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Education For All
in Africa

Nota Bene

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Sources of data :

› Schooling data

The bulk of the data (series up to 2002/03) was provided by the UNESCO Institute for Statistics (UIS). This concerns the Provisional dataset published in January 2005. Any more recent data (2003/04) come from joint actions between the ministries of education and the BREDA / Pôle de Dakar Sector Analysis Support Team. The United Nations tables are used as the reference for indicators that require population data, and these are often different from those used at the national level. This explains why there are some differences between the figures in this report and those in the national publications.

› Financial data

In addition to the information provided by UIS, data have also been used collected from research carried out by Pôle de Dakar and/or the World Bank (PSAST unit for the Africa Region) through the work with countries on education sector finance models.

› Survey data

A wide range of sources has been used, specific examples of which are UNICEF's MICS household surveys, and data and analysis from the CONFEMEN (Conference of Ministries of Education for Francophone Countries) PASEC program (Program for the Analysis of Education Systems in CONFEMEN countries).

In the interest of clarity, the specific source and exact year of the data are not always mentioned in the body of the text or in the «country sheets»; we invite the reader to refer to the «Tables» appendices for information about a particular item of data.

Care has been paid to the monitoring and consolidation of the data by the authors, especially when there were several sources for the same item of data.

The authors are aware that the balance of sources and analyses is weighted in favour of French-speaking African countries, as these countries are the main focus for the work of the Pôle de Dakar sector analysis unit. Nevertheless, efforts have been made to give the best possible coverage to the other linguistic areas.

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Foreword

In April 2000, the Dakar World Forum marked a decisive step forward in international commitment to the Education For All goals.

In the framework of the general mandate issued to UNESCO in its role as the overall coordinator for the Education For All movement, the Regional Office for Education in Africa (BREDA) is responsible for the continent-wide monitoring of the Dakar Forum's goals. One of the concrete benefits of BREDA's involvement has been its support for the development of national plans for Education For All.

A third of the way through the allotted time between the Dakar Forum and the 2015 deadline for most of the objectives of Education For All and the Millennium Development Goals, BREDA felt it was time for a first assessment of the actions undertaken.

This report has been prepared as a reference document for the Review on the Implementation of the Dakar Framework of Action on Education For All in Africa («Dakar + 5 African Forum»), organised by BREDA from June 13th to 15th 2005. In addition, it is also meant to contribute to the existing information, thoughts and on-going debates for the other international gatherings in this anniversary year and, ultimately, as a useful resource for everyone involved in education in Africa.

An electronic version of this report can be downloaded on the BREDA's website (www.unesco.dakar.org) and on the Pole de Dakar's website (www.poledakar.org).

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Under the responsibility of BREDA's Director, Mrs Lalla Aïcha Ben Barka, and Mr Benoît Sossou, the Head of the Literacy and Basic Education/Dakar Follow up Unit (LBE/DFU), the Pôle de Dakar's sector analysis team was responsible for drafting this report.

Pôle de Dakar is a platform of expertise on Education Sector Analysis attached to BREDA's LBE/DFU unit. The fruit of a partnership between the French Ministry of Foreign Affairs and UNESCO, the Pôle de Dakar has been working since 2001 to support the countries and their technical and financial partners in the analysis of education systems, the development of strategies and the monitoring of sector-wide education policies

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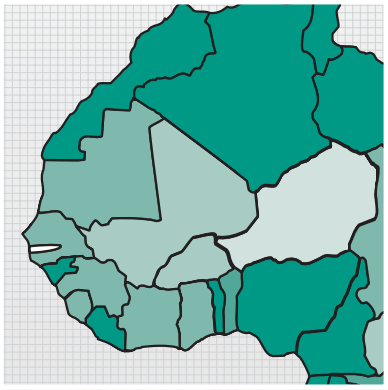
contents

SECTION 2: CURRENT SITUATION AND THE DYNAMICS OF EDUCATION SYSTEMS 61

SECTION 3: ACHIEVING RESULTS: OPTIONS AND PRIORITIES FOR PUBLIC POLICIES 109

› List of illustrations

› Maps

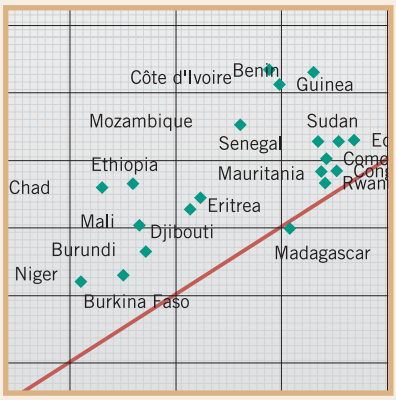


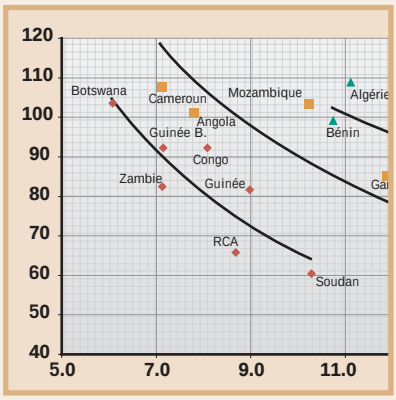
› Insets

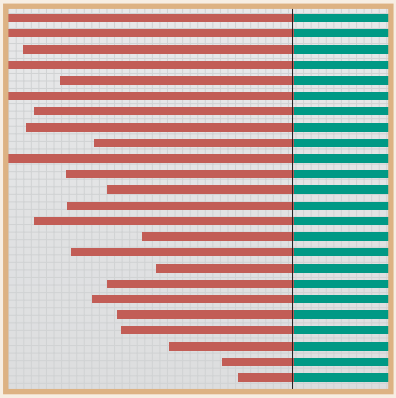
Two opposing approaches describe the mechanism by with education contributes to wealth creation

The first one considers that **education is a factor of additional material**

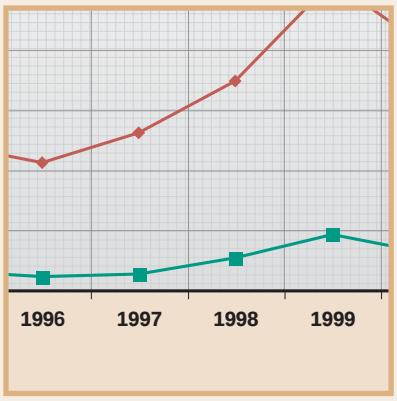
The second one considers that **education is at the heart of dynamic learning phenomena**

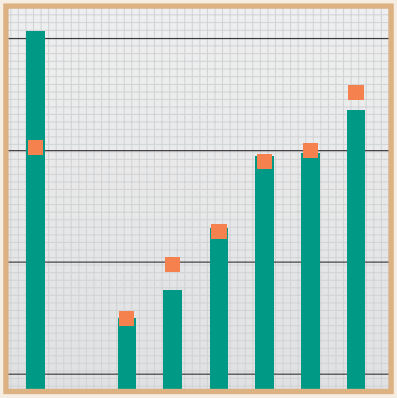




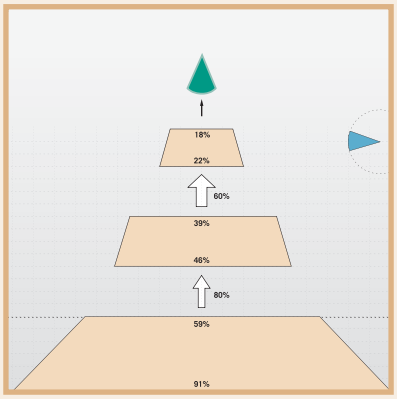


› Graphs





› Diagrams



› Tables

› editorial

By Mrs Lalla Aïcha Ben Barka
Director of UNESCO Regional Office for Education in Africa

Hopes raised by the international mobilization promoting the goals of Education For All are universal. But these hopes are tinged with concern as far as Africa is concerned due to the persistence of a significant gap with the rest of the world. This report intends however to associate lucidity with optimism.

Lucidity first of all : we know that in the current state of African education systems, almost half of each generation of school-age children still do not benefit from sufficient schooling in order to become a literate adult population. One of the main consequences is on the economy which is prevented from take-off by the overall weakness of human capital. But another consequence is the reproduction of dual societies where the question is less one of equality than of a poverty trap. For education has been identified as one of the major levers for helping to break the vicious circle of economic stagnation and social marginalization. International commitments are the most visible expression of this shared conviction.

Optimism next, as five years on from the forum of Dakar, although progress and setbacks hardly balance out on the road leading to 2015, for some countries a positive process has reversed the tendency.

It is on the basis of this reality, and not by virtue of some mysterious knowledge, that this report intends to provide governments with perspectives and “benchmarks for action”.

Because the main driving force for action is the participants' conviction of working in the field of what is possible. The aim of the report is therefore to define the scope of what is possible and to measure progress over time. Proceeding in this way gives one a chance to understand why decisive progress is sometimes made in just a few years; but also to understand why it seems so difficult sometimes to transform the resources made available into more education for more children.

Empirical analysis can provide some arguments to sway this conviction in the field of education where everyone legitimately expresses beliefs and proposals. It is not up to analysis to establish preferences or decide on trade-offs, but analysis must fulfil the task of evaluating the conditions and consequences of these preferences and trade-offs. And in a context where public resources allocated to education are scarce, brutal questions are to be asked: Who has priority in access to these resources: the out-of-school children, in order to enable their first access? Or rather the children who are already enrolled, but whose schooling conditions do not enable learning or do not provide them with the possibility of pursuing their education beyond primary school.

In the course of analysis, recovering the decision-making sphere is always at stake. As, what rapidly comes out from examining the basic principles, growth modes and performance of African education systems is the extraordinary diversity, and such a distended relationship between the resources put in and the results obtained that it cannot be put down to the specific national context alone.

This therefore means that all educational policies are not equal, that there is at least a potential of productivity to be exploited within current strategies, but also, sometimes, some more in-depth reforms which could lead to decisive progress, as witnessed by certain exemplary experiences on the African continent.

But, one could object, if the solutions are there, how is it that they have not already been adopted ? What are the obstacles which come between unanimous political will and winning strategies ?

Firstly, the information must be available: if over the following pages we manage to convince the reader that our knowledge of the internal and external dynamics of African education systems has progressed, that henceforth some analytical grids and points of comparison have been identified enabling to choose between different mechanisms and enabling trade-offs

between different priorities, then we shall have achieved our aim.
We then come to the most important elements, i.e. the people involved, without whom the system is only an outline. The moment comes when those responsible are in the front line. The moment comes when the final test for politicians is not only to choose the right options, nor to have them accepted, but to reach a point where each person feels jointly responsible for the implementation of a true pact for education.

This subject comes up more and more in the international debate. At the outcome of the 2005 Education For All Global Monitoring Report Summary[1], it is stated that «the internal political process is the ultimate guarantee of the success of the reform».

In the African context of state construction, the citizens' connection with public decisions is uncertain at national level and, for the share of the population accumulating the obstacles of poverty and illiteracy, this connection is practically nonexistent. But locally, the connection can materialize, as shown already by the different ways that communities now participate in school management. This is where social demands can really be expressed and the provision of basic social services controlled.

But the legitimate insistence on the local dimension may sometimes have led to neglecting the State's constituent role in guaranteeing the provision of these basic social services. An exclusively local vision of educational development creates new problems while solving others : local tax systems are still virtually nonexistent, educational communities cannot handle everything and territorial and social inequalities may as a result be accentuated unless there is an overall redistribution and regulation.

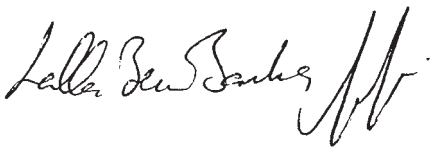
A public education policy, put forward by the government authority, included in a strategic framework of poverty reduction, constitutes more than the link between international mobilization and local processes : it is the pivot on which, in spite of all the obstacles, the success of decisive public action is at stake. And for financing this public action, the budget tool, sidetracked for a time by the rationale of projects, takes on its essential role again, showing clearly that most of all, financing of education is based on domestic resources, which must be managed effectively.

Involving the citizen in the dialogue on the provision of a public education service on the one hand, and a responsible statement on sovereignty for resources made available for this service on the other hand : the internal political and government process is the practical representation of the pact for education. This also guarantees a healthier relationship with development partners who are sometimes placed, with or without their consent, in the position of guarantors of the general interest at national level, which is not their role.

This healthier basis enables a better comprehension of the duty of international solidarity. Today, the convergence of analysis concludes that most of the external financing needs in reaching the goal of universal primary enrolment are concentrated in Africa, and that this priority represents three or four times the flow of aid directed at this level.

This progress report provides us with insight in order to pursue efforts that are beginning to pay off, in order to rework policies when inappropriate, in order to mobilize and direct energy at national and international levels. It shows us how, in ten years time, it will be possible to meet the goals set for a generation of children born at the turn of the century in Africa.

Lalla Aïcha Ben Barka



1 UNESCO, 2004 «2005 EFA Global Monitoring Report: the Quality Imperative»

Executive summary

Five years have passed by since the World Education Forum in Dakar in April 2000 during which the international community committed itself to six major goals of Education For All by the year 2015. Drawing lessons from the limited progress made since the former conference in JomTien ten years earlier, **the Dakar Forum put forward a new deal for solidarity and responsibility at global level:** those countries having made «serious commitments» and presenting a «credible plan» for achieving the goals of Education For All would benefit from the financial partners' support for the share of funding lacking at national level.

This strong commitment was reinforced when two of the goals (**gender parity in access to education** - by 2005 for primary and secondary cycle and by 2015 for all levels of education, and **universal primary enrolment by 2015**) were included in the millennium goals adopted at the United Nations Conference in New York in September 2000.

Did Dakar really change the deal compared to JomTien? The five-year anniversary of the Dakar Forum and of the Millennium Declaration is undoubtedly the first milestone providing sufficient hindsight to take stock of the situation.

Has education maintained its position on the international agenda? Have the arguments and conviction around the goals of Education For All been changed or reinforced? Does the latest available data enable to measure progress made on the African continent? What is the situation as far as reaching the Millennium Development Goal of Universal Primary Enrolment? What policy choices have been made? Where has progress been made and where do the weaknesses lie? Is there some room for manoeuvre? Which directions should be taken for improving efficiency and developing solidarity?

The aim of the present regional report produced by the UNESCO-BREDA education sector analysis team (Pôle de Dakar) is to address the above series of questions in the form of «**benchmarks for paving the way for action**». Empirical analysis is based upon a wide range of sources: national administrative and educational data collected by the UNESCO Institute for Statistics, household surveys conducted by the different countries with the support of UNICEF, various surveys on school achievements (quality of education), United Nations demographic data, recent research work on educational economics, etc.

Thus, although the report is designed first and foremost for education executives and decision-makers in African countries, endeavouring to **equip** them **with information, methodological tools and analysis to assist in decision-making in education,** it is also appropriate for:
- educational advisors in bi-and multilateral development agencies, at head office level and in the field, as it provides comparative study which is sometimes lacking at national level,
- NGOs and other private sector organisations developing their own analysis, and finally
- any reader interested in the issue of education in Africa, investigating for better choices on goals, systems and resources.

The document is punctuated by three types of «benchmarks»:

Benchmarks as to the expected benefits of education: the eminent position of goals for education in the policy commitments of African countries as with the international community cannot be taken for granted once and for all. In order to maintain such a high degree of mobilization, it is useful to reiterate why this choice is justified, and more precisely why the goals of Education For All are crucial in the poorest countries. Today, there are more numerous and more precise arguments which make education the basis for economic and social development in Africa.

Benchmarks on the dynamics of enrolment: once the foundation stone has been re-laid, one should observe to what extent, in the full sense of the term, the importance given to education results in harmonious and sustained development of the education system. An inventory

2 These figures are supplied by the UNESCO Institute for Statistics for 2002/03 in general, or in some cases are calculated from national school data from 2003/04 -in which case they are combined with the United Nations population projections for calculation of the main education indicators-, essentially for West Africa, where the Pôle de Dakar is active on a regular basis.

3 Berthélémy and Arestoff, (2002), Psacharopoulos and Patrinos, (2002), etc.

of enrolments in Africa with apparent trends has been drawn up for this purpose, using the most recent available figures[2], in particularly with regard to achieving Universal Primary Enrolment by the year 2015.

Finally, **benchmarks pertaining to room for manoeuvre as far as policies are concerned**: as current levels and trends will not suffice to achieve Universal Primary Enrolment, the key factors of success for the massive and, at the same time, harmonious development of education systems must be identified, that is to say the **options and priorities for African public policies** in terms of education.

The present executive summary roughly outlines the content of these «benchmarks».

1. 1. Education, the basis for economic and social development in Africa

The right to Education For All is a universally established right. However, along with other rights, it is difficult to put into practice in a situation of constrained resources, particularly in African countries, where there is strong competition for access to public resources, and often difficult budget trade-off between the different sectors. Consequently, in order to bear some weight in the policy decision on allocation of public resources, it is important to provide an objective justification of the primacy claimed for education, along with the level of priorities within the educational sub-sectors.

For that purpose, some new theoretical elements, as well as recent empirical analysis, suggest that the transmission channels of investment in education on growth should be revisited and the impact of education on human development documented. These arguments reinforce the justification for public financing of education but at the same time lead to the necessity of improved targeting of the investment.

This can be demonstrated in two stages.

From an economic point of view, as shown in recent research[3], education comes out as a condition for economic take-off, subject to reaching a «critical threshold» of educated population. This requirement therefore calls for ambitious educational policies, in order to enable the scale change necessary in the development of education systems, which has so far been too progressive.

Beyond that, the way in which education is shared out within the population plays an important part; thus, it is not enough that, on average, the level of education of the population significantly increases, but equity in the distribution of education between individuals is necessary to multiply the expected beneficial effects. However, at the present time, the results are not surprising: there continue to be strong disparities in access to the education system, which increase along with the different levels of education. At the same time, there is a strong concentration of public resources for education benefiting a minority, mainly coming from the wealthiest groups of the population.

The critical threshold and equity arguments leave no doubt as to the justification for public investment in **primary education**. Moreover, the relationship is not linear between the degree of coverage on the one hand and economic and social benefits on the other hand: **some of these benefits are linked to actual universalization of primary school completion for each new generation of children.**

Justifications for the **extension of lower secondary education** are basically the same as for primary education. Recognition by many countries of basic education combining these two levels is good intuition. But the existence of positive effects (on stock and equity) of the universalization of lower secondary education is accompanied by a preference for achieving the objectives on both levels in phases. In other words, refusing access to primary school to part of the school-age population with the excuse that educational continuity is not guaranteed for that generation up to the end of the lower secondary level is counter-productive: it makes economic sense, in addition to being justified in terms of rights, to admit that a large proportion of primary school leavers will not have access to lower secondary education in the transition period.

At higher or terminal levels of education, educational investment in relation to growth is justified with more direct reference to the number and distribution of jobs. In other terms, jobs are the bases to justify education offer at the higher of levels, but education offer by itself does not create jobs. As a consequence, **the system must provide education corresponding to the needs of the economic sphere.** Structural conformity (in numbers and levels) between education system leavers and job structure is important. Even if the education system has to anticipate needs which may not exist when students embark on one course of study or another, it is generally observed that there are many more leaving higher education (and especially university) than jobs available. This trend, when it is the result of heavy public financing at this level, is difficult to justify compared to investments in other levels of education.

Finally, the **quality** of education must be taken into account when considering beneficial effects on growth. Indeed, an individual's economic role is not directly related to the number of years of study or the type of degree but rather to knowledge or know-how actually gained at school and put to use at work. Now in Africa, standardized international tests on pupil learning indicate a general weakness, and a wide variety, both between countries and pupils of the same country. A specific policy for improving quality and reducing quality disparities can have positive effects on the volume and composition of educational capital, and eventually on growth.

From the point of view of human development, the role of education is also reaffirmed on several levels. Complete primary education is a prerequisite for sustainable literacy of future adults with six years of schooling proving to be the strict minimum to avoid forgetting one's knowledge in terms of reading and writing. Such basic education not only prevents the risks of poverty now, but from one generation to the next. It also has a positive impact on changing behaviour, particularly in women, in terms of reproductive, maternal and child health, and the fight against HIV-AIDS.

It is pertinent to detail the arguments relating to human development and to economic development, according to the different levels of education. Once again, there are specific outcomes at each level, especially for **primary education**, if completed, with **impacts on numerous basic social objectives**. This, in the broader perspective of the Millennium Development Goals, gives special status to the two goals of education: they not only represent rights and well-being, but enable achievement of the other millennium goals.

A large amount of data is now available from surveys. What is most striking is the mutual reinforcement of **immediate benefits** from educational investment on human development (short term impact of primary schooling on health and social condition and on the reduction of vulnerability to life hazards) and **long-term benefits**, covering a lifetime (gain in economic independence) or between generations (observation of a «ratchet effect» of literacy and of its positive effects from one generation to another).

All these positive side effects from basic education legitimize massive government investment for the development of primary education, and as far as the financial and physical extension makes it possible, **lower secondary education**. On the other hand, in a constrained budget framework, **a public policy for the development of higher and terminal levels** (higher and vocational education) **must first examine the issue of the adaptation of needs to the economy** ; otherwise, public investment may prove to be inefficient and/or contrary to the reduction of inequalities.

2. Current situation and dynamics of education systems

2.1. Enrolment dynamics vary according to education levels

Progress at primary school level is far from decisive

In 1990, still almost a quarter of African children did not even have access to the first year of primary school. The latest available figures comparatively (2002/03) show that **less than 10% are now excluded from the system.** The African countries have thus proven that the educational offer could catch up with high-pressure demography.

However, the Millennium Goal, in line with the empirical data on the benefits of education, is that of complete primary education for all; from this point of view, the results show many more nuances. In 1990, less than half a generation of children (49 %) benefited from schooling through to the last year of primary education. In 2002/03, the proportion had only progressed by 10 points (59 %). **4 out of 10 children still did not complete primary school in 2002/03.** This shows once again that, even if the goal of universal primary enrolment demands an improvement in access to the first grade in some countries, **principal efforts should be directed to reducing the number of dropouts per level.**

It should be noted that these averages conceal great disparities. Disparities between boys and girls are being evened out only too progressively : **for 100 boys who complete primary education, only 87 girls are in the same situation** out of the 42 countries studied: although data is not yet available for 2005, it is very likely that the parity goal will not be reached on time.

However, it appears from analysis that **geographical disparities** (rural areas/urban areas) **or economic disparities** (low income households/wealthy households) **are more significant than the differences between girls and boys**, and take longer to even out.

From the **quality** point of view, the problem is the shortage of comparative data over time. However, the report provides, on the basis of school achievement evaluation programmes for existing pupils and of household surveys, some information which indicates **very significant disparities in country performance, between the different countries and within each country.**

Other sub sectors and levels of education: a very high progression in enrolments

Currently, **46% of one age group are registered in the first year of lower secondary school** (compared to 28% in 1990), 39% (compared to 21% in 1990) **in the last year. Lower secondary education**, whether measured on entering or on leaving, **has gained 18 points in percentage over the period, i.e. practically double that registered for primary completion.**

Survival in the system is quite good overall in both the first four years and the last three years of secondary education. The pseudo dropout rate[4] in lower secondary education is set at 15%. At higher secondary level, with the current enrolment conditions, 22% of one age group reach the first year of higher secondary education and 18% the last year, i.e. a pseudo dropout rate of 4%.

The proportion of students in technical or vocational education at secondary school level has not really varied since 1990 (14% in 2002 compared to 13% in 1990). This means that the progression in technical/vocational enrolments has followed that of general education.

However, the prize for progression in enrolments, proportionally, goes to higher education. The number of students per 100 000 inhabitants increased from 232 to 449 between 1990/91 and 2002/03.

4 The pseudo dropout rate is the difference between the access rate to first year and access rate to last year of lower secondary education.

Unsatisfactory trade-offs at primary level and deterioration in the global efficiency of the systems between 1990/91 and 2002/03:

Secondary (lower and higher levels) **and higher education enrolments have progressed proportionally more than primary enrolments** over the period 1990 - 2002/03. This result challenges the widespread opinion whereby putting the accent on primary school education has been detrimental to post-primary education.

This is one of the surprises that came out of the analysis, which questions the reality of policy priority given to primary education, and puts into perspective the requests that more interest be given «at last» to post-primary education. But it is less surprising when one considers the strong pressure for educational continuity from the majority already benefiting from schooling, compared to the low pressure from those not in the school system, and who belong to the poorest segments of the population. To this must be added, in terms of political economics, the weakness of mechanisms regulating pupil flow between the different levels of the education system, which only became evident with the general expansion in access.

Consequently, it is of interest to examine the determining factors and the consequences of such an evolution:

Everything leads us to believe that **in 1990/91 the education systems regulated entrance to the different educational levels.** This led to admitting fewer children, in proportion to the population, into the first year of primary education, and to a selection between the different levels (thus, only 58% of primary school leavers had access to the first year of secondary education in 1990 compared to almost 80% in 2002/03). However, this disadvantage came along with the advantage of giving those pupils who entered a given level of education a reasonable chance of completion. This apparently more Malthusian regulation is in fact more efficient if one considers that what is important is not to start a level but to complete it. This choice may have been made due to constraints as to secondary school capacity and/or for reasons of educational quality.

On the other hand, **the situation in 2002/03 shows that during the intervening period the «gates» were opened for first access to primary and secondary school.** Thus, the transition rate from primary to lower secondary education gained over 20 points. This has of course had positive effects on equal access to basic education, but the final picture is much more ambiguous, due to a whole series of reasons. First is the persistence over the period of a very bad survival rate in primary education, and as a consequence of an increased waste on resources, commensurate to the considerable extension in numbers. Second is a frequent situation of overcrowding in the secondary cycles and in upper education, with «uncontrolled» adjustment through lower unit costs, and deterioration in teaching conditions in higher education. Third is an increase in the number of school leavers at the terminal levels of education out of proportion with the evolution of job opportunities at the corresponding levels.

Some national results are more positive: thus, many countries that have reached universal primary education have resolutely set out on, and rightly so, an accelerated expansion of lower secondary education. However, the continental trend is cause for concern, **while achieving the goal of Universal Primary Enrolment by the year 2015 demands in most cases acceleration and better targeting** (improved survival) **of the priority granted to primary education, efforts have been scattered over the educational pyramid resulting in lower overall efficiency.**

2.2. What is the probability of achieving Universal Primary Education in African countries by 2015?

For countries not yet having achieved UPE, the report sets out to forecast enrolment dynamics on the basis of the current structural conditions of the systems (in terms of access, survival

and completion of primary education). This enables **the classification of 34 African countries not having yet achieved UPE[5] as to their chances of achieving the MDG: along this method, 31 of those countries will not achieve UPE, 25 of these 31 staying below the 75 % completion rate mark.** These results are worrying insofar as they leave these same countries under the decisive threshold from which economic and social benefits can be fully appreciated, which also translates into lower effectiveness of public expenditure on education.

2.3. New analytical tools

Although the report naturally presents a comparative picture of education systems, it also aims to provide a reading of the situation per country, with a two page visual «country sheet»

For a general understanding of each national situation, an index, known as the **African Education For All + (EFA+) index**, has been developed, from the four most easily quantifiable and comparable dimensions of the Dakar goals (literacy, complete primary education, parity, quality[6]), which can thus be illustrated by a quadrilateral (the more the quadrilateral is filled in, the nearer the country is to reaching the goals of EFA).

Country sheets also present the evolution between 1990/91 and the most recent available year of the «**educational pyramid**», a graphic representation of the status of enrolments at each level and of transitions between levels, designed to visualize a **synthesis of sector development over the period.**

3. Achieving results : options and priorities for public policies

As the inventory and trends show a definite risk of not reaching the Millennium Development Goal, at least by the deadline for quite a number of countries, **conditions for accelerated progress must be examined**. Given that the lever of any education system is the national policy, and that the latter has to operate in a constrained budget framework, this calls for a comparative analysis of choices made in each case, in order to identify, in line with the objective, the room to manœuvre and the different options available.

In a way, it can be noted that the «uncontrolled» share is too large compared to the «controlled» share in the development process of education systems. Indeed, **it seems that the systems have adjusted themselves rather than being subjected to strong government action. This resulted in negative consequences in terms of social costs and overall effectiveness of the systems.** It is necessary to point out the need for, and the possibility of, designing new levers for public policies better oriented towards collective interest and sustainable development.

Developing education systems requires three types of effort**: sufficient mobilization of public resources** for the education sector, sound choice of the **main parameters of educational policy,** and efficient **educational management and administration.**

3.1. Mobilizing sufficient public resources for the education sector

Mobilization of public resources for education is firstly linked to the State's capacity for mobilizing its own resources (**fiscal pressure**), which in the short term is relatively exogenous for educational policy, as it is closely connected to the

5 These 34 countries are from the 53 taken into consideration in the report, minus (i) 10 countries having achieved UPE in 2002/03 (primary completion rate 90 % or above), and (ii) 9 countries for which data was not available or inadequate for performing the analysis

6 The quality of education itself if measured by the IAQE or IAQE+ composite indicator, calculated for 36 countries from the MLA learning studies (Monitoring Learning Achievement, implemented by UNESCO/UNICEF), PASEC (Programme d'Analyse des Systèmes Educatifs de la CONFEMEN), SACMEQ (Southern African Consortium for Monitoring Educational Quality, which works in partnership with IIEP) and UNICEF MICS (Multiple Indicators Cluster Survey) household surveys.

level of the country's economic development. However it also depends largely on the priority granted to education in **budget trade-offs** between different sectors. Now the options selected in this respect were still very different in 2003, varying between less than 5% and more than 30%!

3.2. Making decisive choices on the major parameters of educational policy

Room for manoeuvre within the major policy trade-offs

Significant variability can be noted in policy choices in terms of intra-sector allocation and use of resources, giving an indication of the room for manoeuvre existing in some countries:

(i) **Intra-sector trade-off.** Distribution of the budget for education amongst the different levels significantly varies from one country to another: ranging from 23% to 62% for the share allocated to primary education (adjusted to six years), from 11% to 52% for the share allocated to secondary education (seven years) and from 8% to 49% for the share allocated to higher education.

(ii) **Quantity-unit cost per student trade-off.** A low unit cost per pupil gives priority to the quantity of enrolments whereas a high unit cost gives priority to the (supposed) quality of education ; this fluctuates between less than 7% and over 29% of the GDP for primary education, between 14% and 63% for secondary education and between 50% and almost 800% for higher education.

(iii) **Trade-off within unit cost.** The distribution of the unit cost per pupil amongst the different types of expenditure may express priority: 1/ to the average teacher salary (varying from under 2 to 8 times the GDP per capita for the 33 countries studied), 2/ to the reduction in class sizes (from 15 to 70 pupils per teacher) or 3/ to other measures covering an objective of quality (expenditure other than teacher salaries spread across 4% and 45% of total current expenditure).

The heterogeneous nature of these policy options, and the success of some of them, prompts each country to act where possible in order to build those educational policies which will enable achievement of the main objectives.

Room for manoeuvre in the management of student flow

Management of student flow in the education system overall, which determines in fine budget allocations between different education levels and the expenditure per pupil (quality), requires regulation as follows:

(i) **Regulation within education levels:** survival must be improved, firstly **by fighting against the rate of repetitions which is too high;** individual and global studies show that these are ineffective, responsible for **triggering off dropouts** and waste an important share of national resources; some steps such as the introduction of sub-levels within which it is impossible to repeat, have been successfully tried out.

(ii) **Regulation between education levels:** regulation must be organized policy-wise, technically, and budget-wise, to better adapt the structure of the education system to 1/ post-primary capacity, to avoid penalizing quality and 2/ the needs of society and the economy. This measure must certainly be backed up by other measures centred on school leavers.

Once the thought process is underway and choices made, it is the management of the system by the decentralized structures which is at stake, to ensure optimal utilization of resources, in accordance with the double requirement of equity and quality of education.

3.3. Improving educational management and administration

Allocation of resources to the schools

Equity requires the **allocation of means** (teachers in the first place) to the schools which address the needs (mainly defined by the number of enrolments). This supposes that one has recourse to an efficient information system, coupled with strategic tools such as school mapping. In the meantime, in case of continuing scarcity of means, different experiments in terms of **class organization patterns** (multigrade, alternated recruitment, etc.) provide, according to the geographical location of the school (urban/rural area), palliative solutions already successfully applied in many countries. It also seems a good idea to reinforce policies of compensation for local context difficulties by allocating additional resources.

Transforming resources into results at school level

Once resources have been allocated from central level to the schools, the question of distribution and utilization of these resources is decisive in obtaining tangible results. **These results must be explicitly set out in order to become the priority for action and vigilance by local stakeholders** (inspectors, directors, teachers, school community).

The common objectives of these stakeholders are to arrive at the best possible results in terms of:

- **Learning** ;
- **Pupil survival** throughout the educational level with minimum repetition;
- **Attraction** (the capacity of the school to attract the child population in its catchment area).

These results call for some autonomy in decision-making by the schools. For example, the objectives of **survival and «attraction»** will be served by an **adaptation of the local offer** according to the specific characteristics of the demand (the most common example being the adaptation to the agricultural calendar in rural areas), or by measures to **stimulate demand**, whose impact is increasingly well known (like school feeding programs).

On the results in terms of learning, there are many **different types of school organization**, educational **input combinations** and **teaching practice which make significant difference in the process of student learning.** It is important to dispose of objective **means of evaluation** of the organizational factors, the material factors and teacher practice which together will enable the children to learn.

Indeed, the socioeconomic and local contexts, as well as the individual characteristics of the pupil, have an influence on results. But there exists an African specificity, brought to light by empirical studies, which shows that the share of enrolment conditions is particularly high compared to external factors; this opens **the way for an effective active policy for overcoming social and economic inequalities.** It was seen above that it was appropriate to try and compensate for inequalities by granting additional resources in difficult areas. But, in this case, it is also possible to adjust those factors of school organization which have the greatest proven impact on learning, e.g. actual teaching time (poorly monitored to date), teacher motivation or teaching techniques used in the classroom.

In general, a **weakness** can be noted **in result-oriented management at local level.** Although in most countries, a mechanism of this type still remains to be defined, inspiration could be taken from some interesting innovations, based on the **definition of roles and giving a sense of responsibility to all stakeholders**, teachers and inspectors, but also parents or local communities (those stakeholders most concerned by the child's learning), together with a greatly reinforced system for evaluating the different schools' results (survival, exam results). It is only by such a change in practice and moreover in culture that the quantitative leap aimed at will be made possible, without deteriorating equal chances at school and without damaging the quality of education delivered.

Conclusion : general implementation of an educational pact

Identifying more effective policies is not enough

The first idea, of a more institutional and political nature, is to go further than the «amazement» of the specialist. Indeed, «technologies» for achieving the goals of Education For All by 2015 do exist: **The levels of internal and external financing and the main parameters of educational policy in line with achieving these aims are not only known, but are a reality for a certain number of African countries** who have moved on from an «off-track» status to an «on-track» status since the initial assessment in 2000.

How then can the conditions for encouraging the adoption, financing and implementation for reworked educational policies be found for the majority of African countries?

Translating an education pact into policy

The issue of political conveyance of the goals of Education For All must be addressed. Responsibility for this is situated at the highest national political level. It is now time to move on from a commitment or a sector priority to a true social pact for education at national level. The objective of this pact would be the **positioning of the goals of Education For All as constituent to education as public property and to general interest.**

The idea is on the one hand to sanctuarize the goals as long as they are not reached, and on the other hand to apply to them those principles associated with the production of public property, with universal and free access as top priority. The advantage of such a pact agreed upstream is **to set one of the parameters for sector negotiation** and to allow the system adjust itself to an objective which is accepted by all and that must subsequently be served by the allocation and utilization of resources.

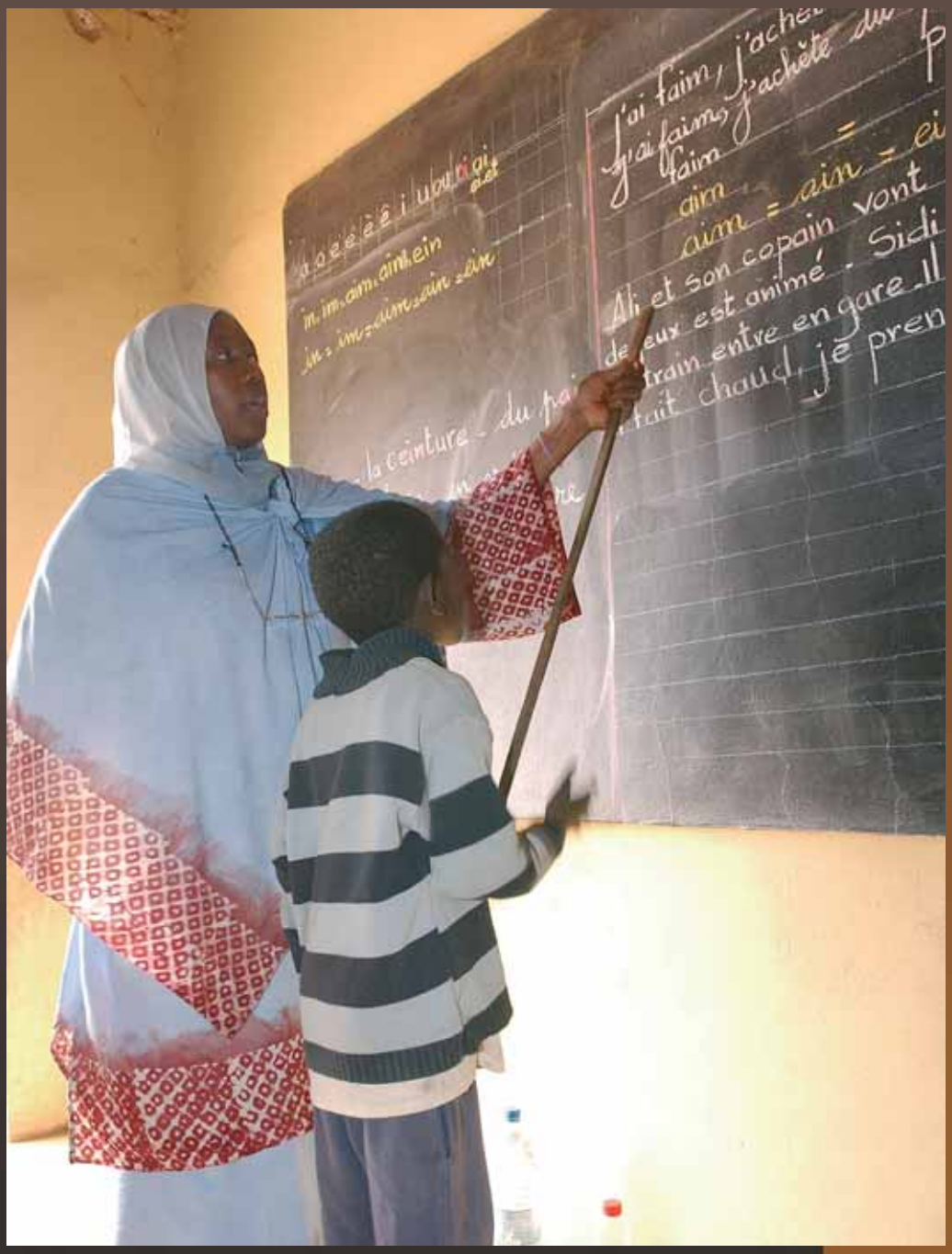
Thus, **several major principles for the definition of education sector strategies** result from the educational pact. Firstly, the **goal of Universal Primary Education must be protected. Then, the first level of secondary education must be extended as far as possible** depending on the capacity of physical and financial extension, **and at the same time the other education levels developed according to social needs and economic demands.**

Solidarity and responsibilities from national to international level

But the interest of the **educational pact** is not restricted to the principles for the **definition** of strategies, it can also facilitate the **implementation** of these policies nationally and internationally.

