



HAL
open science

Excluding the Poor : globalisation and educational systems

François Orivel

► **To cite this version:**

François Orivel. Excluding the Poor : globalisation and educational systems. European Educational Research Journal, 2002, 1 (2), pp.342-359. 10.2304/eerj.2002.1.2.9 . halshs-00004963

HAL Id: halshs-00004963

<https://shs.hal.science/halshs-00004963>

Submitted on 10 Jun 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Excluding the Poor: globalisation and educational systems

FRANÇOIS ORIVEL
IREDU-CNRS, University of Burgundy, France

Article publié dans European Educational Research Journal, Volume 1, Number 2, 2002, pp.342-359

DOI : <https://doi.org/10.2304/eeerj.2002.1.2.9>

ABSTRACT

The article starts from the fact that one billion adults are illiterate world-wide, that more than 100 million children of school age are not schooled, and that the democratisation of the access to education is often only rhetorical. On the basis of available statistics it tackles successively three questions. First, who finances education and how much do they spend? Secondly, what resources or means are devoted to the education of an individual, and how can these data be evaluated. And finally, do the inequalities between individuals, social groups or nations tend to de- or increase with respect to education access. It will be shown that, for example, in developed countries like France, the social inequalities when it comes to education have widely diminished and can appear as relatively minor when compared to those affecting children from the poorest countries. At macro-economic level the 'tendentious reduction of education systems' productivity is not valid. Schools are unequally efficient with the same means. The traditional distinction between developed and developing countries is changing, part of which is due an unequal development of developing nations. The least advanced have remained outside of the race, and the distance is increasing.

Economists started to get interested in education about 40 years ago, when they studied its profitability, first in a theoretical way and then in an empirical one. This profitability has appeared in two ways: for educated people themselves who on average earned all their life along more than less educated ones, but also for the society as a whole: efforts made by nations to educate their population expressed by economic growth rates superior to those of nations less able to follow the same process. This current of research has lasted 40 years and the same lessons have regularly been drawn. However if there is a near consensus for economists to recognise the necessary, if not sufficient, characteristic of education in societies economic development process, there is not any about some allied domains yet, like for example the optimal share of education financing between the different agents, the analysis of education systems efficiency, or the role of educational policies in a matter of equity.

Our point of view is naturally neither to give definitive solutions nor even temporary ones, to these delicate questions, but to enlighten as much as possible the terms of the debate. This is because the problems education systems face in the world remain with us, and still will do for a long time. We want to talk about the fact that one billion adults are illiterate world-wide, that more than 100 million children of school age are not schooled, and that the democratisation of the access to education is often only rhetorical.

We will tackle successively three points. First, who finances and how much? Secondly what resources or means are devoted to the education of an individual, and what judgement can be applied to these means: Too much? Not enough? Badly used? And finally, do the inequalities between individuals, social groups or nations tend to reduce or increase? To answer these questions, we will use available information, but the lack of world-wide information does not enable establish an exhaustive inventory of the situations. That is why concerning some points, the analyses proposed will rely on the case of some countries, like France, a country that the author has particularly studied. It will be shown that for example in developed

countries, like France, the social inequalities when it comes to education have widely diminished and can appear as relatively minor when compared to those affecting children from the poorest countries.

The Resources for Education: evolution of the contribution of main sources of funding

Generally three financial sources for education systems are distinguished: the public sources, families and firms. The public sources are both the most important and the most well known. This has not always been the case. The role of churches, themselves financed by family contributions has been very important for a long time. However this kind of organisation leaves a certain share of children of school age out of the system, and only the setting up of the compulsory schooling, accompanied with penalties, has been able to eliminate this part of children not sent to school. The public financing has become predominant from the time when schooling became compulsory. Thus in France, the Jules Ferry's laws at the end of the 19th century established simultaneously compulsory schooling and the principle of free education, i.e. the public financing.

The principle of predominant public financing was therefore instituted and it has grown all through the 20th century. However nothing has ruled that this principle was to the case for the financing of post compulsory education. The latter has developed in a different way according to the countries. Still today, there are some countries where the not legally compulsory levels of education are financed significantly by non-public sources, whereas others have extended free education to all the levels, mainly for equity reasons, so that children of less wealthy backgrounds are not forced to give up carrying on their studies for financial reasons.

Evolution of Public Financing

For some developed countries (for example, France), the evolution of public spending in the long term (one hundred years and more) is known thanks to quantitative historical research. These data however remain exceptional on an international scale. Exhaustive data have only existed since the beginning of the sixties, thanks to the UNESCO statistics service, which publishes an international yearbook about education, including among others, financial indicators.

In 1960, the world devoted 95 billion dollars to education public financing. This figure rose to 1,400 billion in 1995 (15 times more in current dollars). As spectacular as it may seem, such an increase must be kept in perspective. The average costs of means have themselves strongly increased, and the number of people sent to school has risen sharply from 300 to 1200 million.

