

GLOBALIZATION AND CHALLENGES FOR EDUCATION IN LEAST DEVELOPED COUNTRIES

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1. INTRODUCTION

There is a growing concern about the possibility that the poor, in particular in least developed countries, be suffering instead of benefiting from globalization (World Commission on the Social Dimension of Globalization, 2004). Although the total number of individuals living in absolute poverty has declined globally over the past two decades – thanks in particular to progresses observed in China –, it has increased in many least developed countries (LDCs), particularly in sub-Saharan Africa, which means that hundreds of millions of deprived people hardly benefit from globalization. This is due to economic stagnation, and sometimes to rising domestic inequalities, in poor countries. Such a dismal record is a paradox for economists and a challenge for the development community, which needs to be urgently addressed. I shall put forward in this paper that, to a significant extent, this lack of gains from globalization for a large number of poor people is related to inadequate education policies in many LDCs, in spite of the repeated political pledges in favor of the ‘education for all’ goal. I shall in particular consider these issues in the case of sub-Saharan Africa, which is certainly the region of the world that has suffered the most from globalization, and presents nowadays the most pressing challenges for the development community.

The bottom-line of my argument lies in the history of economic development since 1950. Available data suggest that education policies have been a key ingredient in the take-off of countries that are nowadays considered as emerging economies, which subsequently led them to become major players in the global economy, and winners in the globalization process. Emerging economies started growing in the 1960s when a majority of their workforce had been granted primary education. This proportion

has barely been reached nowadays in many LDCs, particularly in sub-Saharan Africa. I shall submit that such poor performances are due to inefficient and inequitable education policies, more than to shortage of resources. In particular, investments in primary education have been insufficient, compared to the resources invested in higher levels of education.

As suggested by the observed economic divergence of emerging economies and of LDCs since the mid 1970s, the globalization process has exacerbated and accelerated the macroeconomic consequences of such inadequate development policies. Furthermore, I shall show that the negative impact on the poor and on development perspectives in LDCs has been aggravated in at least two additional dimensions. First, it may have had adverse distributional consequences, given that the illiterate individuals are de-linked from global markets. Second, the globalization of labor markets has accelerated emigration of highly educated individuals from LDCs, and this brain drain can only magnify the cost of inequitable education policies.

Finally, I shall discuss some general principles on which more appropriate education policies could be based in least developed countries, as they appear for instance in the 'Education for All' declaration of the Jomtien conference (1990). I shall suggest, in particular, that education policies in developing countries should both promote the acquisition of knowledge necessary to become actual participants in the globalization process and be built on the national culture. An analysis of declared priorities of education policies, based on detailed information available from UNESCO, will show that most African countries do not address any of these challenges, contrary to emerging economies.

2. EDUCATION AND ECONOMIC TAKE-OFF: SOME LESSONS FROM RECENT HISTORY

Global Divergence

Even before globalization, there was a tendency of divergence among nations. This is clearly visible in the evolution of the international distribution of GDP by country from 1950 to 1975 (Figure 1). In 1950, there were a relatively substantial concentration of countries around a GDP per capita (in 1990 PPP US dollars) of US\$ 1,000, and very few countries above US\$ 10,000. In 1975, most countries, including the poorest, had increased their income per capita, but the shape of the distribution curve had also significantly changed, with a sort of plateau between US\$ 1,000

and US\$ 10,000. Between 1975 and 2000, which corresponds more or less to the globalization period, the shape of the distribution curve changed less, although a striking evolution has been that the poorest countries have been impoverished. While the income per capita of the poorest country increased initially from US\$ 290 in 1950 to US\$ 520 in 1975, it dropped to US\$ 210 in 2000.

This observation suggests a nuanced interpretation of the adverse consequences of globalization on poor countries. A number of developing countries, particularly in Asia, have taken advantage of globalization, at least judging from their rapid catch-up with developed countries. But these countries had in fact already started catching up beforehand – with the notable exception of China – and have been able to build on their initial success to develop even faster in the context of globalization. Conversely, poor countries that stayed poor until the 1970s have suffered in globalization, with an absolute decline of their income per capita. There are certainly a few counter-examples to this interpretation. China is the most prominent: although China did not take off until the 1970s, it has become one of the most notable winners in the globalization process. In this country, as well as in other transition economies such as Vietnam, even though there were investments in growth factors before the globalization period, such investment could not lead to fast economic growth due to the planned-economy system. This suggests that a principal difference between the developing countries that have taken advantage of the globalization process and the others is that the former had started investing in growth factors before opening and the latter had not done so, or not enough. As I shall suggest below (Figure 1), the most strategic of these factors is education.

The process of divergence between developed and emerging countries, on one hand, and least developed countries on the other hand, has received a lot of interest in recent growth literature. One major interpretation of this divergence is related to the concept of convergence clubs. This notion relies on the idea of multiple equilibria. In particular, following Quah (1997) one may interpret the emergence of a sort of twin-peaks in the international distribution of incomes as an indication that some countries – the LDCs – stay locked in a low-level stable equilibrium, which can be called a poverty trap, while others have reached or are converging towards a much higher, equally stable, equilibrium.