At national level, the social educational pact legitimizes the citizen and the user in exercising **control over the basic education service**. The citizen, through his control on government policy, can ensure a control on the system upstream, and the user, at local level, can ensure a more day to day control, the latter level being more adapted to the involvement of the underprivileged segments of the population in access to this control, and who are the most directly concerned.

At international level, the educational pact becomes global on the basis of a clear **contract** in the spirit of the Dakar declaration on financing credible policies, in order to increase and make more effective the indispensable share coming from external aid to reach the goals of Education For All.


J'ai faim, j'ache
j'ai faim, j'achète du
faim
aim
aim = ain = ei
Ali et son copain vont
de eux est animé. Sidi
train entre en gare. Il
fait chaud, je pren
la ceinture du pa
in, im, aim, eim, ein
in, im, aim, eim, ein

Guide to reading this report

An understanding of how this report is organised will be beneficial to the reader.

The body of the report consists of two main parts: one analytical and one statistical

• The analytical part includes an overview of the issues, followed by three sections:

› Section 1 deals with the impact of education on economic and social development in the context of contemporary Africa and, in conclusion, covers the question of its public financing

› Section 2 takes stock of the current situation and developments in education on the continent, five years on from the Dakar Forum

› Section 3 focuses on the options and priorities facing African decision-makers with a view to accelerating the progress towards the 2015 goals

This analytical part ends with a section on the developments concerning external aid, followed by a conclusion that re-examines the thinking in the light of more institutionally and politically-based actions.

• The statistical part consists of two entries:

› One entry for each country, consisting of 53 double pages, one for each country on the African continent

› One entry for each indicator, in the form of summary tables

This statistical part is rounded off by definitions and methodological sections.

This report may be read in different ways and on different levels, but the aim of the authors was to ensure that the analyses and recommendations are organised and cross-referenced in a structured way.

Introductory Chapter

(As an introduction to the three analytical sections)

First of all, it was important to revisit the arguments in favour of investment in education in general, with particular emphasis on the education for all goals, in the light of the particular context of Africa.

This is the focus of **Section 1, which is entitled « Education, the springboard for economic and social development »**.

This question has been widely covered by the literature. The traditional macro-economic approach is quite convergent, showing a series of «peaks»» on returns for the development of investment at each level of education according to the stage of economic and social development. It is no surprise that on average in Africa, the primary cycle shows the maximum level of private and social returns.

However, this result must be viewed in the light of the dual structure of African economies. Here, access to the best paid jobs in the modern sector logically remains reserved for those who have been able to reach the highest levels of the education systems. But the persistently high levels of unemployment amongst graduates poses the question of how to make adequate changes in the numbers and quality of students reaching the end of secondary and higher education, as well as raising doubts about the relevance of the large-scale public financing of these levels of education.

One of the most remarkable results revealed by the analysis is that the main regulator of the job market in the traditional and informal sectors is price, whereas in the modern sector this regulation is based on quantity (the job market has a limited capacity to absorb graduates, and those who are «surplus» to requirements either end up unemployed, reduced to working in the informal sector or forced to find work abroad). The result is that increasing numbers of graduates from higher levels of education are taking jobs that were previously occupied by less qualified workers. This devaluation brings about a «race for qualifications» which is particularly costly in terms of human capital for the public authorities. For graduates of the higher education system, the average individual returns on educational investment, which are quite low, are given by the average of a wide range of values, which includes the relatively protected salaries of managerial staff in the modern sector at one end of the scale and the low or non-existent incomes of the «devalued» workers and the unemployed, at the other.

On the road towards Universal Primary Education (UPE), there is therefore a need to find a balance between the lower levels of education systems, which must respond to the need for major increases in pupil numbers, which leads inevitably to added pressures on the subsequent levels of education, and the higher levels, at which the individual and collective benefits are adversely affected when the economy's capacity to absorb the products of the education system is exceeded.

Indeed, in a context of limited resources, concentrating simply on the right to education has little to offer in terms of helping to inform the debate as a whole or in assisting those who make public decisions about the allocation of public resources to the education sector: decisions that concern the distribution of these resources as well as their amount. In reality, this expenditure has to compete directly with other forms of state expenditure, to which rights are also attached, such as the right to security or the right to health. Furthermore, because all forms of educational expenditure are not equal, the appropriateness of investing at certain levels of the system depends on the level of economic and social development. And finally, even if

there is a proven need, the unsuitability or inefficiency of a chosen policy can also raise doubts over its public financing.

The inspiration for this first section borrows liberally from the «Copernician revolution» which sees human development no longer at odds with economic growth, but as an investment firmly based on right and reason in the framework of a long-term vision of the fight against poverty and inequality.

The Millenium Goals, defined in 2000 by the United Nation, have sanctioned this approach.

An analytical reading of these Millenium goals gives the one of Universal Primary Education by 2015 a special status, because numerous studies confirm that UPE, as well as being a legitimate aim in itself, also plays a direct role in helping to achieve the other goals[7].

To start with, UPE narrows down to a specific organization and process : improving access and success in primary schools. From here, it is important to check how pertinent this organization and process are with respect to a more final goal (literacy), and in relation to other organization and processes (informal, adult literacy, etc.), which could be seen as interchangeable (and not complementary, as is the case today).

Empirical data provide reassuring evidence about the justification for choosing UPE: there is indeed confirmation of a solid link between the flow of primary school leavers and improvements to the stock of human capital, as measured by the literacy rate among the adult population. This generational effect is strengthened by an intergenerational effect, because other measures bear witness to the influence exerted by the level of the parents' education, especially the mother's, on the schooling of their children.

The following stage consists of verifying whether, in addition to the role played by UPE in building a minimal base of human capital (literacy), with the aim of improving incomes at the individual level and stimulating economic growth, it also contributes to improving other aspects that have a strong collective value for the population, such as health and fertility. It is especially important to identify the changes in individual behaviours that are linked to the achievement of UPE and those which can only be achieved by providing access to the higher levels of education.

It has repeatedly been shown that the completion of the primary cycle represents a genuine threshold for the achievement of the fundamental goals of society, from both individual and collective points of view. As a consequence, it can be said that UPE represents a valid intermediate goal and that although we are as yet unable to grant universal access to secondary cycle, the social investments that are prioritised for UPE are far from being wasted.

During this critical time, when we are compelled to invest in primary schooling while structural modifications to the economy are under way but far from being completed, the relatively low levels of social and individual returns on investments in the higher levels of education poses a problem. The lack of social benefits does not justify the use of public funds for these higher levels, while the lack of individual profitability restricts the development of private solutions.

The greatest difficulties may well be caused by a time-lag problem: we were already aware that investment in education is a long-term issue and as such, is out of step with the politico-economic cycle and especially with the political horizons of governments. On the road towards UPE, the latter are confronted with immediate internal pressures to maintain educational continuity, whilst the economic justifications for the development for the higher levels of education systems only become apparent much later on.

However the short-term challenges are already enormous, involving the fight against poverty and inequality. Indeed, situations where access to schooling is denied are also the most inegalitarian. The initial steps of making basic education available to the masses, may even be adding to these inequalities. Only after Universal Primary Education has been successfully

7 It is true that the inverse is sometimes true. Today, it is acknowledged that the aim of UPE cannot be achieved if significant efforts are not made to reduce the impact of HIV/AIDS on the education system.

achieved will the benefits of the increased value of human capital be spread to a wider proportion of the population.

The intervening period before Universal Primary Education becomes a reality is therefore a dangerous time in many respects. The level of access to education is not high enough to reach a critical mass and bring about the anticipated social and economic benefits, and it only serves to aggravate the social divisions between the educational haves and have-nots.

This issue can then be directly compared with the trend for the quantitative development of African education systems covered in **Section 2 («Current situation and dynamics of education systems»)**.

This second section starts out with an assessment of the current quantitative performances achieved at the principal levels and branches of African education systems.

This first statistical and structural assessment also provides us with information about the progress that has been made towards the six Dakar goals. It concentrates in particular on comparisons in space and time and may be used as an introduction to the reading of the country sheets and statistical tables in the appendix.

Quality is a difficult dimension to evaluate, and is the subject of a special, still largely experimental approach, proposing the use of an index that makes the best use of information from the available surveys.

Following the assessment of the current situation, the second part of the section consists of the more dynamic exercise of analysing trends and prospects, focusing specifically on the Universal Primary Education goal by 2015.

The question that is posed in Section 2 in relation to UPE is «Given the conditions that currently prevail in education systems, how far away from achieving UPE will we still be in 2015?»

This is the reverse of the question that is asked in Section 3 «What educational policies do we need to implement today if we consider UPE by 2015 to be a fixed goal?»

But in both cases, this look into the future demands a prior examination of the past.

The Jomtien Conference in 1990 sounded the alert that the process of schooling in developing countries was running out of steam. In fact, in Africa during the 1980s and until the middle of the 1990s, the differentials between the respective rates of increase of the school age populations and the numbers of children actually educated were very low, on average, and negative in certain countries.

Since the second half of the 1990s, the differentials have stabilised on the positive side. The fact that, to mention just one example, the continental average for the gross enrolment ratio in the primary cycle rose from 78% to 92% between 1990/91 and 2002/03, is evidence of a genuine mobilization of resources and should be considered as one of the real grounds for hope.

However, the high level of these percentages gives a false picture of the challenge that lies ahead. In fact, the gross enrolment ratio should only be seen as an indicator of a system's capacity to accommodate pupils and as such, it does not provide a measure of the actual completion of a full cycle of primary education, which is a more reliable measure of the primary completion rate.

In reality, the median primary completion rate at the continental level has only recently passed the 50% mark, which means that today, if we take account of the average relationship between primary schooling and literacy mentioned in Section 1, nearly half of all school-age African children are destined to be illiterate adults.

The picture that is starting to emerge from the observation of certain African countries is that genuine progress has been made in term of improving access to the first year of the primary cycle (facilitated by the increased number of places and also by specific measures such as the elimination of enrolment fees). This positive development is having little impact on improving the completion rate, which is the true measure of achievement of the primary schooling goal, because of persistently high dropout rates during the cycle.

By standing back and observing developments across the whole of the educational pyramid over a little more than a decade, it can be seen that, in general, access to the secondary and final levels of education has become less selective. But what might be seen as a sign of success for the campaign for universal access to the primary cycle is quite often the symptom of much more ambiguous developments.

Firstly, there is the fact that the number of pupils in the primary sector has increased at a proportionally slower rate than the numbers in the subsequent levels of education, which belies the priority given to universal primary education, in spite of the commitments that have been echoed repeatedly.

However, it should also be considered that, far from benefiting from this disproportionate increase in numbers, the higher levels of education systems are often in crisis and, even if this is not the only factor to blame, the lack of regulation of numbers is causing a worsening of educational conditions, often accompanied by a drop in quality. For higher education, this also accentuates the problem of producing of too many graduates for the existing job market.

In the final analysis, at the continental level, there is a considerable way to go before the 2015 goals can be achieved and the overall diagnosis is very clear: without enormous and, above all, better targeted efforts, the achievement of the education for all goals will not be delayed for just one or two years, it will be put back several decades.

This said, the different observations that have been made outside of this average level give grounds for optimism: certain countries have made very significant progress, and, by observing the structural mechanisms that have made their performances possible, we can learn valuable lessons for the benefit of those countries that are still a long way from achieving the education for all goals.

The third section («Achieving Results: Options and Priorities for Public Policies») therefore examines all of the available means for establishing the goals and policies.

The thinking behind this third section is not to propose one single policy but rather to give a realistic appraisal of the scope for changes relating to resources, major policy parameters, strategic planning and management of education. The aim is also to evaluate the improvements resulting from the chosen modifications and in this way, to promote the debate, choice and implementation of effective policies.

The mobilization of resources is the first dimension to be explored. Even when comparisons are based on countries that have a comparable GDP per inhabitant, the combination of the tax burden rate and budgetary priorities leads to the existence of very different situations from one country to another.

However, although the mobilization of a sufficient level of resources is a necessary requirement, it is not enough in itself to achieve the educational goals. Indeed comparatives studies of education in Africa typically show that these differences in available resources act as a very poor indicator of performance in the educational field and for the social returns of investment in education in general.

The difficulty thus lies in evaluating the overall performance of the education system in relation to the goals, which Section 1 encourages us to consider as being distincts for the lower and higher parts of the educational pyramid.

For the lower parts of the systems, the social benefits, including those of an economic nature, are linked to universalization in the framework of the fight against poverty and inequalities, whereas for the upper part, the benefits depend on balancing numbers and quality with the needs of the job market: a delicate balance which is difficult to achieve.

This has consequences on the first level of choices concerning the use of public resources for education namely the distribution of resources for each level of the system, which must therefore take account of this desire to widen the base of the educational pyramid, and of the need to regulate numbers in the upper level.

Modifying the unit cost at each level of education provides additional room for manœuvre at this first level of choices: with limited resources, a lower unit cost allows more children to be educated and vice-versa.

The challenge is therefore to find a level of unit cost that is compatible with the objectives of supporting demand and ensuring quality at each level of education.

Comparisons between countries or between schools within a single country show that differences relating to quality have a very weak correlation to unit costs. This can be explored in greater depth in the evaluations of the impact of the elements that make up these unit costs (in terms of inputs as well as with respect to the organisation of schools). There are several examples of this approach and it is possible to conclude that a judicious choice of inputs and modes of organisation can optimise the cost/efficiency ratio and bring about significant improvements at each type and level of education.

Another conclusion is that not all of the differences observed can be traced back to measurable characteristics. These findings are most striking at the classroom level, where the learning actually takes place. Here, the differences in educational levels, initial training and status of primary school teachers can only explain a very small proportion of the differences between teachers. The hypothesis is that new methods of leadership and management must be sought in order to improve the efficiency of teachers, and indeed reinforce the entire system at the local level.

«Good management», at the different levels of education systems, is indeed one of the themes that have become an increasingly important preoccupation for the countries and their technical and financial partners over recent years.

To avoid being overly prescriptive, it is important to steer clear of the trap of proposing solutions that are not supported by a diagnosis. Sector studies performed in Africa indicate that this diagnosis should be performed at two levels: firstly by examining the equitable channelling of resources from the central level to the school level (allocation of teachers, in particular) on the one hand, and secondly by investigating how effectively these resources are transformed into educational results, on the other (measuring results at the school level with particular emphasis on the quality of learning and the survival of pupils).

There are no magic solutions based, for example, on the intrinsic superiority of one model to another, (The contrasts between the education systems of French-speaking countries, which remain highly centralised and those in English-speaking countries where the local authorities play a much more important role, immediately come to mind).

More to the point, the literature on the subject consistently identifies two weaknesses in African education systems. One of these relates to the social control that is exerted over the service which is provided at a local level, especially by the educational community. The other weakness concerns the structure of responsibility within the education system, which is largely disconnected from incentives to improve performance in terms of access, quality and equity.

At the end of this journey, we find that a double rehabilitation of the actors takes place. The first concerns major choices of policy and is based on the idea that there is room for manoeuvre at the steering and management levels. The second revolves around the idea that the best education policies are worthless if they are not put into practice, which requires a structure of responsibility and imputability, especially with respect to the users.

Section 1

Education - the springboard for economic and social development in Africa

Education is an end in itself and an individual right. That does not necessarily mean that all educational expenditure is good, whether for the individual or the community. In the African context, where the resource constraint is strong, choices have to be made. Therefore, the benefits expected from education must necessarily be specified more exactly according to the educational level and objective. That is the first step towards the necessary trade-offs of educational policies.

The link between education, growth and economic development is becoming increasingly well researched : the impact of education on growth no longer only takes stock into consideration, but also the distribution and quality of education. More specifically, it is also useful to distinguish education's impacts according to the structure of the economies which are still mainly dual economies. Part 1 focuses on the exploration of these different dimensions in the African context.

However the ultimate goal remains human development for which an acceptable level of wealth and favourable employment dynamics are essential, yet insufficient, factors. The study on education's impacts on a certain number of key dimensions of human development is therefore essential. Part 2 focuses on this issue. It brings together a number of available surveys and analyses for Africa.

The justifications for educational investments should be clearer subsequent to these first two parts. But if the financing is justified, how should it be split between the State and individuals? An analysis in terms of public goods soon makes plain the unique status of primary education, yet it is not unfounded, in the context of a «social pact», that the public service finances the other education levels. And yet it is necessary, in this case, that the public bid does not hedge individual incentives or a more optimum allocation of public resources: This is the focus of part 3.

1.1 Economic justifications for educational investments

1.1.1 Education as a growth vehicle of economies

Seen from an economic viewpoint, education is an investment: today it is an expense that should produce added wealth and wellbeing tomorrow. **Education brings about an increase in the human capital stock**, which includes all the factors referred to as «incorporated factors» that could influence productivity (like health, etc.). Due to the importance of education amongst all these factors that make up human capital in the broad sense of the term, looking into its specific impact on growth can be justified.

Education, an essential pre-requisite for economic take-off

Have the countries whose population benefited more from educational efforts become wealthier as a result of this? It is difficult to untangle the two theoretical mechanisms at work by which education has productive value, and it is difficult to exactly quantify the causal impact of education on past economic performance (see inset 1.1), nevertheless, there is **a consensus to make education an essential prerequisite for economic take-off.**

Inset 1.1 : Education and growth, economic literature review

Two opposing approaches approaches describe the mechanism by which education contributes to wealth creation.

› One deals with the human capital as an analogy of physical capital: a source of wealth whose accumulation raises production levels. In this framework, **education is a factor of additional material production.**

- *What is the relevance of educational policies in the long term?* In this model, the accumulation of factors has increasingly weak impacts on production due to decreasing yields. In the long terms, the only source of economic growth (excluding population growth) is technical progress which, universally shared, in the end grows at the same pace in all economies. The long term result is that the educational policy has no impact on the economy's growth rate, but it can affect wealth levels that grow concurrently.
- *What are the empirical results?* Accumulation model estimations link the GDP growth rate to the growth rate of the level of education. The results are very sensitive to the measurement of the level of education and it emerges that «the most exact measurement does not allow us to highlight an effect of the growth of the level of education on GDP growth».

› The other approach considers that the human capital directly impacts the economy's growth rate. In this framework, education to a lesser degree determines the production level to given technology than individuals or economies' capacity to transform, innovate or adapt to change. **Education is therefore at the heart of dynamic learning phenomena.**

- *What is the relevance of educational policies in the long term?* In the long term, the growth rate no longer depends on the growth of technical progress but on the investment made in human capital by the various economies. This approach bestows a central place on educational policies that can have a sustainable impact by not only affecting the production level but also its growth rate in the future.
- *Which level of education should be favoured?* Economies refereed to as «adapting» economies and situated close to the technological boundary need to contribute to technological innovation and must have a highly-qualified labour force. This is why a substantial investment in higher education is so relevant. Economies referred to as «imitating» economies and situated far from the technological boundary but with a great potential to assimilate technologies produced elsewhere, as a matter of priority, need to invest in educational levels which favour the implementation of new techniques, i.e. primary and secondary education.
- *What are the empirical results?* Estimations for the innovation/adaptation models link the GDP growth rate to the level of education (and not the growth rate of education). In addition, the economy's growth rate is on the one hand correlated to the education stock - for the capacity to innovate - and on the other hand to a variable that characterises the catching-up effect of technical progress - for the capacity to adapt. These endeavours reveal an impact of the level of education on the differentiated growth in wealthy countries (it is the direct impact of the education stock at work) and in poor countries (it is the indirect impact via the catching-up process of technical progress at work).

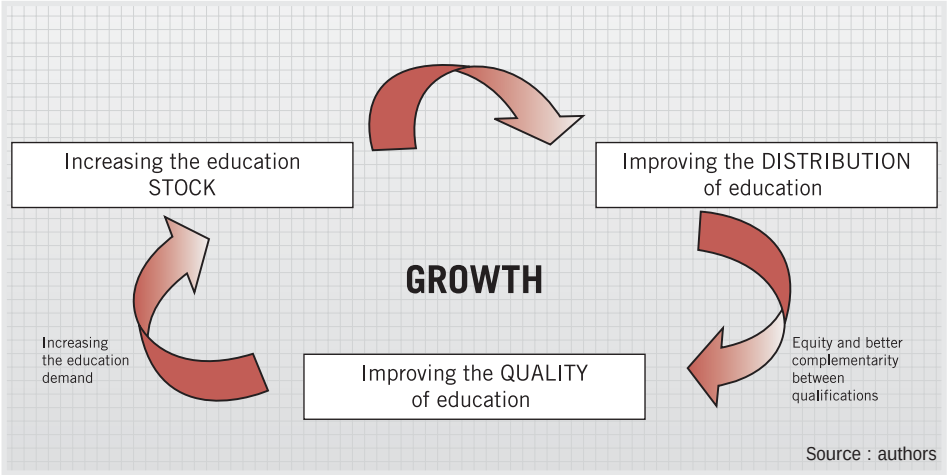
Source : Gurgand (2004)

To ensure that education contributes further to the economic growth process in sub-Saharan Africa, efforts in three directions are required: increasing the education **stock**, improving the **distribution** thereof, both in terms of its equity and pertinent adjustment to the employment structure, and finally ensuring that **quality** education is provided from the classic point of view of skills that are acquired.

The global stock of education is not enough, the distribution and the quality of this education are essential for economic growth

In fact, there is a **cumulative process between stock, distribution and quality of education** that could either lead to the implementation of a virtuous circle between human capital and growth or keep the country in the grips of poverty (see diagram 1.1).

Diagram 1.1 : The virtuous circle between stock, distribution and quality of education for growth



1.1.1.1 The impact of education stock on growth

To reach an educated population's critical threshold, educational policies in Africa should be ambitious and be on a different scale

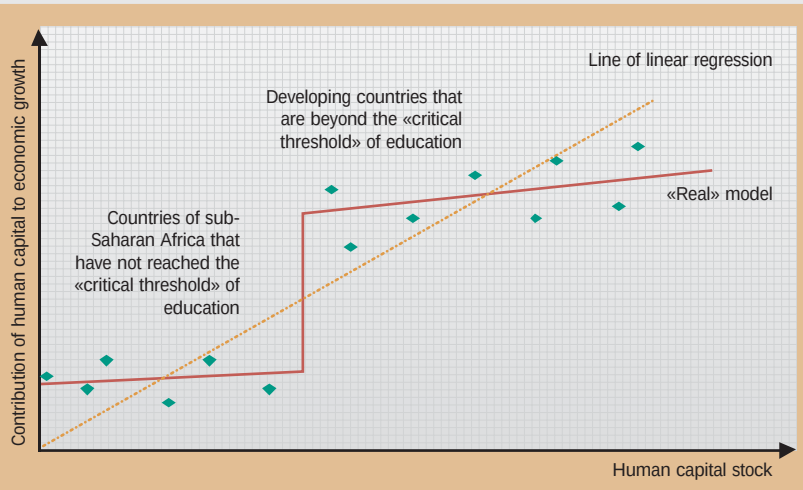
The **education stock has to be massively increased** to reach the **critical threshold** of human capital from which a sustainable development process can begin. As long as the education stock remains below a certain threshold, access increasing by a few percentage points cannot be linked to growth in a linear manner (see diagram 1.1). In sub-Saharan Africa there are still many countries that have yet to reach this minimum educational foundation. On this continent, an incremental strategy for primary education will not be decisive, nor would it be a protection from possible declines as was sometimes observed during the past two decades, and **only an ambitious policy will bear fruit** (Berthelemy and Arestoff, 2002). This means continuing with efforts regarding both the offer and demand side of education to accelerate the pace of accumulating human capital and it argues in favour of positioning education at the heart of development strategies.

However, it is important to note that an increase in the human capital stock is not a sufficient prerequisite to promote growth. Recent empirical studies insist on the fact that human capital's contribution to economic growth can be minimal if: (i) the other supplementary production factors essential to the growth process, such as infrastructures for example, are lacking. (ii) the country finds itself in the throws of an adverse macroeconomic context (extreme shocks, growth volatility, market distortions, political instability, etc.).

But at the same time this means that the country and the technical and financial partners[8] that support them, should dare to make **a large-scale change**, what the UN Millennium Project calls the «big push», in favour of total, and not partial, achievement of human development goals in general, and universal primary enrolment in particular.

8 From being referred as «donors», bi- and multilateral agencies, progressively become technical and financial partners (TFP) and the semantic changes denotes the will to be seen more as a partner as well as a logic of co-responsibility now at work in order to reach the Millennium Development Goals .

Graph 1.1 : Illustration of the relationship between the human capital stock and growth according to education levels



Note: the relationship linking human capital and production (or growth) is decidedly non-linear, which could explain the inability to estimate it correctly. The «real» model is in fact a model in which the group of poor countries whose level of initial human capital is low, experience a small marginal contribution of human capital to growth, up to a decisive threshold reached by the more developed countries that place more value on increasing their human capital stock. Such an analysis is directly applicable to Africa where most countries fall in the first group of countries, characterised by low schooling indicators.

Source : from Berthélémy and Arestoff (2002)

1.1.1.2 The impact of the distribution of education on growth

a) The positive outcome of a more equal distribution

The quality of human capital counts for much, therefore recent studies insist on the importance of equity in the distribution of human capital to increase the impact of education on growth. The results are very clear regarding the impact of the initial inequalities of the distribution of wealth on economic growth: an economy in which the soil, capital and human capital are distributed very inequitably will generally record a lower growth rate than a country in which resources are distributed more equitably amongst inhabitants (Thomas and *alii*, 2000; Birdsall, 1999). This is reinforced by the very specificity of the «human capital» asset which is a non-transferable incorporated asset between individuals: as a result, an initial inequitable distribution of human capital cannot be corrected.

In the African context, **the beneficial impact of equity**, in the distribution of human capital, on growth **is based on the finding of a broad spectrum of basic education's positive impact on productivity, whatever the sector of the economy:** traditional and informal sectors, of course, but also not highly qualified jobs of the modern sector. On the contrary, in Africa, **the concentration of human capital would only be compatible with an increase in productivity through intensive choices regarding** capital and technology which are on the one hand not very likely due to the weakness of the economy's infrastructures and general structures, and on the other hand are undesired due to the increase of inequalities that result from it in the distribution of revenues.

More fundamentally, amongst the pertinent development paths for African countries, many authors nowadays consider that it is better to target the adjustment of existing technologies

than a hypothetical connection with the technology boundary that requires advanced research. This growth path is largely based on an adequately-educated working population to implement productions derived from existing technologies. This argument should be taken into consideration, in the case of countries that have already reached universal primary enrolment, in favour of a progressive generalisation of a good quality lower secondary education.
A growth-promoting strategy in Africa therefore includes the equitable distribution of human capital that can only come into play progressively due to, in particular, the deferred effects of a less inequitable education policy, as the initial situation is not favourable.

In Africa, the inequalities in the distribution of education and the appropriation of public resources in education are particularly deep-seated

In Africa, the inequalities in the distribution of education are particularly deep-seated. This great concentration is largely due to the weakness of its average level of education, but it is also a result of equity-opposing educational policies.

There are large social educational disparities based on gender, geographic location and income group: a study on 21 African countries for the various primary education indicators shows that the extent of disparities is 0.16 between boys and girls, 0.37 between rural and urban indicators and 0.48 between the first and last income quintile respectively (Mingat, 2003a). Available empirical data beyond the primary level show the image of education systems without which social inequalities deepen as one moves up on the school ladder. No children from the poorest quintile in Cameroon and Kenya pursue higher education while this situation prevails amongst 80.5% and 73% of children respectively from the richest quintile.

Table 1.1 : Inequalities in the duration of education according to the income quintile (population 5-24 years)

	Educational attainment	Q1 (20% the poorest)	Q2	Q3	Q4	Q5 (20% the wealthiest)	Total
Cameroon (2000)	Out of school	24	24.4	21	14.4	16.2	100
	Primary	20	21.2	22.4	18.1	18.3	100
	Lower secondary	5.7	9.9	15.2	21.8	47.5	100
	Upper secondary	1,9	4,1	4	21.8	72.6	100
	Tertiary	0	0	2.5	17	80.5	100
Gambia (2000)	Out of school	29.5	23	20.3	17	10.2	100
	Pre-primary	7.9	20.1	15.3	23.1	33.6	100
	Primary	14.4	22.8	18.8	21.1	22.9	100
	Lower secondary	5.3	15.2	17.3	25.7	36.6	100
	Upper secondary	1.0	9.5	13.1	28.9	47.5	100
	Tech. and tertiary	0	3.9	13	27.3	55.8	100
Guinea (2002)	Out of school	21.7	22.3	21.1	20	15	100
	Pre-primary	19.3	12.5	18.7	20	29.6	100
	Primary	19.3	18.4	19.4	20.4	22.5	100
	Lower secondary	14.7	13.9	17.3	19.1	35	100
	Upper secondary	10.2	11.5	13.6	18.1	46.7	100
	Tertiary	5.1	11.9	20.5	19	43.4	100
Kenya (2000)	Out of school	41.1	21.3	19.8	8.9	8.9	100
	Pre-primary	28.3	24.5	19.5	16.8	10.9	100
	Primary	21.3	23.6	22.1	19.8	13.3	100
	Secondary	8.5	14.7	14.3	26.3	36.3	100
	Tertiary	0	0	4.5	22.7	72.7	100
Lesotho (2000)	Out of school	33.9	26.9	18.2	12.7	8.2	100
	Pre-primaire	18.4	19.7	20.4	21.2	20.3	100
	Primary	17.1	22.4	22.3	20.6	17.6	100
	Secondary	5.7	10	19.8	27.5	37	100
	Tech. and tertiary	2.4	4	13.5	12.7	67.5	100
Niger (2000)	Out of school	22.7	17.5	22.9	21.3	14.6	100
	Primary	12	12.4	15.8	15	44.8	100
	Lower secondary	4.9	3.9	2.7	4.3	84.1	100
	Upper secondary/tertiary	0	2.2	2.2	6.5	89.1	100

Note :
The table should be read linearly. The lines provide information on the distribution of individuals having had the same number of years' study according to the income group (example: in Cameroon, amongst those individuals who completed their primary education, 20% belong to the poorest 20% of the population, 21.2% to the second quintile, 22.4% to the third quintile, 18.1% to the fourth quintile and 18.3% to the wealthiest 20%). The line total is 100.

Source :
- French speaking countries: from state reports of national education systems drawn up in Cameroon (World Bank, 2005) and Niger (World Bank, 2004)
- English-speaking countries: from MICS survey data

Correlatively, **the inequalities in the appropriation of public resources in education are substantial:** for 2002, in French-speaking Africa, 45% of education expenditure was concentrated in favour of the most qualified 10% (30% in English-speaking Africa)[9] against 31% (figure for 2000) in the poor countries outside of Africa. This overall result is firstly due to a political choice to extend public financing to all education levels. Given that the pupils who remain in the education system for the longest period of time are disproportionately coming from the wealthiest families and that unit costs increase with each level of education, the largest part of education expenditure benefits children whose parents are the wealthiest. By assimilating this budgetary expenditure to a transfer of income in favour of households with children in the education system, **it is clear that in Africa, the poorest households only receive very little public transfers through the education policy**. The poorest 20% of the population always systematically receive less than 20% of the educational expenditure.

What is at stake with the poorest having access to a basic education service is even more important because of the combination of two phenomena:

- education supply policies are generally sufficient in obtaining good results at the beginning and middle of the process of universalising primary schooling, but at the end, for the last 20% to 30% of children still excluded from school and who are the most difficult to enrol at school, educational policies should combine adjustment measures of the supply and demand-stimulation measures, with higher marginal costs for enrolling these last 20-30 % as a consequence.

- it is also for these last 20% to 30% of un-enrolled children that progress is made towards less unequal educational expenditure: gains on equity are in fact not linear and accelerate as we move closer to the 100% target (see inset 1.2).

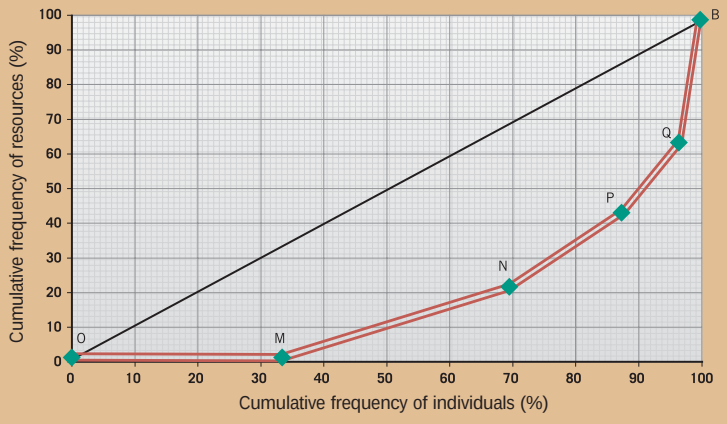
Inset 1.2 : Measurement of inequalities in the distribution of education expenditure

A common way of describing the structural distribution of public education resources, allocated to the various education stages, to individuals who benefit from it, is to draw up a Lorenz curve; it is calculated, on the one hand based on individuals of the cohort's cumulated values and on the other hand the volume of public resources accumulated by this same cohort of children. The indications given by the Lorenz curve are often summarised by the calculation of the Gini ratio that synthesises the degree of concentration of the distribution of public resources by one single figure.

The OB diagonal line relates to the equal distribution situation in which, whatever the value of X, X% of the cohort obtains exactly X% of public resources. The Lorenz curve (OMNPQB) relates to the effective situation of the distribution of public resources in education in the country. It generally deviates significantly from this egalitarian reference.
Two indices can be defined to assess the extent of the deviation in relation to the egalitarian reference:

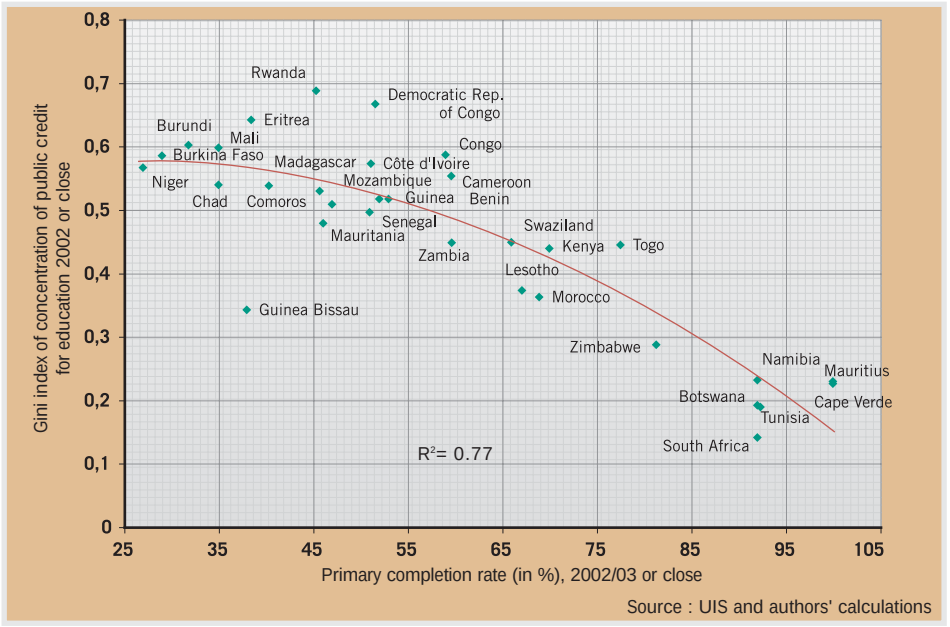
- **the Gini ratio**, which is equal to the ratio of the area between the Lorenz curve and the diagonal line, to the area of the OAB triangle. By definition, this indicator is between 0 and 1, given that the closer the Lorenz curve is to the diagonal line, the smaller its numerical value and the greater the tendency of equal resource distribution.
- the second indicator **measures the share of public resources appropriated to the ten percent most educated** people within the cohort. It therefore relates to the part of public resources for education that have been used to finance the studies of individuals who have gone the furthest in their studies. This indicator provides a measurement of the more or less «elitist» (or «equal») aspect of the education systems.

Lorenz curve of the distribution of public resources in education



9 Source : Pôle de Dakar (for the whole paragraph)

Graph 1.2 : Progress towards UPE and educational expenditure equity



Source : UIS and authors' calculations

The goals of equity in educational expenditure and those impacting growth therefore combine to plead in favour of a voluntarist policy to reach the goal of universal enrolment. The preceding paragraphs warned against «getting sucked into the middle lane» which means being satisfied with reaching a «respectable» primary completion rate (around 60 to 75%) whereas all benefits in terms of equity and efficiency are linked to the 100 % primary completion rate.

Goals of equity and growth combine to plead in favour of a voluntarist policy to reach the goal of universal primary education

Let us consider the education system as a pyramid resulting from the juxtaposition of levels ; the base would represent a proportion of children starting the first year of primary education, and the top would represent the proportion of pupils finishing off their higher education and each level represents a cycle with a slope reflecting the actual flux of children through this cycle. **The goal of equity and that of growth pleads in favour of an education pyramid base that is as wide as the school age it relates to.** The argument does not however question the principle of the existence of an education pyramid, only the fact that in many regards, in Africa, this pyramid is upside down (the base is - relatively - narrow and the top is - relatively - wide. The following paragraph seeks to establish the indications for an optimal form for this pyramid in relation to the structure of jobs, and therefore always in reference to an efficiency goal of the educational investment.

b) The effects of a distribution of education that is more adapted to the structure of employment

The education system's capacity to create an additional unit of efficient human capital requires **satisfactory correspondence between the education structures on the one hand, and productive and employment structures on the other hand.** In the dual economies of sub-Saharan Africa, relations between the production of graduates from the various levels and branches of the education systems and their integration into the modern and informal workplace are limited, on the one hand, by the modern sector's absorption capacity and, on the other hand, by work productivity in the traditional sector. Both the qualifications pyramid as a whole, and the specific training orientation for secondary, technical and tertiary, seem inadequately adapted to the productive structure.