	1960	1965	1970	1975	1980	1985	1990	1995
Countries in transition	na	na	6,2	6,7	6,4	6,3	7,5	5,2
Sub-Saharan Africa	2,6	3,4	4,0	4,5	5,1	4,8	5,1	5,6
Arabic states	na	na	na	na	4,1	5,8	5,2	5,2
Latin America and Caribbean	2,1	3,0	3,1	3,3	3,8	3,9	4,1	4,5
EastAsia / Oceania	*2,5	*3,0	*3,7	*3,2	2,8	3,1	3,0	3,0
<i>Of which: China</i>	na	na	na	na	2,5	2,5	2,3	2,3
South Asia	*2,5	*3,0	*3,7	*3,2	4,1	3,3	3,9	4,3
<i>Of which: India</i>	na	na	na	na	2,8	3,4	3,9	3,5
Less developed countries	na	na	na	na	2,9	3,0	2,7	2,5
Total developing countries	2,3	3,1	3,5	3,5	3,8	3,9	3,9	4,1
Total developed countries	3,9	5,1	5,5	5,9	5,2	5,0	5,0	5,1
World	2,6	3,4	4,0	4,5	4,9	4,9	4,9	4,9

* = From 1960 to 1975, Southern and east Asia are put together; na = not available

Table I. Public education spending in GDP percentage. Sources: Eicher & Orivel (1979); UNESCO (1998).

That is why instead of analysing the amount of the expenses, economists have developed indicators which speak more for themselves, especially the one that measures the part of a country's GDP spent on education. This indicator reflects well enough the real priorities of the protagonists and the decision-makers. The evolution of this indicator through the last 50 years is very enlightening. During the 25 years following World War II, it has quickly risen, from less than 2% on a world scale to about 5%. But at the same time, an increasing dispersion has been observed, with widening discrepancies between countries. The second period has opposite features. Since 1975 indeed, this indicator average value, 5%, has not moved anymore. Besides there has been a certain tendency to convergence, in the sense that regions clearly under the average have had a slight growth, whereas those above have reduced their effort. Within the rich countries, those whose efforts have slightly been generally above average, such as the Scandinavian countries, Netherlands or Canada, have come closer to the average. Nevertheless important discrepancies remain.

Countries from the ex-Soviet Union were to a certain extent the more generous in terms of education public financing, with about 50% more than the average, but since political changes at the beginning of the 1990s, they have fallen back to the average, and for some of them, significantly under it. Sub-Saharan Africa which has gone through a fall in the middle of the 1980s, i.e. when public financing crises were at their peak, is one of the developing regions which spend the most. But it is the most behind region in matters of access to education, and therefore the hypothesis that the latter is mainly linked to comparatively lower budgetary efforts cannot be upheld.

Latin America has during that period continuously got closer to standards observed in developed countries, as well as South Asia. The only notable exception to the convergence phenomenon is the East Asia. This is at first sight a paradox, because it is probably the region in the world which for 20 years has seen its education indicators more clearly improved. This

paradox can be explained by two considerations. The first one is linked to the role played by China in this group, which not only spends less money than the rest of the world (about half), but moreover has reduced its effort during the last decade (only 2.3% of the GDP). The atypical nature of China is the result of two phenomena, the decrease of the school-age population following the restricting demographic control enforced by Chinese authorities, and low prices of school inputs, when it comes to textbooks or staff wages. The second reason to the Asian paradox does not come from China, but from some of its neighbours, like Korea for example. It is about the role of private financing, that balances out public financing. We will come back to this in the following part.

Within developed countries, it is interesting to notice the somewhat atypical behaviour of France, one of the large countries that increased its public financing effort through the 90's. According to the last statistics from OECD, France has increased the part of the GDP devoted to public spending for education from 5.1% in 1990 to 5.8% in 1997, sharply more than the USA (5.2%), the UK or Italy (4.6%), Germany (4.5%) or Japan (3.6%).

Evolution of Private Financing

Private financing is less well known than public financing. Few nations have set up a statistical overview system of private expenses presenting the same reliability and consistency as for public spending. The UNESCO statistical yearbook says nothing about this point. Since 1987 however the OECD attempted to solve this problem for its 29 member countries. The first results are now available. They show that on the whole, private financing represent 1.2% of the considered countries' GDP. In other words, education expenses use up, all financing merged, 6.1% of the OECD countries' GDP, of which 80% come from public sources and 20% from private sources.

Nevertheless, unlike public spending, private expenses do not converge. There are large discrepancies between countries, that can be illustrated by the example of Italy which only devote 0.15% of its GDP to private education spending, whereas Korea, with 3% makes a relative 20 times bigger effort. Actually two types of behaviour can be distinguished. The first is defined by considerable private contributions concerning non-compulsory education, i.e. high school and higher education. In this group there are, (besides Korea, Japan, the USA), Australia and Greece which devote 1.5 to 3% of their GDP to education private financing. Germany is an odd case, insofar as private financing is also large but does not come from families. This financing is deducted from firms to provide initial vocational education. We can notice by the way that however often admired or envied by the rest of the world, the German system of vocational education is not imitated, and this could shroud in mystery its relevance.