At a very abstract level, multiple equilibria occur in economic growth processes when, in the neighborhood of certain values of the state vari-

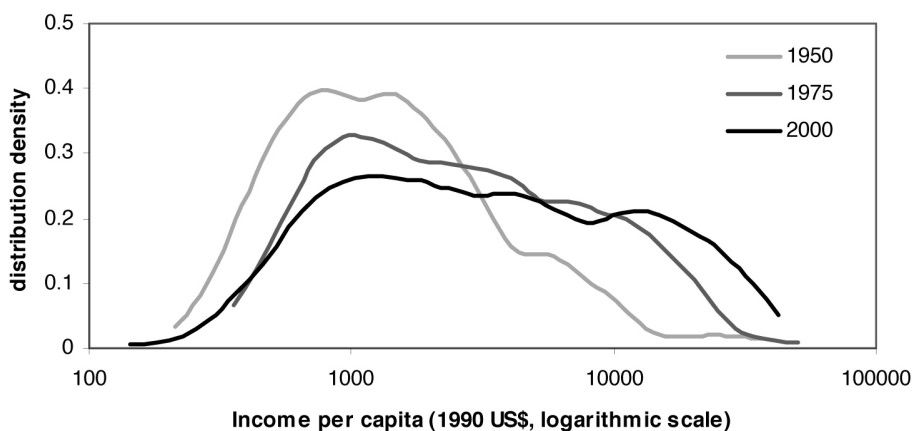


Figure 1. International distribution of income. Source: bases on Maddison (2003) data.

ables, the growth rate of an economy becomes an increasing function of its initial income level. Under such circumstances the initial gap between two countries can only increase over time, leading to a divergence between them. Combined with the existence of convergence processes – in the neighborhood of other values of state variables –, this leads to convergence clubs. This argument is exemplified in Figure 2, where I have traced a curve showing growth rates as a function of income level, henceforth called the ‘growth curve’. Equilibriums are defined by intersections of the growth curve with the horizontal axis. There will be multiple equilibriums if the growth curve is not monotonous, as illustrated in Figure 2. In this example, points B and D are stable equilibriums, defining convergence clubs, and the neighborhoods of points A and C illustrate situations where countries diverge. To the immediate left of B (respectively D), economic growth is positive, so that income per capita grows to B (respectively D); while to the immediate right of B (respectively D), economic growth is negative and income per capital declines to B (respectively D). Conversely in the neighborhood of A (respectively C), income per capita diverges from A (respectively C)(Figure 2).

Although the convergence club literature is fairly well-developed, it says almost nothing about the conditions under which an economy could escape a poverty trap and catch-up with more advanced countries. In Berthélemy (2005), I proposed an attempt to fill this gap. I first explored the

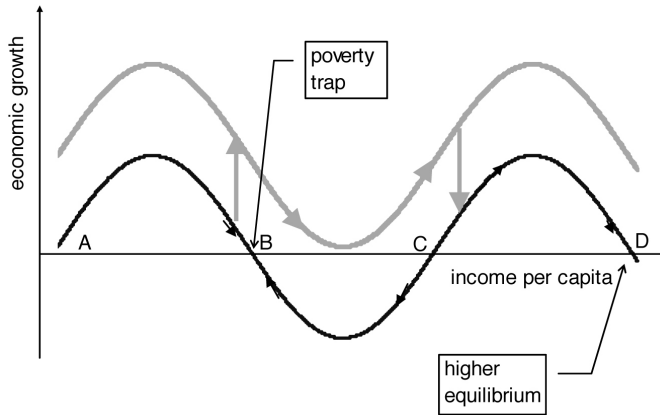


Figure 2. multiple equilibria and the poverty trap.

dynamic path that could be interpreted as jumps out of the poverty trap. I have shown that such jumps should be characterized by multiple-peak growth cycles, i.e. dynamics in which the growth rate of the economy exhibits multiple ups and downs before converging to a new, higher, stable equilibrium. Intuitively, this kind of dynamics can be triggered by a temporary upward translation of the growth curve in Figure 2, sufficiently high to lead for a while to positive growth rates, even for initial income levels located between B and C, as exemplified by the gray curve in Figure 2. If this shock persists long enough to pull the economy above the income level C, then this economy will inevitably converge to the higher level equilibrium point D. An interesting observation emerging from this example is that the jump out of the poverty trap leads to a very peculiar dynamics, in which the growth rate observed over time has several peaks, as exemplified by the growth path materialized by grey arrows in Figure 2. This peculiar dynamics, with a multiple-growth peak, should be actually a common feature of jumps out of the poverty trap (see Berthélemy, 2005, for substantiation of this point).

Emerging and Stagnating Economies

Applying this analysis to long-term data (1950-2002) produced by Maddison (2003), I have shown that this very peculiar dynamics, leading

from low-level income per capita in 1950 (between US\$ 500 and US\$ 1,500) to much higher levels in 2002, characterizes very well a dozen countries that experienced during the 1950-1975 period a very significant economic growth process. These countries are: Botswana, Dominican Republic, Indonesia, Lesotho, Malaysia, Myanmar, Pakistan, South Korea, Sri Lanka, Taiwan (China), Thailand and Tunisia.¹ Henceforth, I shall refer to these countries as the 'emerging' economies. Although for a couple of these 'emerging' economies later performances have been more modest (Myanmar, Pakistan), all of them were in the 1990s much richer than in the 1950s thanks to their initial jump.