The example of Guinea, given below, is a case in point:

Table 1.2 : Quantitative education-employment assessment in Guinea (annual flow 1996-2002)

Distribution of those leaving the education system *			Distribution of jobs on offer			
Exit level	Number	%	Sector	Employment	Number	%
Never attended primary school	15 400	14	Informal	Agriculture	60 100	54,6
Incomplete primary education	37 400	34				
Primary schooling complete	13 200	12				
Lower secondary education incomplete	18 700	17		Other informal jobs	40 500	36,8
Lower secondary education complete	7 400	6,7				
Upper secondary education incomplete	7 800	7,1				
Upper secondary education complete	5 500	5	Modern	Other modern sector jobs	7 100	6,5
Higher education incomplete	2 800	2,5		Middle jobs	700	1,5
Higher education complete	1 800	1,6		Executive jobs	600	0,5
Cohort total	110 000	100	All jobs on offer		110 000	100

* This distribution is obtained from the enrolment profile in 2003/2004 and internal efficiency indicators in tertiary education.

Source : World Bank and Pôle de Dakar (2005)

Little correspondence between the qualifications pyramid and employment which is detrimental to the valorization of skills in the economy

Overall, the education system presents **a relatively unbalanced structure** in which not enough is done for the «low-end» and too much is done for the «high-end». This first level of inadequacy is increased twofold regarding the type of qualification: **unemployment of graduates** can co-exist with the difficulties employers encounter in recruiting in certain fields. Numerical inadequacy is clearly at play at all exit levels of the education system compared with the corresponding level of skills that could be valorized.

The effort made towards attaining adequacy is therefore of utmost importance. But, **quantitative adequacy is not all-important: at the same exit level, the productivity observed in employment can vary considerably according to the very quality of the education received.** This point will be discussed now.

1.1.1.3 The impact of the quality of education on growth

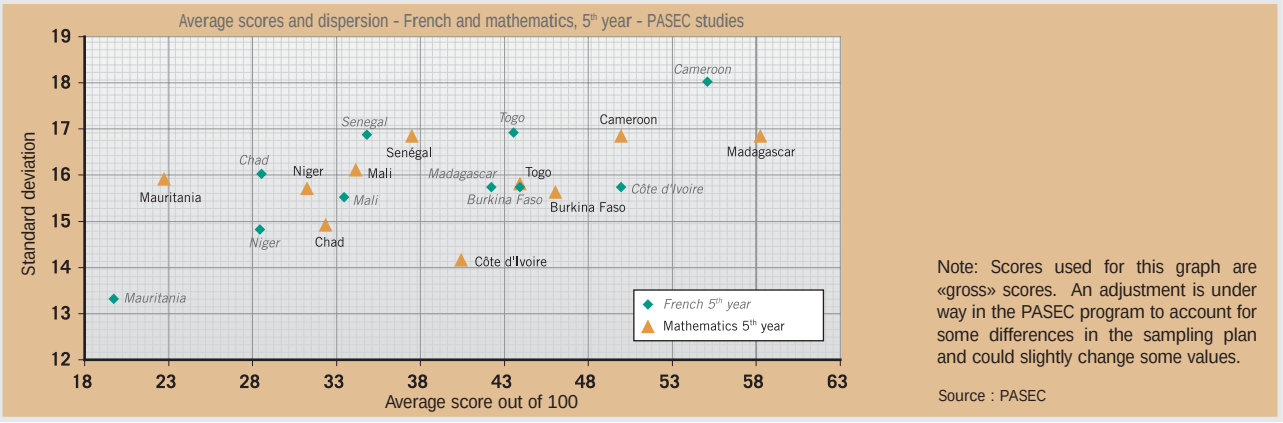
The **quality of education**, understood in the sense of academic capacities and skills assimilated by individuals, **is an important variable** in the process of economic growth in **as far as the individual's productivity** is not a direct **prediction from** the number of years of study or the degree obtained but **rather on knowledge and know-how actually learnt at school and implemented in the course of employment.**
The **definition of the quality of education is a much-debated subject due to its many dimensions** (it includes socialisation and civic goals which are of a different order than cognitive goals). However, to inform debates on the impact of the quality of education on growth, measurable dimensions of this quality must be used. This report focuses on two of them:

- *The first is the duration of studies which combined with the type of education received* can be considered as a proxy of quality. In fact, the following part will establish a very good correlation between the completion of primary education and the retention of literacy in adult life, but this relationship must be monitored for each country as it is not the same for all countries.
- *The second is the score of standard knowledge tests*, considered a better approximation of the cognitive dimension of quality. These empirical data on the level of pupils' achievement are rarer but are starting to become available for the African continent. This information will be used in the second section (and linked to the population's literacy on the framework of the AEQI+ index).

Heterogeneous quality can weigh heavily on the multiplying effect of education on economic growth

In the event that data from the standard tests are available, **it is useful**, on the one hand, **to go beyond the average scores** obtained **to put them into perspective with the proportion of the population that did reach the assessed level of education** (what is the use of having a good national score, but for a very small group of pupils, since we saw earlier the importance of reaching the «critical threshold» of the educated population) and on the other hand, **to take into account the deviations in the level between pupils from the same country** (it is most certainly not neutral from the point of view of equity, to observe major differences in the level of pupils from the same country).
This is the spirit of graph 1.3 that expresses, in the ten countries that participated in CONFEMEN's PASEC program, the average scores for the same standard French and mathematics tests in the 5th year of primary school (horizontal scale) and the dispersion of scores between the pupils of the same country (vertical scale). Not only can a great variety of scores in French and mathematics in the 5th year of primary school be observed, but also a significant dispersion of scores between pupils in some countries. Taking into account the «quality» adds a new dimension to the argument according to which the analyses according to the stock must be complemented with analyses on the distribution of education capital.

Graph 1.3 : Quality : differencies between countries and individuals



Note: Scores used for this graph are «gross» scores. An adjustment is under way in the PASEC program to account for some differences in the sampling plan and could slightly change some values.

Source : PASEC

Quality measurements are available through standard tests during the first education stages, they are more uncommon in the end stages (technical and higher education). And here once again, it is likely that the productivity of individuals varies according to the general quality of a given end stage and that it is not equal from one facility to the next on the one hand and from one individual to another on the other hand.

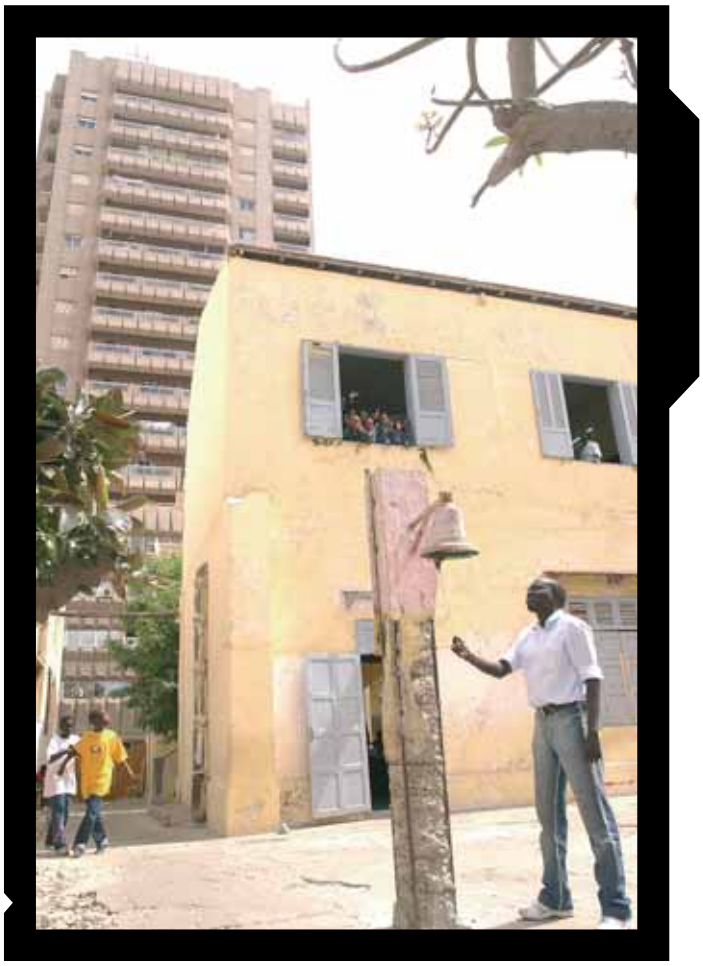
An educational policy encouraging growth should therefore, over and above the training-employment link discussed in the previous section, make sure that a quality policy is developed to multiply the impact of improved numeral adequacy.

1.1.2 Education - stake and driving force of structural changes in African economies

The African economies are characterised by a deep-seated duality between a large traditional and informal sector and a smaller marginal formal (or modern) sector. Even if the share of the former progressively declines compared with that of the latter (or, according to some development scenarios, if the two progressively converge), this proportion is not called into question in the medium term. The empirical finding confirms that **positive basic education yields do exist as much in the traditional and informal sector as in the modern sector.**

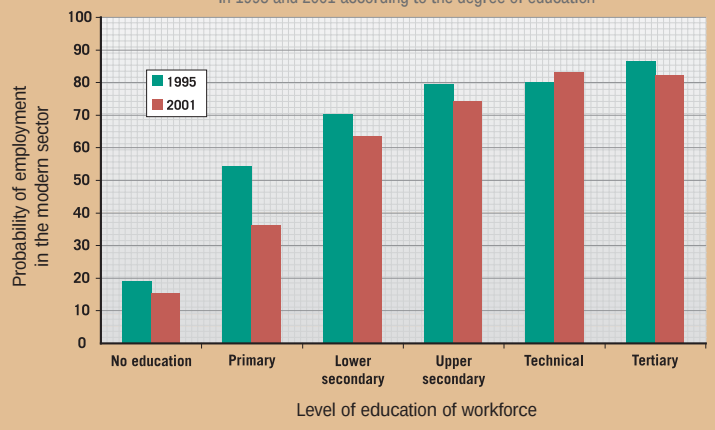
- In **the traditional sector**, and in particular in the **rural areas** concerning agricultural activities, only a significant increase in productivity will mean that change can be initiated in the productive structure in favour of secondary and tertiary sectors. Two results are encouraging. The first shows that **the most productive farmers are those who attended school** (transmission channels are variable: More rapid imitation of the most efficient techniques, diversification of crops, etc.). The second shows that the **income from farming of individuals who completed primary school is considerably higher than that of illiterate farmers.**

- A more or less similar pattern can be observed in **the informal urban sector: successful integration into the informal job market requires minimal schooling background.** A recent study conducted on the seven capital cities of the UEMOA (Union économique et monétaire ouest-africaine) countries shows that the labour force in the informal urban sector have 5 years of schooling on average: 4.1 in Bamako, 4.3 in Ouagadougou, 4.6 in Dakar, 4.7 in Niamey, 5 in Abidjan, 5.4 in Cotonou and 5.9 in Lomé (DIAL-AFRISTAT, 2004). In addition, other studies, like the one presented below on Senegal, show a positive return on education in these sectors which is even higher than the return observed in the modern sector.



Inset 1.3 : The external return on education in Senegal

Possibility of integration into the modern sector in Senegal in 1995 and 2001 according to the degree of education



Average monthly income in the modern and informal sectors in CFA francs of 1995, according to the highest degree [a/]

Highest degree [b/]	Modern sector			Informal sector
	Men	Women	Total	Head of household
None	102	76	98	103
Primary	167	105	159	360
BEFM	249	117	216	184
Technical	259	100	202	476
Baccalaureat	372	231	344	381
Licence or +	368	190	332	186
Other	581	191	397	-
All	217	126	199	199

a/ This concerns individuals between 15 and 55 years of age in the modern sector and between 10 and 65 in the informal sector. In the modern sector where employees dominate, (a situation that concerned 98% of the labour force in 1995 and 93% in 2001), are considered for income of individual salaries (as well as piece workers' income). In the informal sector, self-employment dominates (60% of the labour force in 1995 and 52% in 2001); income therefore includes, excluding salaries, operating surpluses from individual production units.

b/ CFEE (Certificat de fins d'études élémentaires) (Basic education level certificate); BEFM (Brevet de fin d'études moyennes/secondaire 1er cycle) (Lower secondary education certificate).

Rate of private returns on education in the modern and informal sectors of the economy [a/]

Sectors	CFEE	BEFM	SLE [b/]	Tech.[b/]	Tertiary
Modern	11	18	14	20	0,1
Informal	29	27	29	38	-0,2

a/ In percentage and calculated with reference to the level of education directly below in general education and of primary schooling for technical education.

b/ SLE (School leaving examination), Tech. (technical or vocational)

This table show that:
i) private returns are higher in the informal sector than in the modern sector,
ii) individual investments in education are profitable until the school-leaving examination,
iii) technical education is at least as profitable as the lower secondary education. It is even more so in the informal sector.

Source : Foko, Ndém and Reuge (2004)

In Africa, the development of basic education is profitable and constitutes a prerequisite for transforming economies

- In terms of the **modern sector, access to employment depends on having a high level of education**, therefore the labour force in this sector are by far the most educated people in society. Therefore, in Senegal, the size of the modern sector grew between 1995 and 2001 and holds between 6 and 10% of jobs. During this period, the access is chiefly limited to the most educated people : 80% of the labour force who passed the school-leaving examinations, technical or tertiary graduates work in this sector (Foko et *alii*, 2004).

These trends appear in summary form in the **latest regional assessments** made on the economic return of educational investments (Psacharopoulos and Patrinos, 2002) and it emerges that **Africa is the continent on which:**

(i) **private and social returns** (see inset 1.4) **on education are high:** one additional year's schooling is equal to an 11.7% increase in individual remuneration in Africa against an average of 9.7% in the world;

(ii) private and social returns on education are much **higher in primary education** than in secondary or tertiary education: social returns amount to 25.4% in primary education against 18.4 % in secondary education and 11.3% in higher education[10].

In addition, it emerges that private returns tend to decrease when the level of education improves and that at a given level of education, private returns decrease with the level of development (social returns follow the same trends).

10 Nevertheless a recent study by Schultz (2004) shows that in six countries of Sub-Saharan Africa, private returns are higher in secondary and tertiary education.

Inset 1.4 : Rates of social and private returns on education

The calculation of economic rates of return is based on the assumption according to which education is an investment. These returns can be measured on individual or aggregated levels by comparing the wealth differential and the expected well-being of this investment to the costs and expenses it brings about. These return rates are then referred to as «marginal» in the sense that they examine the profitability of an additional year of schooling, or that of a given educational level in reference to a lower level.

Formally, *the cost linked to the additional investment* in education consists of direct education costs at the expense of individuals or the community as well as opportunity costs that correspond to implicit revenues that have been dropped due to the time individuals spent on their studies. The *additional income at a given date t* is $Y_t - X_t$, where X_t represents the average income of individuals with the reference level of education. The current value (**CV**) of this income differential is linked to *the real interest rate* (***r***) of the market through the relationship $CV = \frac{Y_t - X_t}{(1+r)^t}$, with the idea that **CV** today represents an income that, saved or invested in financial assets, would yield exactly *the additional income* $Y_t - X_t$ *after t years.*

The rate ***r*** for which the current value of the additional income over the entire career is equal to the cost of the additional investment is the rate of economic return for education. Individuals or companies are indifferent to this rate about whether to invest in a year's additional education or in financial assets.

Private returns: calculation, implication and limits

Private rate of return for education = withdrawn profits - private costs borne directly or indirectly

- *Calculation.* Profits are assessed whilst taking the income differential into account between individuals of the considered level of education and individuals of the reference level of education over the entire career. Costs include individual education expenses (school fees, stationary costs, etc.) as well as the income of individuals with the reference level of education (for the estimation of the opportunity cost).
- *Implication.* The private rate of return is a **major factor of the demand for individual education** in the sense that the higher it is, the stronger the incentive for those individuals who seek this education. The private rate therefore relates to education's appeal to individuals.
- *Limits.* Some factors could both affect the level of education and income such as individuals' intrinsic competence achieved outside of the education system, individuals' social background, etc.

Social returns: calculation, implication and limits

Social rate of return for education = (private profits - private and social costs) + externalities

- *Calculation.* Regarding profits, social rates take income differentials before tax into consideration. Regarding costs, public grants for running educational institutions and potentially funding allocated to schooled individuals are taken into account. However, estimating externalities is complex and as a result social return rates for education are often under estimated.
- *Implication.* The social return rate is supposed to guide **choices governing the allocation of resources** between levels and types of education made by countries.
- *Limits.* Uncertainties remain on the relevance of the social return rate guiding education policy priorities. Two essential reasons:
  - the issue of the association between income and marginal productivity of work: countries intend to invest in education on the assumption that its contribution to national production would be effective. If the job market is competitive and if labour productivity is mainly linked to the education-training received, then individual income is a reliable indicator of productivity. Therefore in developing countries both the above-mentioned assumptions are considered questionable, especially due to the rigidities of the job market.
  - the issue of externalities: given that the intensity of external effects could be different according to the educational level (for example, a social, diversified mass primary education role - health/population/citizen rights - or training the educated elite at tertiary institutions), the result is that the structure of social rates could not reflect the structure of effective social priorities of the country.

Source : from Mingat and Suchaut (2000), pp.187-189

Table 1.3 : Private and social return rates according to level of education and world region

World region	Average number of years of schooling	Private return rates (%)				Social return rates (%)		
		Average rate	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
Africa[1]	7.3	11.7	37.6	24.6	27.8	25.4	18.4	11.3
South America	8.2	12	26.6	17	19.5	17.4	12.9	12.3
Asia	8.4	9.9	20	15.8	18.2	16.2	11.1	11
Europe, MENA[2]	8.8	7.1	13.8	13.6	18.8	15.6	9.7	9.9
OECD	9	7.5	13.4	11.3	11.6	8.5	9.4	8.5
World	8.3	9.7	26.6	17	19	18.9	13.1	10.8

Notes : 1/ Sub-Saharan Africa; 2/ Middle East/North Africa

Source : Psacharapoulos and Patrinos (2002)

The unemployment of graduates is a reality in Africa that calls into question the profitability of public investments at the levels of technical, secondary and tertiary education

However, the significant values obtained for the secondary and tertiary levels must be put into perspective, given that these observations do not account for unemployment. When considering the facts, the observation of employment in the modern sector reveals that the **unemployment of secondary, technical and higher education graduates is a reality in Africa**. In the survey carried out on the seven capital cities of the UEMOA (*Union économique et monétaire ouest-africaine*) countries between 2000 and 2002, the unemployment rate increases with the number of years of study: it is less than 8% amongst out-of-school individuals and reaches 17% amongst those who continued with their education until tertiary level (DIAL-AFRISTAT, 2004). In Cameroon, in 2000/01, there are twice as many tertiary technical education graduates than suitable jobs on the market (CSR Cameroon, 2004). In this specific case, a very clear effect of downgrading of tertiary graduates can be observed which adversely affects graduates of the intermediary categories. In Guinea, between 1996/97 and 2002/3, the number of tertiary-trained individuals each year was two to three times higher than the number of modern jobs created each year; and in 2004, the executive stock (22,000) matched the total number of students (CSR Guinea, 2005).

Together with **the current imbalance between the job market and secondary and tertiary education that many African countries experience** is their further degeneration by an influx of new secondary and tertiary graduates. In this case, the problem is not only that of regulating the advancement from one level of education to the next, but also the necessary «reorganisation» of the tertiary levels which require optimal orientation choices for individuals and the community. From this point of view, the fact that higher education is free of charge and already constitutes a transfer form the community to the wealthiest individuals, could still be difficult to accept. In fact, as part of this general move towards more and more enrolment, it would be necessary to help the most disadvantaged populations even more who are even more disarmed in this race to higher education. This issue of public financing will be discussed in more depth in the third part of this section.

In total, the dynamic from an increase in school enrolment triggers:

- a threshold effect on growth, which in turn can increase the country's overall wealth and the likelihood of creating jobs;
- possibly adjustment pressure linked to the decrease in the need for labour in the sectors where employees have become more productive on average.

In a balanced development pattern, job creation in other sectors will absorb the labour surplus of the traditional and informal sectors and there will concurrently be an increased education demand for the tertiary levels which will be in line with a reality of individual and collective expectations of returns.

But these expectations are not such that the central stake of lifting the level of education of populations as the driving force of economic and social development will be called into question; the former goal has just been discussed and the second is at the heart of the next section.

1.2 Education and human development

Today, human development is firmly established at the heart of international goals. The Millennium goals are both the manifestation and vehicle of this.

The goal of universal primary schooling holds a unique place amongst the millennium goals for development in that it is closely linked to seven other goals set by the international community in the areas of poverty, gender, maternal and child health, endemic diseases, and environment. It furthermore contributes to the achievement of the other goals because of the economic and social impact both on an individual and collective scale on which it is dependant. (see Inset 1.5). The aim of this section is therefore to review why, in an environment with restricted resources, **education in general and primary education in particular, must become or remain a priority in the allocation of national resources**, especially **in the poorest African countries.**

The goal of universal primary enrolment is closely linked to the other MDGs

Inset 1.5 : Why is the goal of education important to achieve the other Millennium Development Goals (MDGs)?

Goal 1. Eradicating extreme poverty

› In the medium term, the reduction of poverty depends on economic growth. And yet, no country in the world has succeeded in achieving strong and sustainable economic growth without a large part of its population being literate. In addition, in most poor countries, the agricultural sector is the main driving force of economic growth. The process of growth can be strengthened if productivity is improved in the agricultural sector which can only be achieved through universal basic education. Finally, on an individual scale, the possibility of rising up out of poverty in rural and urban areas is directly linked to the number of years of schooling. The income of farmers and workers in the informal sector increases with their degree of education, which makes them less vulnerable to the risks of life.

Goal 3. Promoting gender equality and empowering women

› Girls having completed their primary schooling become long-lasting literate women; this allows them to benefit more from employment and income opportunities, better negotiate the use of resources in the household, better manage their sexual and reproductive health, better participate in social and political activities and therefore achieve increased independence in the private and political area.

Goal 4. Reducing the child mortality rate

› Women with six or more years of schooling are more inclined to take care of their child's health (inoculations, nutrition and acting when their child is ill). The mortality rate of children under 5 decreases with the population's level of education.

Goal 5. Improving maternal health

› Similarly, women with six or more years of schooling take better care of their own health (first pregnancy at an older age, spacing children, taking vitamin A during pregnancy, taking ante-natal classes and preventive ante-natal health care, and giving birth in a medical environment with qualified personnel). The rate of maternal death decreases with the population's level of education.

Goal 6. Combating HIV/Aids, malaria and other illnesses

› 50% of newly infected people in the world are youths. And yet, amongst youths between 15 and 24, half as few fall ill who have completed their primary education as those who have never attended school or who dropped out during their primary education. Education helps women in poor countries to better protect themselves against HIV infection through better information on the illness and their rights in terms of sexual health.

Goal 7. Ensuring the sustainability of environmental resources

› Through education, access to and the comprehension of information on environmental protection can be increased and it encourages the development of environmentally-friendly behaviour.

Source : from Herz and Sperling (2003)

1.2.1 The impact of education on the retention of literacy in adult life

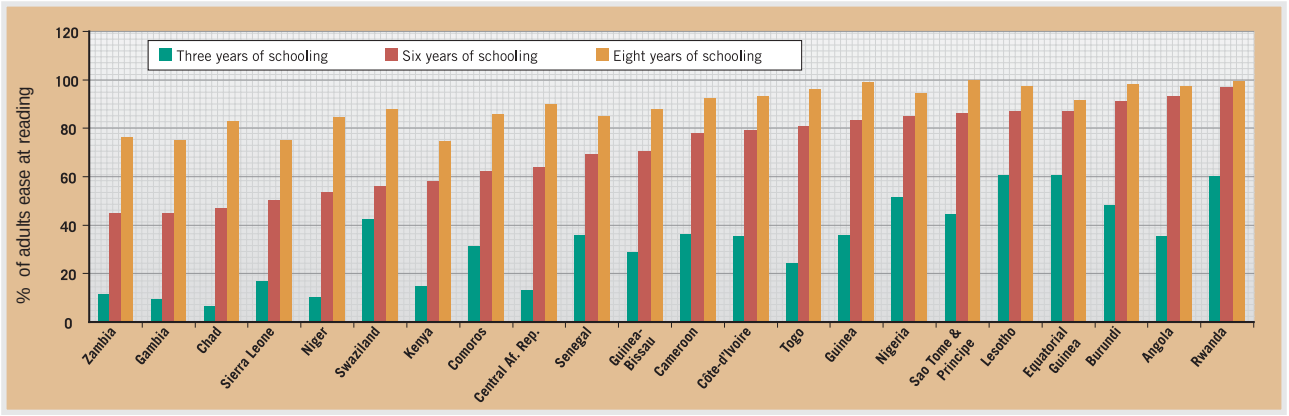
Completing primary education is essential for long-lasting retention of litteracy

Retaining literacy in adult life is closely linked to the duration of schooling. According to empirical observations, **a minimum duration of schooling is necessary for literacy to be long-lasting**. This emerges as much in individual survey data as in aggregated data.

On average in African countries for which individual data are available, it is estimated that less than 1 adult in 3 is literate in adult life after having had three years of schooling, however the ratio climbs to 7 out of 10 for adults with six years of schooling, and it reaches 9 in 10 with eight years of schooling. The lesser increase in chances of literacy after the 6th year of schooling (13% on average per year between the 6th and 8th year of schooling against 31% per year on average between the 3rd and 6th year) strengthens the link between Universal Primary Education and the literacy rate (see graph 1.4).

11 The duration of primary schooling is 6 years in 6 out of 10 African countries

Graph 1.4 : Proportion of adults (22-24 years) who can read with ease after three, six or eight years of schooling in 22 African countries.



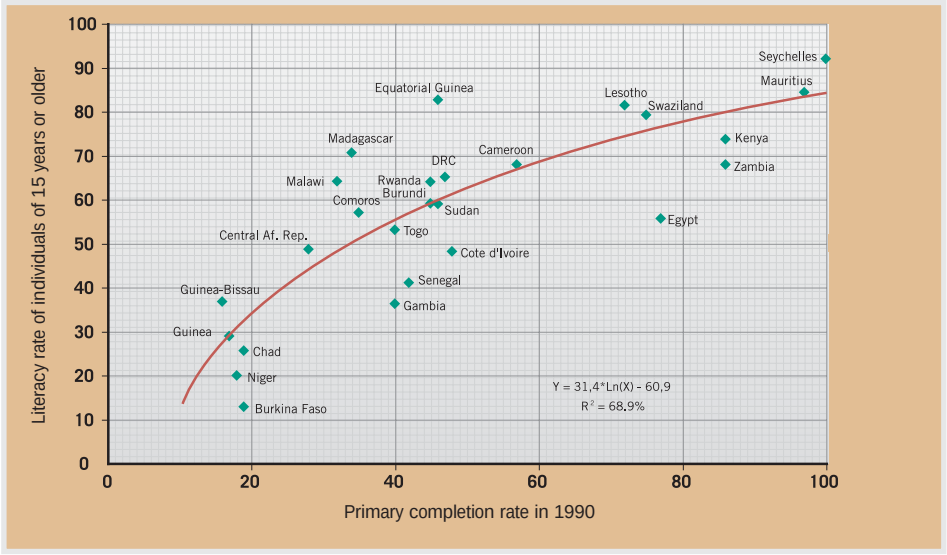
Note : countries are ranked by increasing order of the literacy rate of adults after six years of schooling

Source : - from the following surveys: MICS (Multiple Indicators Cluster Survey) for Angola (2001), Comoros (2000), Gambia (2000), Equatorial Guinea (2000), Kenya (2000), Lesotho (2000), Sao-Tome (2000), Swaziland (2000) and Zambia (2002)
- from the QUIBB (Questionnaire Unifié des Indicateurs de Base et de Bien-être - Unified Questionnaire of basic and Well-being indicators) for Guinea (2002)
- from Mingat (2003b) for the other countries

In some countries, over and above the duration of schooling **the type of education attended could impact literacy retention at adult age.** The deviation between the literacy rate of adults (22 to 44 years) who attended the formal education system and the rate of adults who attended the informal education system is for example 44 points in Gambia (MICS, 2000), 29 points in Chad (Mingat and Zein, 2004), 21 points in Senegal (Pôle de Dakar, 2003 Mingat et alii, 2002) and 19 points in Swaziland (MICS, 2000), every time in favour ot the formal education system.

At an aggregated level, the adult literacy rate is positively associated with the primary completion rate. The impact of progress in primary completion on literacy rates seems to be greater for countries that are the furthest form the achieving the goal of Universal Primary Enrolment (see graph 1.5). Simulations indicate that the achievement of universal primary enrolment in Africa would decrease the adult illiteracy rate from 35% (situation in 2002) to 16% in 2015.

Graph 1.5 : The relationship between primary completion and literacy for adults who are 15 years or older in 25 African countries.



Note:
Illiteracy rates are the rates observed from household survey- or population census data.

Source:
- Comoros, Gambia, Guinea Bissau, Equatorial Guinea, Kenya and Sao Tome (MICS 2000),
- Guinea (QUIBB 2002),
- Zambia(MICS 2002),
- Other countries (data from UIS from household surveys)

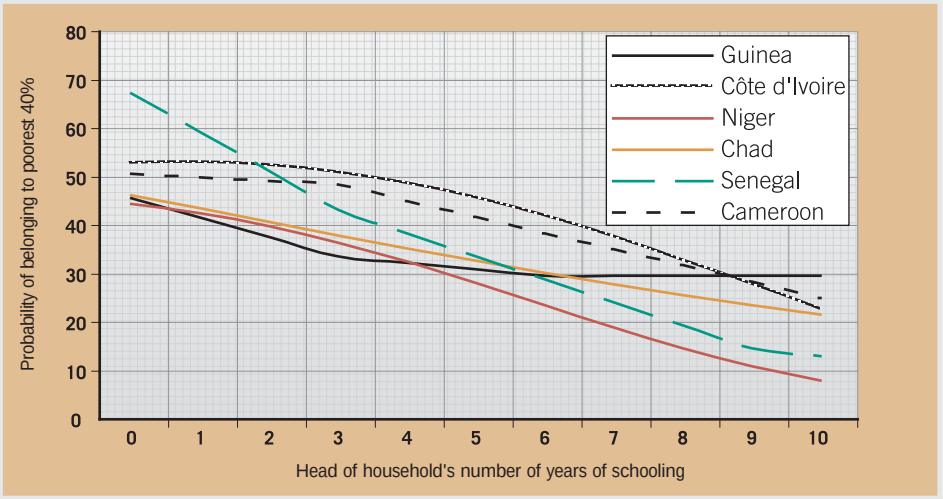
1.2.2 The impact of education on poverty

1.2.2.1 Alleviating the risk of poverty

Education decreases the risk individuals run of being in situation of (relative and absolute) **poverty.** Compared with individuals who never attended school, the risk of poverty for individuals who attended and completed primary school is significantly less. Beyond this level of education, additional years of schooling generally only have a marginal impact on poverty alleviation. For example, in Guinea, the probability of belonging to the poorest 40%, is 14 points less for individuals who completed primary school compared with individuals who never attended school (the deviation with individuals who completed their higher secondary education is only 8 points). This trend of poverty alleviation after at least four years of schooling is observed in the African countries for which data are available (see graph 1.6).

Complete primary enrolment protects individuals against the risk of poverty

Graph 1.6 : The probability of belonging to the poorest 40% according to the head of the household's level of education attainment in 6 African countries



Note : In Cameroon and Senegal, this involves the % of individuals under the national poverty threshold
Source: Cameroon (ECAM 2001), Côte d'Ivoire, Niger, Chad (MICS 2000), Guinea (QUIBB 2002), Senegal (ESAM 1995)

1.2.2.2 Breaking the intergenerational vicious circle of poverty

Education seems like an efficient way of breaking the vicious circle of intergenerational transmission of poverty. With the education of girls and female literacy in particular, the average number of years of schooling can be increased from one generation to another and, therefore, the next generation's economic situation can be improved.

Parents' level of education increases their children's chances of education

In fact, several empirical studies conducted in the developing world show that the parents' level of education in general and women's in particular is a factor for requesting schooling and reducing disparities between girls and boys in school intake. For example, in Guinea, the likelihood of a child going to school when the mother is not educated is 57%; this rate increases to 88% when the mother has completed primary school. In Chad, schooling disparities between girls and boys, which is very apparent in cases where the mother did not attend school (likelihood of going to school is then 74% for boys and 47.6% for girls), disappear when she completed primary school (same likelihood). In this regard, a strong impact of female- as opposed to male education can be observed on child attendance. This is for example the case in Guinea where children from households run by women have a 12-point higher chance of receiving a higher education compared with children's chance from male-run households, keeping other conditions equal (the household's geo-

graphic location, the child's gender, number of school-age children in the household and level of education of the mother)[13].

Table 1.4 : Impact of parents' education on their children's schooling (% of children accessing the 1st year of primary school)

	Country	Number of years' education of parents										
		0	1	2	3	4	5	6	7	8	9	10
% of access to primary schooling	Côte d'Ivoire	61.3	69.1	75.2	79.7	82.9	85.2	86.7	87.7	88.1	88	87.5
	Guinea	56.9	76.7 (incomplete primary)					87.8	87.3 (secondary)			
	Chad	61.1	77.2	88	94	97.1	98.7	99.4	99.7	99.9	99.9	100

Note : Impact of the level of education of the mother (Côte d'Ivoire, Chad) or a woman heading the household (Guinea)
Impact of the level of education of the mother, head of household (Guinea)
Source: Côte d'Ivoire (CSR, 2002); Guinea(CSR, 2005); Chad (Mingat and Zein, 2004)

Several mechanisms are put forward to explain female education's stronger impact on the education of their children compared to male education: (i) the fact that educated women have stronger negotiating powers in the household to influence the choice of resource allocation towards the children's education; (ii) the fact that they play a notably more active educational role by being more involved in their children's education; (iii) the fact that they are a «model» to their children, especially their daughters (UN Millennium Project, 2005b).

1.2.3 Education's impact on population and health variables

Sub-Saharan Africa presents the particular feature of being the region in the world where the demographic transition process[13] only recently got underway and where child and maternal mortality rates are the highest in the world. The total fertility rate is two time higher in Sub-Saharan Africa than in other developing countries on average (5.1 children per woman against 2.8) and the rate of demographic dependence14 is 87% against 58% in the developed world. The mortality rate of children under 5 years is 174 for 1,000 against 88 for 1,000 on average in developing countries and the maternal mortality rate is 917 for 100,000 live births against 440 on average in developing countries.

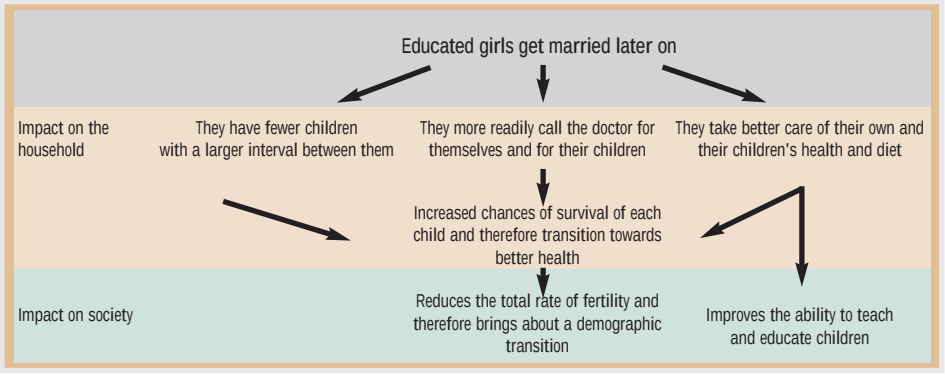
And yet it seems that **education has an even stronger impact on indicators of demographic and health results than activities of the health sector themselves** which is in itself a justification for the efforts of educating young populations in general and girls in particular (Summers, 1992). Many empirical studies, using household survey data, show that the change of **individual behaviour** as regards health (especially reproductive health) is mainly due to the education of women (see inset 1.6).

12 Guinea (CSR 2005)

13 Demographic transition characterises the change-over from a «traditional» demographic system with high levels of mortality and fertility (but not necessarily identical amongst all populations) to a «modern» demographic system with much lower levels of the two variables

14 The demographic dependency rate is the ratio of non-working population (under 15 and over 65 years) over the working population

Inset 1.6 : Education of women at the heart of transformations in society



Source :
Mehrotra and Jolly (2000), in the *Human Development Report* 2003, p.85

Educating girls is at the heart of the process of transforming society

1.2.3.1 Encouraging demographic transition and reducing the dependency rate

The drop in fertility levels may be due to marrying and falling pregnant later in life and a greater gap between children which is also achieved by the use of appropriate contraception.

On an individual scale, empirical observations made in four French-speaking African countries (Cameroon, Guinea, Niger and Chad) show that educated girls: (i) **actually get married and have children later than the other girls if they extended their education until secondary school** (there is practically no difference between uneducated women and those who completed primary school); (ii) tend to **have their children further apart** even if the quantitative impact is only a few months (in the Republic of Chad, the average increase of the interval between two consecutive births, between uneducated women and women who completed their secondary education, is only approximately 2 months, the first interval is 2.12 and the second 2.27; (iii) more commonly **use contraception** (in Cameroon and Guinea, women who completed primary school or continued their education in secondary school, are three times more likely to use contraception than uneducated women. The result is that the **number of births** tends to decline with the mother's level of education: in Chad, while a 29-year old woman who never attended school has had 4.8 children on average, this figure decreases to 4 children when a secondary education until the 9th grade was achieved and to 3.5 children when the last year of secondary schooling (grade 12) was reached.

Table 1.5 : The impact of the mother's education on population variables in three French-speaking African countries

Number of years' education	Mother's age at the 1st birth		Interval between children (years)	Use of contraception (%)			Total number of children	
	Guinea	Chad	Chad	Cameroon	Guinea	Chad	Guinea	Chad
0	17.9	18.8	2.12	22	4	7	4.4	4.8
2	17.9	18.4	2.15	43	10	6.2	4.4	4.8
4		18.3	2.17			5.8		4.8
6	18.3	18.5	2.20		12	5.8	4.1	4.6
8	18.8	18.9	2.22	52 (gen.)1/ 47 (tech.)2/	17	6.3	3.8	4.4
10		19.7	2.25			7.2		4
12	18.7	20.8	2.27	65 (gen.) 57 (tech.)	15	8.8	3.9	3.5

Note : 1/ «gen»: general secondary and 2/ «tech»: technical secondary
Source: Cameroon (CSR, 2004); Guinea (CSR, 2005), Niger (CSR, 2004), Chad (Mingat and Zein, 2004)

On a global scale, simulations performed on a sample of countries with a comparable level of development, show: (i) a 20-point increase of the primary gross enrolment ratio (which in 2001/2002 was 87% in Sub-Saharan Africa and 96% in North Africa) triggers 6.4 additional points in the percentage of women using contraception and (ii) that an increase of four years in overall school cover (school life expectancy was estimated at 5.7 years in Sub-Saharan Africa in 2003) would decrease the total fertility index from 5.1 to 3.9 (i.e. a figure that is close to the one observed in the North African countries in 2002 where, on average, women give birth to 3.1 children during their fertile life cycle).