	Origin of the financing	Primary and high school	Higher education	Whole education system
<i>Group I, high private financing</i>	Public	88	50	70
	Private	12	50	30
	Total	100	100	100
<i>Group II low private financing</i>	Public	96	85	94
	Private	4	15	6
	Total	100	100	100
<i>Total OECD</i>	Public	90	60	80
	Private	10	40	20
	Total	100	100	100

Table II. Part of public and private financing in OECD countries (Unit: %).

The second group of countries, by far the biggest, summon a small amount of private financing. It devotes roughly a third of GDP point to these expenses, that makes only 1/15th of public spending compared to the quarter on average, sometimes more than the third, in the first group. France naturally belongs to this second group, where it holds a rather average placing. We can notice that the dividing line between the two groups does not put oppose an 'Anglo-Saxon' model and a Latin one. The UK, Netherlands, Scandinavian countries and Canada are in the same group as France, whereas Greece, Japan and Korea who are part of active private financiers cannot be considered as belonging to the Anglo-Saxon allegiance. The common ground of countries which summon a small amount of private financing is more political: all of them have at a certain moment of their history, socialist, labour or social democratic inspiration governments of which have set up almost free education systems, and when more conservative governments come back to power, they hesitate to question free education.

If we distinguish the funding sources according to the level, a simple opposition between elementary and secondary education on one hand and higher education on the other hand, the contrast is striking. The predominant public financing principle of primary and secondary education remains the norm everywhere, with a 1:10 ratio between private and public sources, including in countries displaying the purest liberalism. This principle is only called into question for higher education, where a small group of countries (containing no European countries) balances on average both sources of financing. In terms of number of countries, this represents less than 1/5th of countries providing data, but in global funding sources terms, the presence of the two most powerful economies in the world in that group, the USA and Japan, strongly bears upon weighted averages.

These results involve member-countries of the OECD, i.e. with a few exceptions, developed countries. Are they valid for developing countries, which represent 4/5th of the world population? Some of them have asked for a participation to the OECD comparative office and therefore that's how India is known to have a very low private financing level (1 per 1000 of the GDP, universities excluded), as well as Malaysia (0.32%). As for China, however it did not participate to the OECD indicators project, it's known that private financing is rather low. The two biggest countries of the planet, (40% of the world population) have therefore clearly

chosen a predominant public financing. But other countries non-member of the OECD spend much more in a private way, like Chile (2.5% of the GDP), Israel (1.72%) or the Philippines (1.42%).

In most of the other developing countries, the information on educational private spending is very deficient. However there are surveys about incomes and domestic expenses, which include questions on education spending, from which it is possible to make an estimate for the whole country. Two trends emerge from these surveys. First there is a great discrepancy in family behaviours. There is a large share coming from the richest families, (more than a half of family educational expenses comes from the 10% richest). Secondly the global weight of educational expenses remains extremely low, and it can be estimated at less than 1% of the GDP. Recent surveys carried in some countries of the ex soviet Union, where the collapse of public budgets has severely affected the level of public educational expenses, are especially enlightening. There has not been a real substitution phenomenon between public and private financing. The family contribution has surely increased, especially in the nouveaux riches, but it is significantly lower than the severe cuts public financing have known. On the whole, despite the deficient nature of information, it is justified to think that the predominant public financing principle is also observed in non-member countries of the OECD. This principle has become universal.

Why Does the Private Financing Remain Marginal?

We have seen that apart from Germany, education systems only marginally call upon firms to fund initial training. These systems tend to limit firm intervention to the further training of staff, either because firms have the legal obligation, or to remain more competitive in their field of activity. In terms of international comparisons, the absence of data is even more limiting than in the case of families' education expenses. Needless to say that we do not know. France is one of the rare countries, which make efforts to produce information in this field and make detailed information public. Firm contribution represents 5.8% of all education spending, further training included, of the country (French Education Department, 1998). This figure does not include expenses carried out by firms to pay the active population in terms of training, which have the same rough estimate as educational spending *stricto sensu*. Although firms tend to consider this element as being a part of the cost they bear, the Ministry of education has an opposite opinion because this obligation, results from an agreement between social partners, and does not constitute an educational resource.

If we stick to firms contribution to (initial training), it represents less than 0.5% of all expenses, (devoted mainly to training activities). Therefore firms do not represent an active funding source, and it is doubtful that their share will significantly increase. From the economical analysis point of view, these choices are logical and justified. As Gary Becker, one of the education economy pioneers has shown, firms should finance training activities 'specific' to them, i.e. those other firms would not be able to benefit from, in case of staff mobility. In a market economy, these cases are rather seldom, and they more and more tend to become so in contemporary economies.