For the sake of brevity, I shall call the other countries that were equally poor in 1950 but that did not escape their poverty trap the 'stagnating' economies. In Berthélemy (2005), I identified about fifty such stagnating economies, more than 70 percent of them being in sub-Saharan Africa.²

The Role of Education in Emerging Economies

The important question is to know what triggered the take-off of emerging economies, and this is where education policy comes into the picture.

In general, the initial jump of these economies was observed around the 1960 decade. The explanation for their success must therefore be searched in policies implemented in the 1950s and the early 1960s. In a previous paper (Berthélemy, 2005), I looked at a number of possible explanations using quantifiable variables that may have influenced structural change: education, savings, financial development, economic diversification and demography. None of them, but the education policy, passed simple empirical tests. The average savings and investment ratios, financial depth ratios, manufactured export ratios, population growth

¹ Some initially richer countries also experienced a jump to a higher equilibrium, but they started already in 1950 from a higher level of income, about US\$ 2,000 or more (Brazil, Hong Kong, Mauritius, Seychelles, Singapore).

² These countries are: Afghanistan, Algeria, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, China, Comoros, Congo, Congo (DRC), Côte d'Ivoire, Egypt, Ethiopia, Gambia, Ghana, Guinea, Guinea Bissau, Haiti, Honduras, India, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mauritania, Morocco, Mozambique, Nepal, Niger, Nigeria, Oman, Philippines, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Uganda, Vietnam, Yemen, Zambia and Zimbabwe.

rates and dependency ratio are comparable in the early 1960s for emerging and stagnating economies. Moreover, none of these variables influences in a robust way the probability of belonging to the group of emerging economies (see Berthélemy, 2005 for more details).

With respect to education, emerging economies behave markedly differently from stagnating economies. Although most of them started from a low-level of education at the end of WWII, they invested massively in literacy. In 1960, more than half of the adult population (aged above 15) had attended primary school in South Korea, Taiwan, Thailand, the Dominican Republic, Sri Lanka, Malaysia and Lesotho (Table 1). Exceptions are Pakistan and Myanmar, which did not confirm their initial good performances at the same level as the others, and Tunisia. Political events may explain reversals of dynamic performances observed in Pakistan and Myanmar.³ Concerning Tunisia, figures are strongly biased downward because they do not take into account Islamic schools, which were initially more developed than State schools; moreover, heavy public investment in the education system accelerated later than in the other emerging countries (in the 1960s), a fact that is consistent with the relatively late take-off of this country.⁴

There are certainly a few counter-examples of stagnating economies with relatively good educational performances in the 1960s that would deserve careful analysis. Again, China comes to mind here. In 1970, China's adult literacy rate was already above 50 percent, comparable for instance to Indonesia, while on average the adult literacy rate in sub-Saharan Africa was still about 20 percent only. When China started opening, its literacy rate was about two-thirds, a level that has been barely attained by sub-Saharan Africa today. This China example certainly suggests that human capital building is not sufficient to trigger development. However, it also suggests that it is a good complement to participation in globalization.

Data on educational characteristics of emerging economies at the end of WWII would be necessary to give a better picture of the magnitude of progresses that they achieved between 1945 and 1960. The available information is scanty, but UNESCO collected useful data in the early 1950s on enrolment ratios, which provide some indication on their investment in schooling. According to these data, among the twelve emerging economies

³ In the case of Pakistan, sensitivity analysis shows also that its classification in the emerging countries group is not very robust (see Berthélemy, 2005).

⁴ On growth history of Tunisia, see Morriison and Talbi (1996).

TABLE 1: Human capital in adult population in 1960: emerging economies compared to stagnating economies.

	Proportion of population aged over 15 with primary education	Proportion of population aged over 25 with primary education	Proportion of population aged over 15 with complete primary education	Proportion of population aged over 25 with complete primary education
South Korea	56.2	43.1	52.4	39.7
Taiwan	62.7	53.4	35.4	28.9
Thailand	63.1	51.9	50.3	39.4
Indonesia	32.0	24.5	15.3	9.6
Dominican Republic	64.7	56.6	20.1	17.3
Sri Lanka	72.9	67.7	34.0	28.0
Pakistan	16.9	14.4	4.9	3.9
Malaysia	50.3	41.5	25.2	20.2
Myanmar	26.9	20.4	14.2	12.0
Botswana	34.7	30.7	11.1	10.2
Tunisia	9.0	7.7	5.4	4.6
Lesotho	66.8	60.8	19.2	17.9
Average emerging economies	46.4	39.4	24.0	19.3
Average stagnating economies	25.0	20.1	9.4	7.5

Source: based on Barro and Lee (1996) database.

previously identified, four had primary enrolment effectively compulsory around 1951: Taiwan, Thailand (compulsory since 1935), Korea (compulsory since 1945) and Sri Lanka (compulsory since 1951). Although for Korea and Taiwan this objective was not yet fully attained in 1951 (with a gross enrolment rate around 80 percent, as compared to more than 100 percent in Sri Lanka and Thailand), these two countries were certainly relatively advanced in terms of education at the end of WWII, compared to other developing countries. In Korea, however, the education take-off actually started only after 1945: at that time, close to 80 percent of the population was still illiterate (Lee, 1995). Therefore, only three of the dozen emerging economies (Sri Lanka, Taiwan and Thailand) inherited high

human capital from the colonial pre-WWII period. For the others, good performances already visible in the early 1960s must be credited to policies implemented since 1945.