1.2.3.2 Improving maternal and child health

In Africa, maternal mortality rate is one of the **few indicators of human development that has practically not changed since 1990.** The risk of dying after a difficult pregnancy is 500

times higher in Sub-Saharan Africa than in Europe and African women are amongst the people most affected by HIV/Aids. Here once again, **women's education encourages a behavioural change that is less detrimental to their health.** The observations from the four empirical studies (Côte d'Ivoire, Guinea, Chad and Niger) show a positive correlation between the number of years of schooling and (i) taking vitamin A during pregnancy, (ii) taking ante-natal classes and ante-natal preventive health care (iii) choosing assisted birth with qualified personnel, a doctor, midwife or nurse and (iv) the degree of women's knowledge regarding HIV/Aids and how to protect themselves against it.

Table 1.6 : Frequency of behaviour in terms of maternal health according to the mother's level of education in four French-speaking African countries

Number of years of schooling	% Taking vitamin A during pregnancy	% Tetanus vaccine before giving birth		% Medical check-ups during pregnancy		% Births assisted by medical personnel			Index [0-12] of knowledge on Aids	
	Chad	Côte d'Ivoire	Guinea	Guinea	Chad	Guinea	Niger	Chad	Niger	Chad
0	10.6	83	69.7	77.1	35.6	34.9	11.5	10.5	3.1	5.1
2	16.1	88	77.1	86.9	55.2	45.9	13.2	17.5	3.6	6.6
4	20.9	91	82.9	92.7	69.5	56.9	17.8	25.3	4	7.8
6	23.7	93	87.2	95.9	77.6	66.9	27.3	32.2	4.4	8.6
8	23.9	18.9	90.5	97.7	81.4	75.2	44.2	36.8	4.8	9
10	21.3	95	92.9	98.7	82	81.7	55.4	38.7	5.3	9.1
12	16.6	-	94.6	99.2	79.6	85.6	86.4	37.4	5.7	8.8

Source : Côte d'Ivoire (MICS 2000), Guinea (EDS 1999), Niger (MICS 2000), Chad (MICS 2000)

The same studies show that **educated women are more concerned about their children's health and diet.** In Chad, the percentage of children who follow the full inoculation schedule increases from 12.6% in the case of an uneducated mother to 31% in the case of a mother who completed primary school, and to over 50% if their mother continued her schooling until the upper secondary level. Consequently, the mother's level of education influences the size and weight of her children and on their chances of survival during the first five years of life. In Guinea, 50% of children of uneducated mothers suffer from growth retardation; this figure declines to 36% if the mother completed primary school (the same relationship emerges between the mother's level of education and her children's risk of inadequate weight).

Table 1.7 : Frequency of behaviour in terms of child health according to the mother's level of education in three French-speaking African countries

Number of years schooling of mother	% Full inoculation schedule	% Taking vitamin A during pregnancy	Anthropometric status of children under 5 years				% Death children born alive	
	Chad	Chad	Insufficient weight	Eight (kg)	Slow development	Aist (cm)	Niger	Chad
			Guinée	Tchad	Guinée	Tchad		
0	12.6	38.1	31	10.6	50	82.1	26.2	59.5
2	21.5	51.4	26	10.9	45	82.7	24.3	56.8
4	26	57.5	22	11	41	82.9	22.3	54.1
6	31.1	61.5	18	11.1	36	83.1	20.3	51.3
8	36.6	64.3	14	11.2	32	83.2	18.4	48.5
10	42.5	66.5	12	11.2	28	83.3	16.4	45.7
12	48.7	68.3	9	11.3	25	83.4	14.5	43

Source :
Guinea (CSR, 2004); Niger (CSR, 2005), Chad (Mingat and Zein, 2004)

Of course, educating girls is so much more conducive to progress in terms of maternal and child health that it is part of a dynamic sanitary framework for the supply of health care all over the country.

The overall advantages of education and those that are more specifically linked to the various types of education have been brought to light through the aspects presented in the two previous parts. They constitute the aspects on which to base deliberations on the importance of public financing of the various levels of education; such deliberations cannot be evaded in countries with extremely restricted resources.

1.3 How can public funding for education be justified?

1.3.1 Reverting to characteristics of education as a good

Theoretically, education can be defined as private good, largely **because it is incorporated**, and consequently to be the concern of private funding. **Public funding can however be justified as soon as individual choices regarding educational investments are at a level that would not allow for the achievement of communal positive externalities associated with these individual decisions.** For example, the fact that education constitutes a factor of economic growth and development does not in itself justify public funding, seeing that this impact on growth is first of all seen in a productive personal situation that justifies each individual's investment in education. This public funding can however become justifiable if individual investments, for various reasons, are at a lower level than the one that could be reached; this is the case of the possibility of a stock threshold effect mentioned earlier in part 1 on the relationship between human capital stock and growth.

The justification of public funding first of all involves some deliberation on the characteristics of education as a good. That said, a distinction must be made between the various levels and types of education in the course of these deliberations, given that the private dimension of educational investments clearly increases with the level of education reached, as illustrated by the «brain drain» phenomenon where individuals with a high-level of training have access to employment opportunities beyond the national framework.

Defining a «social pact» for public financing exclusively for basic education and selectively for other levels of education with a private property status

These deliberations on the characteristics of education as a good require us to revert to its origin and value to individuals and the community. We can distinguish between the following values for each level of education:

- **a** direct or indirect **productive market value** (by accumulating knowledge and skills by selection) illustrated by the positive link between education and salaries on an individual level;
- **an unproductive market value**, of which many examples were given earlier by using the results of work on the impact of (basic) education on health, fertility, etc.;
- **an optional value**, achieving a level of education beyond one's own advantages is necessary to rise to the next level.

These elements are apparent on an individual level and on that of the community. The productive market value constitutes the building blocks of economic growth on the whole; communal education benefits in terms of health, demographic transition, citizen's rights, etc. are built on the non-productive market value; the optional value remains an extremely individual dimension based on expectations of earnings linked to consecutive levels of education.

1.3.2 Basic education has public good status that justifies collective funding

Basic education[15] is education for which communal and individual dimensions of the human capital value are most linked and, therefore, it practically reaches a status of public good that justifies communal funding. In fact:

- it constitutes the minimum foundation on which to base and satisfy the right to education,
- it presents the most risks associated with individual under-investment due to the threshold effect which is characterised by the relationship between human capital stock and growth,
- it contributes, by its productive and relatively broad spectrum, to poverty alleviation,
- recent research shows it allows for progress to take place that on dimensions with no market value which largely benefit the community.

1.3.3 Other levels of education have a mixed status that leads to some deliberation on the selectiveness of public funding

The **other levels of education generally retain a status likening them more to private goods**, even if, in very particular circumstances such as those that emerged after independence illustrated the need for national executives, the necessity for a public body for a great deal of public funding of secondary and higher education can be conceive of.

For these levels of education for which the direct productive market value is above all a result of real employment opportunities, massive and undifferentiated public funding can even largely slow down the consistency drive of individual and collective interests by retaining a positive private value for investments that have socially become little profitable (development of deviant rational behaviour as illustrated by multiple repeaters grant holders who extend their schooling to benefit from income benefits disproportionate to real market benefits due to their student status; disqualification that leads the most qualified individuals to take up the least-qualified positions, therefore encouraging the emergence of a vicious cycle of a race to become qualified, etc.) or by subsidising a «brain drain» due to the lack of sufficient employment opportunities for the most qualified individuals.

Even though it did not lead to as many analyses as the one associated to development of primary education, it can be thought that the non-productive market value of these levels of education could in itself have a stronger «private» value in that it becomes more individualised (intergenerational transmission of human capital, access to advantaged codes and networks, etc.).

Justification for public funding present at these levels is firstly and above all for selective public funding.

- This is the case when this funding (for the sake of efficiency and equity) is motivated in order to **allow all talents to come to the fore by removing obstacles in the way of schooling which, to the most disadvantaged individuals, means the absence of financial resources.**
- This is the case when funding is motivated in order to **facilitate and accelerate the orientation of individuals towards fields which are the most useful to the community**, all whilst this entails a clear vision of individuals' needs, selectivity and flexibility of funding which seem to have little to do with the current operation of public institutions.

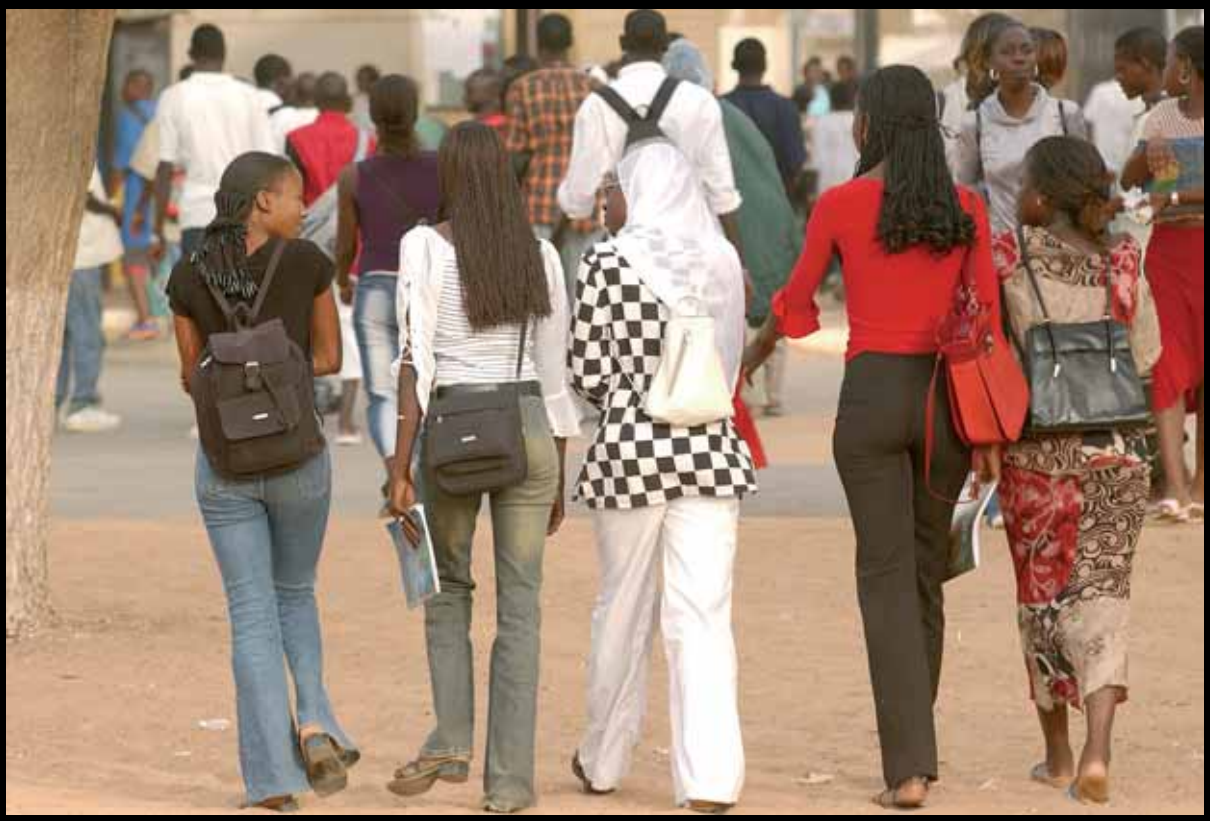
15 It should be noted that the concept of basic education changes progressively, from a strictly primary educational sense to one that includes lower secondary education

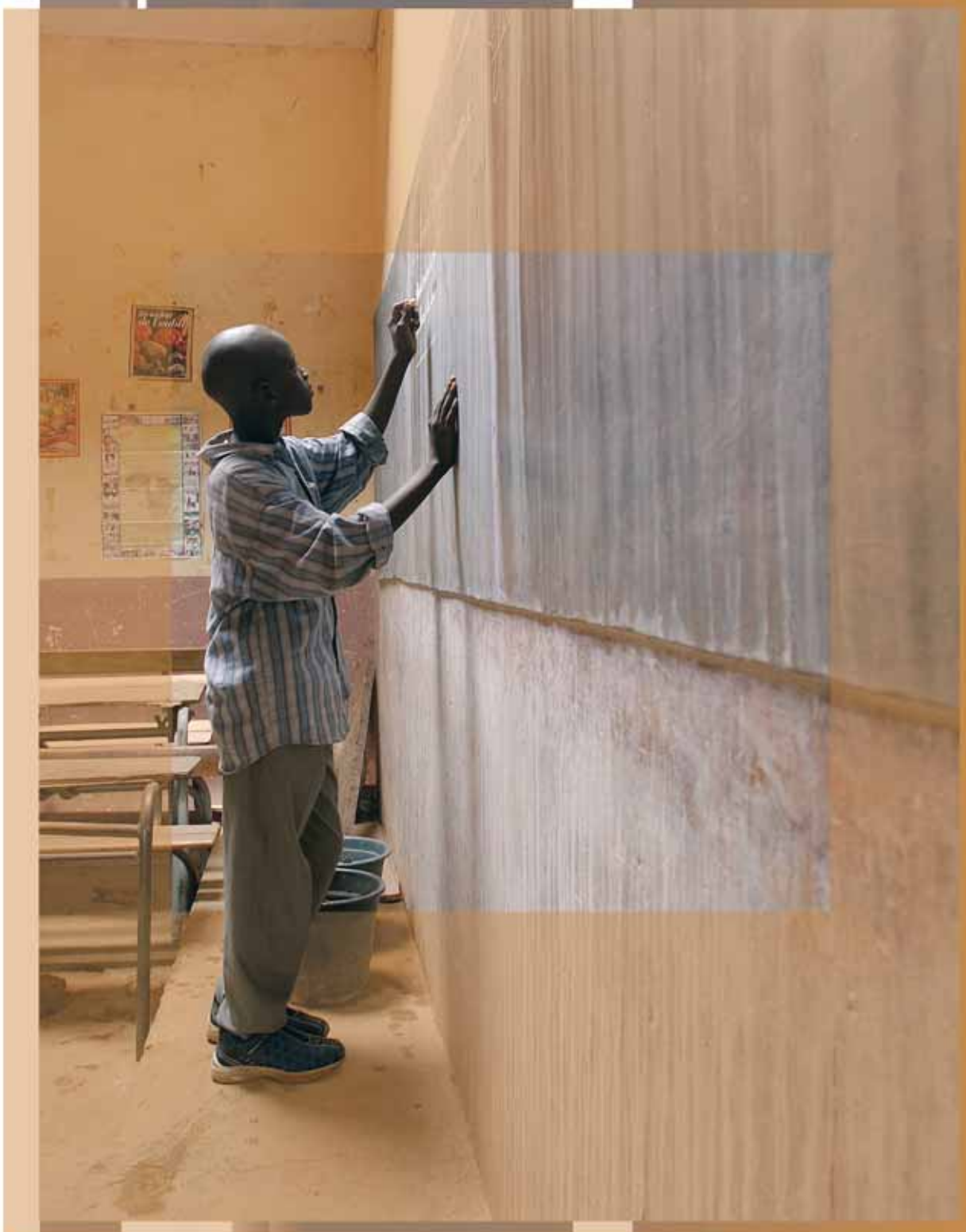
1.3.4 Conclusion

This **justification for public funding that is more focussed on basic education** than on the other levels of education is more even **relevant in countries with severe retardation of primary education development** as observed in many countries taken into account for this report. In the move towards universal enrolment, the individual value of primary education is going to decrease: a human capital concentration threshold effect on growth strengthens the necessity to lower the individual cost of primary education of which the value for individuals will firstly deteriorate with its distribution and only improve when a higher growth path will have been reached collectively as a result of the threshold effect.

In the longer tem, as part of massive primary education development, retaining real appeal for this level of education will depend on the improvement of its optional value by «reorganising» the market for the highest levels of education. If basic education has a positive effect on individual productivity in the traditional and informal sectors, that also means that eventually - and trends seen in developed countries attest to it - in these sectors, less employees would be necessary to achieve the same level of production. This constitutes a powerful driving force for the education demand for the highest levels of education; it will only benefit the community if the content of this education is in line with national economies.

Obviously the States that have, long ago, been committed to free access to secondary and tertiary education, will most probably not have the ability to drastically change this situation. That said, they should consider going into this new direction at least gradually, as was recently done when, over and above free education, policies on scholarships had to be reduced for secondary education that were in line with a need for national executives which was mainly met. Public funding, in this spirit, must in contrast improve the relevance of individual choices.





Section 2

Current situation and the dynamics of education systems

This second section will present the development status, and in some cases the changes, at each educational level. Supplementary analyses of equity and quality will also be provided for certain levels.

This section will also provide an analysis of the dynamics in terms of student volumes in the different educational cycles and for the transitions between cycles.

Finally, a series of projections based on current primary enrolment conditions will be presented in order to determine which countries should be able to achieve Universal Primary Enrolment by 2015 if enrolment conditions and educational policies were to remain stable.

2.1 Status of enrolment in Africa

2.1.1 Dakar's central goal: primary education. Can we meet the challenge of Universal Primary Education by 2015?

Primary education is essential because this is the level at which long-term literacy is established. As graphic 1.4 in Section 1 shows, the percentage of people who can read easily after six years of studies (the length of most primary cycles in Africa - 36 out of 53 countries), is considerably higher than for those who left school prematurely. The average is 70%, which shows that UPE is the bare minimum needed to improve human capital in these countries. Furthermore, UPE is a central international commitment; universal completion of primary schooling is both the leading goal of the Dakar EFA conference and one of the principal objectives among the Millennium goals.

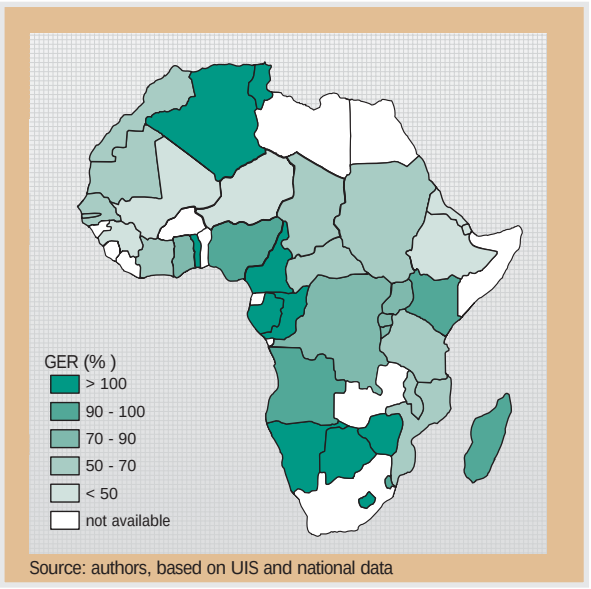
2.1.1.1 Educational coverage

• **From gross enrolment ratio…**

Gross enrolment ratio is one of the indicators that allow measurement of the development of an academic level. Calculated by relating the number of students enrolled in a given stage (primary in this case) to the number of children in the country that are of the theoretical age for enrolment, it allows measurement of the education system's intake capacity. However, a 100% GER does not mean that all school-age children are in fact enrolled, but rather that under current registration conditions, the system is logistically able to accommodate all of these children. A 100% GER does not coincide with achievement of UPE except in cases where no child leaves school or repeats a grade.

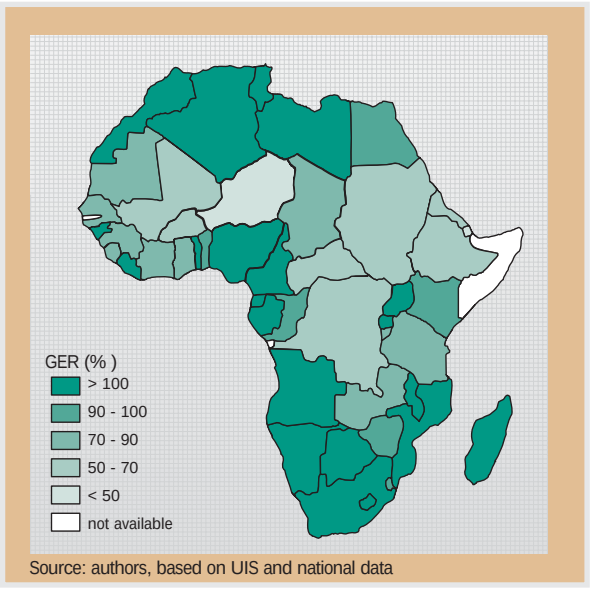
Intake capacity for primary cycle is growing strongly, although remains insufficient for certain countries

Map 2.1: Variety in the supply of places in 1990/91…



Source: authors, based on UIS and national data

Map 2.2: …which remains in 2002/03 (or close)



Source: authors, based on UIS and national data

Only Niger and Djibouti have a GER of below 50%. 23 of the 51 countries for which recent data are available have the capacity to enrol at least all children of the primary school age. Progress since 1990/91 has been substantial.

There are two major difficulties with using GER as an indicator of progress toward the Dakar goal[16]:

- it grants a «bonus» for repetition, which results in overestimation of academic coverage in countries which have high % of repeaters;
- it gives only the «average» for the educational level, and does not include the proportion of children who complete the entire primary level.

Finally, a 100% GER does not mean that all children go to school.

• …to access rates to the last grade of primary education: an estimate of the primary completion rate (PCR)

In order to measure the progress towards the goal of Universal Primary Education, it is preferable to use access rates for the last grade of primary education, defined as being the relationship between new entrants into the last grade of the cycle, and the population of the relevant age to be enrolled in that grade.

Universal Primary Education is far from the reality for many African countries

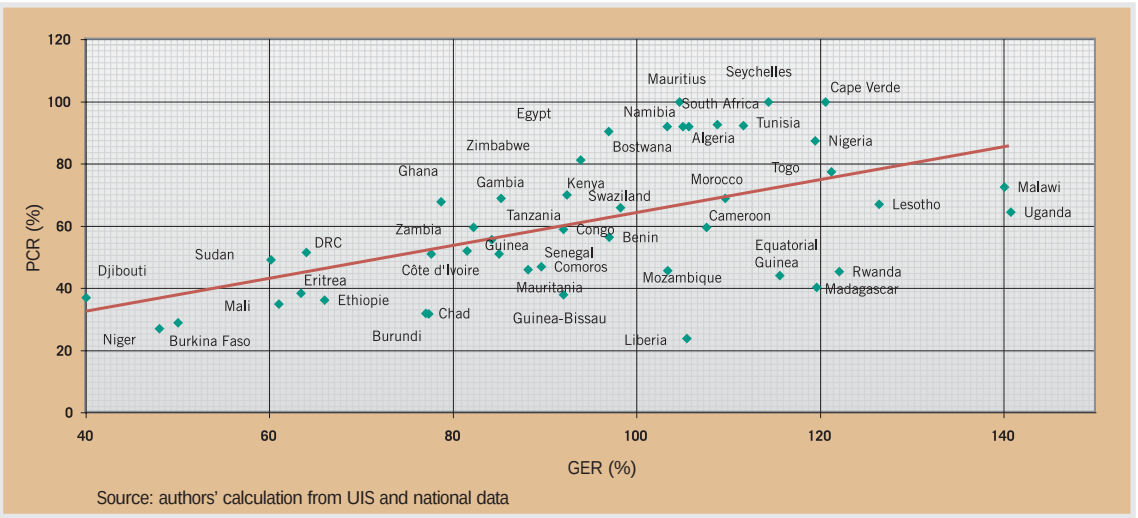
This indicator has two advantages: firstly, it shows progress towards the Dakar Goal of completion of primary education; secondly, it shows that six years of schooling is the bare minimum for lasting literacy.

Using the access rates to the last grade certainly has its drawbacks as measure of achievement. Since it is calculated by relating the number of non-repeaters students enrolled in the last grade with the population of the relevant age to enrol in that grade, it considers only the number of new entrants into the last grade of the stage and supposes that attrition in the last grade of primary education is zero (this is only slightly erroneous, since attrition in the last grade is very low).

Even with these disadvantages, this figure remains our best method for estimating completion. Using the results of exams at the end of elementary schooling raises problems of comparability between countries.

Shown in relation to the GER, access rates for the last grade of primary education allow us to examine a variety of situations, as can be seen in Graph 2.1.

Graph 2.1: GER in primary education and access rate to the last grade of primary education (PCR) in 2002/03 or close

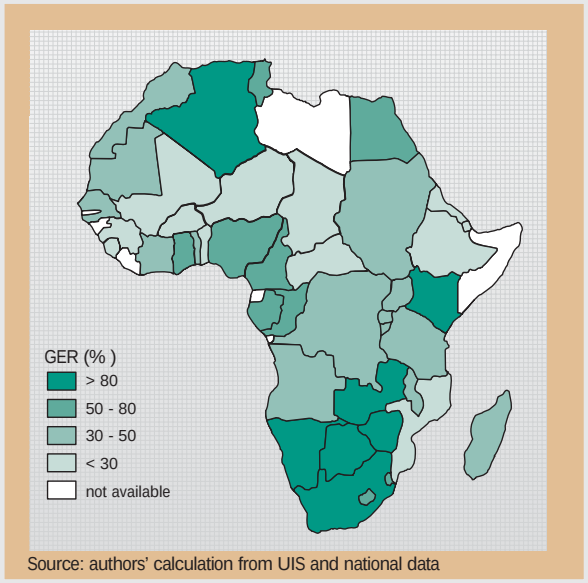


Source: authors' calculation from UIS and national data

16 For more information, see Reuge (2004a).

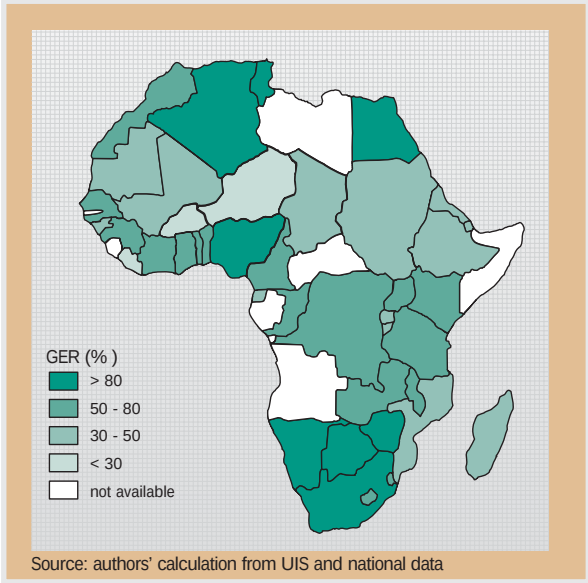
While a low GER is often associated with a low PCR, as in Niger or Djibouti, for example, a high GER can be associated with a wide range of PCR: In this way, for similar GER, while Algeria and Tunisia present an elevated PCR, countries such as Madagascar and Mozambique have a PCR below 50%. Empirically, a GER of 100%[17] or more is a necessary - but insufficient - condition for the achievement of UPE.

Map 2.3: Primary completion rates in Africa in 1990/91



Source: authors' calculation from UIS and national data

Map 2.4: Primary completion rates in Africa in 2002/03 (or close)



Source: authors' calculation from UIS and national data

The completion map for 1990/91 shows strong similarities to the GER map for the same years. 12 countries in particular were lagging behind the others, with a PCR below 30% (which means that out of 10 children of the relevant age to complete primary school, only 3 actually finished). In this category we primarily find West African countries (Mali is the farthest behind, with 10% completion) and Central African countries, as well as three East African nations (Eritrea, Djibouti and Ethiopia), in addition to Mozambique. On the other hand, in 1990/91, Mauritius[18] and the Seychelles had already achieved Universal Primary Enrolment.

The growth of primary level completion between 1990/91 and 2002/03 is striking. From this perspective two countries still lag behind: Niger[19] (27%), and Burkina Faso[20] (29%), although most countries were able to improve their completion levels. Only five countries had a lower completion level in 2002/03 than in 1990/91: Burundi (32% in 2002/03 compared to 46% in 1990-91), Congo (59% in 2003/04, down from 62% in 1990/91), Kenya (70% instead of 86%), Zambia (60%, down from 93%) and Zimbabwe (to 81% from 96%).

Other countries greatly improved their performance in Universal Primary Enrolment, with an average 0.8-percentage point gain between 1990/91 and 2002/03.

Some countries have already reached the goal of Universal Primary Education, or will reach it very soon; these countries have completion rates of over 90%. This is the case for some southern African countries (Botswana, Namibia, South Africa) and North African countries (Algeria, Tunisia, Egypt).

Nevertheless, the 2002/03 primary completion rate does not reflect current enrolment conditions; it is the result of enrolment conditions over the last five or six years.

17 Situations of this nature are associated with high level of dropout during the stage and/or high repeating rates years.

18 Note that Mauritius, the Seychelles, Sao Tome and Principe, Cape Verde and the Comoros are never present on the maps, for reasons of scale.

19 2003/04 Data.

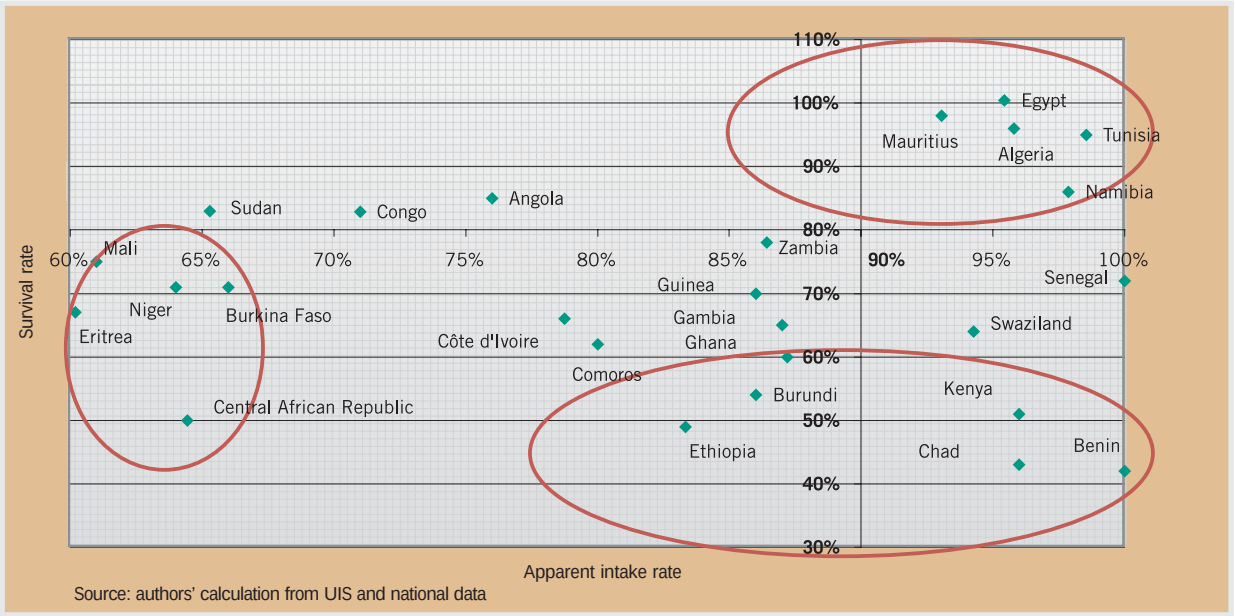
20 2003/04 Data.

- **Dropping Out: The major obstacle to Universal Primary Education**

Weak survival represents the major obstacle to achieving Universal Primary Education.

Structural enrolment conditions may be better understood using (i) the Apparent Intake Rate (new entrants into the first grade of the stage, compared to the population of the relevant age to enter primary school) and (ii) the 2002/03 survival rate (proportion of children entering the first grade who, given current conditions for promotion into the next grade, will reach the last grade of primary schooling). Essentially, these two rates will allow us to determine the 2007/08 completion rate (if we base our calculations on a six-grade primary stage). Graph 2.2 compares the two values (Apparent intake rate and survival rate), which highlights three different types of country:

Graph 2.2: Relationship between apparent intake rate and survival rate in 2002/03, or close



Source: authors' calculation from UIS and national data

- Countries that have both a low Apparent Intake Rate (around 60%-65%) and relatively weak survival (45%-80%): Mali, Niger, Eritrea, Burkina Faso and Central African Republic. In these countries, we can predict a low completion rate six years from now (i.e. over a timeframe equivalent to the length of the primary stage). These countries remain a long way off achieving Universal Primary Education.

- Countries with a relatively good Apparent Intake Rate (between 80% and 95%) and a fairly weak survival rate (between 30% and 60%): Benin, Burundi, Ethiopia, Kenya, and Chad. Above all, these countries must implement measures to encourage survival. However, Burundi and Chad have very high % of repeaters (over 25%). Repetition encourages dropping out. Reducing this rate is one measure to consider with a view to improving survival, as we shall see in Section 3.

- Countries with high access and survival rates (access rates above 90% and over 80% survival): Namibia, Algeria, Tunisia, Mauritius, and Egypt. The combination of these two characteristics leads us to believe that the primary education systems of these countries are performing well, and that they should be able to attain Universal Primary Enrolment within a reasonable timeframe, if they have not already attained it.

This graph highlights the fundamental problem of survival in a number of African countries. While several of these countries are showing access to grade 1 that is equal to or approaching 100%, few are close to universal completion of the primary cycle due to problems in retaining students during the stage. **Decreasing school dropout rates will be the major issue in achieving UPE in Africa in the next few years.**

2.1.1.2 Education systems with persistent inequalities

Equity issues are important in the analysis of education systems, because objectives relating to equal opportunities have been assigned to education. These objectives are in themselves a contribution towards attempts to achieve greater collective efficiency (Section 1), that can be promoted by education: e.g. the collective benefits of educating girls, improvements in agricultural yields for farmers who have been to school, etc. We have simply described the average situations, but the following analyses will focus on the potential dispersion that could exist, which will allow to better understand the issue of equity[21].

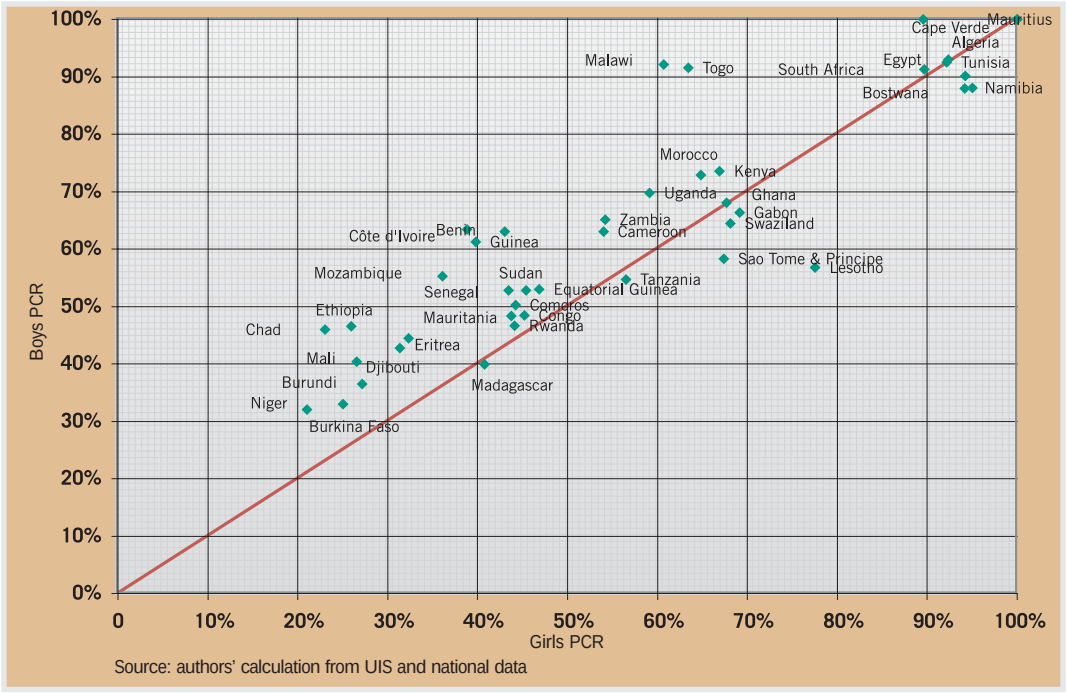
- **Gender disparities that were supposed to have disappeared by 2005**

The goal of eliminating gender disparities in primary and secondary education, which was fixed for 2005, is far from a reality in a large number of countries.

Parity-far from the reality in terms of primary school completion

Comparison of completion rates for boys and girls (Graph 2.3) shows the same results as examination of access rates ito grade 1 (girls and boys).
The diagonal that appears on the graphic is the parity line. Countries found on this line have identical PCR for boys and girls, while countries found below the line are those in which the girls' completion rate is lower than that for boys. Note that in the countries where parity exists or where completion rates for girls are higher than for boys, we can logically conclude that the country has reached the goal in terms of access.
On average, the parity index (completion rate for girls divided by the completion rate for boys) is 0.87. For 100 boys that attend up to the end of the primary level, only 87 girls make the same progress. Of the 42 countries for which data are available, 14 still have a girl-boy parity index below 0.8.

Graph 2.3: Comparison of boy/girl primary completion rate, 2002/03 or close



Source: authors' calculation from UIS and national data

Gender disparity remains substantial, especially in countries with a low primary completion rate

21 Equity, particularly between boys and girls, is one of the Millenium Objectives assigned to education.

- **Disparities according to other criteria are stronger**

While trends observed on the continent suggest that the gender parity goal is not a reality in many places in 2005, this dimension should not obscure the other discriminating factors in enrolment.

Disparities between urbans and rurals, riches and poors are stronger than gender's disparities

From the perspective of coverage, Table 2.1 presents access to and completion of primary education in Africa, along with certain variables for which we observe large disparities between these indicators. For example, the girl/boy PCR differential is valued at 11 percentage points, but the difference between urban and rural PCR is three times greater, reaching 33 percentage points. Even larger is difference by income quintile: PCR is 23.4 for the poorest 20%, but 68.6 for the richest 20%, or a 45.2 percentage point differential. The disparities created by income are more than four times greater than those related to gender.