Concerning the second private funding source, families, the exclusive public financing principle is a priori less obvious, because educated people are the first beneficiaries of education expected advantages. That is why many economists in the wake of the neo-liberal trend of recent years have advocated policies aiming at strengthening family contribution to the financing structure. This has triggered off some vigorous reactions against a process that would aim at privatising school. Many arguments have been advanced.

The first is based on the notion of efficiency: states might not be efficient administrators compared to private ones. De facto most countries have proceeded, for a good decade, in the

privatisation of very numerous public firms, and the question why school should be an exception can be raised. If 'users' pay, they would exert a higher pressure to make schools more concerned by the results obtained. In other words, one of the incitements classically underlined by the economical analysis to improve firms' efficiency would be introduced.

The second argument refers to the situation of (poor) countries where public budgets are widely known as insufficient to take charge of all the educational 'needs'. This is a pragmatic argument: if the resources lack, and if some agents are ready to pay more, why should one do without it? In countries less concerned by budgetary income insufficiency, an increase in family contribution has another advantage: it enables, all other things being equal, to reduce fiscal pressure. This is another question of importance and topical for public policies, in so far as the globalisation process in progress can favour countries with a low tax system (they attract more investors).

The third argument curiously follows the theme of equity. Public financing of post compulsory education levels carries out a regressive redistribution of income, i.e. in favour of rich families at the expense of modest ones. Certainly, it is not the legislator's intention, but as the access to post-compulsory levels is governed by school merit, (and not by demand solvency), the social groups the most capable of winning the merit race are de facto those who benefit from free education. But these social groups are perfectly known. They are higher professions, especially executives, the professions, senior civil servants, teachers and company managers, whose children achieve on average better results than those from families belonging to the other social groups. Some empirical surveys in France, USA or Chile have shown the extent of this perverse re-distributive effect, that would justify that one has to pay (or at least partially) for post compulsory education, while offering specific financial aids or fees exemptions to students of less wealthy background. However these studies are already old and their current relevance can be disputed. Indeed, the time when post compulsory education was reserved to a small number of a chosen few is no longer the case in these countries. Secondary education is widespread there, and higher education has become a mass higher education.

If the argument has lost some of its strength in the context of developed countries which have generalised lengthy schooling, it remains relevant for some developing countries. These countries, without having extended primary schooling to everybody for want of means, offer free lengthy studies to a small and socially biased fringe of school-age population.

It can be observed that some recent educational policies have seized these arguments to modify post compulsory education funding structure, especially higher education. The known archetypal of this kind of policy is offered by the United Kingdom, known in the past for its generosity in terms of higher education public financing. This period is over. Means have globally decreased, and inside an envelope on the downswing, the share of public funding has also diminished, thanks to the institution of substantial fees, at least for French observers (about 1,000 francs a year). Scotland has refused to set up this kind of system, and the debate rages about the degree of autonomy universities have, to fix themselves the amount of the fees. It is clear that a completely private financing would not be politically saleable, as it is the case in the USA, Japan, Korea or in some countries of south America. The French actors' resistance towards the same type of projects would undoubtedly be very strong, as it would be in any other country where free education is part of social benefits considered to be sacrosanct. The willingness to pay of families is not very much developed, and we have witnessed French students seizing the Council of State to demand the repayment of specific fees not required by the law and representing very low amounts of money.

Family willingness to finance educational systems costs is uncertain, low and unequal. Making families paying a contribution significantly higher than today is no more really topical, even for the most liberal economists. It would result in the summoning of means too

low to provision for the future of national economies (whose qualification needs are in an upward trend, and not downward). It would also result in a slight increase in injustice, because the willingness to pay tends to be higher in rich families than in modest ones. At this moment where the State intervention is called into question in some sectors, it does not seem appropriate to particularly limit its involvement in educational systems funding.

Resources by Pupil: analysis of education systems efficiency

The standard economical analysis shows that in any economy, for sectors characterised by a strong productivity growth and producing goods or services involved in the phenomenon of consumer saturation (for example food), the part of the GDP represented by these sectors tends to decrease. That is how farming has seen its share fall from 50% to 4% within two centuries. At the opposite, where productivity progresses are slow or nil, and where needs are steady or increasing, the part of the sector in the GDP tends to increase. Within those sectors, education, health and art are traditionally named. Therefore in educational systems, if the problem of educational quality is disregarded by limiting it to the fact that a child is educated if he/she is at school, it is observed that productivity is rather going downwards. Indeed, in many countries it can be observed that education systems tend everywhere to increase the amount of inputs per output unit. We remind the reader that the output is the fact to have a child at school, and inputs are resources brought together to teach him/her, i.e. teachers, an administration, buildings, furniture and teaching materials. 'Personnel' inputs are by far the most important (about 80% of the total costs). But, during the period from 1950 to 2000, the ratio between the number of pupils present in a school and the number of people employed in a given school has tended to increase. So there is more input per output unit, what is the standard definition of productivity decrease. Certainly, it can be supposed that increasing the 'personnel' input improves the quality of learning, but at this point of reasoning, we will keep a purely quantitative approach.