One may therefore conclude that most of the educational achievements that triggered the economic take-off of emerging economies in the 1960s were the result of new ambitious education policies that these countries had implemented in the previous two decades. They did so under circumstances that were considered by observers at that time as extremely adverse to development, and that were not much different from conditions observed in stagnating economies. In particular, public budgets available for education were not significantly different in emerging and stagnating economies: on average about 2.5 percent of their GDP, in 1960. Better performances of emerging countries in education are related to more efficient education systems, and also to better allocation of educational resources. The better efficiency of education is visible when one compares the proportion of adults who have completed primary education to those who have merely attended primary school. In 1960, the average of this ratio was 52 percent in emerging economies (93 percent in South Korea), against 38 percent in stagnating economies. Also, a larger proportion of resources might have been spent in primary education in emerging economies, compared to stagnating economies. Although no precise data is available to make such comparison on education budgets, several indirect observations point in this direction.

A first piece of evidence is provided by the observation of ratios of secondary enrolment rate to primary enrolment rate. The usual expectation is that this ratio, which can be analytically conceived as an odd ratio (a probability of attending secondary school conditional on primary school completion) should be higher in countries with a higher level of education. However, the stagnating economies had on average, in 1960, the same odd ratio as emerging economies, close to 40%. Relatively to their meager achievements with respect to primary enrolment, the stagnating economies have therefore performed rather well in secondary schooling, but this suggests, particularly in view of their poor aggregate performances, that they had the wrong priorities. In addition, UNESCO data available for the early 1950s suggests that on average a majority of children were already able to attend primary school around 1951 in emerging economies – a performance already much higher than that attained by stagnating economies in the early 1960s –, while, at that time, the odd ratio in those emerging economies was only around 13%.

Also, Asian emerging economies have usually delegated a significant part of the secondary school system to the private sector (e.g. between one-third and 40 percent in the Philippines, South Korea and Thailand already in the 1950s), therefore reducing the relative cost of secondary education in the government budget.

Other, more qualitative, explanations of successes of emerging economies in the 1960s and 1970s could be considered, such as cultural differences. Most of the emerging economies being in Asia, and most of the stagnating economies being in Africa, considering cultural and institutional differences as an alternative explanation is tempting. This also corresponds nowadays to common received wisdom. However, relying on a cultural and institutional explanation to explain the successes of Asian countries in the 1950s and the 1960s is somehow an anachronism. Myrdal (1968), who was one of the most knowledgeable experts on Asia at his time, explained in his famous trilogy 'Asian Drama' that South and South-East Asia would be the last region in the world to develop, due to their many cultural and institutional weaknesses.⁵

3. THE BLEAK RECORD OF EDUCATION POLICIES IN SUB-SAHARAN AFRICA

Trends in Primary Enrolment

Unfortunately, the unfavorable educational performances observed in stagnating economies in the 1950-1975 period have continued afterward. The region that gives greatest cause for concern is sub-Saharan Africa, which is the only region in the world where the education-related objective of the Millennium Development Goals (achieving the 'primary education for all' objective by 2015) is out of reach in a majority of countries.

The only widely available measurement of primary schooling performances is the gross enrolment rate. This data is not very adequate to do cross-regional comparisons, given that repetition rates vastly differ from one region to another. According to UNESCO data, repetition rates (in percentage of total enrolment) are at present much higher in sub-Saharan African (10 percent) than in Asia (2 percent), which means that

⁵ In doing so, he echoed previous similar wrong predictions by Max Weber at the beginning of the last century, about the role of religion in economic development, including a negative role of Buddhism.

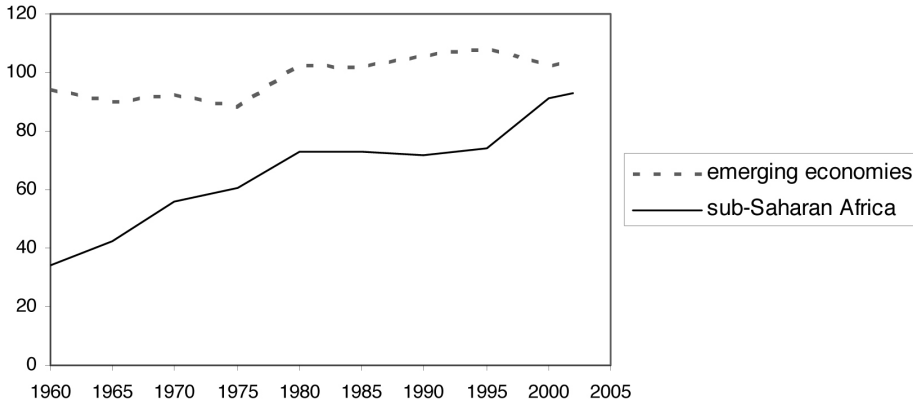


Figure 3. Comparison of gross primary enrolment rates in emerging economies and in sub-Saharan Africa (median, in percent). Source: based on UNESCO data.

comparing gross enrolment rates between sub-Saharan Africa and emerging economies probably overestimates African performances. In spite of this bias, sub-Saharan Africa has been unable in four decades to reach a level that emerging economies reached in less than two decades after WWII. Some progress was observed up until the late 1970s, but this progress stopped between 1980 and the late 1990s, during the period of adjustment programs. One may blame the adjustment programs for this evolution but, from a long-run perspective, the necessity of implementing adjustment programs was only a consequence of the economic non-sustainability of the growth path of stagnating economies: they were unable to escape the poverty trap. With the benefit of hindsight, one may conclude now that the social sectors such as education paid too heavy a price in adjustment. However, the distribution of the costs of adjustment was not determined only by the IMF and World Bank, they also corresponded to political processes in societies where education was not given top priority in the policy agenda.

