colombia*, World Bank Staff Occasional Paper No. 18, Johns Hopkins University Press, Baltimore, Md., 1974.
- Jimenez, E., *Pricing Policy in the Social Sectors: Cost Recovery for Education and Health in Developing Countries*, Johns Hopkins University Press, Baltimore, Md., 1987 forthcoming.
- Kreising, D., "Government and Public Sector Payrolls in Developing Countries: Some Quantitative Evidence," Washington D.C.: World Bank mimeo, 1975.
- Leibenstein, H., "Allocative Efficiency vs. X-Efficiency," *American Economic Review*, June 1966, 55, 392-415.
- Lindauer, D. L., "Public Sector Wages and Employment in Africa: Facts and Concepts," *Studies in Employment and Rural Development*, No. 68, IBRD, Washington, D.C., 1981.
- Mincer, J., "Unemployment Effects of Minimum Wages," *Journal of Political Economy*, August 1976, part 2, 84, S87-S107.
- Mingat, A., and G. Psacharopoulos, "Financing Education in Sub-Saharan Africa," *Finance and Development*, March 1985, 22, 35-38.
- Mingat, A., and J. P. Tan, "Expanding Education Through User Charges: What Can Be Achieved in Malawi and other LDCs?," *Economics of Education Review*, November 1986, 5, forthcoming.
- Orivel, F., "Cost and Financing of Education in Upper Volta: Current Situation and Prospects," Country Policy Department, The World Bank, Washington, D.C., 1982.
- Pinera, S., and M. Selowsky, "The Optimal Ability—Education Mix and the Misallocation of Resources within Education Magnitude for Developing Countries," *Journal of Development Economics*, 1981, 8, 111-131.
- Psacharopoulos, G., "Measuring the Welfare Effects of Educational Policies," in V. Halberstadt and A. J. Culyer, eds., *Public Economics and Human Resources*, Cujas, 1977, 75-94.
- Psacharopoulos, G., "The Perverse Effects of Public Subsidization of Education, or How Equitable is Free Education?" *Comparative Education Review*, February 1977 21, 69-90.

- Psacharopoulos, G., "Returns to Education: An Updated International Comparison," *Comparative Education*, 1981, 17, 321-341.
- Psacharopoulos G., "Is it Worth Spending on Education in a 'High-Cost' Country?" Education Department, The World Bank, Washington, D.C., 1982.
- Psacharopoulos, G., "Earnings and Education in Greece, 1960-1977," *European Economic Review*, 1982, 17, 383-347.
- Psacharopoulos, G., "Education and Private Versus Public Section Pay," *Labour and Society*, April-June 1983, 8, 123-133.
- Psacharopoulos, G., and C. Soumelis, "A Quantitative Analysis of the Demand for Higher Education," *Higher Education*, 1979, 159-177.
- Selowsky, M., *Who Benefits from Government Expenditure?* Oxford University Press, 1979.
- Selowsky, M., "Income Distribution, Basic Needs and Trade-offs with Growth: The Case of Semi-Industrialized Latin American Countries," *World Development* 1981, 9, 73-92.
- Squire, L., *Employment Policy in Developing Countries: A Survey of Issues and Evidence*, Oxford University Press, 1981.
- Tan, J. P., "The Private Direct Cost of Secondary Schooling in Tanzania," *International Journal of Educational Development*, Vol. 5, No. 1, 1985, 1-10.
- Tan, J. P., K. H. Lee, and A. Mingat, *User Charges for Education: The Ability and Willingness to Pay in Malawi*. Staff Working Paper No. 662, The World Bank, Washington, D.C., 1984.
- Welch, F., "Minimum Wage Legislation in the United States," *Economic Inquiry*, September 1974, 12, 265-318.
- West, E. G., *Education and the State: A Study in Political Economy*, The Institute of Economic Affairs, 1970.