Besides, education is a sector where the demand is not saturated, quite the opposite. It increases everywhere. The average schooling duration becomes longer on a world scale, and this trend should continue for a long time if the unsatisfied needs of developing countries, or further training which some people announce to be exponential, are taken into account. These factors explain why, in the 70's, the economical analysis foresaw a significant increase in the part of the GDP devoted to education on the mean and long terms, some authors having put forward about 30%.

Moreover the same conclusions were drawn about health sector, which at that time, was close to education in terms of deductions from the GDP. It is interesting to notice that about health, the error made is less glaring, because it's a sector whose weight in the GDP has really increased significantly, as it consumes today 14% of American GDP, and about 10% of European GDPs, without a trend reversal being detected.

Where does the error come from? Many sources can be suggested. The first is linked to the change in school-age population. The world is on the way to a demographic decrease, which results, especially in developed countries consuming 84% of the world's educational expenses, in new generations of a smaller number than the preceding ones. The lengthening of schooling tends to be counterbalanced by the reduction in the number of pupils.

The second type of explanation is linked to changes in productivity. It can be approached by means of an indicator which expresses the share of the GDP per head used to educate a person during one year, (data showed in Table III). If productivity has decreased, more resources would have had to be debited from the GDP to send a person to school. But many opposite phenomena are observed. First, we notice that in all regions of the world except one, higher

education productivity has been improved for ten years. It was maybe already true before, but we do not have corresponding data. Then the more a region is poor, the more its higher education is expensive. However, the increasing number of students in higher education is more likely to happen in developing regions than in developed ones, where the phenomenon has already taken place. This is, so to speak, where the most promising productivity growth deposits are. If sub-Saharan Africa is compared to developed countries, we see that the value of more than four GDP per inhabitant must be allocated to have one student at university in Africa versus only a quarter of GDP in developed countries. Although the movement is too slow to us, there is a development process in progress, at least on average, inside developing countries, and therefore a tendency to converge productivity towards levels reached by more developed countries.

Another factor of overall productivity improvement is linked to the fact that higher education, which is the level the most concerned by productivity improvement, is also the one with the quicker relative growth. Finally, the growth of primary school number of pupils, (which is negative in developed countries, countries from the Former Soviet Union and those ending their demographic transition (like Tunisia for example), is mainly now in areas like south Asia, sub-Saharan Africa, east Asia, Arab countries and Latin America. But we notice that in all these areas, excepted sub-Saharan Africa, the primary level has a higher productivity than the rest of the world, as on average less than 10% of a GDP per head is needed there to send a child to school instead of about 20% in developed countries.

However it remains correct to say that productivity does not increase, inside every area, at the primary level. It slightly decreases in developed countries and in Latin America, and it is relatively steady elsewhere. It has not moved either at the secondary level, at least in areas for which data are available. On the whole, it clearly appears that the economists' prediction did not work, and that the development of education systems has taken place, in the recent past, with almost unchanging means per pupil for primary and secondary levels, and decreasing means for the higher level.

About this last point, causes have not been studied in detail, but it seems rather credible that it is due to a triple phenomenon: a) a tendency to increase the average number of tertiary students per teacher in many countries, (of which France), b) a tendency to develop educational technology (hopefully less expensive), like distance learning, and c) a tendency to increase private financing in certain countries or to reduce social assistance to students in some others.

	Primary		Secondary		Higher	
	1985	1995	1985	1995	1985	1995
Public spending per pupil in percentage of the GDP per inhabitant						
World total	17,5	18,2	*	*	66,1	58,2
Developed countries	17,3	19,9	*	*	30,5	25,5
Countries in transition	18,8	17,9	*	*	26,5	21,7
Less developed countries	9,7	9,2	26,0	29,2	153,9	125,6
Sub-Saharan Africa	16,4	17,0	57,5	57,6	481,5	433,9
Arabic States	24,9	20,5	*	*	115,6	73,5
Latin America/ Caribbean	5,9	9,1	14,8	13,1	30,4	27,2
East Asia/ Oceania	7,2	8,8	18,1	18,1	93,1	70,3
South Asia	10,7	10,2	17,7	21,3	77,6	89,1

* = For these regions, the separation primary/secondary was not possible. Indicated data for the primary represents in fact the average for both primary and secondary levels.

Table III. Public spending per pupil in percentage of the GDP per inhabitant, according to primary, secondary and higher school level. Source: UNESCO (1998).