Recent data suggests that significant progress has been achieved since 1995. Such progress is real, and is associated to successful reforms in education policies in several countries, aiming at providing universal primary education. This progress can be attributed to recent changes in development policies, putting a growing emphasis on poverty reduction strategies. The best-known example is Uganda, which has invested in education a sig-

nificant portion of resources granted by donors through debt relief and new aid inflows and has developed, since 1997, an almost free and universal primary education system. However, the 20 percentage points gain in school enrolment rates reported by UNESCO for a majority of African countries in 1995-2000 seems to be an exaggeratedly optimistic assessment of actual achievements. At least, it is not consistent with a declining trend in public education expenditure as a percentage of GDP, which fell on average in sub-Saharan Africa from about 4.5 percent in 1992 to about 3.4 percent in 1999 according to data reported by the World Commission on the Social Dimension of Globalization (2004).

Recent data available on net enrolment rates in primary education point also to continuously inadequate education investments in sub-Saharan Africa. At present, according to UNESCO data, only Cape Verde, Mauritius, the Seychelles, South Africa and Togo have a net primary enrolment rate reasonably close to 100 percent (90 percent or above),⁶ a performance that was already attained by Asian emerging economies more than three decades ago.

Governance Issues

Poor primary education performance is not only a matter of budgetary resources but also of governance, which is reflected in the way resources are allocated. The bias observed in the early 1960s in stagnating economies, compared to emerging economies, against primary education and in favor of secondary education, has continued in sub-Saharan African countries (Berthélemy and Arestoff, 2003). Moreover, recent UNESCO data shows that expenditure per pupil is much higher in the secondary sector than in the primary sector of education in sub-Saharan Africa, with a median ratio of 2.6 in recent years, as against 0.9 for emerging economies. Data on tertiary education point to a similar bias.

Both the relative bias against primary enrolment and the relatively high expenditure per pupil in secondary and tertiary education benefit the relatively wealthy, and are detrimental to the poor. This bias of public education systems against the poor has been documented in several studies revealing that the implicit subsidy to households, corresponding to

⁶ To this list, Uganda (for which net enrolment rate data are unavailable) may probably be added.

public spending in the education system, has a regressive impact on income distribution. Examples of Madagascar and Tanzania are discussed in Morrison (2002). A plausible interpretation of these biases is that the members of the elite care more for their offspring than for poor children (Berthélemy and Arestoff, 2003). In doing so, they only continue a system inherited from the colonial times, when a small elite received good quality education, while the rest of the population was not offered any education.⁷

A counterargument to my emphasis on primary education for sub-Saharan Africa and other LDCs would be that in the context of technological change concomitant with the globalization process, much more skills are needed to compete in the international market now than four decades ago when emerging economies started their take-off. According to this competing view, African governments might be right in investing relatively more in secondary and tertiary education than did the emerging countries in the 1950s and the 1960s. This point of view has however two limits. First, on social justice grounds, it is hardly acceptable, given that more investment in secondary and higher education, for a given amount of resources, means that a larger number of people are excluded from primary education. Second, on economic efficiency grounds, it is debatable, because, as I shall show in the next section, a large number of highly educated people are unable to use their skills at home in such countries, and emigrate.

Another facet of the poor governance of education systems is that they suffer severe leakages of resources. This has been documented by Reinikka and Svensson (2004) in the case of Uganda where, previous to recent reforms, only 13 percent of funds earmarked by the central government for non-wage expenditure in primary schools were actually received by these schools. Although this example may look extreme, it is also illustrative of the large waste of budgetary resources that may exist in education systems when there are governance problems, a situation that is quite common in sub-Saharan Africa.

⁷ There are a few counter-examples, principally in former Belgium colonies, where the colonial rulers fully delegated the education system to Christian missionaries. Interestingly, these countries have kept more egalitarian education systems than their neighbours.

4. SOME DISTRIBUTIVE CONSEQUENCES OF INADEQUATE EDUCATION POLICIES IN THE CONTEXT OF GLOBALIZATION

The globalization process has several facets. In pure economic terms, it has led to increased trade linkages, labor mobility and capital mobility. On all these three accounts, the poorest people in stagnating economies, which have inadequately invested in human capital, pay the highest cost, and in fact suffer rather than benefit from globalization.

The Factor Content of Trade Argument

The standard trade theory tells us that all countries can gain from exchange opportunities. More specifically, according to this analysis, poor countries could export the services of their abundant uneducated workforce, in exchange of goods produced by skilled labor in other countries. This argument should imply that, in LDCs, the uneducated or poorly educated people are among those who can benefit the most from trade openness. However, this simple theoretical prediction has been contradicted by experience. According to the World Commission on the Social Dimension of Globalization (2004), those who have suffered the most from globalization are the poorest people. This is true in sub-Saharan Africa as well as elsewhere.

The standard argument from trade theory supposes that the uneducated workforce is able to produce commercialized goods, sold either on the domestic market or on the international market. However, the very poor and uneducated people, particularly in sub-Saharan Africa, are peasants who are engaged principally in self-consumption activities, and have therefore virtually no commercial exchange, of whatever nature, with their home economy, let alone with the world economy. They can therefore hardly reap benefits from globalization.