Table 2.1: Social disparities between the different indicators for primary education in 21 countries[22], around the year 2000

Indicator		Gross Enrolment Ratio (%)	Access rate to the first grade (%)	Completion rate (%)
Sample Average		78.2	71.9	41.7
Gender	Boys	84.5	76.9	47.2
	Girls	72.1	66.8	36.2
	Difference (Boys-Girls)	12.4	10.1	11
	Ratio (Girls/Boys)	0.84	0.87	0.77
Location	Urban	103.5	88.4	61
	Rural	70.1	65.4	28
	Difference (Urban - Rural)	33.5	22.9	33
	Ratio (Rural/ Urban)	0.68	0.74	0.46
Income Quintile	Q5 (20 % richest)	106.7	89.9	68.6
	Q1 (20 % poorest)	62.1	53.3	23.4
	Difference (Q5 - Q1)	44.6	36.6	45.2
	Ratio (Q1 / Q5)	0.57	0.59	0.34

Source: Mingat (2003a).

2.1.1.3 Quality indicators

Quality should not be measured by resources, but on the basis of learning achievement

Increasing the number of children in school is crucial, but in itself, it is not enough. In addition, children must learn the content contained within curricula, particularly in primary education. Furthermore, as noted in Education For All Goal 6, it is important to: «*improve all aspects of quality in education and guarantee its excellence in order to ensure that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills…*». But what is quality? If we were to ask a panel of experts, there is every chance that each one of them would give a different answer.

We often confuse quality with the resources needed to obtain it. Quality in education is generally described using indicators of resources such as the pupil-teacher ratio, teacher education level, school buildings, etc. This approach can be explained by a lack of comparable information between countries concerning learning achievement, especially in Africa.
Furthermore, we note that, unfortunately, **the relationship between resources and results (learning achievement) is very weak (see: Section 3).** Most macro and micro studies

22 These 21 countries are: Angola, Benin, Burundi, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Guinea, Guinea-Bissau, Madagascar, Malawi, Mauritania, Niger, Nigeria, Uganda, Rwanda, Sierra Leone, Togo, and Zambia.

demonstrate that while resources are important, the way they are used counts even more towards explaining the differences in student learning. **Thus the use of resource indicators as a «proxy» for results indicators - which are not available - is unsatisfactory.** Efforts have been made to measure the quality of education in Africa in comparable terms on the basis of learning achievement. How are these measurements developed? How solid are they? And what are their limitations ?

- **Existing learning achievement evaluation programs in Africa**

In Africa, there are three major learning achievement assessment programs: **MLA** (Monitoring Learning Achievement), implemented by UNESCO/UNICEF, the **PASEC** (Program d'Analyse des Systèmes Educatifs de la CONFEMEN - CONFEMEN Program to Analyse Education systems), and **SACMEQ** (Southern African Consortium for Monitoring Educational Quality), which works in partnership with the IIEP. Since 1992, the MLA has helped 72 countries to develop or reinforce their achievement evaluation system, through studies testing students in the 4th, 5th and 8th grades of schooling. The PASEC program, which concentrates on the French-speaking African countries, has been performing learning achievement assessments since 1992 1992 (in the 2nd and 5th grades of primary school). PASEC evaluation has been performed in around 10 countries. Finally, the SACMEQ, a consortium created in 1995 that includes the Ministries of Education of 15 southern and eastern African countries, has also done studies on learning achievement in around 10 African countries.

Several studies measuring quality are available, but each has its limitations

- **The African Education Quality Index (AEQI)**

Each of the studies cited above was performed using standardised tests administered to public in primary schools. This allowed comparisons to be made between countries within each study, which cannot be obtained from student results in national exams. However, the tests for the three studies do differ and hence, it is not possible to make direct comparisons of the results between studies. Nevertheless, **the fact that some countries performed both an MLA and either a PASEC or a SACMEQ study makes it possible to re-calibrate all of the existing measures on a single scale (the MLA, for example) to obtain a reasonable comparison of average student scores across countries**. A. Mingat carried out this work and calculated an African Primary Education Quality Index (AEQI) for 24 African countries[24].

Limitations:

- *Comparability of results within a single study:*
  - *The samples used in each country are not always exactly representative of the student body (for example, some PASEC assessments were performed on a representative sample of teachers, slightly different from a representative sample of pupils)*
  - *The test items administered to students are not always entirely harmonised due to a country's desire to adhere as closely as possible to national curricula (MLA)*

- *Comparability across studies: The number of countries on which the relationship between MLA and the other scales is based (the countries that participated in two different studies) is low (5 countries).*

- **Multiple Indicators Cluster Survey (MICS) (Household Surveys)**

In co-operation with governments (often the national statistics office), UNICEF performs wide scale standardised household surveys (often numbering around 20,000 individuals), called MICS. This survey, performed in over 20 African countries, provides information about individuals' academic careers and their current literacy level.

23 Mingat (2003c).

24 This includes Zanzibar (a territory of Tanzania) which performed a SACMEQ evaluation, but excludes Nigeria (MLA) and Kenya (SACMEQ) due to questionable data.

Combining these two kinds of information allows international comparisons to be made concerning the relationship between literacy and the number of years of schooling completed. **The measurement of the literacy rate for people who have completed six years of schooling (one complete primary cycle in many African countries) can also be viewed as a comparable measure of the quality of education received** (the essential mission of primary education being to produce literate individuals). For example, it is reasonable to believe that an education system in which 90% of primary school completers are literate provides a better quality of education that a system in which only 50% of school completers are permanently literate[25]. The World Bank[26], in co-operation with the Pôle de Dakar and BREDA/UNESCO, has been able to calculate this measurement for around 20 African countries.

Limitations:

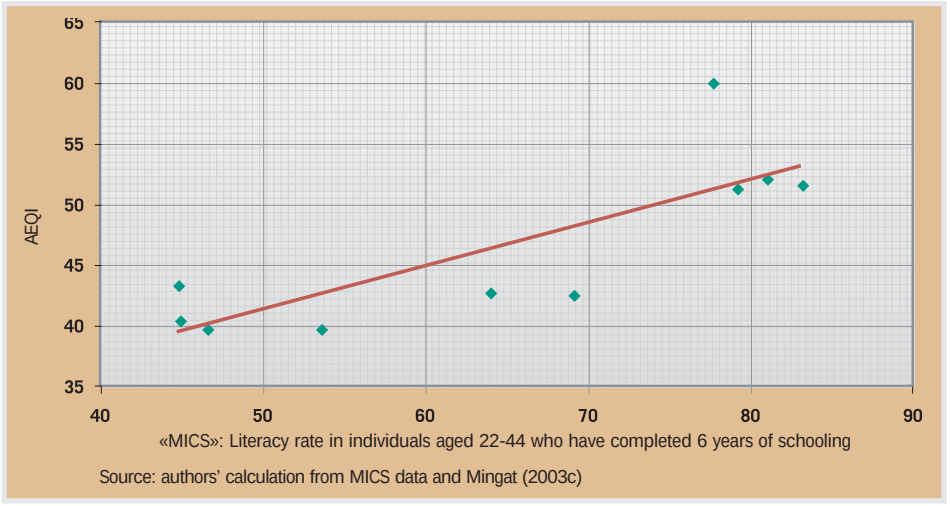
- *Information on individuals' literacy is gathered through self-declaration. No test is administered during completion of the questionnaire*
- *The indicator is calculated for a sample of individuals aged 22 to 44. For the older participants in this sample, the estimated quality measure corresponds to instruction given 30 years previously (when the individuals where in school[27])*

- **The African Education Quality Index+ (AEQI+)**

Since ten countries had both a learning achievement evaluation survey and a MICS survey, we can compare the AEQI and MICS indicators.

We can combine available data to develop a synthetic index of quality the AEQI+

Graph 2.4: Comparison of the AEQI and «MICS» indicators for 10 African countries



Source: authors' calculation from MICS data and Mingat (2003c)

As seen in Graph 2.4, **the two measures classify the countries in the same way**, and their good correlation allows to build up an other indicator, the AEQI+. This measurement provides broader coverage (all countries with the AEQI added to those without the AEQI but with a MICS indicator) by combining the results of the two measures. AEQI+ is built as follows: it is equal to AEQI if AEQI is available and it is computed from the MICS indicator on the basis of the estimated relation between the two indicators if AEQI is not available[28]. **The AEQI+ Indicator, an indicator of primary education quality, is reasonably comparable across countries and can be calculated for 36 African countries (see graph 2.5).**

Lastly, we note that despite the known limitations of the two indicators in question, the strong correlation between the AEQI and the MICS indicator encourages to consider that these mea-

25 However, education quality is not the only vector for literacy. The local or national context (frequency of foreign language use, openness to other countries, etc.) can also have a strong influence.

26 Mingat (2003c).

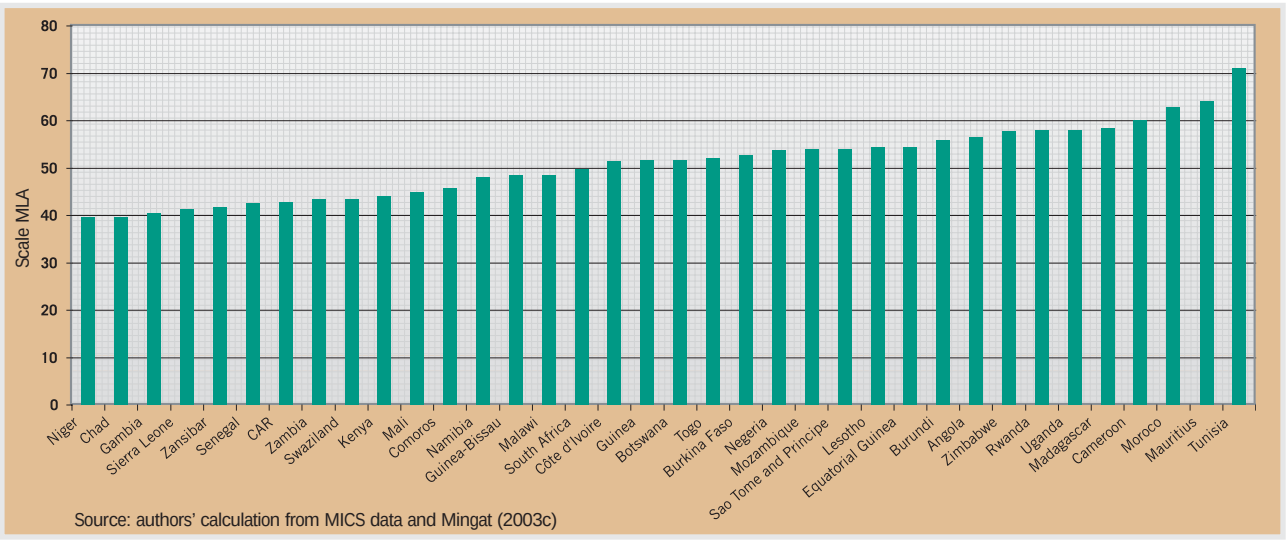
27 However, integration of the variable «number of years that have passed since studies were completed» in econometric models shows that the effect of this variable on literacy is not significant. When the number of individuals is large enough, it is possible to refine the measure by using smaller age groups and thus to calculate how the indicator changes over time (the younger the age group is, the more the measure corresponds to the quality of teaching provided in recent years).

28 AEQI+ is calculated based on the estimated relationship between the ten common AEQI-MICS countries:
AEQI+ =23.427 + 0.3556 x MICS Indicator (R^2= 0.656).

sures are reliable enough to be used (the fact that they coincide so well is a sign of their reliability).

Graph 2.5 gives an idea of the differences in learning achievement level on the continent based on the MLA[29] scale.

Graph 2.5: Differences between countries on a perfectible but comparable measure of quality (AEQI +)



Source: authors' calculation from MICS data and Mingat (2003c)

In conclusion:

- **There is a reasonably comparable measurement of primary education quality for 36 African countries.**
- **This measurement is not perfect due to the limitations of the sub indicators (AEQI and MICS) that are used to calculate it.** The plan for the future is to continue to test the reliability of this indicator as new data becomes available from the learning achievement surveys and/or MICS household surveys.
- The AEQI+ also **presents the limitation of not allowing yearly monitoring**, inasmuch as neither the MICS surveys nor the learning achievement surveys are administered regularly in these countries.
- To broaden the indicator's coverage even further, it would be useful to Test AEQI+ calibration with non-African countries (for example, countries that participated in the PISA and TIMMS surveys or other learning achievement assessments, or countries that have performed a MICS survey[30].

29 The MLA scale is the result of a combined assessment of averages in reading, writing, mathematics, and life skills, obtained from a sample of students during the study. For more information, see Chinapah inter alia, (1999).

30 cf. Mingat et al (2000), and Hanushek, (2003).

2.1.2 Literacy and the other cycles of education

2.1.2.1 Literacy: changes that are difficult to measure

Measuring progress towards the literacy goal remains difficult, given the wide variety of definitions that can be given for the notion of literacy itself[31]. Nevertheless, using available data helps us to understand the work that remains to be done in this field.

The African continent remains one of the areas most affected by illiteracy. Estimates for the period 2000-2004[32] show that **the proportion of literate adults over the age of 15 stands at around 60% for Africa as a whole**. As seen in Table 2.2, this proportion demonstrates one of the greatest levels of growth in the developing world since the 1990s. Table 2.3 illustrates that within Africa, the situation is no less disparate.

Table 2.2: Literacy rates (15 years +) in the developping world, 2000-2004 estimate (%)

	1990	2000 - 2004
North Africa	48.1	59.6
Sub-Saharan Africa	49.7	60.9
Latin America and the Caribbean	85	89,3
East Asia	79	91.3
South Asia	47.5	58.5
Southeast Asia	84.1	89.2
West Asia	67.3	76.4
Oceania	62.8	71.6

Source: UIS data

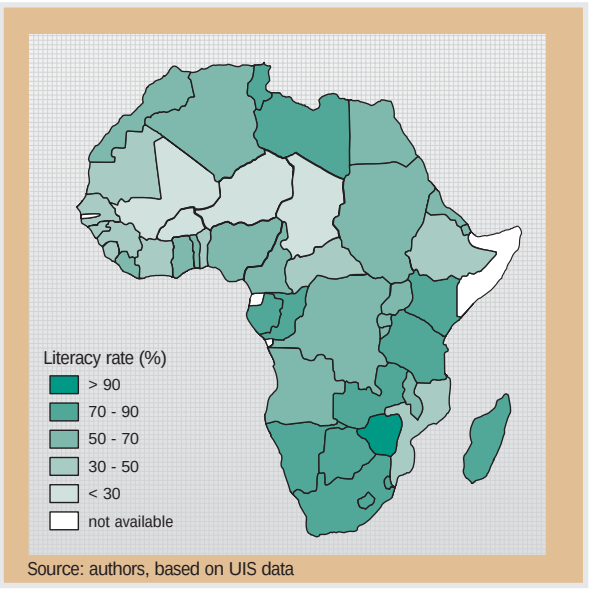
Table 2.3: Literacy rates (15 years +) on the African continent, 2000-2004 estimate (%)

Southern Africa	73.7
Central Africa	56.5
East Africa and the Indian Ocean	62.4
North Africa	59.6
West Africa	52.2
Total for Africa	60.2

Source: authors, based on UIS data

This average results in extremely variable national levels, as seen in Map 2.5. While some countries show nearly a 100% literacy rate (Zimbabwe, Mauritius, Seychelles), the challenge remains considerable for others. The French-speaking African countries are the most affected by illiteracy, and the situation is particularly troubling in the Sahelian countries: Mali, Burkina Faso, Niger, and Chad have literacy rates below 30%. The situation appears to be more favourable in the English-speaking countries.

Map 2.5: Literacy rates, 2000-2004 estimates



Source: authors, based on UIS data

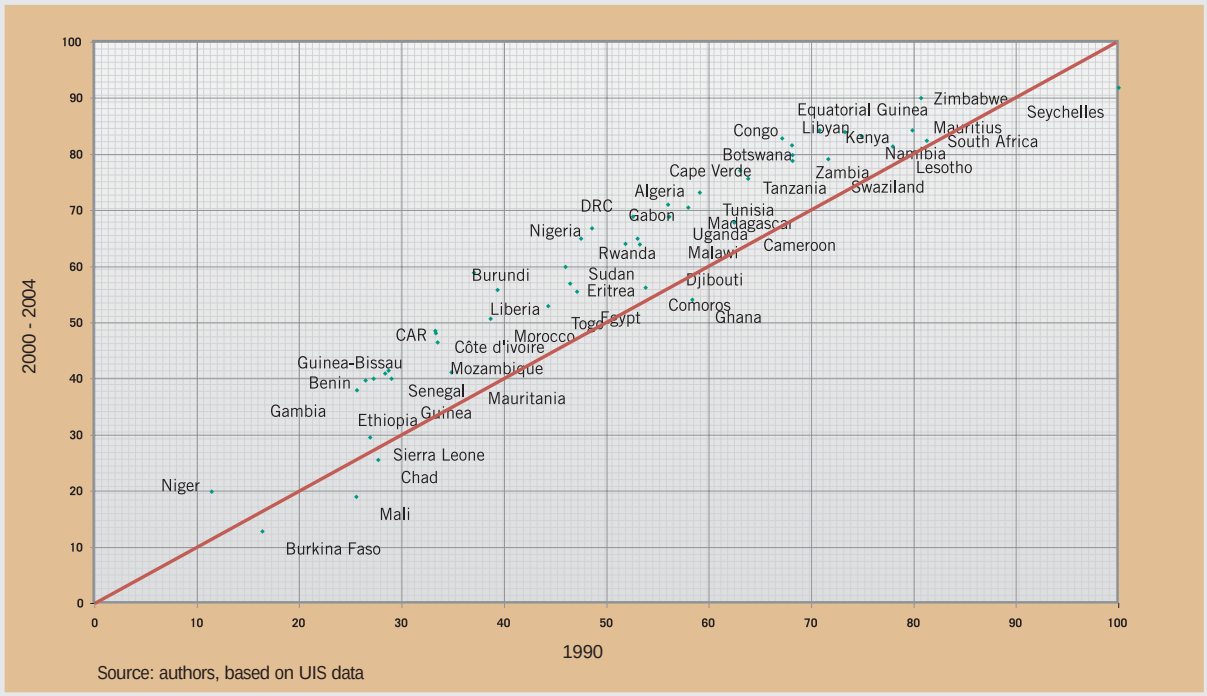
31 For example, in Malawi (2003 census), a literate individual is a person who can read in at least one language; in Cameroon (Cameroon household survey, 2001), literacy is the ability of people above the age of 15 to read and write in French or English.

32 The decision to present only a single estimate for a five-year period was adopted by the ISU based on the fact that literacy rates fluctuate very little in the short term.

Graph 2.6 shows the countries in which literacy rates increased between 1990 and the 2000-2004 period. The bisecting line on this graph represents situations that were unchanged between 1990 and 2000-04. Countries located above this line are those whose literacy rates increased between the two periods. We can see that most countries do report an increase, except for certain rare exceptions[33]. However, change appears to be relatively slow and country rankings remain essentially the same whether we base our study on literacy rates in 1990 or in 2000-2004.

Despite considerable progress, the African continent remains the least literate in the world. This phenomenon mainly affects women.

Graph 2.6: Growth of the literacy rate (15 years +, %)

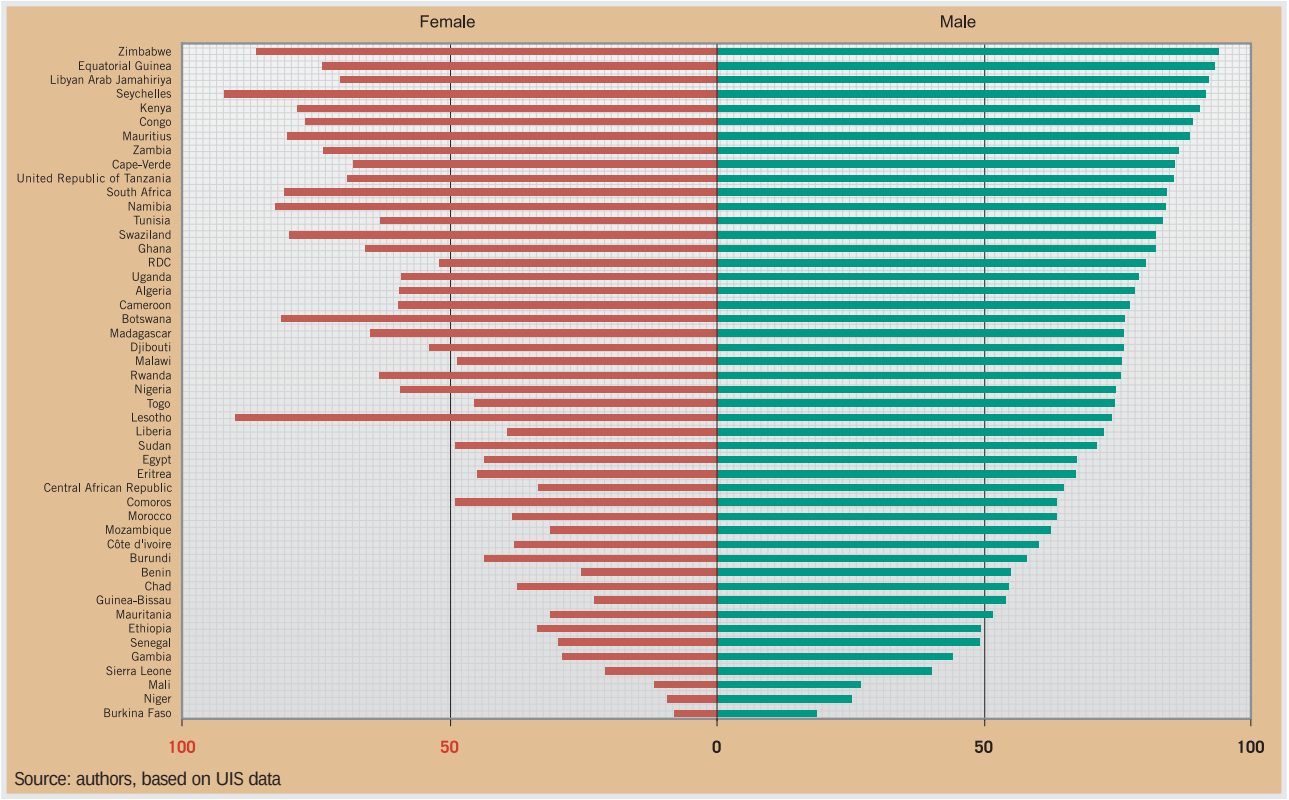


Source: authors, based on UIS data

Gender disparity varies considerably from one country to another, although it is generally greatest when the country has a low level of literacy. In Niger, for example, while 25% of men are literate, this proportion plummets to 8% for women. On the other hand, a country like Lesotho shows a higher literacy rate for women than for men (Graph 2.7).

33 Which can be attributed more to estimate problems than to a real decline.

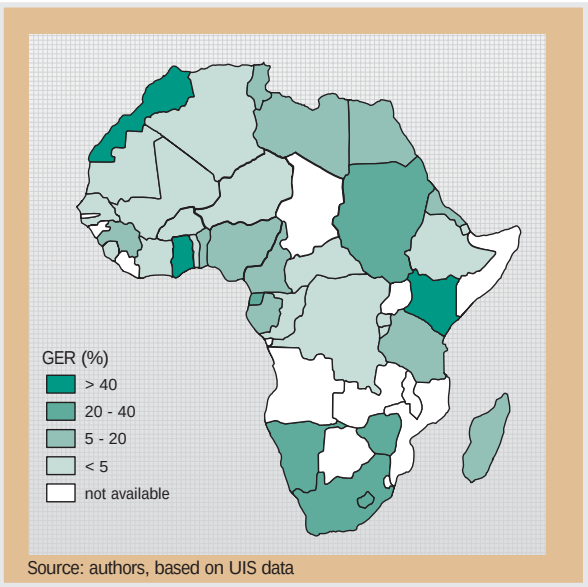
Graph 2.7: Literacy rate (15 years +) for women vs. men, 2000-2004 estimates (%)



Source: authors, based on UIS data

The challenge remains substantial, not just because of the diversity of situations across the continent, but also due to primary enrolment that is by no means universal for most African countries. Each year, the children that do not reach the end of primary education represent almost the same number of potential illiterates; this is a factor that should be taken into consideration in parallel with adult literacy programs.

Map 2.6: Pre-primary gross enrolment ratio in 2002/03 or close



Source: authors, based on UIS data

2.1.2.2 Pre-primary education - a slowly developing level

The definition and length of pre-school varies between countries. Thus a single value for Gross Enrolment Ratio can obscure the real situations. For this reason, it is important to take precautions when comparing two countries.

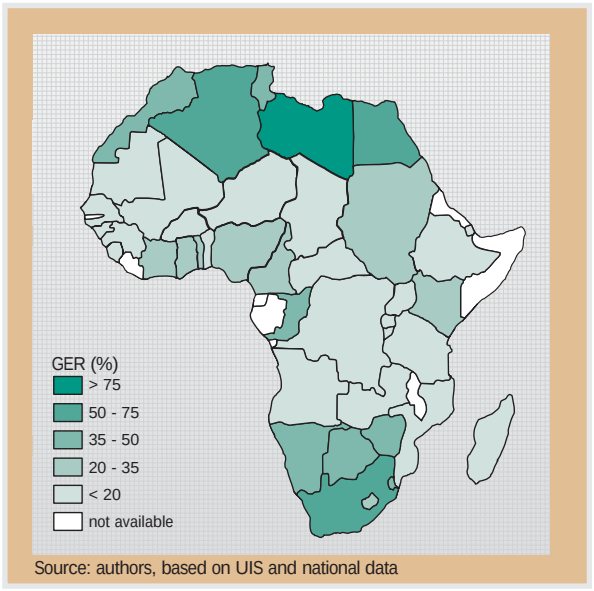
As seen in Map 2.6, development of this educational cycle is extremely disparate across the continent, although it is generally low. Thus, in 18 out of the 42 countries for which GER can be calculated, for 100 children in the pre-school enrolment age group, fewer than five actually attend school. 11 countries have a GER between 5% and 20%. Academic coverage[34] at this level exceeds 20% in only 13 countries.

2.1.2.3 Secondary education: a substantial change

Clearly increasing schooling coverage in secondary education

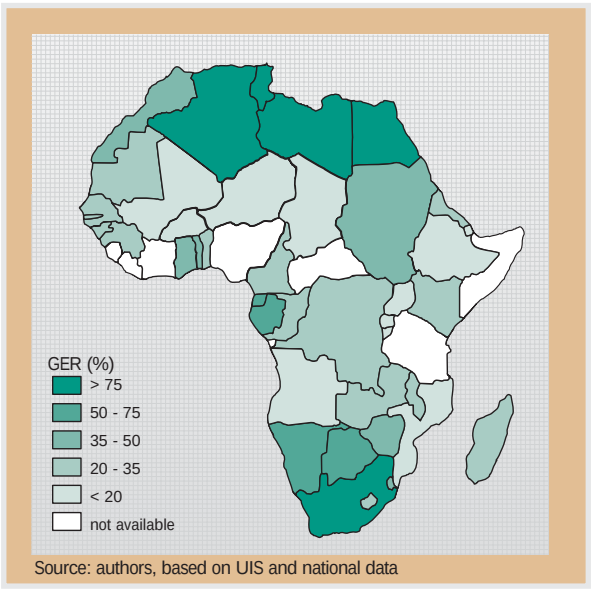
In 1990/91, general secondary education (lower and upper) was relatively undeveloped, with an average GER of 28.3% throughout Africa. Over half the countries studied in 1990/91 (24 of 45 countries) had a secondary level Gross Enrolment Ratio below 20%. Tanzania, Burundi, Niger, Mali, Burkina Faso and Mozambique had very low Gross Enrolment Ratios (between 4.7% and 6.9%) while Libya, Egypt, and South Africa varied between 66% and 86%.

Map 2.7: Gross enrolment ratio for the African countries in 1990/91



Source: authors, based on UIS and national data

Map 2.8: Gross enrolment ratio for the African countries in 2002/03 or close



Source: authors, based on UIS and national data

The situation has changed substantially since 1990, as **the average secondary GER in Africa has risen to 35.4% for 2002-03.**

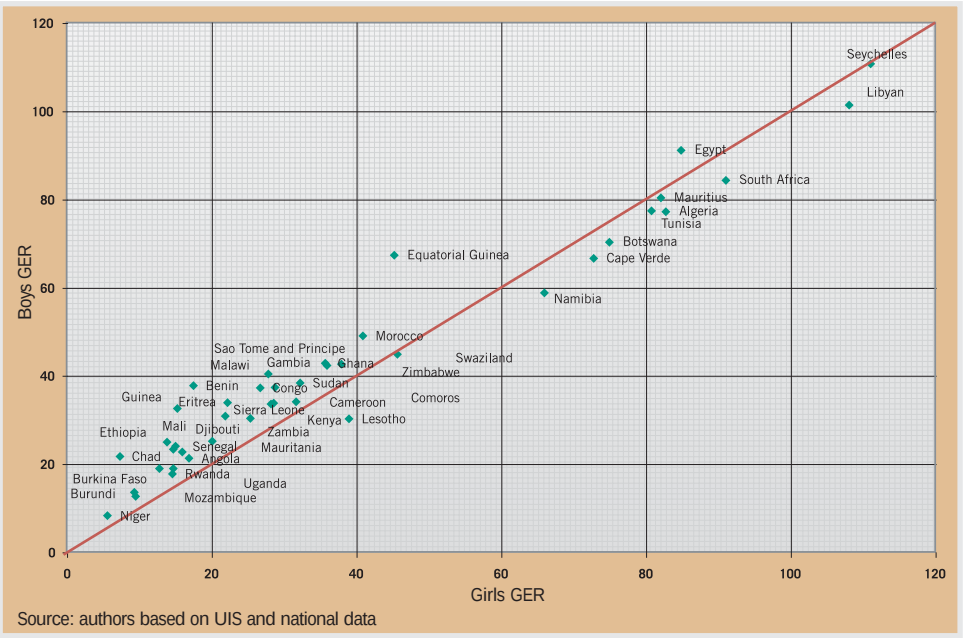
As seen in Map 2.8, the disparities in secondary enrolment remain considerable. GER varies from 7% in Niger and 11% in Burundi to over 100% in Libya and the Seychelles.

In 12 of the 46 African countries for which data are available, fewer than 20% of young people in the secondary school age group actually attend school (compared to 24 countries in 1990/91). These are mainly Sahelian countries. 12 countries have a GER over 50% (versus 5 in 1990/91). All of these countries are in North Africa or southern Africa.

As we can see, the situation has changed substantially. On average, GER for the continent has risen 7.1 points in 12 years.

34 Due to very rare repeated years at this level of study, we can combine GER with a coverage indicator rather than a capacity indicator.

Graph 2.8: Comparison of gross enrolment ratio in secondary education for girls and boys in 2002/03 (or close)



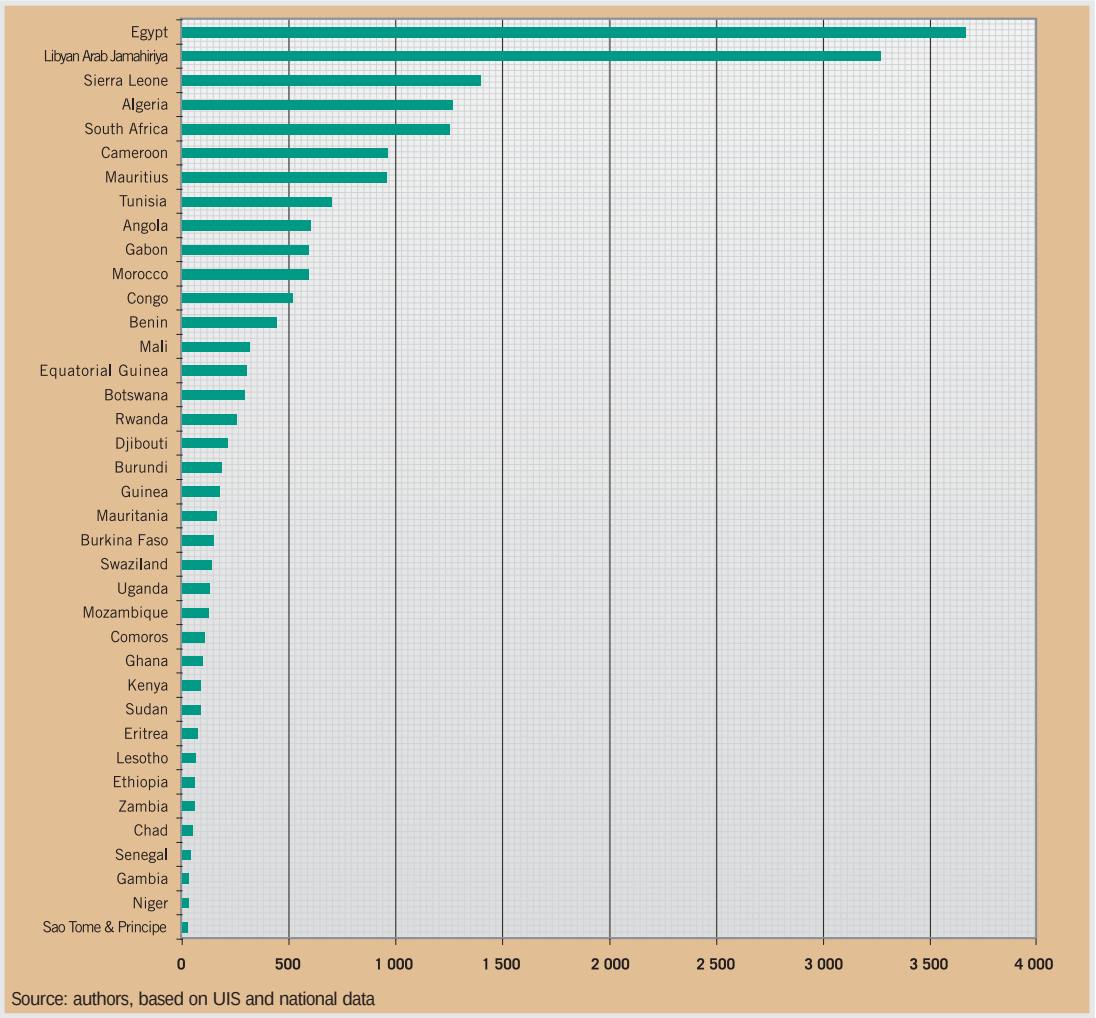
Source: authors based on UIS and national data

Graph 2.8 shows that the gap between girls and boys in secondary education is generally less important than at the primary level. In 13 of the countries in question, it can even be seen that more girls than boys attend secondary school, particularly in the North African countries and in southern Africa. The countries in which secondary education is relatively undeveloped are also the countries in which more boys than girls are enrolled.

2.1.2.4 Technical/vocational enrolment are often unrelated to economic realities…

The coverage of technical/vocational education is highly variable. Graph 2.9 provides a glimpse of the situations observed in the countries for which recent information is available. Figures range from fewer than 100 students per 100,000 inhabitants in countries such as Niger, Senegal, and Chad, to the much higher levels observed in Algeria (1,300), Sierra Leone (1,400), and in certain North African countries that exceed the threshold of 3,000 students per 100,000 inhabitants (Libya and Egypt). This dispersion does not appear to have any specific geographical characteristics.

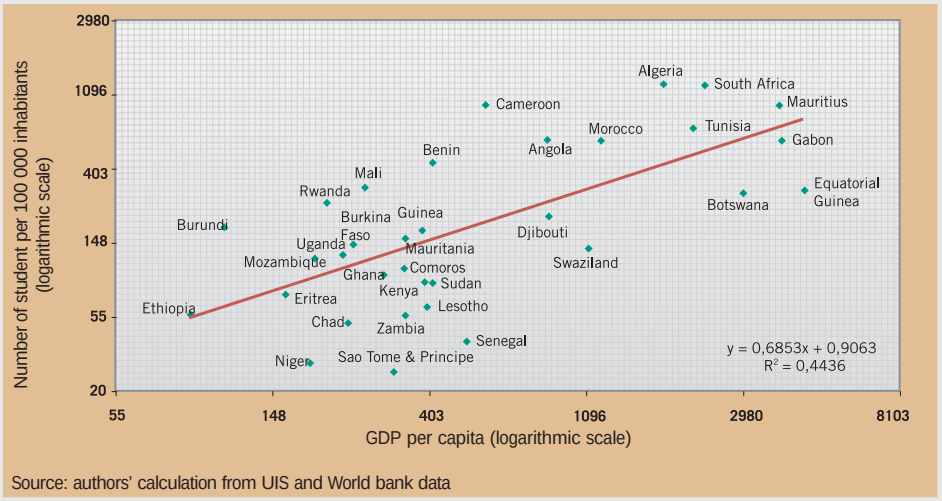
Graph 2.9: Coverage of technical/vocational education (number of students per 100,000 inhabitants), 2002/03 or close



Source: authors, based on UIS and national data

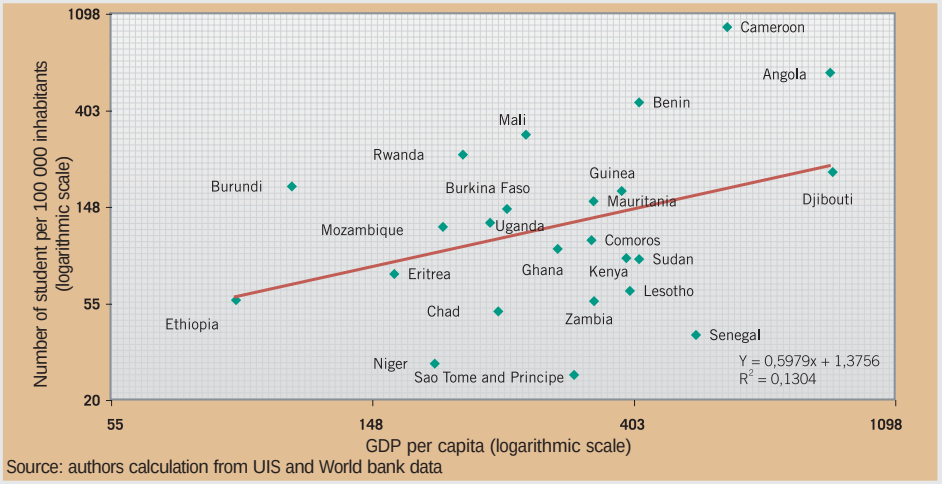
Given the relationship that, in theory, should exist between technical/vocational education and the economic sector (basically, the more developed the country and its industrial sector, the greater the need for students who have completed technical/vocational training), it is worthwhile comparing the level of coverage in different countries with the level of development. Graph 2.10 shows each country's GDP per capita as well as its level of coverage for the sub-cycle of technical/vocational education.