How imperfect they may be, the data that have just been presented do not comfort the hypothesis of a massive inefficiency of the world educational systems. There have been some productivity decreases, but not everywhere, not for all levels of education, and rather slow. How to explain then the fact that most economists put forward an opposed diagnostic? In reality, the diagnostic on which the weak efficiency of education systems is based, has been for a long time, on micro economic type of studies, that is to say works that compare costs in different education institutions, and that seek to measure whether different means lead to significant different results. A former group of this kind was conducted in the US in the early 1970s, under the initiative and the funding of Carnegie Foundation. Those studies demonstrated that institutions could have costs per child that could double without anyone being able to detect important differences in terms of results, in quantitative as well as in qualitative level. One of the author who was part of the research team, named Bowen, ended up presenting an unpublished theory on the determinants of resource allowances in the field of education, 'the income theory of cost', literally, the theory according to which schools tend to spend what they generate as income. A few American universities that are wealthy receive income from public allowances, maecenas, and substantial subscription fees, that enables them to provide extensive services such as swimming pools, museums, have star-like teachers (very well paid), rich libraries, and computerised equipment which can make their competitors green. They happen (not always) to be better than others, because they produce very well prized degrees and the most competent, but most of the time, this is more due to the fact that those universities are able to select students the most capable at the beginning of university than to the fact that the universities have higher resources.

This weak relation between means and results, or between inputs and outputs, is in fact a constant of the economic literature on the topic. This has been very well documented by an author named Hanushek, who carried out several subsequent meta-analyses of his colleagues' studies. His conclusion is that good governance of the education systems should lead their heads and managers to align the resources of every school to those which, for a given result, appear to be cheaper. Yet very few education systems are run according to such principles, which leads to the diagnosis of inefficiency and waste.

Nevertheless it is to show out that the management principles are applied in some cases, of which the best known is that of New Zealand. It introduced, about 15 years ago, the system of a forfeit budget to the pupil or student. The school or university budget is determined each year by the number of enrolled schoolchildren that multiplies a fixed sum per enrolled. This forfeit is modulated according to some criteria, such as discipline, level in the school year, and other contextual factors (urban/rural, social background that is more or less high, costly options, etc.) A certain number of countries have since copied New Zealand, and others are planning to do so. This does not seem to be a topical issue in France.

The same type of approach has inspired the latest multiplication in the US of 'charter schools', a system in which school authorities enable entrepreneurs to have the mission of running a few schools, in committing themselves to respect the 'chart' relative a) to the modalities of pupil selection, b) to aimed objectives, and c) to expected results. In this approach, the responsibility for funding, control, and monitoring of results are the exclusive work of local public authorities.

Some authors have talked about the weakness of the relation between means and results to minimise the importance of means in well working of educational systems. That is a mistake. If the ten world education systems that have more means are compared to those, which have less means, there is no doubt that school children from the former leave school with better scores, than the latter. The reason for which the studies on this issue lead to a weak relation inputs-outputs is mainly linked to the fact that the comparison is made between schools of the

same country where the means can vary from one to another, but not enough to induce important differences of results. Some countries, especially the developing ones, schools have different access to means from one school to another, and the relation inputs-outputs is more marked. Unfortunately, there have been less studies on developing countries than on developed ones and the latter do not mention the differences in results regarding the lack of means because almost everywhere there is a minimum of means, (which is even higher), that allows better management of schools.

However, one can say, regarding the costs of educational resources in a given country (teachers salaries, value of school buildings, costs of diverse teaching materials), there is a resource line per pupil under which it is difficult to reach the expected school results. However, there are a few schools that notably appear above this line, without this turning into results which are basically different. These higher cases are for an economist an indication of inefficiency and the ways of current management education systems do not deal with them in a convincing way. Such a conclusion does not imply that all schools should be necessarily embodied at the same level. The legislator can very well decide that some schools categories, that have specific difficulties, are eligible to more consequent means than the average. That is called positive discrimination, which aims at compensating the weakness of school acquisitions of risks groups by programs that are more costly than those offered to average schoolboys/girls.

Is There a Conflict Between Efficiency and Equity?

Equity is always defined in relation to an object. Regarding education, one speaks of equity in relation to two very different types of objects. On one hand, in relation to means: are all individuals treated in the same way regarding the access to public means given to the educational systems? On the other hand, in relation to the results: do all individuals have an equal opportunity to get the level of education competence they wish?

On this last point, everyone knows that it is not the case, and everyone should admit that the magic recipe has not been invented yet. One can simply say that beyond the educational systems, we have and this is in all countries, three types of individuals: a small group, whose size can vary from 10 to 20 % of an age group in the developed countries, (often much more in the less advanced countries), who do not master the basic knowledge in a satisfying way, we mean, writing, reading and using numbers. At the other end of the spectrum, we have another group of about 5% of an age group, that has acquired the degrees the most desired by the job market and they are assured to enter the elite market (this means universities and the most prestigious curricula in several countries, Grandes Ecoles and a few types of academic training in France). In the middle, the great majority of individuals has obtained from school a kind of asset that allows to normally entry into the job market, to use school acquisitions in everyday current activities and to better themselves according to needs and tastes all along their lives. Indeed, these groups are unequal. To improve the equity among the three groups, several countries have implemented policies aiming at reducing the size of the first group, that of weak pupils, by what we have mentioned earlier as being positive discrimination policies. The latter consists on the whole in giving more means to these pupils to help them escape failure. Regarding this group, one goes from equity in terms of means to minimal equity in terms of results. In general, these policies do not work well, at least in the short term. The great variety of experiences in the world shows very well that we are still searching our way, but the fact that this group is less important in some countries than in others allows us to hope that progress is coming.