Moreover, peasants who have a surplus, and participate indirectly in international trade through cash crop production, have to rely on other sectors of the economy to be able to export. Usually, commercialization costs represent in fact a higher proportion of primary exports than the traded commodities themselves. Increased exports will maybe imply a higher demand of goods produced by uneducated people, but at the same time this will equally increase demand for much scarcer products such as transport and commercial services. There is no reason, under such circumstances, to expect that income distribution improve in favor of the poor uneducated people.

Another part of the poor uneducated workforce is employed in the informal sector in cities, when they have migrated out of rural areas. However, this does not change the analysis much, given that the kinds of occupation in which they are engaged are mainly related to production of services to individuals, which are non-tradable.

To conclude this discussion, in the terms of trade theory, poor uneducated people may not gain in globalization simply because what they are able to produce are non-tradable goods, or are products that require scarce factors to become tradable.

Under these circumstances, only educational investment that would help transfer this workforce to tradable sectors could help solve this issue. This corresponds to the experience of emerging economies, where universal education has both contributed to increase agricultural productivity – and then to create a tradable surplus in this sector, such as for instance in Thailand and Malaysia – and to increase the mobility of rural workforce to the urban sector. The core of this urban sector has been labor-intensive industries, which have become the principal export activities in these countries in the context of globalization.

International Labor Mobility

Although at a slower pace than for goods and services, globalization has facilitated international labor force mobility. On average, Africans migrate internationally less than people from other developing regions, with the exception of Central and South Asia. The development of international labor migration has however concerned sub-Saharan Africa as well as other regions. The principal difference between sub-Saharan Africa and other developing countries is in the structure of migration by level of education.

Again, the pure theory of international trade would suggest a standard argument saying that more openness to migration should lead to emigration of unskilled labor from developing countries in general, and from sub-Saharan Africa in particular. This is exactly the opposite of what is observed, as shown by Table 2.

In all developing regions, tertiary education graduates tend to emigrate internationally much more than the others. University graduates migrate 6.4 times more than the average in developing countries. This observation may be explained by a pull factor: migration is much easier for the skilled workforce, because they have qualifications that can be directly used in the country of destination, and immigration policies are usually more flexible

TABLE 2. Emigration rates by education level (percent of stock, regional medians).

	Primary or no education	Secondary education	Tertiary education	All education groups	Ratio of tertiary/all groups	Ratio of secondary/ all groups
Sub-Saharan Africa	0.3	1.8	17.8	0.7	25.4	2.6
Central & South Asia	0.2	0.2	2.2	0.3	7.3	0.7
East Asia & Oceania	1.4	3.0	14.8	3.1	4.8	1.0
Cent America & Caribbean	5.8	27.5	36.4	14.0	2.6	2.0
South America	0.8	3.2	6.2	2.3	2.7	1.4
Middle-East & North Africa	0.6	1.5	5.7	1.8	3.2	0.8
All developing countries	0.6	2.2	11.5	1.8	6.4	1.2

Source: based on Docquier and Marfouk (2004).

concerning skilled people. This pull factor can explain the relatively high degree of brain drain out of developing countries. However, it cannot explain the extreme level of brain drain observed in sub-Saharan Africa, where University graduates emigrate 25.4 times more than the average (and graduates from secondary schools 2.6 times more).

There are also, in sub-Saharan Africa, push factors. Skilled people emigrate out of Africa because many young graduates remain unemployed, and the levels of salaries that they can obtain elsewhere are much higher than what they can get at home. A first explanation of this observation is related to the structure of education policies that I have discussed in the previous section: for having invested too much in secondary and tertiary education, African countries have in fact produced graduate unemployment more than anything else. Certainly, this overall assessment must be qualified in the case of some specific sectors. Technically qualified personnel, such as engineers or physicians, are often lacking. However it should be noted that those who are technically qualified also emigrate quite a lot. In the case of physicians, the massive emigration out of some African countries is partly responsible for a crisis in the health sector; only a minority of trained physicians and nurses choosing to work at home. This observation points to a second explanation: the very adverse working environment for technically skilled personnel, who have usually no equipment to work with and low salaries.

Capital Mobility

Capital mobility is another aspect of globalization that has been beneficial to a number of developing countries. The best example is again China, which is the second largest recipient of foreign direct investments after the United States. Berthélemy and Démurger (2000) have shown that, in the case of China, FDI and economic growth are interacting both ways. This kind of dynamic interaction can contribute to reinforce multiple equilibria: while the Chinese economy gains a lot from FDI that it receives, its economic performances are also contributing to strengthen its ability to attract new investments.

This example suggest that capital inflows, and in particular FDI, are only accompanying economic successes, contributing to accelerate the process of divergence between emerging and stagnating economies.

It is also possible that education policies play a direct role in FDI attraction. At microeconomic level, except in mineral and oil rich countries, foreign firms invest in developing countries where they can find competent workforce. There are of course many other factors influencing FDI, such as market size, credibility of government policies or political stability.⁸ But the lack of a competent workforce may contribute, together with the cumulative processes mentioned just before, to the poor record of sub-Saharan Africa in FDI attraction (Table 3). Per capita, this region has received so far 2.7 times less FDI than the average developing country. If one considers only those countries that are not mineral and oil rich, the ratio is 1 to 7.