Graph 2.10: GDP per capita and technical/vocational education coverage, 2002/03 or close



Source: authors' calculation from UIS and World bank data

Graph 2.11: GDP per capita and technical/vocational education coverage for countries with GDP per capita below 1,000 US$, 2002/03 or close.



Source: authors calculation from UIS and World bank data

Technical/Vocational education that appears to be inadequate to the needs of a dual economy, in some low-income countries

The poorest countries (those with a GDP per capita below $US700) generally have lower coverage (fewer than 200 students per 100,000 inhabitants for most countries) but there is a certain degree of variability. Sierra Leone, Cameroon and Angola have a much higher ratio (1,300, 1,000 and 1,600, respectively). In contrast, countries with a GDP per capita over US$ 4,000 have much higher ratios of coverage, in spite of a few exceptions (for example, technical students in Botswana account for only 300 students per 100,000 inhabitants, which is four times lower than in South Africa).

There does appear to be an overall consistency when we examine all the African countries. The most economically developed countries are also those with the highest technical/vocational education enrolment ratios.

However, a closer examination of countries with a GDP per capita below US$ 1000 shows there is less consistency between the poorest countries, as shown in Graph 2.1.1. While the situation seems to be relatively homogeneous for the poorest countries, we can nevertheless observe that the number of students becomes ever more variable as wealth increases. This certainly highlights a mismatch between the number of trained individuals and the economic needs. Some countries (those found above the line in Graph 2.1.1) are running a strong risk

of «overproduction» of graduates (and thus of public investment) while others (those below the line) seem to have abandoned this sub-cycle and are risk not «producing» enough technical/professional trainees to meet the economy's needs

2.1.2.5 … as well as higher education

Quantitatively, higher education grew strongly between 1990/91 and 2002/03, but in a highly irregular way. As seen in Table 2.4, the number of students per 100,000 inhabitants varies quite considerably from one area to another, ranging from 220 in the East African and Indian Ocean nations, to 1,760 for North Africa. These regional averages are in no way homogeneous; in southern Africa, for example, Tanzania has 86 students per 100,000 inhabitants, while this figure is 17 times greater in South Africa.

Table 2.4: Number of students per 100,000 inhabitants, and percentage of growth

	Number of students per 100,000 inhabitants in 2002/03 (or close)	Percentage of ratio growth between 1990/91 and 2002/03	Range	Number of countries
Southern Africa	919	30	956 - 1 508	8
Central Africa	502	64	120 - 934	5
East Africa and the Indian Ocean	220	180	86 - 1 386	11
West Africa	555	100	124 - 784	10
North Africa	1 760	65	1 117- 2 349	3

Source: authors' calculation from UIS and World Bank data

Beyond the current situation, the changes are surprising in themselves. While we see a decrease in coverage in certain countries (e.g. Congo, Zimbabwe and Madagascar, where the number of students per 100,000 inhabitants has fallen by nearly 35%, probably due to the depression of the late '90s), coverage has generally increased, as shown by Table 2.5. The rates of increase are also quite variable: while South Africa and Botswana have seen more modest growth (27% and 29% respectively), other States have seen a veritable explosion in student numbers, multiplying their enrolment by a factor of up to 10 (Djibouti). For example, Mali had around 50 students per 100,000 inhabitants in 1990/91; by 2002/03, this ratio had risen to 224, an increase of 323%.

Finally, we can observe that there does not seem to be a strong relationship between the changes in the capacity to accommodate students and the initial level of coverage. For example, Cameroon and Madagascar had the same level of coverage of 300 students per 100,000 inhabitants in 1990/91, but since then, changes in growth have been very different in each country.

Table 2.5: Number of students per 100,000 inhabitants, 1990/91 and 2002/03 (or close)

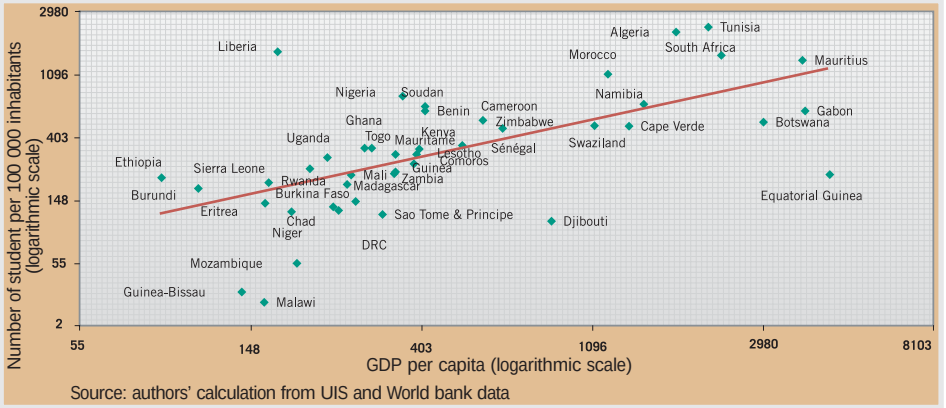
	1990	2002-2003	évolution
Madagascar	300	193	-36%
Congo	428	370	-14%
Zimbabwe	472	469	-1%
Mauritania	263	311	18%
Zambia	187	236	26%
South Africa	1 191	1 508	27%
Swaziland	381	491	29%
Senegal	255	338	33%
Botswana	385	518	35%
Angola	70	95	36%
Democratic Republic of the Congo	215	358	67%
Sierra Leone	117	198	69%
Cameroon	300	517	72%
Nigeria	402	784	95%
Burkina Faso	61	127	108%
Niger	57	124	118%
Kenya	137	311	127%
Namibia	285	691	142%
Lesotho	129	339	163%
Benin	234	644	175%
Burundi	64	180	181%
Tunisia	835	2 349	181%
Uganda	101	295	192%
Guinea	89	262	194%
Ethiopia	70	215	207%
United Republic of Tanzania	28	86	207%
Mauritius	330	1 386	320%
Mali	53	224	323%
Comoros	41	229	459%
Djibouti	10	107	970%

Source: authors' calculation from UIS and national data

As for technical/vocational education, it is interesting to compare the level of enrolment for this sub-cycle with a country's general level of economic development (Graph 2.12).

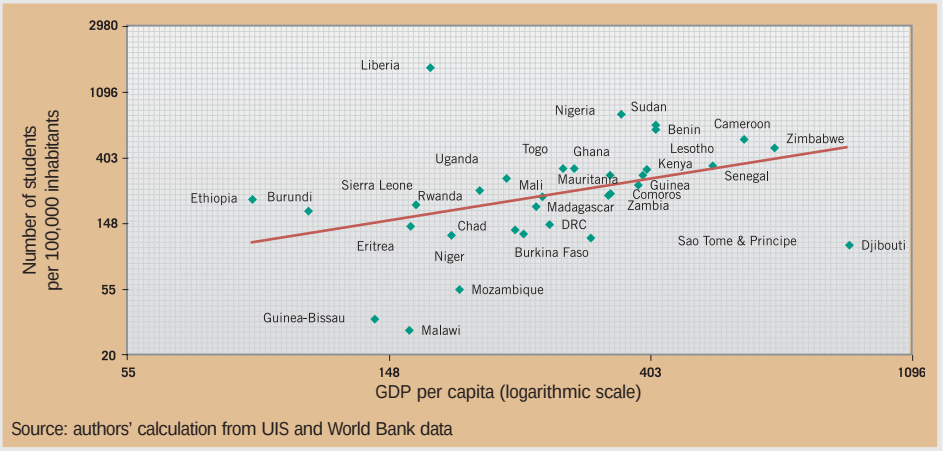
Very high levels of higher education compared to the absorption capacity of dual economies in low-income countries

Graph 2.12: Number of students per 100,000 inhabitants and GDP per capita in US$, 2002/03 or close.



Source: authors' calculation from UIS and World bank data

Graph 2.13: Number of students per 100,000 inhabitants and GDP per capita in US$ for countries with a GDP per capita below US$ 1,000, 2002/03 or close.



Source: authors' calculation from UIS and World Bank data

It is difficult to see a relationship between the data, because the level of coverage for higher education appears to be highly variable regardless of the GDP per capita level. For example, whereas Angola and Guinea have a GDP per capita nearly US$ 630, their enrolment ratios are 91 and 262 students per 100,000 inhabitants respectively. However, if we look at all the African countries together, we observe a strong trend: in general, the most economically developed countries are those with the most developed higher education systems.

Once again, a closer examination of the countries with a GDP per capita below US$1000 (Graph 2.13) shows a lower correlation between economic development and level of coverage for higher education. As with technical education in certain countries (primarily those above the line in the graph), some countries will certainly have ended up in a situation of graduate «overproduction», without any real links to the level of economic development. This is probably a consequence of insufficient regulation of student flows into this stage of education.

2.1.3 Synthesis

In this section we suggest some elements that give a better synthetic appreciation of the development of education systems on the African continent, as well as the progress towards quantifiable EFA goals.

2.1.3.1 The EFA African development index

This composite index (see Inset 2.1) allows to measure each African country's progress toward the EFA goals. It evaluates each country's progress toward three of the six goals, in relation to the performance of all of the countries under consideration. The goals are: Universal Primary Education as measured by the Primary Completion Rate, gender equity as measured by the GER parity index [girls' GER divided by boys' GER], and literacy, as evaluated by the literacy rate for people aged 15 and older. The countries that score highly on this index should be able to achieve the three goals included in the index, and vice versa. The EFA+ index includes the three previous dimensions but also includes quality, as measured by the AEQI+ index described previously.

Inset 2.1: Calculating the EFA African development and EFA+ indices

Methodologically, the EFA African Development Index is calculated in a similar way to the UNDP Human Development Index, except that here, all of the components are education indicators from the Dakar Goals for which a comparable measurement between African countries is available.
For each of the three components X of the EFA Index, we calculate a relative measure Y as follows:

$$Y = \frac{X_{country} - X_{min}}{X_{max} - X_{min}}$$

X_{min} and X_{max} represent, respectively, the minimum and maximum value on the African continent for the component under consideration, and $X_{country}$ is the value for the country concerned*.

In 2002/03 the minimum and maximum values retained for each value were as follows:
- Primary Completion Rate: 27% (Niger) and 100% (Seychelles, Mauritius, Cape Verde)
- GER Parity Index: 65% (Chad) and 100% (for several countries, see the explanation below)
- Literacy Rate for individuals 15 and older: 12.8% (Burkina Faso) and 91.9% (Seychelles)

For example, if a country's access rate to the Primary Completion Rate is 50, the relative value will be equal to:

$$\frac{50 - 27}{100 - 27} = 0.315$$

Note that for the parity index, given the benefits to human development of higher schooling rates for girls, all of the countries that show a disparity in this field (index above 100%) are considered to have achieved the Dakar Goal. For this calculation, a value of 100 is taken to be the maximum reference value.

The EFA African Development Index is calculated by taking the average of the three relative values and multiplying the result by 100.

EFA African Development Index = Average (Y1, Y2, Y3) x 100

When Y1 = Relative value of the Primary Completion Rate
Y2 = Relative value of the Parity Index (GER for girls/GER for boys)
Y3 = Relative value of the Literacy rate for individuals 15 years and older.

Let us show the calculation of the composite index using South Africa as an example:

Primary Completion Rate	GER Parity Index	Literacy Rate for individuals 15 and older
92.0	96.5	82.4

Relative value of the Primary Completion Rate = $\frac{92 - 27}{100 - 27} = 0.890$

Relative value of the Parity Index = $\frac{96.5 - 65}{100 - 65} = 0.899$

Relative value of the Literacy Rate = $\frac{82.4 - 12.8}{91.9 - 12.8} = 0.880$

The EFA Development Index for South Africa is: $100 \times \frac{0.890 + 0.899 + 0.880}{3} = 89$

Some countries can also calculate the EFA+ Index, which adds the dimension of quality to the three EFA index factors (the AEQI+ Index presented earlier in this report).
For 2002/03 or nearby years, the minimum and maximum values calculated for the AEQI+ are: 39.7 (Chad) and 71 (Tunisia).

The EFA+ African Development Index = Average (Y1 , Y2 , Y3 , Y4) x 100
When Y4= Relative value of the AEQI+ Index

Still using South Africa as our example, the relative value of the AEQI+ = $\frac{49.6 - 39.7}{71 - 39.7} = 0,317$

Hence the EFA+ Index stands at: $100 \times \frac{0.890 + 0.899 + 0.880 + 0.317}{4} = 74,7$

* The fact that the minimum and maximum values may vary over time is certainly a drawback for the comparability of the index in the long term, yet this choice is definitely preferable to fixing invariable minimum and maximum values, since it is entirely possible that one or more countries would in future years be outside any min-max interval that might be fixed.

Table 2.6: EFA and EFA+ African indices

Country	EFA 1990/91	EFA 2002/03	EFA + 2002/03
Niger	11.1	6.8	5.1
Chad	9.4	7.7	5.8
Burkina Faso	15.9	9.5	17.5
Mali	12.0	18.7	18.1
Central African Republic	26.0	20.2	17.6
Ethiopia	23.6	23.5	-
Guinea-Bissau	14.2	24.3	25.2
Benin	13.2	29.3	-
Guinea	10.3	35.2	35.9
Angola	-	35.8	40.3
Burundi	46.4	36.4	40.2
Djibouti	38.8	37.1	-
Mozambique	33.3	38.3	40.1
Eritrea	47.1	39.3	-
Côte d'Ivoire	38.7	39.9	39.2
Comoros	41.1	43.7	37.5
Sudan	43.4	50.8	-
Senegal	35.4	51.4	40.8
Mauritania	34.4	51.4	-
Togo	36.1	57.3	52.9
Cameroon	59.3	57.4	59.3
Morocco	38.4	58.9	62.6
Madagascar	58.1	60.0	59.9
Gambia	32.0	61.2	46.5
Rwanda	56.2	63.3	62.0
Ghana	60.0	64.7	-
Nigeria	57.2	65.6	60.3
Congo	64.7	69.8	-
Zambia	80.2	70.0	55.4
United Republic of Tanzania	65.7	70.3	-
Equatorial Guinea	-	70.6	64.7
Swaziland	74.5	72.1	57.0
Malawi	45.6	72.2	61.2
Uganda	52.2	72.4	68.9
Egypt	61.6	74.6	-
Gabon	70.9	76.0	-
Sao Tome & Principe	-	77.7	69.7
Kenya	80.8	77.6	61.7
Algeria	65.8	79.9	-
Lesotho	76.9	80.6	72.1
Tunisia	68.2	84.9	88.7
Cape Verde	65.2	88.5	-
Zimbabwe	90.7	88.8	81.0
South Africa	86.3	89.0	74.7
Botswana	82.7	90.9	77.8
Namibia	84.0	92.7	76.3
Mauritius	92.4	96.8	92.1
Seychelles	100	99.1	-
DRC	-	-	-
Liberia	-	-	-
Libyan Arab Jamahiriya	-	-	-
Sierra Leone	-	-	-
Somalia	-	-	-
Average	51.1	58.0	52.0

Source:
authors' calculation using data from UIS, countries, household survey and learning achievement surveys.

Given that the index makes less sense when based on a missing value, it is possible to calculate the EFA index for 47 countries, and the EFA+ index for 33.

Both of the indices give us an idea of each country's progress on the EFA Index for the three Dakar Goals: literacy, complete Universal Primary Education, and parity. For some countries, we have data on four of the goals - literacy, complete Universal Primary Education, parity, and quality - to create the EFA+ Index.

The weaker the index, the farther the country is from reaching these goals.

2.1.3.2 The African pyramid and how it breaks down

As a supplement to the assessment of the current situation for each level of education that was presented at the beginning of this section, this part of the report aims to bring all of the analyses together in the form of a sector-wide overview. It is necessary to consider the education system as a unified whole within which i) the different levels of education interact and ii) budgetary trade-offs are made. To do this, we use **use an educational pyramid, which gives a transversal picture of the education system at a given moment by synthesising student flows throughout the system**[35] (from entry into primary school through to higher education).

By analysing these flow charts dynamically (see: Inset 2.2), we can get an idea of the level of priority (in terms of quantitative development) that is assigned to each level of education - possibly to the detriment of others. For this report, we have chosen to describe only average pyramids[36], not because analyses of each country would not be useful (refer to the end of the report for the country diagrams) but simply in the interests of synthesizing the available information. The analysis is based on three factors. First to be shown are the changes in the average African pyramid between 1990/91 and 2002/03, which shows the overall trends in Africa by means of the sector-wide organisation of education systems. Secondly, the dynamic analysis is refined by highlighting the level of primary school completion for each country (countries are grouped into three rankings according to the 1990/91 PCR value). Finally, we take a closer look at countries with a low PCR rate (below 60% in 2002/03). Using a statistical method, these countries are ranked in accordance with the shape of their current pyramid. This allows us to draw up a typology of the least advanced education systems in four groups, differentiated by their «sector-wide» characteristics.

Inset 2.2: Interpreting the educational pyramids

A diagram of flows is a graphic representation that is used to describe student flows - in a synthetic and comparable manner -from entry into primary school and continuing through to higher education. It is presented as three blocks, which, from bottom to top, represent primary education, lower and upper general secondary education, and two discs that represent technical/vocational secondary education and higher education. There are also arrows that describe the transitions between the different levels.

Each of the blocks is in the form of a trapezoid, whose base and summit represent the access rates to the first and last grades of that educational level respectively. The height of the trapezoid represents the length of the cycle, and the corresponding theoretical ages of entry are shown on the left.

For example, for the lower block representing the primary level, the base of the trapezoid represents access to the first grade of primary school (or Apparent Intake Rate) and the summit represents access rates into the last grade of primary schooling (or Primary Completion Rate). To allow comparison with the universal enrolment goals - implying that all children enter the primary cycle and complete it - a rectangular shape has been added using a dotted line. With a view to UPE, this is the form the trapezoid should have in 2015: 100% access into the first and last grades.

Just above this block is the transition arrow between primary education and lower secondary education. The width of this arrow is proportional to the actual transition between the two levels (number of non-repeaters in the first grade of a level that is underway, compared to the number of non-repeaters students the year before in the last grade of the preceding level[37].

The same representational format is applied to the two other blocks and to the second transition arrow. For each country, the distance to the Universal Primary Education goal is clearly shown, and we can also see the management of flows - that is, the academic rate of attrition during the stage and the attrition during the transition between two stages.

Finally, the access rates for technical/vocational secondary and higher education are shown in slightly different ways, given that it is difficult to calculate the access rates for the first and last grades due to the number of different courses of study. The disc for technical secondary education represents the size of technical/vocational education in relation to the whole of secondary education. The size of the disc for higher education is proportional to the number of students per 100,000 inhabitants and its bottom angle (width) is proportional to the value of the number of students in relation to student body in the last grade of upper secondary education. The size of the arrow leading from the secondary education block to the higher education block is fixed, and is not a quantitative representation of student flows.

35 Pre-primary education is not considered due to insufficient data.

36 The indicators in these diagrams are the weighted averages (a more populous country is more heavily weighted when calculating the average) of the indicators for countries for which all data is available.

37 For more details, see the appendices relating to calculation and interpretation of indicators. The indicators in these diagrams are weighted averages (a more populous country is more heavily weighted in the calculation of averages) of indicators for countries for which all data is available.

a) Changes in the Average African Pyramid

A look at the two average African pyramids (1990/91 and 2002/03) shows positive developments in access to all levels of education, but also a change in educational structure on the continent (in terms of increased student flow within and between stages). A more detailed analysis of the average pyramids reveals the three primary observations that follow:

1. Access to the first grade of primary education has grown substantially, but progress on survival has been slow

In 2002/03, while access to the first grade of primary schooling had become nearly universal on the continent (an average of 9 in 10 school-age children were in fact enrolled, compared to slightly over 7 in 10 children in 1990/91), completion of the elementary level (Dakar Goal No. 2) remained low. This was a consequence of student survival in a system that had barely changed over the period in question. In 12 years, completion of the cycle for the continent had risen by an average of only 10 percentage points. On average, 4 children in 10 still did not complete the primary cycle in 2002/03, giving an access rate of just 59% for the last grade of primary schooling as compared to 49% in 1990/91.

Overall, access to each cycle is growing, but student drop-out remain a major problem

This result shows once again that while the UPE Goal must still include improvement of access to the first grade in certain countries, (given the disparities that still persist; see the first part of this section) **efforts must be mainly focused on improving the survival rates of students within the system.** On average this survival rate has only risen from 60% in 1990/91 to 68% in 2002/03.

2. A transition structure that has evolved toward less selective access into secondary education.

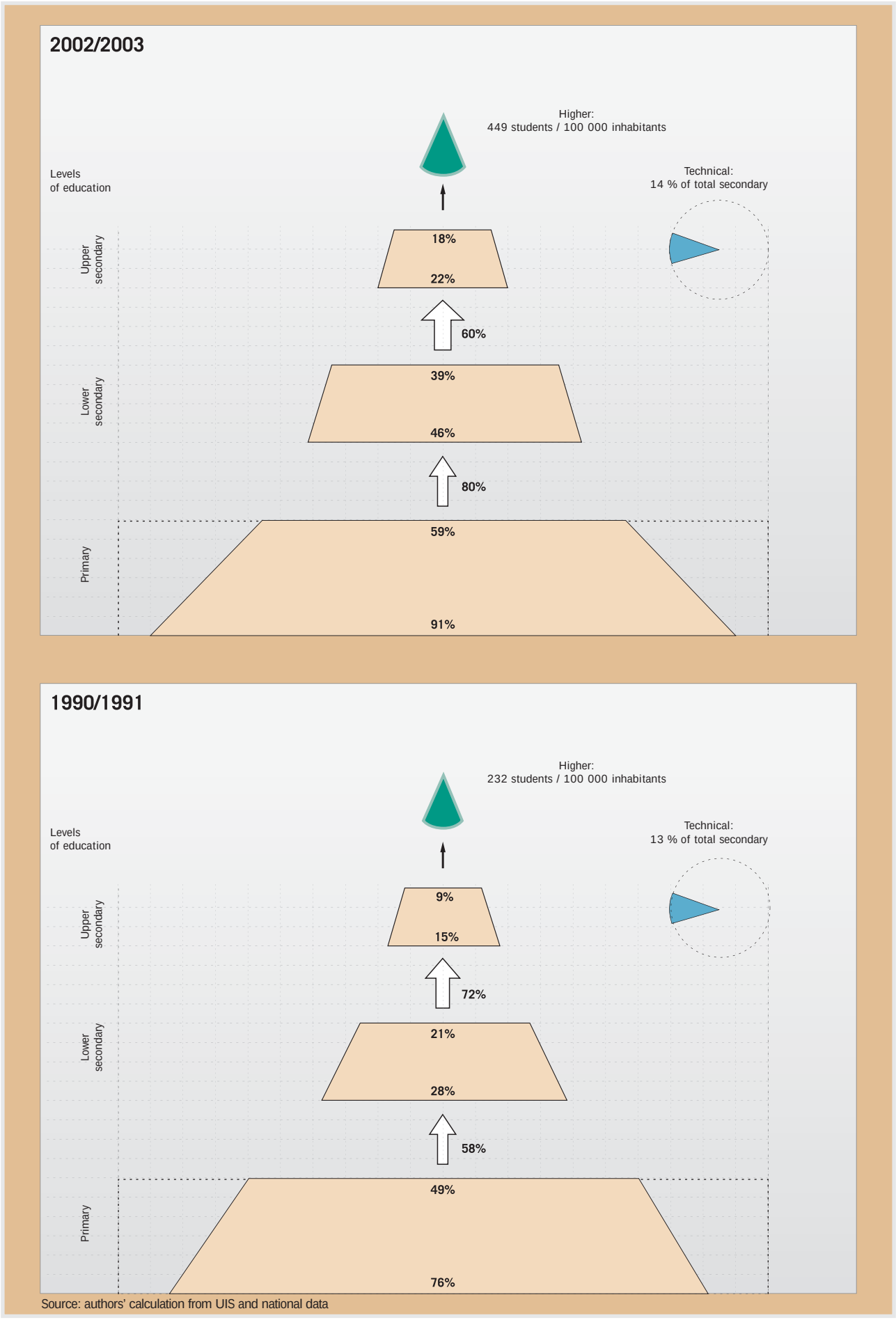
As with primary education, we see a change in schooling coverage in the post-primary levels. Everything points to the whole system being regulated from the bottom up in 1990/91. The choice (implicit or otherwise) was to let fewer students from primary education into lower secondary education, while allowing a larger proportion of students that had reached the end of lower secondary education (collège) access to upper secondary education (lycée). The secondary education cycle could then be considered as a block, in the same manner as primary education. It is possible that this choice was influenced by the limited capacity of the system to accommodate pupils in the secondary cycle.

In contrast, in 2002/03, the trend was more for regulation from the top downwards. The lower level tends to allow a larger proportion of students in the last grade of primary school access to lower secondary education. The transition rate from primary to lower secondary rose by more than 20 percentage points over the period, from 58% in 1990/91 to 80% in 2002/03. A lower proportion of students entered upper secondary education than in the past (transition rate from lower to upper secondary was 60% in 2002/03 versus 72% in 1990/91). This change, whether deliberately chosen by the decision-makers or a natural development, is doubtless the result of the growth in primary education and the non-regulation of entry into lower secondary education.

The individuals trend towards pursuing studies beyond primary school for students that have completed that level, and the desire of a considerable number of countries to extend universal enrolment to lower secondary education, could be the cause of a similar increase in the transition. In 2002/03, more students than in the past (both relatively and in the absolute) entered secondary education due to the increase in Primary Completion Rates and increased primary→lower secondary transitions.

Overall, survival is good in both cycles of secondary education. In the first cycle, the pseudo dropout rate (difference between the access rate to the first grade and the access rate to the

Diagram 2.1: Changes in the average African pyramid



Source: authors' calculation from UIS and national data

last grade) is 15%. Under current enrolment conditions in upper secondary education, 22% of young people in an average cohort enter the first grade of upper secondary, and 18% enter the last grade, giving a pseudo dropout rate of 4%.

Currently, 46% of school-age children are enrolled in the first grade of lowersecondary education (versus 28% in 1990/91), and 39% are enrolled in the last grade (versus 21% in 1990/91). **Education in lower secondary education (collège), whether measured at the outset or on completion, has gained 18 percentage points over the period, i.e. nearly double the growth recorded for primary completion (10 percentage points). While this growth is significant, it shows us the need to emphasise the priority for the primary level, particularly in countries that are farthest from reaching UPE.**

3. Access to the final levels of education is also less selective.

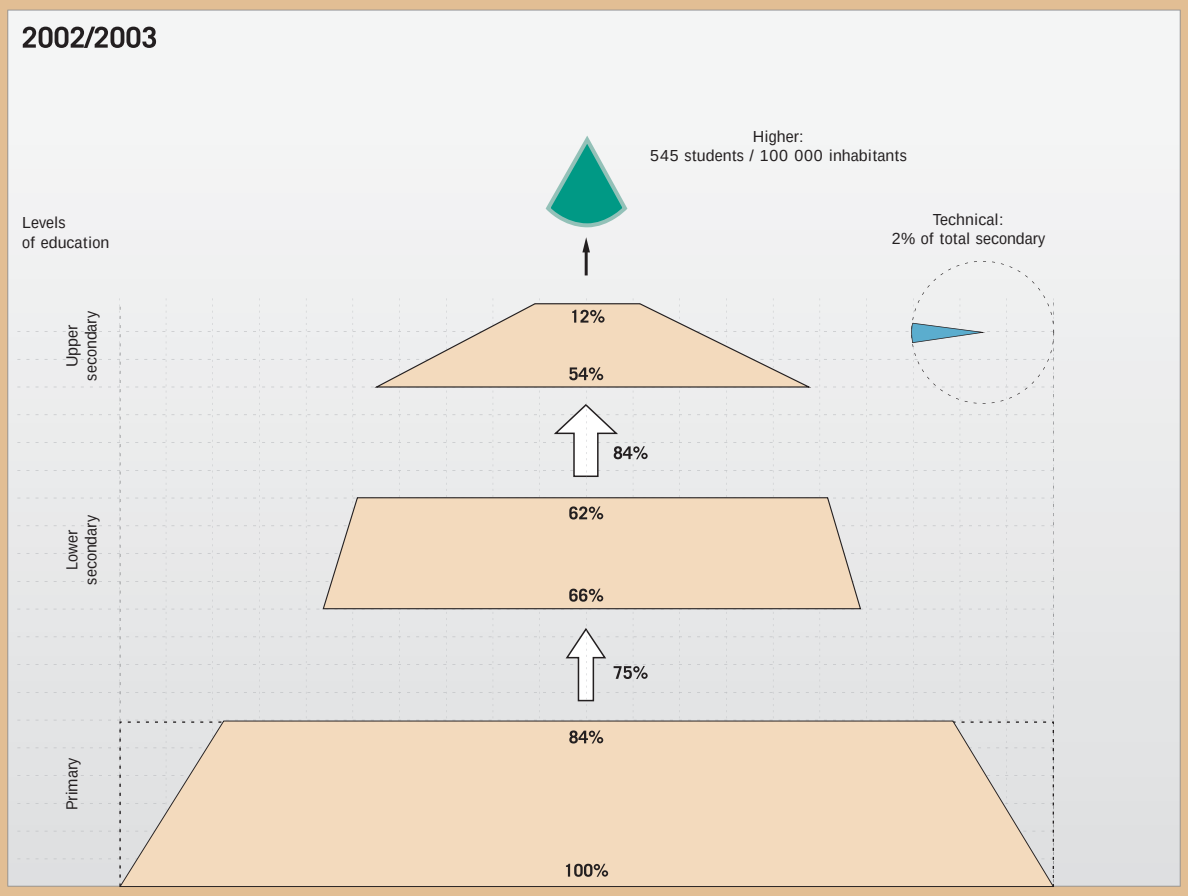
The percentage of students enrolled in technical/vocational education in the whole of secondary education has not really varied since 1990/91 (14% in 2002-03 versus 13% in 1990/91). **This means that the growth of student numbers in technical/vocational education has followed that of general education, i.e.r twice the growth observed in primary education.**
The average number of students in higher education per 100,000 inhabitants also nearly doubled over the period, rising from 232 to 449 in 2002/03.

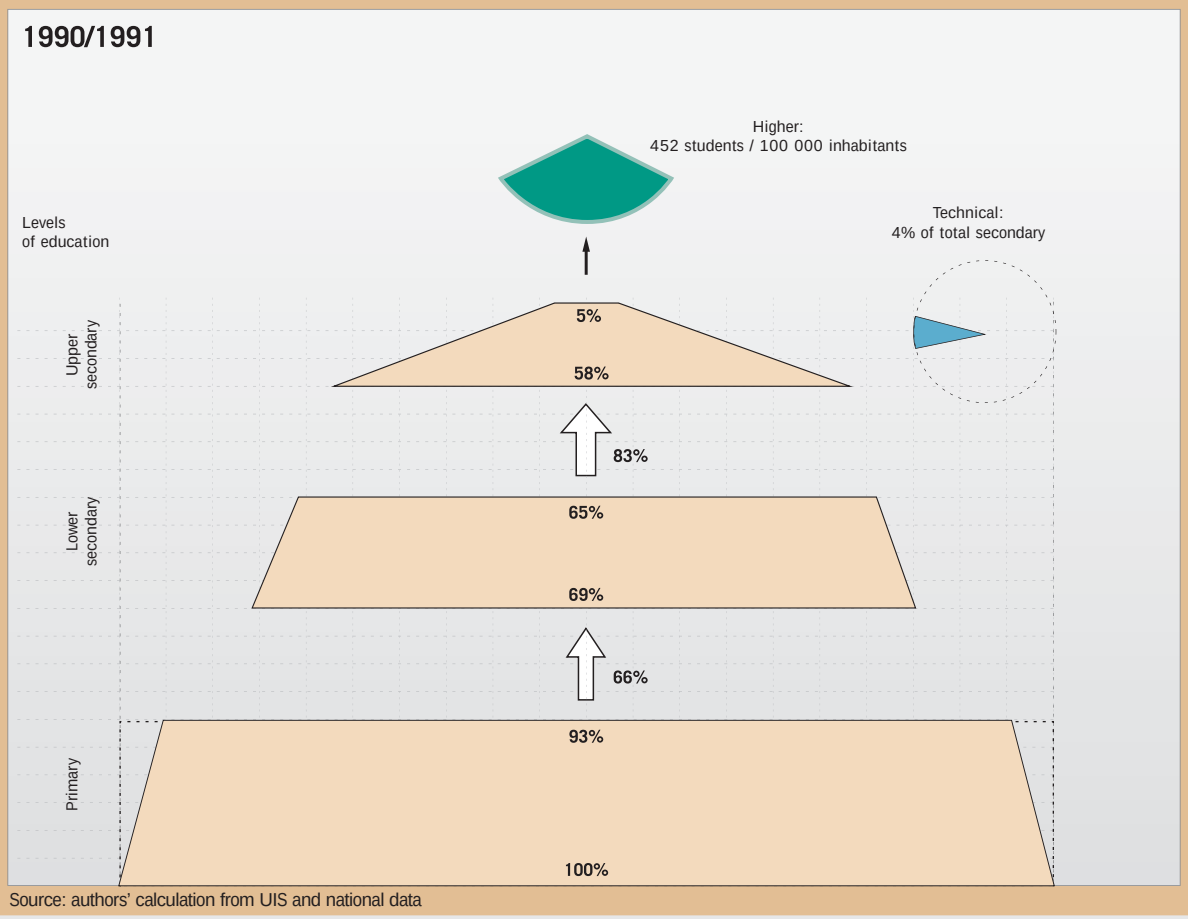
b) Average change in countries according to primary completion levels in 1990/91

To the extent that the objectives of an education system are a function of its progress in terms of the completion of the primary cycle, the countries have been grouped according to whether their 1990/91 Primary Completion Rate was below 50% (28 countries with a low PCR), between 50% and 75% (9 countries with average PCR), or above 75% (10 countries with high PCR). Some of the main features that characterise the average past and present structures of these groups of countries are described below:

Diagram 2.2: Changes in the average pyramid for countries with **high PCR** in 1990/91 (>75%)

In decreasing order of PCR for 1990-91: Mauritius, Seychelles, Zimbabwe, Zambia, Kenya, Botswana, South Africa, Namibia, Algeria, Egypt





Source: authors' calculation from UIS and national data

1. Countries with a 1990/91 primary completion rate above 75% (high PCR, Diagram 2.2)

The main observations concerning the development of the sector-wide structure in these countries are as follows :

• Changes in Primary Completion Rates vary widely between countries

Overall, countries with high PCR improve survival in the different cycles and regulate flows between cycles

While, on average, primary completion remains high in these countries, completion has regressed from 93% in 1990/91 to 84% in 2002/03. This is the result of declining survival rate in 3 of the 10 countries under consideration (Kenya, Zambia, and Zimbabwe). In the other countries where UPE has already been reached, it has remained stable (Mauritius), or else primary completion has increased (Botswana, Namibia).

• A clear growth in transition to lower secondary education

The fact that these countries have reached or nearly reached UPE has allowed them to focus on efforts in post-primary education and to increase the primary→lower secondary transition rate (from 66% to 75%). The transition rate between the two secondary stages has been maintained at a very high level (84%).

• Clear improvements in survival at the secondary level

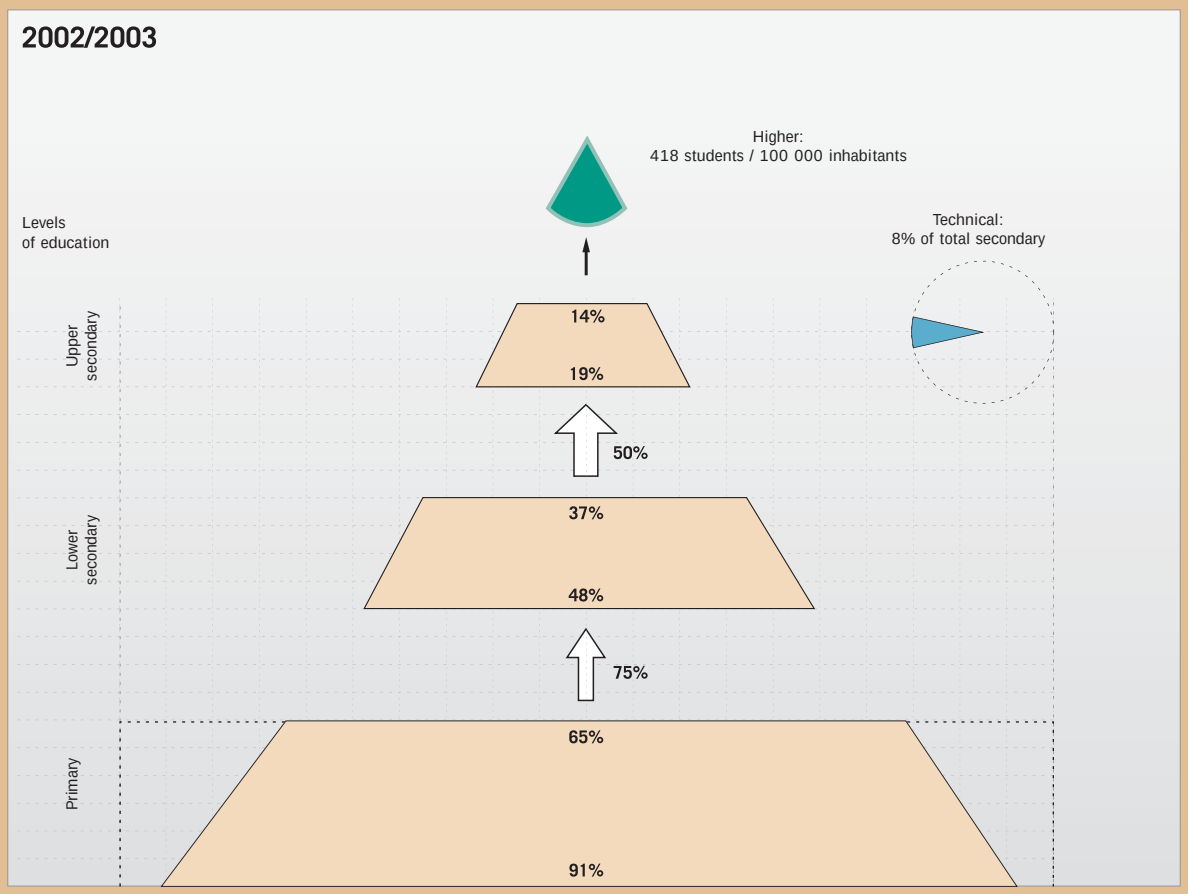
On average, survival in lower secondary education remains very good in these countries: of the 66% of children that enter lower secondary education, 62% complete it. For upper secondary education, where survival was very low in 1990/91, developments are quite positive although they are still far from reaching the desired levels (of the 54% of children who enter this cycle, only 12% complete it).