As far as the access to the elite market is concerned, one can see that in most countries, this

access is more likely to happen when people come from families that belong to the elite than when they are from ordinary families. The equity of results in this segment is then very imperfect. The causes are more or less known. The elite families are more motivated by school values, they are better informed, better able to make the best curricula choices, to give family schooling extras, more capable to finance optional school inputs that will make the difference, etc. If equity had to be re-established by giving to the big centre group the same assets as those available in the elite families, the public costs would be too high without anyone being able to change something in the problem. Elite families can be trusted to find out appropriate answers that will keep higher their probabilities of success. There is here an efficiency/equity conflict, for which the answer may not be in a reform of the education systems, but in the employment processes for the school leavers, in the role the employers give to degrees, or in the policies of incomes distribution which the society wishes to give itself.

What remains is the equity in terms of access to public means. When the duration of school years strongly varied from an individual to another. For instance between those who left school after primary school certificate (end of primary school) and those who went up to universities, the gap could be important, let us say in a ratio from 1 to 4 (meant both by the difference in the years spent in school, and by the fact that post primary years are more costly). Moreover, there were more opportunities in belonging to advantaged social milieu when one had longer school years and to less advantaged social 'milieu' when the school years were shorter. That has led to the judgement already mentioned above of regressive incomes redistribution through school.

Indeed, the framework has not disappeared, but it has become very hazy. For instance, in France, most students do not leave school before 18, and have spent sixteen years in school, including pre-schooling. About half of them will have two or four more years according to whether they go to short higher education or to the longer one. These additional years are not on average more costly in this country than they are in the last years of higher school. If we take an average of three years spent at the tertiary level, the average gap between the two groups is no longer from 1 to 4, but from 1 to 1.2. Moreover, the gap is often reduced by the fact that the half that is less educated has a bigger probability in repeating a year, and thus is consuming more of public resources. To that, some specific allowances to children from disadvantaged backgrounds are added, such as allowances or scholarships at the beginning of school. Formerly, children from rich families had relative benefits from profitable taxes reduction, which have been constantly levelled off and reduced. Finally, students from the less educated half are more likely to attend technical and vocational schools, whose unit costs are a little higher than in the formal education followed by students who have longer studies. In short, there are always gaps, but indisputably much weaker than they used to be. If one takes once again the French example, the most obvious non equity element that has not been corrected concerns the small group that is supposed to join the elite market. It takes advantage of two elements which are more or less costly compared to what is offered to the majority of students: the preparatory years of Grandes Ecoles and the Grandes Ecoles themselves, whose curricula receives means beyond comparison to universities (the double or more per student). Although these data are those of a specific country, it does not seem that the situation in other European countries is different. In the US and in Japan, families are more called upon than in Europe, and this reduces even more inequalities of access to means between those who spend longer years in school and those who stop earlier. Besides, in the US upper class families tend to send their children, as soon as the primary years, to non-subsidised private schools, and this brings about the fact that they do not get free education services.

Actually, what we think is the problem of equity in terms of access to means has shifted, without the knowledge of most observers. The problem is now at an international level, with

at a seriousness level never seen before. Today, to have access to a good quality of education, it is better to be born in a poor family in Europe than in a rich family in Sub-Saharan Africa.

What we called developing countries is a heterogeneous set, composed of four types of countries: 1) countries that have almost reached the development level of wealthy countries, 2) countries that evolve rapidly while still lagged behind, 3) countries that evolve slowly, 4) but also of a fourth group, that economists of specialised international organisations call the least advanced countries. This group is defined through a simple criterion, that is to say, having a GDP per head under some line, periodically adjusted, that is currently at about 800 US dollars per year. Today there are at least 45 countries in this case. This group is characterised by an almost lack of economic takeoff. Most families have a standard of living called 'of subsistence', that is the same as that of their ancestors. More than a half of the population live under the poverty line, that is to say with less than 1 dollar per day and per person. These countries bring together the major part of the 100 million school-age children who will never go to school, plus the majority of illiterate adults.