TABLE 3. stock of inward FDI in 2003.

	US\$ billion	US\$/capita	% of GDP
World	8245	1308	23
Developed countries	5702	6532	20
Developing countries	2280	448	31
Sub-Saharan Africa	116	166	28
Of which:			
<i>oil and mineral rich</i>	93	267	30
<i>non oil and mineral rich</i>	23	65	21

Source: based on UNCTAD database on FDI.

⁸ There is a vast literature on FDI determinants, which goes much beyond the scope of this paper. See for instance Navaretti and Venables (2004).

Therefore, both directly and indirectly countries with poor education policies have no chance to take advantage of capital flow movements that have been stimulated by globalization. The only exceptions are countries that have attracted FDI in extractive industries. At least in sub-Saharan Africa, however, such foreign investments have rarely contributed to economic development.

5. THE CONTENT OF EDUCATION

So far, I have discussed various aspects of the consequences of poor allocation in education investments, to show that in LDCs, particularly in sub-Saharan Africa, inadequate investment in literacy has created a major obstacle to economic take-off. Such inadequate education policies are intrinsically linked to governance issues. Governments have invested in the education of children of a relatively wealthy part of the population. The globalization process has only exacerbated the adverse consequences of this weakness. Very recently, thanks to the development of new poverty reduction strategies supported by the international donor community, more attention has been paid to these issues, and progress, although probably overstated in reported statistics, is now on its way. However, such quantitative progress will be translated in actual development only if it comes together with changes in the general objectives and orientations of education policies.

Inevitably, the governance issues that have so far influenced education policies in LDCs have had adverse qualitative consequences as well. The best-known aspect of this problem is linked to rent-seeking behaviors. In sub-Saharan Africa, a majority of people who have been enrolled in the secondary and higher education system have received general rather than technical education. Graduating from this system has for a long time been merely considered as providing access to civil service positions. This is the result of both supply and demand factors. Civil service positions are sought because they provide the best rent opportunities, in societies where rent seeking comes along with governance deficiencies such as corruption. Moreover, the content of education that is offered also influences activity choices of graduates from this education system.

The content of education is to a large extent a result of general objectives and priorities of education. An analysis of information available on such objectives and priorities provides in fact evidence of quite significantly different orientations of education policies among developing countries.

Comparing these orientations suggests that the weaknesses observed in sub-Saharan Africa are in fact deeper than what is suggested by a purely quantitative analysis.

Various Goals of Basic Education Policies

At the Jomtien conference in 1990, an international consensus was reached on the various goals of the 'education for all' objective:

1. *Every person – child, youth and adult – shall be able to benefit from educational opportunities designed to meet their basic learning needs.*

These needs comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning. The scope of basic learning needs and how they should be met varies with individual countries and cultures, and inevitably, changes with the passage of time.

2. The satisfaction of these needs empowers individuals in any society and confers upon them a responsibility to respect and build upon their collective cultural, linguistic and spiritual heritage, to promote the education of others, to further the cause of social justice, to achieve environmental protection, to be tolerant towards social, political and religious systems which differ from their own, ensuring that commonly accepted humanistic values and human rights are upheld, and to work for international peace and solidarity in an interdependent world.

3. Another and no less fundamental aim of educational development is the transmission and enrichment of common cultural and moral values. It is in these values that the individual and society find their identity and worth.

4. Basic education is more than an end in itself. It is the foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training (UNESCO, 1990).

The way these common goals are implemented by governments depends however a lot on the specific orientation of national education policies. To illustrate this, and to compare the objectives pursued by dif-

ferent countries, I use a recent database produced by the International Bureau of Education of UNESCO,⁹ which documents in an harmonized framework, and with a rather high degree of detail, general principles, priorities and organizational characteristics of national education policies of UNESCO member countries. Reports are produced by UNESCO staff, but they are based on information provided to them by governments. Such policy declarations are sometimes not entirely credible, concerning for instance compulsory primary education, but comparing such declarations already reveals vast differences in education policy, general objectives and priorities.

I shall discuss below two broad aspects, which are central in the role of education policies as a response to the globalization process, and fit naturally in the framework of the Jomtien declaration:

- The first point relates to the direct role of basic education in economic development, as a way to improve productivity of labor, which is, particularly in the context of globalization, a strategic aspect of the competition of nations.
- The second relates to the capacity of a nation to preserve its culture, at a time when the globalization process tends to uniformize culture globally.

Education and the Development of Workforce

In an economic perspective, the most direct effect of education policies is to improve the capacity of individuals to participate effectively and efficiently in the process of production of goods and services. As suggested earlier, such policies have played a major role in the development of emerging economies, and still contribute today to explain economic stagnation of LDCs, notably in sub-Saharan Africa.

The important point here is that the role of school education is not only to provide literacy. It has also a role to play in labor productivity enhancement, by giving individuals technical and professional competencies, or at least the basic knowledge background necessary to acquire these skills later; it may also help develop a culture of labor.

An analysis of general objectives and priorities of education policies of developing countries, as they are reported in the UNESCO database reveals

⁹ In this paper I utilize the 2004 electronic release of this database, available at <http://www.ibe.unesco.org/>

vast differences among them in this respect. Certainly, almost all countries mention economic development as one of the general objectives of their policies, but many fewer go beyond vague statements about economic development, and mention explicitly the role of labor productivity in development. Keywords such as 'labor market', 'manpower', 'workforce', 'work oriented education', 'productive labor', 'world of work', are repeatedly mentioned by a vast majority of Asian governments, and much less by African governments.