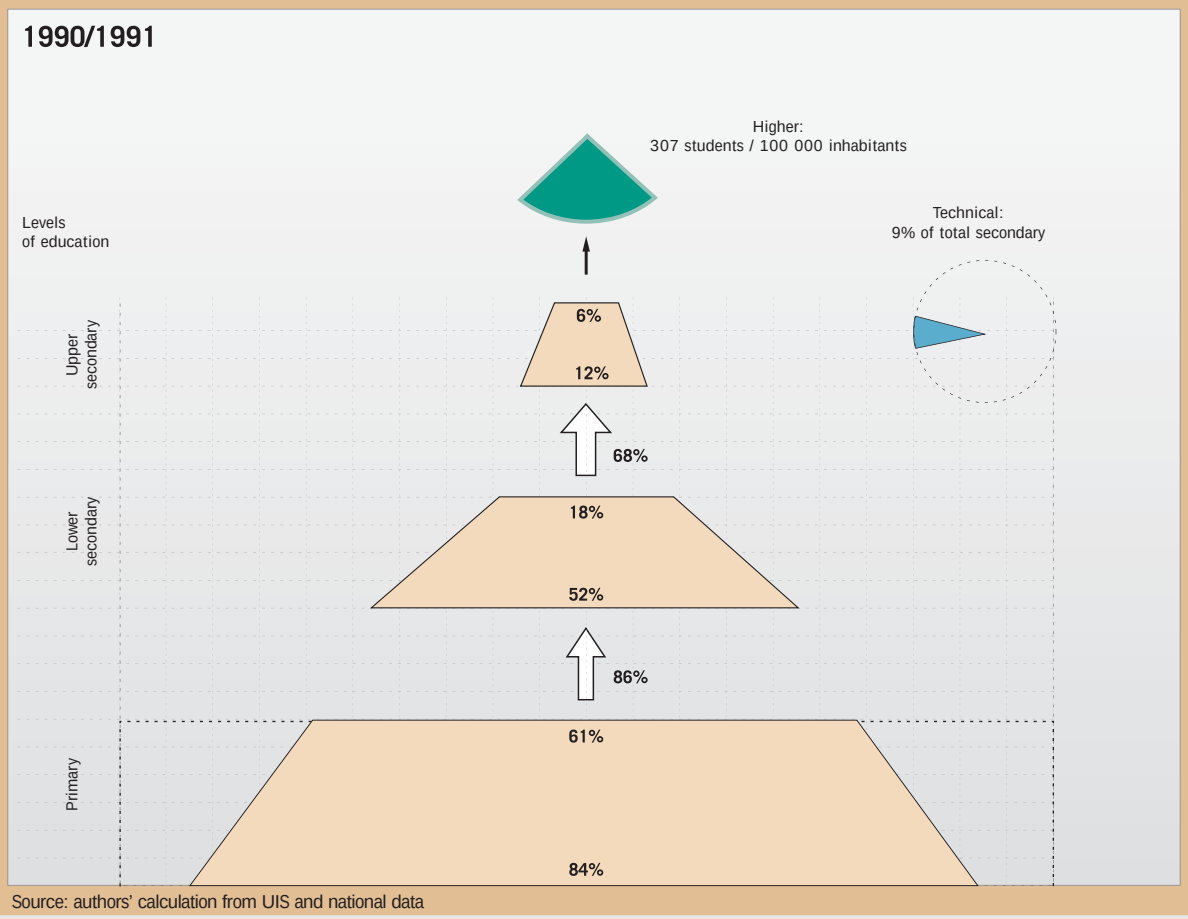
• Better-regulated entry into higher education

Higher education grew quantitatively over the period (from 452 to 545 students per 100,000 inhabitants), but this progress was slower than that observed for those who completed their secondary education (access rates into the last grade of secondary education more than doubled over the period studied, from 5% to 12%). This is to be encouraged to the extent that it supports a policy of regulated access into higher education, being (1) more in line with the quantitative employment needs of the economy (2) more in favour of quality (regulating quantity enables a greater allocation of resources per student).

Diagram 2.3: Changes in the average pyramid for countries with **medium PCR** in 1990/91 (between 50% and 75% PCR)

In decreasing order of PCR for 1990-91: Tunisia, Nigeria, Gabon, Swaziland, Congo, Ghana, Lesotho, Cameroon, Cape Verde





Source: authors' calculation from UIS and national data

2. Countries with a 1990/91 primary completion rate between 50% and 75% (medium PCR, Diagram 2.3)

On average, these countries are mainly characterised by:

- **Improved access to the 1st grade of primary education but a stagnant survival rate that hinders progress toward UPE**

In 2002/03, access rates to grade 1 had risen by 7 percentage points over the period, from 84% in 1990/91 to 91% in 2002/03. However, the survival of students did not follow the same pattern as access, which held back the progress toward primary level completion. Completion rates rose by only 4 percentage points over the period (from 61% to 65%, on average).

Countries with medium PCR have improved management of student flows and secondary survival but drop-out within the primary cycle remain the main obstacle to reaching UPE

- **Significant improvement in survival at the secondary level, combined with improved regulation of students flows between levels**

On average in these countries, transition rates between the main levels of education have decreased in favour of improved survival within each secondary cycle. This makes for considerable improvements in the internal efficiency of the system. For example, over the period, the transition between primary and lower secondary went from 86% to 75%, but the concomitant decrease in dropouts in lower secondary education (from 34% in 1990/91 to 11% in 2002/03) doubled the proportion of children that finish the cycle (up from 18% to 37%). Similar changes took place at the subsequent levels (transitions between lower and upper secondary and between upper secondary and higher education were lower, but survival rates were noticeably improved).

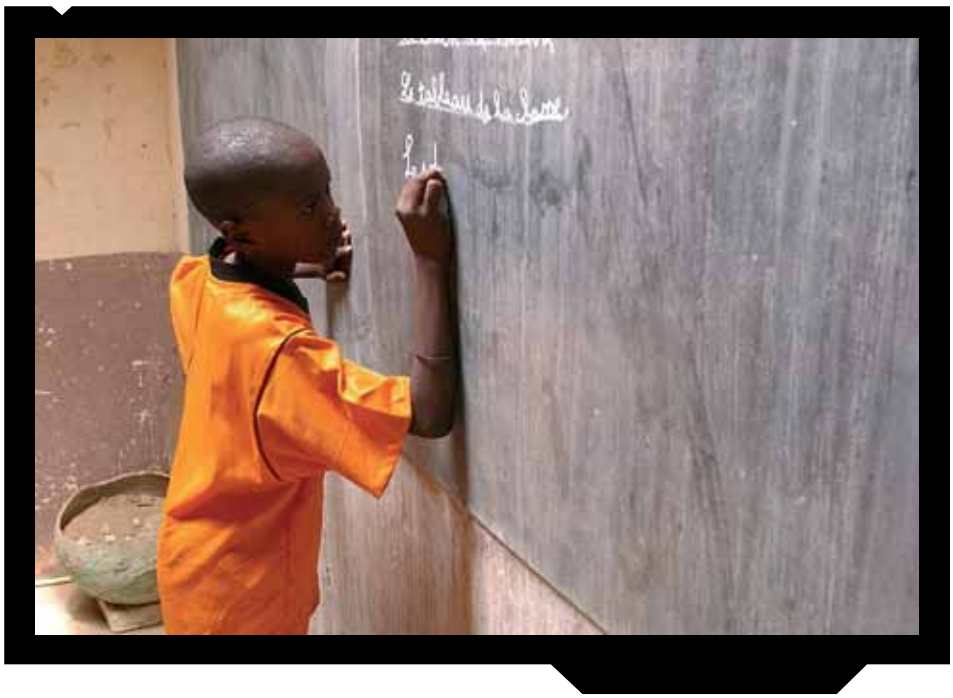
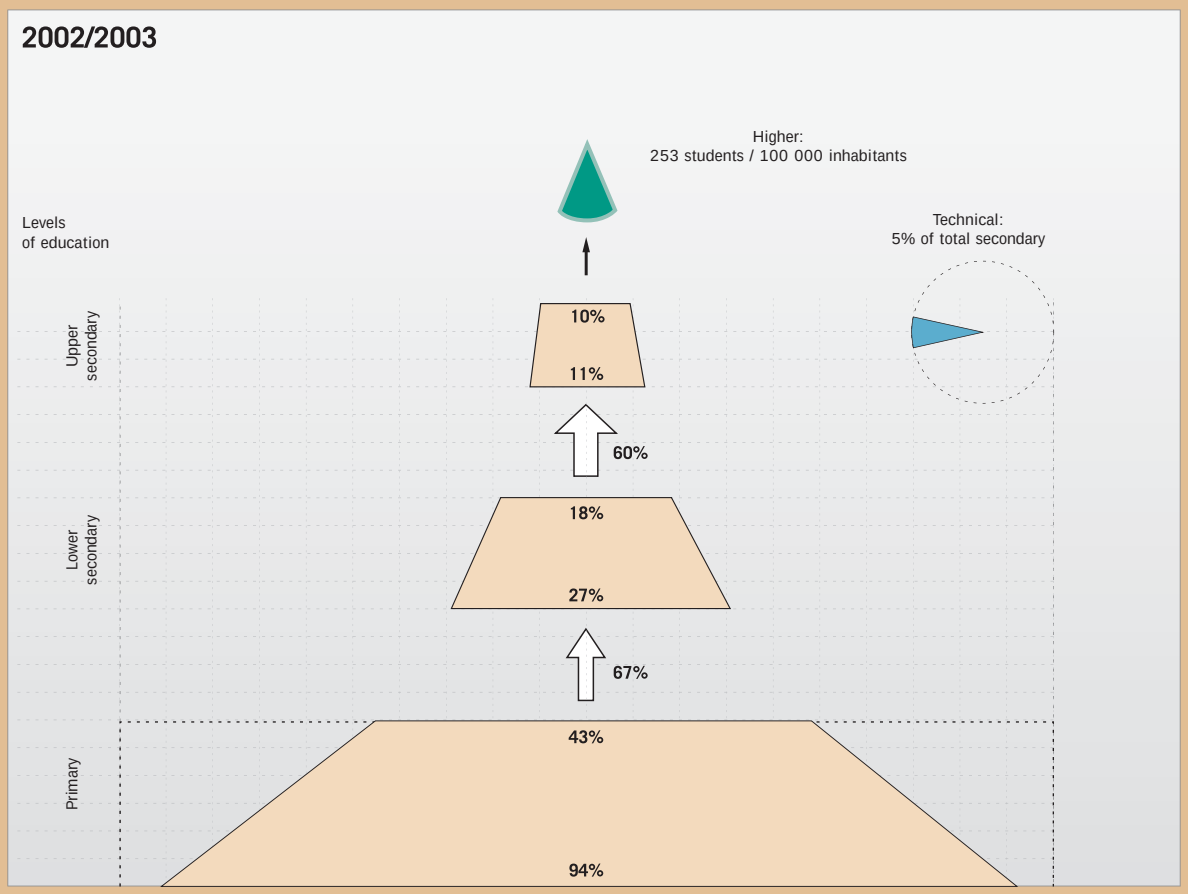
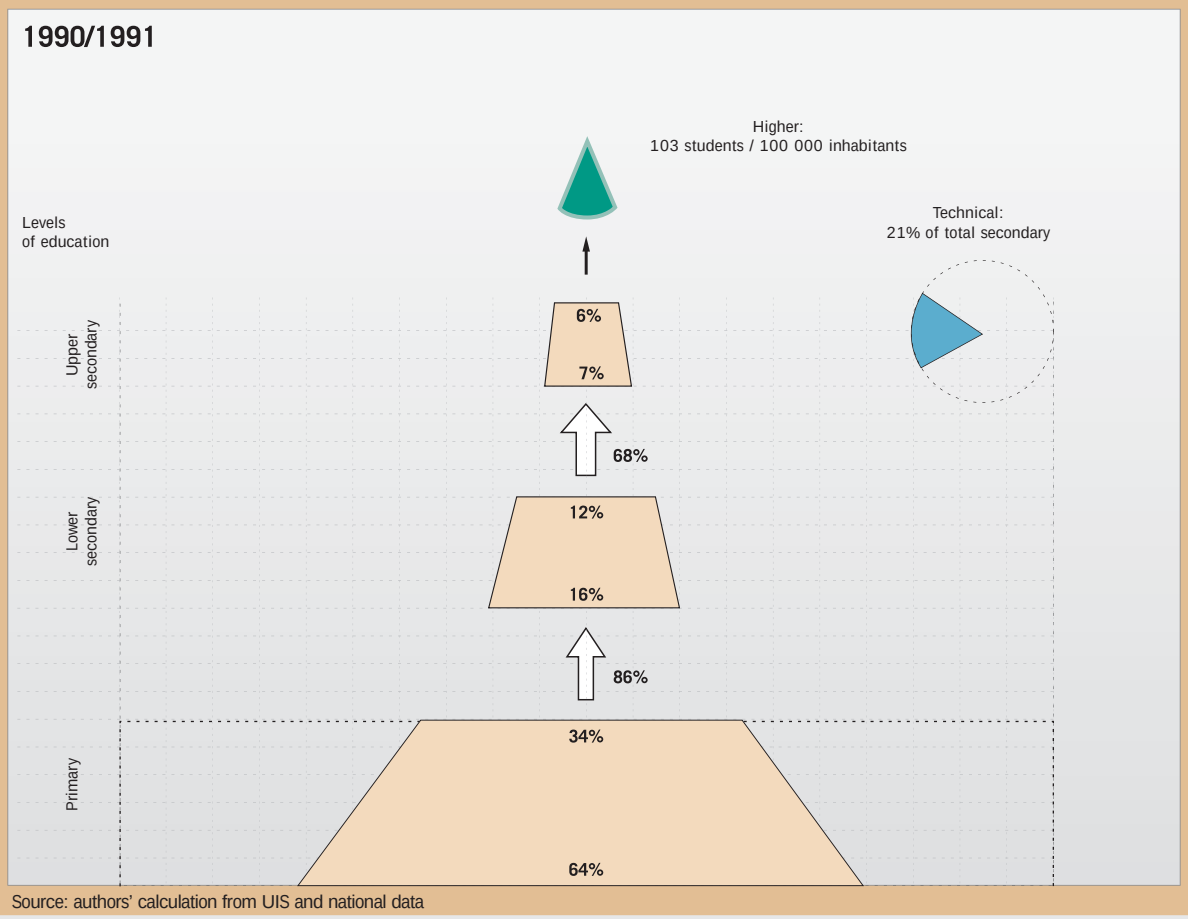


Diagram 2.4: Changes in the average pyramid for countries with low PCR in 1990/91 (<50%)

In decreasing order of PCR for 1990/91: Uganda, Tanzania, Morocco, DRC, Burundi, The Gambia, Sudan, Côte d'Ivoire, Senegal, Togo, Angola, Madagascar, Comoros, Rwanda, Mauritania, Malawi, Djibouti, CAR, Mozambique, Benin, Ethiopia, Eritrea, Burkina Faso, Chad, Niger, Guinea, Guinea-Bissau, Mali.





Source: authors' calculation from UIS and national data

3. Countries with a 1990/91 primary completion rate below 50% (Low PCR, Diagram 2.4)

The main observations concerning average growth in the sector-wide structure of these countries are as follows:

- **Almost universal access to the 1st grade, but low survival**

At the primary level, access to the first grade is almost universal: entry rate rose from 64% in 1990/91 to 94% in 2002/03 (or a 45% increase over the period). Unfortunately, survival of pupils within the cycle has not followed the same trend as access: in 2002/03 fewer than one child in two completed primary education, making the UPE goal of UPE by 2015 difficult to achieve for these countries if the dropout rate remains high.

Overall, countries with low PCR have low survival rates in primary and lower secondary. There is very little regulation of student flows between educational cycles

- **A lack of selection on entry to lower secondary education and a declining rate of survival within this cycle**

On average for the countries in this group, we observe a more than proportional increase in access to grade 1 of lower secondary education in comparison with the Primary Completion Rate, as shown by an average increase of 19 percentage points for the transition between the two levels. The current transition rate is 67%, compared to an average of 48% in 1990/91. Similarly to primary school, survival in lower secondary education has also declined compared to 1990/91 values. The result of these two factors is that while access rates to this cycle have risen by 11 points (from 16% to 27%), the proportion of children that finish lower secondary education has only increased by 6 points (from 12% to 18%). This demonstrates deterioration in the internal efficiency of the systems, as the returns (children finishing the cycle) do not match the increased investment.

- **Rapidly increasing numbers of students starting higher education due to a lack of regulation at entry**

At the same time as the period of comparative growth in the completion of the secondary cycle (from 6% to 10% over the period, or multiplication by a factor of 1.7), the number of students in higher education increased by a factor of 2.5 (the number of students per 100,000 inhabitants rose from 103 to 253). Overall, there does not appear to have been any regulation of student flows on entry to higher education, and it raises the question of how well the volumes of students correspond to the economic needs.

- **A drastic drop in technical/vocational education's share in secondary education**

Technical/vocational education's share of secondary education declined substantially from 21% of secondary students in 1990/91 to 5% in 2002/03.

c) Typology for the pyramids of countries with low 2002/03 primary completion rates - classification in 4 groups

Average pyramids must not obscure the sizeable differences between countries. To provide a closer analysis of the differences between the structures of education systems in these countries, it is worthwhile (1) taking a closer look at countries with a relatively low PCR (below 60%) and (2) organising them into different groups, based on different sector-wide characteristics.

On the basis of the indicators that make up the pyramid (access rates, survival, completion of different cycles, and transition or pseudo transition rates between cycles), we can use statistical methods[38] to analyse the differences and similarities, and thus to group the countries into relatively homogeneous categories. Countries with a PCR below 60%, for which recent,

38 This is a data reduction analysis (a method which studies correlations between the different indicators and develops new synthetic indicators, providing fuller explanations of the differences between countries). This analysis is combined with an ascending hierarchical classification (a method which uses the synthetic indicators developed by factorial analysis to classify countries into groups so as to maximise the differences between groups and minimises the differences within groups).

consistent data is available, can be grouped as shown below[39]. The country in italics is the most representative of the group. The other countries are ranked in decreasing order of their proximity to the average for the group. The average pyramid is presented for each group (Diagrams 2.5, 2.6, 2.7, and 2.8).

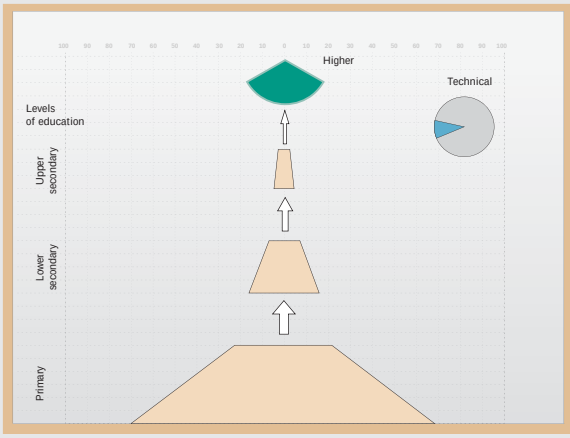
There are striking differences in the structures of different countries far from reaching UPE. Some structures are more efficient than others.

Table 2.7: Pyramids «under construction»: *CAR*, Burkina Faso, DRC[40], Niger, Mali, Djibouti

Main Characteristics	Group Average (%)	Average Countries with PCR <60%
Very low access to the grade 1 (AIR)	52.4	80.5
Very low completion of the primary cycle (PCR)	30.3	41.5
Very undeveloped secondary education (GER)	14.7	23.1
Low transitions between lower and upper secondary education (Transition Rate)	52	62.7
Relatively undeveloped higher education (number of students per 100,000 inhabitants)	143	299

Source: authors' calculation from UIS and national data

Diagram 2.5: Pyramids «under construction»



Source: authors' calculation from UIS and national data

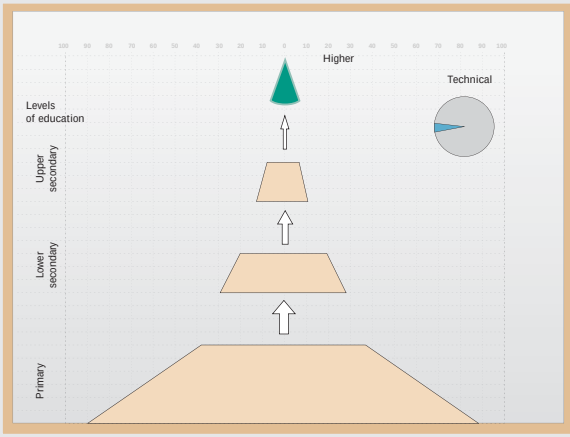
These countries will need to prioritise **improving access to primary school, while seriously tackling the issue of survival** (within the average for other countries, hence insufficient to achieve UPE).

Table 2.8: «Eiffel Tower» pyramids: *Chad*, Angola[41], Mozambique, Senegal, Madagascar, Guinea-Bissau, Mauritania, Ethiopia

Main Characteristics	Group Average (%)	Average Countries with PCR <60%
Quasi-universal access into grade 1 (AIR)	95.2	80.5
Very low survival in primary cycle (Survival Rate)	49.5	66.3
Technical/vocational education slightly lower than the average	3.2	7.9

Source: authors' calculation from UIS and national data

Diagram 2.6: «Eiffel Tower» pyramids



Source: authors' calculation from UIS and national data

39 Among the 28 countries with a PCR of below 60, the following countries were removed from the rankings due to unavailable or incoherent data: Sierra Leone, Liberia.

40 For the DRC, the transition rate from the first to second cycles of secondary education, the secondary GER, and the ratio of secondary students in technical education were not available.

41 For Angola we do not have information on the percentage of secondary students in technical education.

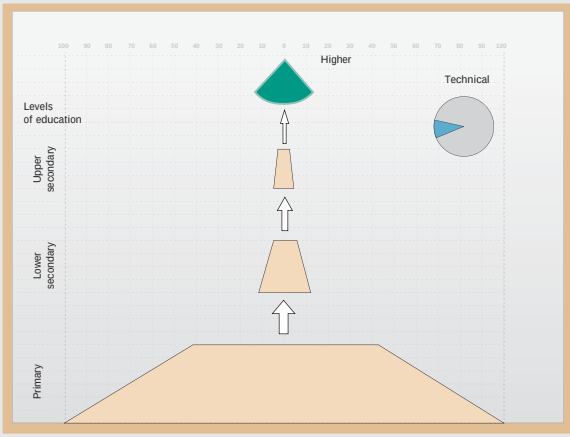
These countries will certainly need to make **primary school survival a priority**, as survival is the current impediment to UPE. Depending on the country and the areas inside each country, this will take place **either through supply policies** (adding more complete primary schools) **or through demand policies** (raising of awareness of different communities, reducing repetition rate, etc.), or through both methods[42].

■ Table 2.9: «Aztec» pyramids: *Burundi*, Rwanda, Tanzania[43]

Main Characteristics	Group Average (%)	Average Countries with PCR <60%
Quasi-universal access into grade 1 (AIR)	95.5	80.5
Undeveloped secondary education (GER)	13.6	23.1
Fairly low primary→secondary transition (Transition Rate)	37.7	69
Technical/vocational education slightly higher than the average	10.4	7.9

Source: authors' calculation from UIS and national data

■ Diagram 2.7: «Aztec» pyramids



Source:
authors' calculation from UIS and national data

These countries are mainly characterised by two factors: **A below-average primary→secondary transition rate**, evidence of **greater regulation of student flows, and a higher proportion of technical/vocational education at the secondary level.**

■ Table 2.10: «Toboggan» pyramids: *Guinea*, Côte d'Ivoire[44], Zambia, Comoros, Sudan, Congo, Eritrea, Gabon, Benin

Main Characteristics	Group Average (%)	Average Countries with PCR <60%
Slightly higher Primary Completion Rate (PCR)	51.7	41.5
Higher primary→secondary transition (Transition Rate)	85.4	69
Comparatively better-developed secondary education (GER)	31.7	23.1
Better-developed higher education (number of students per 100,000 inhabitants)	422	299

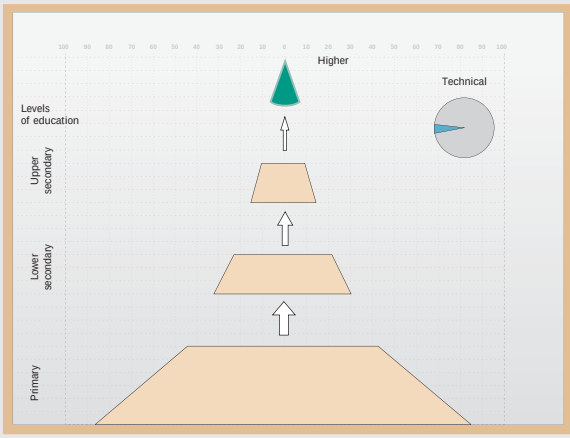
Source: authors' calculation from UIS and national data

42 For more information on the best ways to improve survival, see the example of Senegal in Amelewonou et al (2004).

43 Information on secondary GER in Tanzania is not available.

44 Secondary GER is not available for Côte d'Ivoire.

Diagram 2.8: «Toboggan» pyramids



Source:
authors' calculation from UIS and national data

These countries present the most «continuous» pyramids; the education system loses students throughout all levels of education, both within each cycle and between the educational cycles. There is no management of student flows between cycles. The system and the individuals in it are the primary decision-makers. These countries would be well advised to **1) take steps to increase survival in the primary cycle in order to achieve UPE, and 2) implement a flow management policy in order to produce a more balanced educational pyramid, which will be more effective in the fight against poverty and which is better adapted to a limited job market (universal base and terminal education levels in accordance with the labour market).**

2.2 Current dynamics: on track for UPE ?

The Dakar Framework for Action places primary education at the very heart of the Education for All goals. This level of education is also of capital importance in terms of its impact on social and economic development (Section 1)-particularly in African countries, where the returns for primary education are much greater than those for other levels. For this reason, **primary education must be a priority in national education policies.** What is the current situation? Will the trends observed help Africa achieve the Dakar Goal by 2015 ?

This section will attempt to analyse the reality of this priority by firstly examining comparative changes in pupil numbers in the different cycles. The question of managing flows between educational cycles will then be introduced, before concluding with a forecast of primary completion rates in 2015, given current enrolment conditions.

2.2.1 Changes in pupils' number: a priority with little impact on primary education

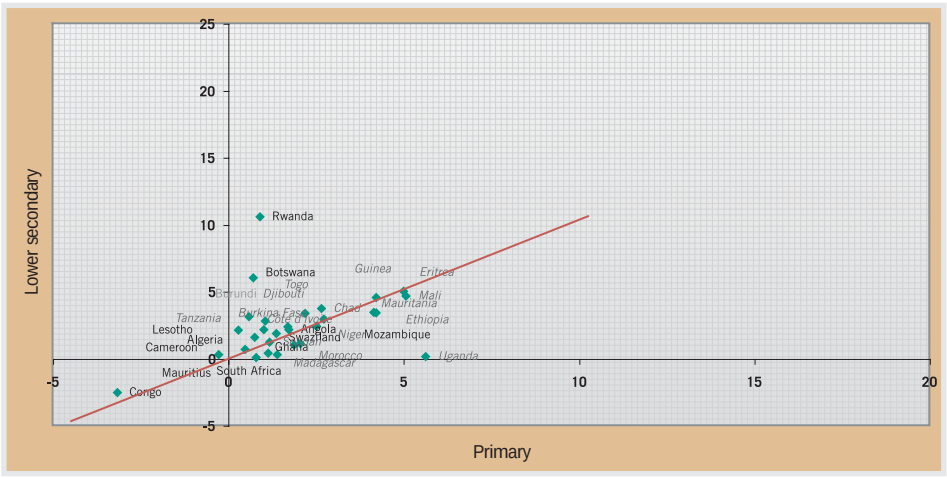
The review of the situation in 2000 showed that the Jomtien goals had not been achieved. Have the Member States prioritised action for primary education? To answer this question, we can compare the growth rate in student numbers within each educational cycle, and compare it with that for primary education. Section 3 will examine primary education's share of the resources that are allocated to education in relation to what is given to other levels.

Graphs 2.14 and 2.15 show changes in pupil numbers in primary education and in lower secondary schooling between 1990/91 and 1998/99 respectively (i.e. two years before the

deadline for the Jomtien Goals). The next chart compares 1998/99 and 2002/03. Graphs 2.16 and 2.17 present the same analysis for primary/upper secondary education. Lastly, Graphs 2.18 and 2.19 make the comparison between primary/higher education.

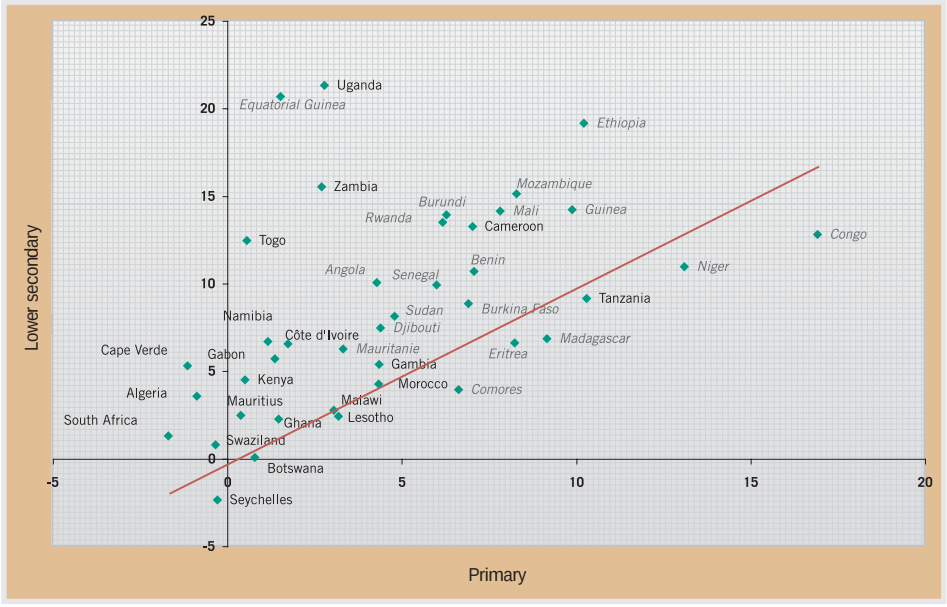
Countries found on the oblique line of each graph are those for which the expansion of primary education between the two dates was the same as for the other cycle in question. Those below the line showed greater development in primary education than in the other levels of study, and the reverse is true for countries found above the line.

Graph 2.14: Average annual variation in number of pupils in primary education and in lower secondary education between 1990/91 and 1998/99 (in %)



Source:
authors' calculation from UIS and national data.

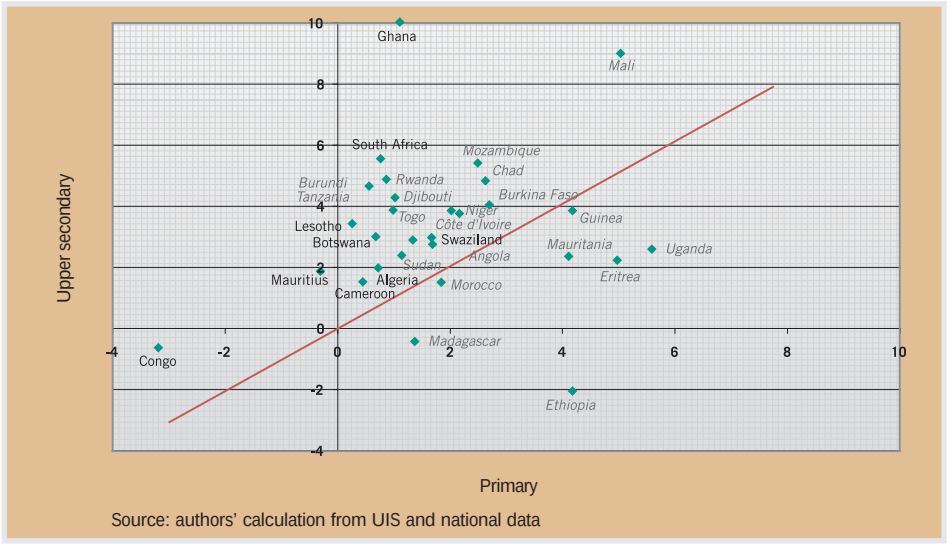
Graph 2.15: Average annual variation in number of pupils in primary education and in lower secondary education between 1998/99 and 2002/03 (in %)



Source:
authors' calculation from UIS and national data.

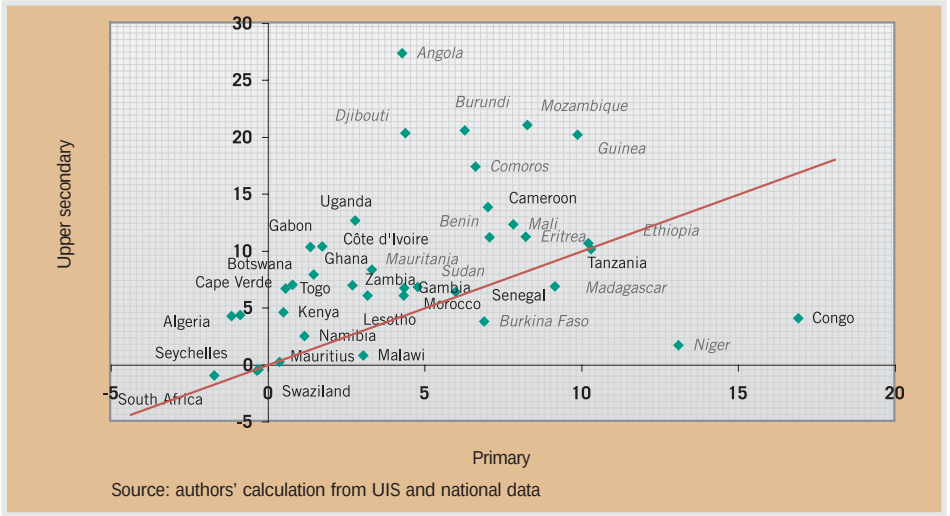
A dynamic comparison between cycles in student body growth does not show primary education as a priority. This trend is not improving, despite the Dakar Forum's commitments to do so.

Graph 2.16: Average annual variation in number of pupils in primary education and in upper secondary education between 1990/91 and 1998/99 (in %)



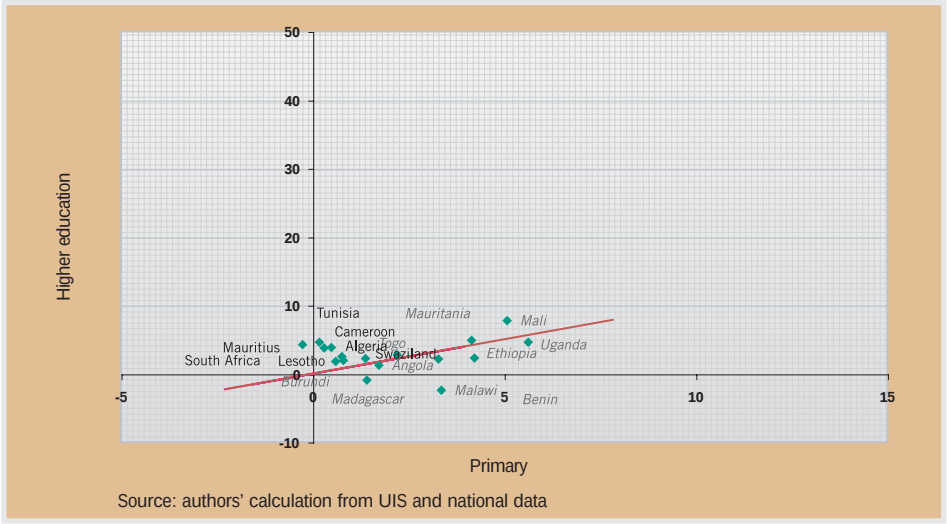
Source: authors' calculation from UIS and national data

Graph 2.17: Average annual variation in number of pupils in primary education and in upper secondary education between 1998/99 and 2002/03 (in %)



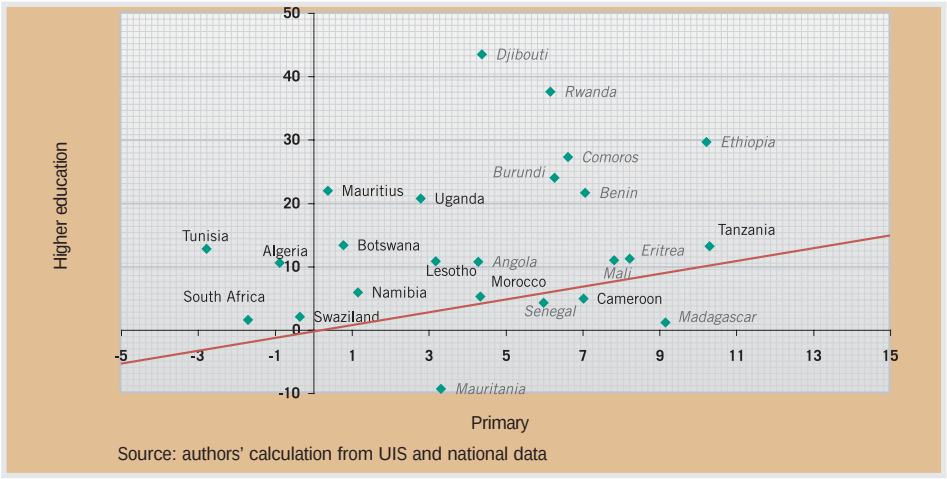
Source: authors' calculation from UIS and national data

Graph 2.18: Average annual variation in number of pupils in primary education and in higher education between 1990/91 and 1998/99 (in %)



Source: authors' calculation from UIS and national data

Graph 2.19: Average annual variation in number of pupils in primary education and higher education between 1998/99 and 2002/03 (in %)



Source: authors' calculation from UIS and national data

The analysis is similar for these three series of graphs. **Comparing the primary cycle with the post-primary cycles generally shows primary education to be lagging behind in terms of development**. For countries found below the bisecting line, primary schooling developed more quickly than for the other educational cycle in question. However, on the whole, these countries are few, whether we refer to lower secondary, upper secondary, or higher education. While this situation would be understandable in countries approaching Universal Primary Education-which can therefore devote greater attention to the other educational cycles-it is less easily justified for countries that are far from reaching this goal (see: conclusions in Section 1). However, stronger growth in post-primary education is still observed, even when we limit our study to countries that are a long way from achieving UPE (countries with PCR below 50% at the start of the period, shown in grey on the graph).