The resources gap per child of school age between those countries and developed ones goes far beyond imagination. First, there is a gap because of the difference of produced wealth. The average GDP per inhabitant is 300 dollars per year, i.e. 80 times less than the 25 000 dollars observed on average in developed countries. The gap between the two groups has doubled during the last 20 years. If the two groups had devoted the same percentage of the GDP to education, the school resources per inhabitant would have been then 80 times weaker. But that is not the case. In the less developed countries, the part of the GDP allocated to school public expenditure is only of 2.5%, which is half less. The interval resource per inhabitant is then 160 to 1. But that is not all. The least developed countries have school-age populations relatively higher compared to the whole population. This comes from the fact that demographic transition, (a phenomenon through which countries go from a natural fertility of about 7 children per woman to a planned fertility that is below 2 children per woman), has not been achieved. All other things being equal, the less developed countries have then three times more children to send to school than the developed ones. If we think in relation to school-age children, the resource gap is multiplied by 3, increasing to 480 to 1. But even though the teaching inputs are cheaper in the less developed countries, we are far from the count. It would require that a schoolbook sold at 48 francs in France be available at 0.1 franc in Mali, what is absurd. Or that a teacher who earns 9600 francs per month in France earns 20 francs in Mali.

With all will in the world, the less advantaged countries cannot afford the same education services as in developed countries. To compensate the only demographic effect, where the developed countries devote 5% of the GDP to education, the least advanced countries should devote 15% of the GDP which is close to the State budget in those countries. We notice how difficult this is. It accounts for the subsequent international conferences held for 40 years in Addis Ababa in the early 60s, in Lagos in early 80s, in Jomtien in the early 90, which gave themselves a deadline of 10 years to reach universal primary education, have all failed. The last one held in April 2000 in Dakar put a longer deadline, of 15 years, but as it does not have adequate strategic means, it is doubtful that it will succeed better than the others.

What are the financial stakes? Developed countries devote about 1,500 billions of dollars to education. If they decided to devote 1% of this amount to child education in the least developed countries, that would represent 15 billion dollars, meaning 150 dollars for each child out of the education system. That means an amount more than enough as it corresponds to 50% of the GDP per head of the concerned countries. Moreover in these countries, the children currently in school are there at low costs, even though the quality leaves a lot to be desired. With 150 dollars, this quality could be improved.

What is the financial flow of money devoted to international education aid today? It is

estimated at 5 billion dollars but a small part of the amount allows the increase in the number of children sent to school at primary level. In fact, they are distributed throughout the developing countries, and not in the only countries called the least advanced. Accordingly, the least advanced countries only have access but to a small share of education aid. Then they are mainly allocated to post-primary levels (high school, technical and vocational schools, universities, teacher training schools, or reinforcement of the central administration). Finally, they only exceptionally serve to finance the key input of primary school, i.e. the teachers' wages. Whatever the reasons are, justified or not, that lead to those choices, it is obvious that foreign aid only plays but a marginal role in the reaching of the objective assigned by the world to these conferences, which is to give all children a primary education as soon as possible.

Today the countries that are developed have reached this point after centuries of slow evolution of their educational systems and the increase in work productivity. One would like the countries which are now the least developed to skip and achieve in one or two decades what had be done in western systems in one or two centuries. The laudable and necessary wishes will not overtake the stage of pious wishes as long as a credible strategy, including adequate funding modalities, will not be associated with them.

Conclusion

These few considerations about costs and education funding did not give us final solutions to the problems of world education, but they suggest a few hypotheses that are more likely to be valid than others. First the hypotheses show that there is little chance that the principle of predominant public funding being negotiable, and this even less when one addresses grassroots level, i.e. everyone mastering basics such as reading, writing and using numbers. The hypotheses then demonstrate that the ability of current funding sources to increase their contributions is trifling, which leads the educational systems to conceive and organise their future with constant means rather than increasing ones. How surprising it may be, it appears that at macro-economic level, the hypothesis of 'tendentious' reduction of education system productivity has not been validated. One can see in a recurrent way that with the same means, schools are unequally efficient. The two propositions are not contradictory as long as one can demonstrate that the proportion of inefficient schools is a shared worldly concern but whose solution faces scaring obstacles, mainly because of the hostility of school actors themselves. That does not prevent a certain number of reforms that are taking place in this direction, and one can think that successful reforms will end up being copied by others. The generalised increase of school years in developed countries has slowly pushed back the deficit in terms of equity in the sharing of public means allocated to education systems. However this has been without correctly improving the equity at the level of results, even though strong concerns in this direction tend to reduce the most glaring failures especially by means of positive discrimination policies. Finally, it appears that the two pole world that we knew before (between on one hand developed countries and on the other hand developing ones), is changing. An important part of the latter is due to an unequal development within the group of developing nations. Among them, the least advanced have remained outside the race, and the distance is increasing between all of them. Despite the serious nature of the problem, it does not seem that the developed nations have seriously considered the stakes and truly decided to cure the problems involved.

References

French Education Department (1998) Repères et références statistiques. Paris.

Eicher, J.C. & Orivel, F. (1979) L'allocation des ressources à l'Education dans le monde. (Statistical survey prepared in collaboration with the Education statistics Office). Paris: UNESCO.

UNESCO (1998) Worldwide Report on Education / Rapport Mondial sur l'Education. Paris: UNESCO.