More precisely, the labor improvement content of education is reported as being a priority or a principal objective in school education policies in more than two-thirds of developing countries in Asia, against only one-third in sub-Saharan Africa – and a half in Latin America and the Middle East and North Africa region (MENA). In my group of 'emerging' economies, all governments reporting to UNESCO consider the labor market orientation as a priority or a principal objective.¹⁰ Conversely, the vast majority of my 'stagnating' economies do not give such a role to education. There are however some noticeable exceptions: Benin, Congo, Ethiopia, Kenya, Madagascar, Mozambique, Senegal, Sudan and Zimbabwe.¹¹ Of course, such information inform only about the recent orientation of education policies, which may have changed over the past half-century. It is however striking that education policies have an explicit labor market orientation principally in countries that are developing fast, and in which education has played a central role in the economic take-off process.

Education and National Culture

The previous analysis suggests that African countries pay much smaller attention to the economic objectives of education. Do such countries pay more attention to other aspects of education that may help a nation to face the globalization challenges, notably the protection of national culture? A count of countries that mention the key words 'culture' or 'cultural' in the priorities and objectives of their education policies shows that sub-Saharan Africa is the region that pays the smallest attention to cultural objectives in education policies. Only 15 percent of African countries report that culture

¹⁰ Myanmar is not reporting.

¹¹ Certainly, more research would be necessary to identify what is different in these countries, compared to other African countries.

is to some extent central in their education policies, as against 21 percent in Asia, 50 percent in Latin America and 58 percent in MENA.

In MENA, the significant importance attached to culture in education is related to the major role played by religion and morals in their public education policies. These countries pay far more attention to such values in their education policies than other countries: moral and religious education is mentioned by 84 percent of these countries, as against only 23 percent in sub-Saharan Africa. In Asia, Muslim countries have the same orientation, and correspondingly moral and religious education plays a significant role in 38 percent of Asian developing countries (principally in Muslim countries). In Latin America, moral and religious education is very rarely mentioned in priorities and general objectives of education policies. Even though religion plays a significant role in such countries, their education policies are characterized by a principle of laicism. Therefore, the significant role that they give to culture in their education policies has a different meaning: they pay much more attention than other developing countries to the preservation of cultural heritage.

Other Dimensions

Previous findings suggest that sub-Saharan Africa is the only region where education policy does not pay attention to the major challenges of globalization that are economic competition and the competition of cultures.

Do these countries attach more importance to other general objectives of school education, as they are for instance described in the Jomtien declaration? Again, several observations suggest a negative answer.

Consider the objective of building political and social cohesion. Only one out of four countries gives a role, in its education policies, to citizenship education, which is the same proportion as in Asia and in Latin America. The only region where citizenship education is frequently mentioned is the MENA region (with a little more than half of the reporting countries). My previous observations on the relatively inequitable nature of education policies in sub-Saharan Africa, where the poor are rarely at the center of education policy orientations, reinforce my conclusion that school education policies are not characterized in sub-Saharan Africa by strong social objectives.

Finally, a last fundamental aspect mentioned in the Jomtien declaration relates to sustainable development and the environment – an area

that is also becoming a major source of concern in the context of globalization. Whatever the region, very few countries mention the keyword 'sustainable development' in the priorities and objectives of their education policies. Although sub-Saharan Africa does behave worse than other regions in this respect, this is not a dimension in which African governments invest significant efforts.

In sum, sub-Saharan Africa appears as the only region in the world where education policies are not characterized by any of the usual fundamental objectives that one may attach to school education. This observation is consistent with views expressed by African experts, such as Ndoye (2005), who describes the African school as essentially an imported product, imposed by colonial powers before independences, and in some countries previously imported from the Arab world. Among other aspects, education languages that are used, particularly in francophone Africa, provide powerful indication of this alien nature of the African school systems: education is delivered in French, which is generally the official language, but can be considered as the usual communication language of only a fraction of the population (again, the relatively wealthy, rather than the poor).

6. CONCLUSION

In developing countries that have been able to emerge over the past half century, education has always played a major role. It has helped develop workforce productivity and triggered economic take-off. Countries that had been able to emerge in this way before the globalization process have been among the principal winners of this process. Comparatively, countries that stagnated, at least in part due to inadequate education policies, in the 1950 to 1970 decades, have generally been unable to benefit from globalization.

Moreover, the poor uneducated individuals are, in LDCs, among those who suffer the most in globalization, notably because they are usually not engaged in tradable activities. Conversely, the globalization of labor markets has accelerated the brain drain, with a very large proportion of highly educated individuals emigrating from LDCs.

Education policies need to be reformed not only in quantitative terms, but also qualitatively. One striking characteristic of education policies implemented in most African countries, in particular, is that they are not based on strong priorities related to any of the main objectives of the Jomtien declaration on 'education for all'. Their education policies are

poorly adapted to answer the challenges created by globalization, regarding both economic competition and the competition of cultures.

Reforming education policies in LDCs is the sole responsibility of their governments. Although they are resource poor, what is usually lacking is less budgetary means than political will. Poor performances in the education sector are often linked to governance issues, and are reflected in the absence of any strong development objective in education policy orientations.

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