Countries with a low completion rate, and where the numbers of primary pupils increased more slowly than for the other levels of education, were even more numerous for the period

1998/99 to 2002/03 (cf. Graphs 2.15, 2.17, and 2.19) than for the period between 1990/91 and 1998/99. **The gap between the pace of growth in the primary sector and that in the other educational cycles is now even greater than in the past.**

While the comparative analysis of the 1990/91 to 1998/99 and the 1998/99 to 2002/03 periods shows the same tendency: an absence of true priority status for primary education, the results are even more striking for the more recent period. There were more countries with low Primary Completion Rates making better progress in their post-primary levels between 1998/99 and 2002/03 than between 1990/91 and 1998/99. Demographic growth and the (slow) increase in primary completion rates (without improved regulation of flows between cycles) may provide a partial explanation of this situation.

2.2.2 Flow management: survival and transition

Table 2.11, taken from Alain Mingat's «Issues of Financial Sustainability in Developing Secondary Education in Sub-Saharan African Countries» (2004d), shows estimated changes in the growth of pupil numbers, using the hypothesis of UPE in 2015 and depending on two scenarios: i) maintaining primary→lower secondary and lower→upper secondary transition rates between now and 2015, and ii) increasing these rates to 100%.

Table 2.11: Number of secondary pupils in 2015 according to several scenarii in 10 countries

Country	Primary Completion 2001-2015	Lower secondary					Upper secondary						
		2001 (1000)	Maintained Transition Rate (a)		Transition Rate=100 % (b)		2001	(a) + Maintained Transition Rate		(b) + Maintained Transition Rate		(b) + Transition Rate = 100 %	
		Num X	Num	Num /X	Num	Num /X	Num Y	Num	Num /Y	Num	Num /Y	Num	Num /Y
Togo	1.8	210	412	2	507	2.4	42	77	1.8	94	2.2	214	5.1
Cameroon	2.5	468	1 262	2.7	2 233	4.8	151	345	2.3	620	4.1	1 108	7.3
Mozambique	2.8	327	1 040	3.2	1 679	5.1	179	701	3.9	1 326	7.4	2 493	13.9
Benin	2.8	222	862	3.9	1 078	4.9	41	154	3.8	194	4.7	552	13.5
Senegal	3	210	717	3.4	1 353	6.4	62	190	3.1	358	5.8	667	10.8
Mauritania	3	45	181	4	324	7.2	29	82	2.8	140	4.8	162	5.6
Rwanda	3.5	96	368	3.8	884	9.2	57	236	4.1	560	9.8	740	13
Madagascar	3.6	316	1 350	4.3	2 150	6.8	66	309	4.7	480	7.3	930	14.1
Mali	4.9	181	806	4.5	1 203	6.6	58	215	3.7	321	5.5	886	15.3
Niger	7.9	85	1 026	12.1	1 555	18.3	17	132	7.8	200	11.8	694	40.8
Total	3.6	2 160	8 024	3.7	12 966	6	702	2 441	3.5	4 293	6.1	8 446	12

Source: Mingat (2004d).

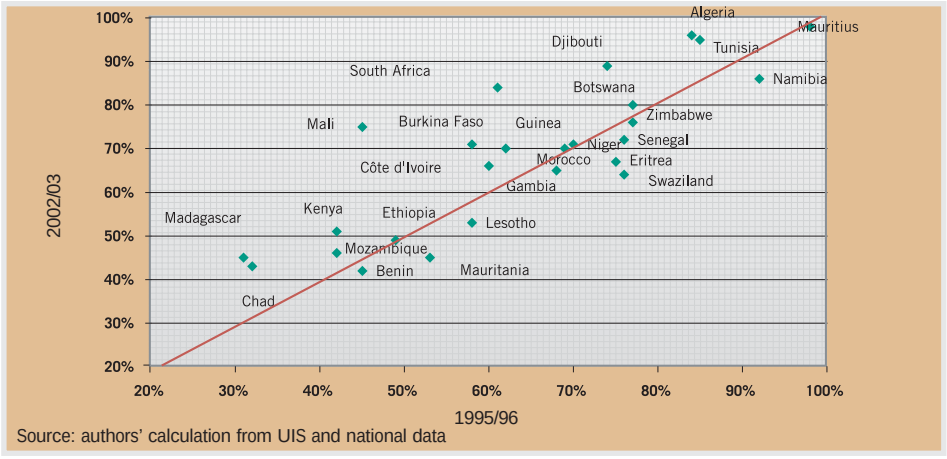
For all 10 of these countries, maintaining both primary→lower secondary and lower→upper secondary transition rates would involve multiplying pupil numbers in both levels by 3.7 and 3.5 respectively, while volumes of pupils in primary education will already have to be multiplied by 3.6 to achieve Universal Primary Education. **From a logistical and financial perspective, the simultaneous development of these three educational cycles seems unrealistic.** The scenario of universalising lower secondary education even implies multiplying pupil numbers at that level by a factor 6.
It is imperative that the regulation of flows between the different cycles be made a part of future educational policies, as will be seen in Section 3.

This table also reminds us of the **importance of relating survival within an educational cycle** (UPE implies 100% survival in primary education) to **transition from that cycle to the next one**.

2.2.2.1 Changes in Primary Survival and in Transition to Secondary School

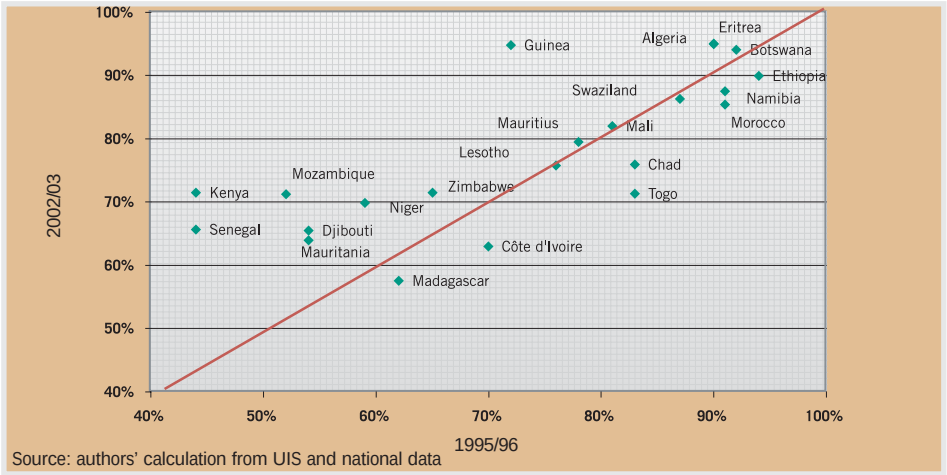
Graph 2.20 illustrates primary survival rates in 1995/96 and 2002/03 (or close). Next, we will examine the situation in countries where completion rates for 2002/03 (or close) were below 75%.

Graph 2.20: Changes in primary survival rate between 1995/96 and 2002/03



Source: authors' calculation from UIS and national data

Graph 2.21: Changes in primary-secondary transition rates between 1995/96 and 2002/03



Source: authors' calculation from UIS and national data

Stagnating survival in primary school and increasing primary→secondary transition

Survival rates showed little improvement in the majority of countries between 1995/96 and 2002/03. Some countries, such as Benin, Mauritania, Eritrea, Lesotho, Swaziland, Senegal, and Namibia, have even seen a decline. On the other hand, countries such as Algeria, Burkina Faso, Djibouti, Mali, and South Africa have made great improvements in survival. To a lesser extent, Chad, Madagascar, and Kenya, despite a currently low level, actually made progress.

Given that above and beyond access to primary school, it is essential for students to complete the cycle, **any stagnation or even a decline in a low survival rate is not compatible with the need to prioritise primary schooling.**

In contrast to survival rates, we can see that transition rates have, in general, increased, particularly in countries where they were below 70% in 1995/96. The exceptions are Côte d'Ivoire and Madagascar, where the transition rates declined. For the other countries (i.e., those where the transition rate was above 70% in 1995/96), this rate has remained relatively stable, except for Togo, Morocco, Namibia, and Ethiopia, where transition levels remain high, despite a fall.

2.2.2.2 Survival versus transition

Due to lack of student flow management, education systems tend to suffer from individual pressures.

The relationship between primary survival and primary-secondary transition (Graph 2.22) is very weak. Countries with low survival can have an equally low transition rate (Kenya), or a very high one (Congo). However, high survival rates are generally associated with relatively high transition rates.

It is important to include both survival and transition when examining the issue of flow management. Table 2.12 provides a succinct presentation of certain characteristics of two different, hypothetical education systems.

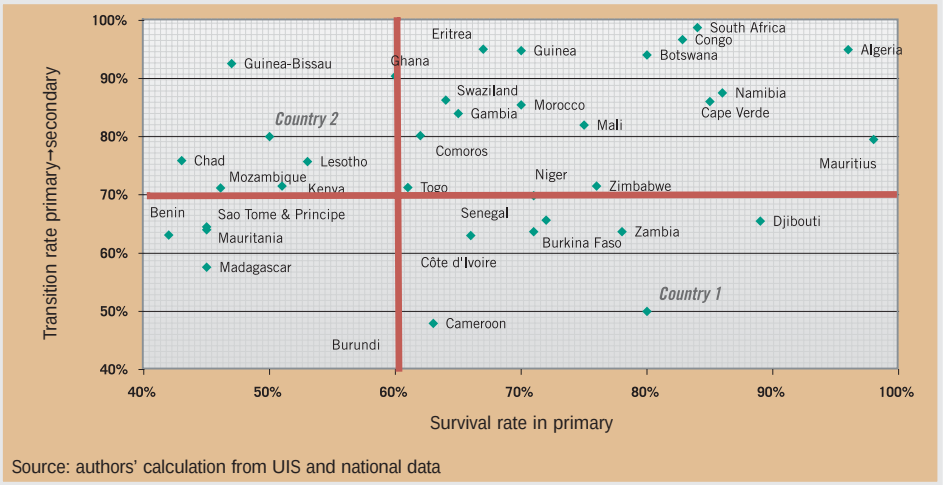
Table 2.12: Flow regulation - hypothetical examples

	Number of children in grade 1 of primary education	Primary survival rate	Number of students in the last grade of primary school	Primary-secondary transition rate	Number of students sntering secondary school	Simulated percentage of long-lasting literate children from the system[45]
Country 1	100	80%	100*80%=80	50%	80x50% = 40	62.8%
Country 2	100	50%	100*50%=50	80%	50x80% = 40	52%

Country 1, with a primary school intake of 100 children, is characterised by fairly high survival (80%) and a 50% primary-secondary transition rate. Country 2 also has a primary school intake of 100 children, but is characterised by a poor survival rate (50%) and a high, 80% transition rate between primary and secondary schooling. The result is that each system allows 40 children to enter secondary education. Nevertheless, the first country has implemented a policy that emphasizes primary completion, and then regulates access into secondary school. In contrast, primary dropouts are frequent in the second country, so completion is low. However, even when these children went to school, they did not reach the end of primary school and thus had less chance of becoming permanently literate, as shown in the last column on the table. The first system enables a 10% increase in literate children compared to Country 2.

In system 1, only 20 children out of 100 fail to reach the end of primary school. In system 2, this number is 50. This system, which is ineffective because of its high dropout rate, also produces more potential illiterates.

Graph 2.22: Primary survival rates and transition from primary to lower secondary education in 2002/03 (or Close)



Source: authors' calculation from UIS and national data

45 We simulate this rate by taking the percentage of children in an average country who will be literate after one, two, six, etc. years as our reference (average calculated for 22 countries with available MICS survey data). We suppose that the dropout rate is identical in each year of the cycle.

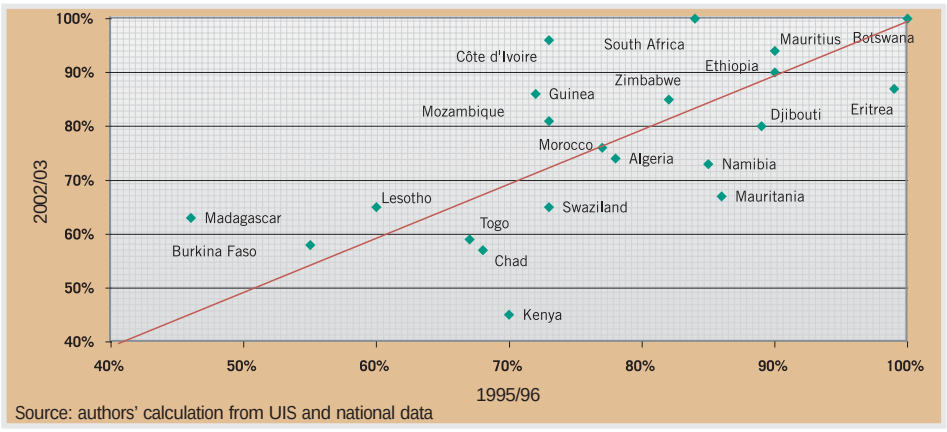
Graph 2.22 shows us which countries are close to the second category; i.e., having low survival and high transition rates into lower secondary education.

Guinea-Bissau, Ethiopia, Kenya, Lesotho, Mozambique, and Chad are among the countries that have high primary-secondary transitions despite low primary survival. Could education policies in these countries be considered to be at odds with prioritising primary education? Overall, it might have been preferable to implement measures designed to improve primary survival, without adversely affecting the development of secondary education.

2.2.2.3 Managing flows in secondary education

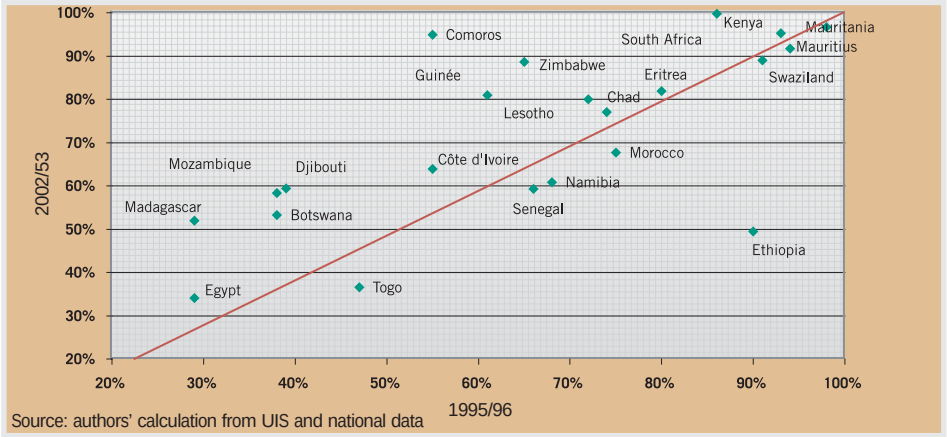
We can perform the same type of analysis for the relationship between lower and upper secondary education

Graph 2.23: Changes in survival rates for lower secondary education between 1995/96 and 2002/03 (or close)



Source: authors' calculation from UIS and national data

Graph 2.24: Changes in the lower→upper secondary transition rates between 1995/96 and 2002/03 (or close)

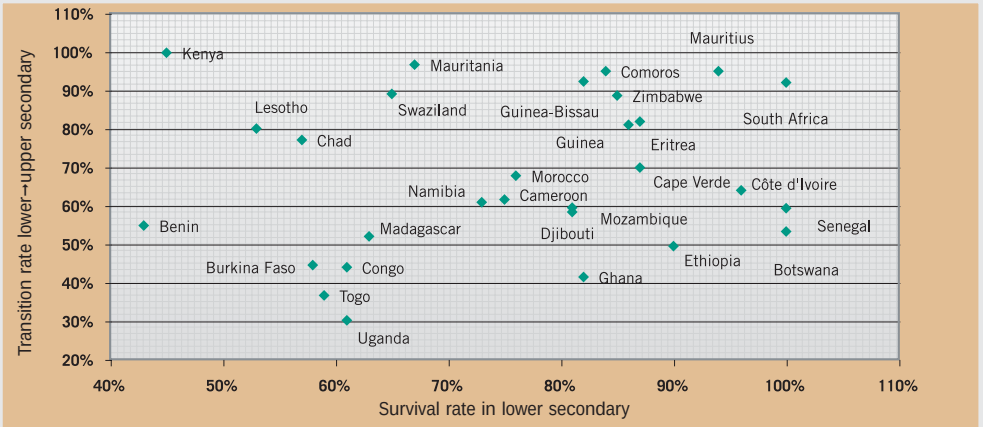


Source: authors' calculation from UIS and national data

Simultaneous study of Graphs 2.23 and 2.24 reveals that lower→upper secondary **transition rates have increased more quickly than the survival rates within lower secondary education** (there are more countries below the diagonal in the second graph). Survival rates within lower secondary have even shown an overall decline, since they have decreased for the majority of countries for which data were available. This is similar to the results in the cycle below, and is a sign of unregulated flows. The growth in enrolments (and the shape of the educational pyramids) seems to depend more on the effects of individual pressure than on the collective interest shown by public policies for the management of student flows.

Student flow management is just as low for the lower→upper secondary transition

Graph 2.25: Lower secondary education survival rates and lower→upper secondary transition rates in 2002/03 (or close)



Source: authors' calculation from UIS and national data

Graph 2.25 provides a look at lower secondary education survival in 2002/03 and lower-upper secondary transition, and confirms the previous observations. The link between these two values is very weak, or even non-existent. Thus, countries like Uganda and Swaziland have a survival rate in lower secondary education of nearly 60%, but the former has a transition rate of 30% and for the latter it is 89%.

Countries like Mauritania, Lesotho, Burundi, Kenya, and Swaziland are characterised by low survival rates (below 70%), and relatively high transition rates to upper secondary education (above 70%). However, rather than rationalising entry into upper secondary, a system that encourages survival at lower secondary education, and thus completion, seems preferable to one in which there is a high number of dropouts, for reasons of both internal efficiency and reducing the waste of public resources. Graph 2.25 also shows us that overall, transitions tend to stabilise at around 70% as survival rises, which implies that, over time, prioritising survival in lower secondary education leads to increased transition rates when the latter are low.

2.2.3 On track for Universal Primary Education in 2015 ?

The Dakar Forum reaffirmed the priority of Universal Primary Education by 2015. But will current trends in access and survival allow countries to achieve universal primary education ?

To answer this question, projections for the access rates to the last grade of primary education by 2015 have been performed for all of the countries for which sufficient information was available. These projections are based on:

- The most recently known primary completion conditions (the most recent access rate to the last grade of primary school, no earlier than 2000)
- The most recently known intake conditions (the most recent Apparent Intake Rate, no earlier than 2000)
- The average survival rate in the primary cycle observed for the 2000-2003 period

This method has the advantage of being based on **current enrolment conditions**. More specifically, it allows us to calculate the PCR that will be achieved in 2015 if conditions continue to change at the same rate as has been observed over the last (approximately) six-year period, during which we have measured the most recent changes.

Inset 2.3: Projection method

We consider one primary level, with duration d. We attempt to anticipate access rates into the last grade of primary school in 2015 on the basis of recent trends.

The method used is based on:

- Primary Completion Rate in 2002/03 (or similar year) (PCR_{2002})
- Apparent Intake Rate in 2002/03 (or similar year) (AIR_{2002})
- The Average Survival Rate (ASR) observed for the period 2000-2003 (or similar period), calculated as an average of Primary Survival Rates observed for the same period. Survival Rate, or SR, is the percentage of children who reach the last grade of schooling from among those who entered the first grade.

$$ASR = \frac{1}{\sum_{t=2000}^{2003} I_t} \sum_{t=2000}^{2003} SR_t \times I_t$$

Each survival rate is calculated using a pseudo-longitudinal method[46].

$$SR_i = \prod_{\text{All grades in the cycle}} \frac{\text{New entrants into a given grade, Year t}}{\text{New entrants into the previous grade, the year before (t-1)}}$$

I_t is a dummy variable worth 1 if the observation of survival rate is available for Year t, and 0 if it is not available. Thus, we calculate ASR using only the years for which this information is available, since in practice, cases where the information was available for four consecutive years were rare.

Using an average survival rate rather than the figure observed for the last available year allows us to smooth out data that could be an individual case or an accidental event.

Once the average survival rate has been calculated, it is applied to Apparent Intake Rate, which gives an initial estimate of Access Rate to the last grade of primary school for the base year + the level's duration. For example, if the last available AIR is for 2002/03 and the primary level lasts six years, we get an estimated PCR for 2007/08:

$$PCR_{2002+d-1} \approx AIR_{2002} \times ASR$$

Next we apply (in linear fashion) estimated progress between this base year and the first year of the projection to the period remaining before 2015/16

$$PCR_{2015} = PCR_{2002+d-1} + (2015 - (2002 + d - 1)) \times \left[\frac{PCR_{2002+d-1} - PCR_{2002}}{(2002 + d - 1) - 2002} \right]$$

Nous avons donc

$$PCR_{2015} = AIR_{2002} \times ASR + (2015 - (2002 + d - 1)) \times \left[\frac{AIR_{2002} \times ASR - PCR_{2002}}{d - 1} \right]$$

Certain countries are not included in the projections:

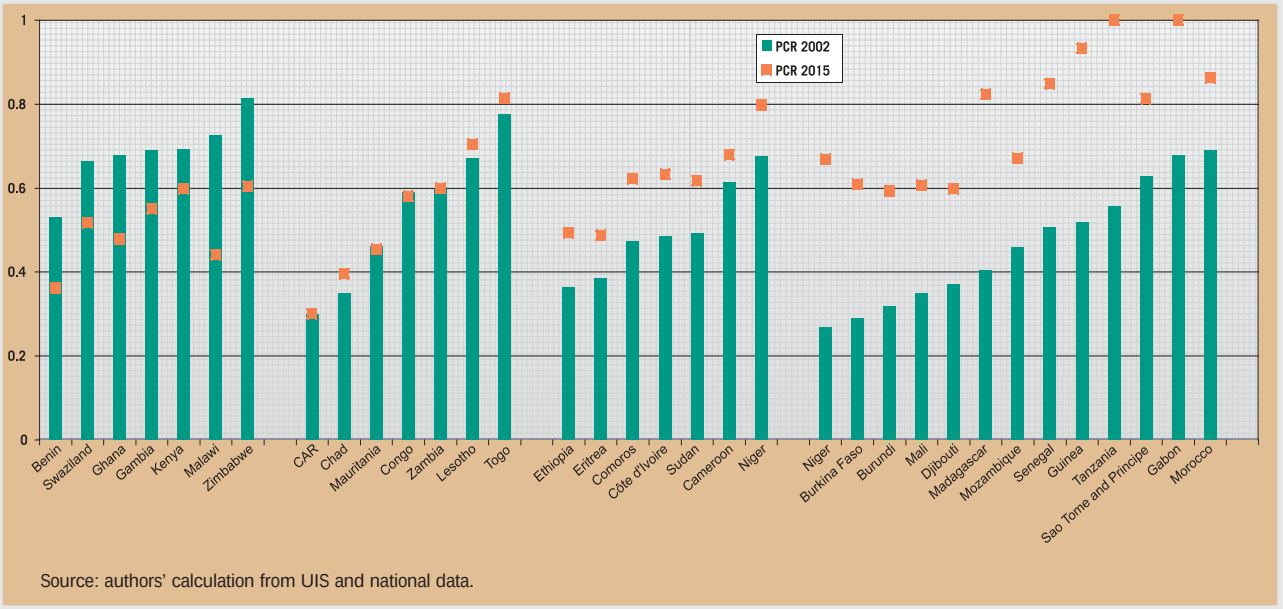
- Countries for which the available information structure fluctuated too much, or was insufficient (or unavailable): Angola, Guinea-Bissau, Equatorial Guinea, Liberia, Uganda, Democratic Republic of the Congo, Rwanda, Sierra Leone, Somalia;

- Countries where access rates to the last grade of primary school were above 90%. These countries are considered to have achieved UPE or to be close to doing so. Projections would have exacerbated a threshold effect, observed in recent years, related to the minimum effort to be implemented, given the shortest route to attainment of the goal: Cape Verde, Libya, Namibia, Mauritius, Seychelles, Algeria, South Africa, Botswana, Egypt, Tunisia.

The exercise was performed for 34 countries and the results are presented in Graph 2.27.

46 See Reuge (2004b).

Graph 2.26: Access rates into the last grade of primary school by 2015 for certain African countries



Source: authors' calculation from UIS and national data.

While UPE is already a reality for a small number of countries, current trends are not encouraging for the majority of the continent

Four groups are obtained when we classify countries by level of progress:

- Countries with a **downward trend** for access into the last grade of primary school and for which current enrolment conditions are decreasing their chances of meeting the 2015 goal. Some of these countries have a relatively high completion rate (Malawi, Zimbabwe).

- Countries that show a **slight increase** (fewer than five percentage points by 2015) in their access rate for the last grade of primary education. This situation could be seen as normal for countries with high PCR, but it is not desirable for other countries such as Chad, Central African Republic, and even Mauritania, since they currently have low completion levels.

- Countries that show a **moderate increase** (between 5 and 15 percentage points by 2015). This situation is less of a concern for countries with relatively high completion rates. However, this observation is more troubling when countries with low completion rates are involved, such as Ethiopia, Eritrea, Comoros, Côte d'Ivoire and Sudan

- Finally, we come to countries that can anticipate **strong growth** (above 15 percentage points). Some of these countries currently have low completion rates (Niger and Burkina Faso). Strong growth is pulling some countries towards the 2015 goal (Gabon, Tanzania).

Anticipated completion levels, by examining the overall situations in the light of current trends, therefore allow us to see whether these countries are on track for the 2015 Goal. Table 2.13 provides a summary.

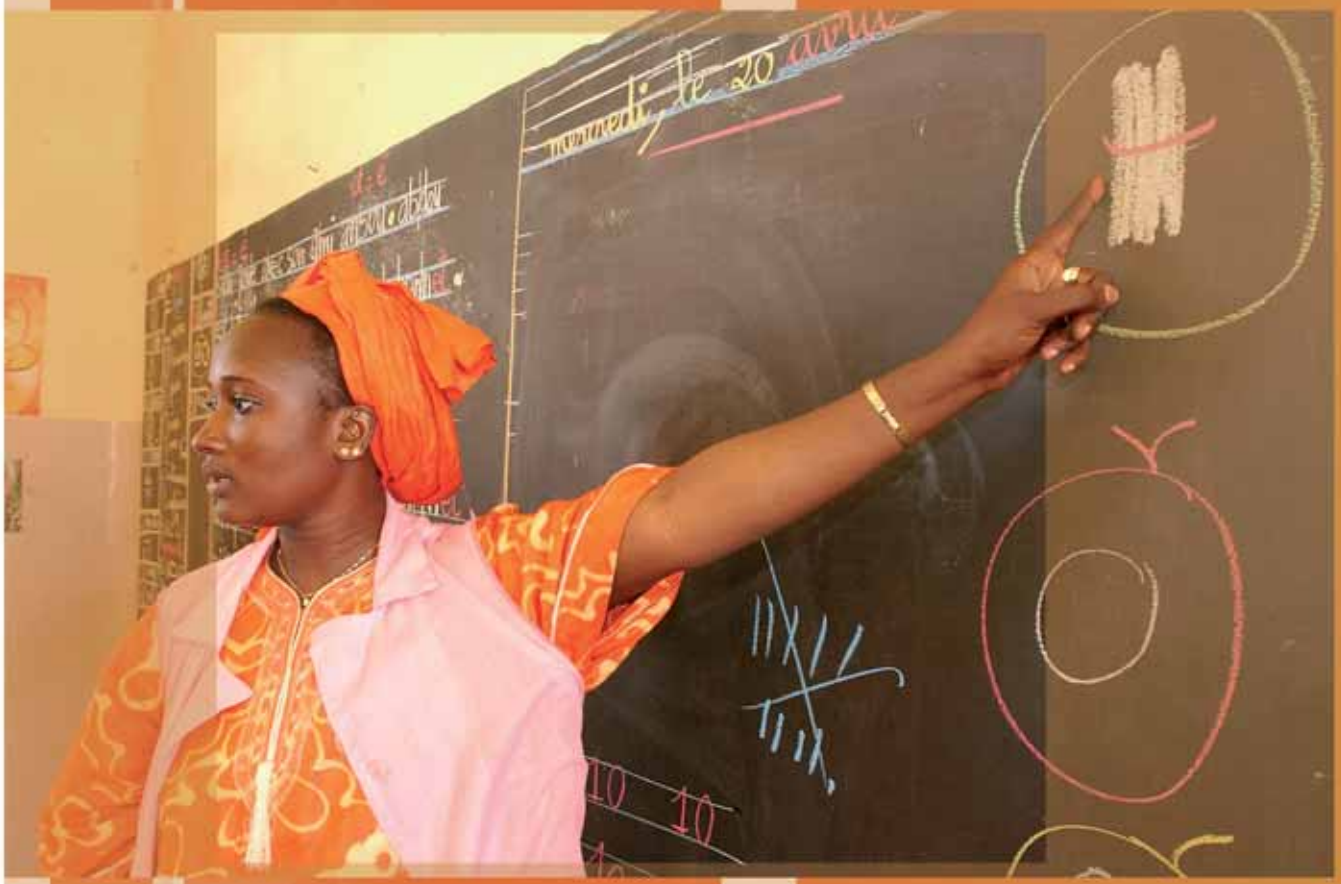
Table 2.13: Classification of countries by current trends towards achievement of the Universal Primary Education goal by 2015

	PCR 2015>=90%	75%<=PCR 2015<90%	PCR 2015<75%
High 2002/03 PCR (above 75%)	Algeria, South Africa, Botswana, Cape Verde, Egypt, Mauritius, Namibia, Libya, Seychelles, Tunisia	Togo	Zimbabwe
Medium 2002/03 PCR (50% - 75 %)	Tanzania, Gabon, Guinea	Nigeria, Morocco, Senegal, Sao Tome & Principe.	Congo, The Gambia, Ghana, Cameroon, Kenya, Lesotho, Malawi, Benin, Swaziland, Zambia
Low 2002/03 PCR (below 50%)		Madagascar	Djibouti, Eritrea, Ethiopia, Comoros, Chad, Central African Republic, Mali, Burundi, Burkina Faso, Mauritania, Mozambique, Niger, Sudan, Côte d'Ivoire

As a whole, these results are disquieting. If current intake, and especially, survival rates do not change significantly, 30 countries (out of 44) will not be able to achieve the 2015 goal (their PCR will be below 90%). 25 countries will have less than 75% access to the last grade of primary school, even if we include countries which are making very good progress. In fact, countries like Niger, Burkina Faso and Mali have already made considerable progress, starting from a very low level of coverage.

It is important to emphasize, especially for countries that are not on track, that these projections are based on countries maintaining their current enrolment conditions. However, as we shall see in Section 3, there is potentially enough room for manoeuvre within education policies to significantly improve access and survival in the primary cycle and enable more countries to meet the 2015 deadline.

In terms of increasing the numbers of pupils, the 2000 review and the new commitments have not changed primary education's priority status. In a number of countries, pupil numbers in the post-primary cycles continue to increase faster than at the primary level. The current developments at the primary level must therefore be speeded up. In Section 3, we will attempt to show which educational policies are most likely to provide this impetus.

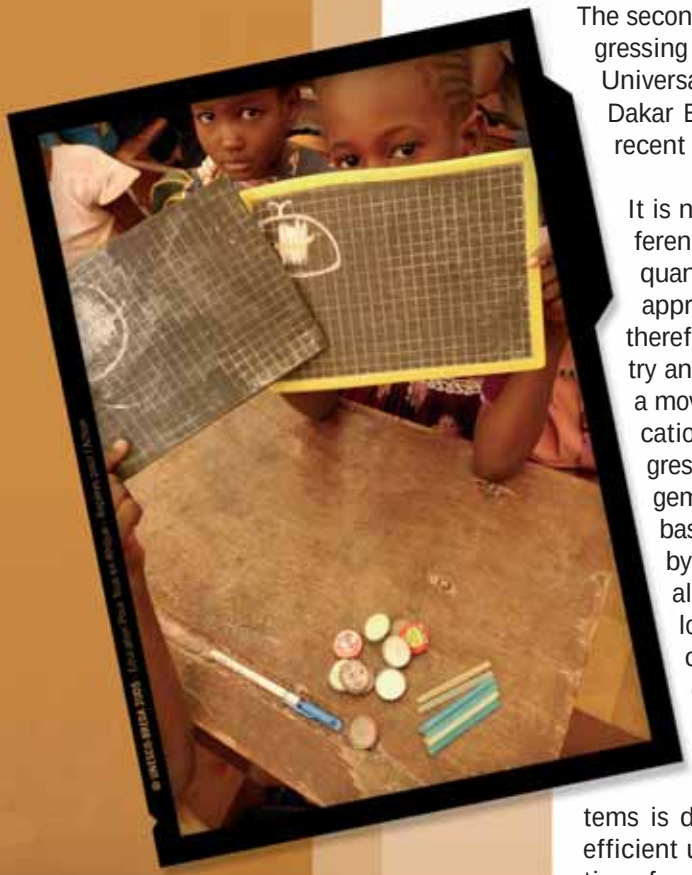


Section 3

Achieving results: options and priorities for public policies

The first section showed that no country develops in economic and human terms without moving nearer to Universal Primary Enrolment (UPE). Crossing the 70-75% threshold for the Primary Completion Rate (PCR) also triggers off the formation of human capital fostering both an alleviation of poverty and a reduction of disparities. As the saying goes in Cameroon: «It's the last strike of the axe which chops the tree down».

The second section noted that although certain countries were progressing sufficiently to give reason to believe they may attain Universal Primary Enrolment (UPE) in 2015, in line with the Dakar EFA and the New York Millennium Goals, others show a recent tendency to insufficient growth.



It is now important to scrutinize key current policies in the different countries and to compare their efficiency in terms of quantity, quality and equity. The comparative empirical approach is used to identify the key factors of success and therefore to assess (1) the constraints prevailing in each country and (2) the room for manoeuvre within systems to facilitate a move towards quality UPE and a balanced and efficient education sector policy. The underlying idea is that to make progress in many countries, it is crucial to ensure better management of education systems by public authorities on the basis of education policy options chosen (and not imposed by the system itself), discussed nationally and accepted by all for their impact on the common good and lasting development. These past tendencies, inadequate in many countries, can be accelerated by the influence of more efficient public education policies. It is the choices made today which will determine the Africa of tomorrow.

In view of the fact that the success of education systems is dependent on (1) a sufficient level of resources, (2) an efficient use of the resources and (3) the successful implementation of quality education based on good management, this section is divided into three corresponding parts. The first part examines the mobilization of resources for the education sector. The second part analyses the various (more or less efficient) policy options within the overall budgetary constraints for the education sector. In particular, this part deals with the question of various trade-offs with which policy-makers are faced as well as the crucial question of pupil flow management. Finally, the third part looks into the issues of system management, under the dual spectrum of the allocation of means in schools and that of the transformation of these resources into results (quality and survival).

UPE demands resources, an efficient use of these and effective management

3.1 Adequate mobilization of resources: a budgetary priority for education consistent with commitments to «Education for All»

Even though direct donor funding is necessary in many countries to achieve ambitious goals (UN Millennium Project 2005b, Gersher 2005, Bruns et *alii*. 2003), the main funding of current expenditure of the education sector stems from domestic revenues. A commonly used measure of a nation's will to develop its education system is the current public expenditure on education expressed as a % of GDP (national wealth). The share of GDP allocated to education provides a reference point in respect of nationally available resources (as it is the case for other social sectors) and in respect of the long term sustainability of public policies.

An examination of current public expenditure on education as a % of GDP for all African countries shows extreme differences. On the continent, the current public expenditure on education ranges from 0.4% of GDP (DRC) to 9.6% (Lesotho). The statistical mid-point[47] on the African continent is 3.2%. Considering total public expenditure (including capital expenditure), the cross-country average in Africa is 3.9% of GDP, higher than the Asian average (3.2%) but lower than the averages observed on other continents (4.3% in South America, 5.2% in Europe, 5.6% in Pacific and 5.7% in North America-Caribbean).

The differences between countries as regards resources available for education are the combination of differences concerning two factors: (1) the «macro-economical/fiscal» capacity of the government to appropriate national resources (exogenous factor for the education sector) and (2) the priority accorded to education which is expressed by the budgetary allocation attributed to it, in relation to all the other budget allocations (the education ministry(ies) are not the only «spending» ministries and each one negotiates to obtain the most sizeable share of the budget). In the countries where education expenditure is not up to the level that it should be, the methods to increase the resources depend on the country's situation concerning the two points above.

47 The statistical mid-point of a series of values is the mid-point value: half of the African countries have a value higher than the mid-point and the other half have a lower value.

Table 3.1: Macroeconomics constraints and budgetary priority for education

Mobilization of domestic resources (macro-economics/fiscal context)	Education as a budgetary priority					
	LOW (Current public expenditure on education < 20% of government domestic revenues; average 13%)			HIGH (Current public expenditure on education > 20% of government domestic revenues; average 25%)		
LOW (Government domestic revenues<= 16% of GDP; Average 12%)	Current public expenditure on education as			Current public expenditure on education as		
	GROUP F	% of GDP	% of Gov. Rev.	GROUP D	% of GDP	% of Gov. Rev.
	Average	1.7	14.8	Average	2,9	25,4
	Togo	2.7	18.3	Sierra Leone*	3.7	31.3
	Rwanda	2.4	18.9	Benin	3.6	22.6
	Guinea	2.0	18.4	Tanzania	3.6	29.7
	Sudan	1.8	16.2	Uganda	3.2	30.1
	Cent. Af.Rep (CAR)	1.2	10.0	Mozambique	3.0	21.0
	Dem.Rep.Congo (DRC)*	0.4	7.1	Niger	2.6	24.1
				Madagascar	2.5	22.8
				Burkina Faso	2.4	21.9
				Chad	1.9	24.9
AVERAGE (Government domestic revenues between 16 and 22% of GDP; Average 19%)	Current public expenditure on education as			Current public expenditure on education as		
	GROUP E	% of GDP	% of Gov. Rev.	GROUP B	% of GDP	% of Gov. Rev.
	Average	2.7	14.6	Average	4.6	24.5
	Comoros	3.7	19.6	Ghana	5.2	25.3
	Senegal [49]	3.7	18.2	Malawi	4.8	26.0
	Mauritius	3.3	18.3	Côte d'Ivoire	4.3	24.5
	Burundi	3.1	16.4	Gambia	4.1	22.0
	Ethiopia	3.0	15.9			
	Mali	2.7	16.6			
	Cameroon	2.9	15.1			
	Guinea-Bissau	2.1	11.7			
	Zambia*	2.0	11.1			
	Equatorial Guinea	0.6	2.9			
HIGH (Government domestic revenues > 22% of GDP; Average 31%)	Current public expenditure on education as			Current public expenditure on education as		
	GROUP C	% of GDP	% of Gov. Rev.	GROUP A	% of GDP	% of Gov. Rev.
	Average	3.3	10.7	Average	6.5	24.1
	Namibia	5.9	18.5	Lesotho	9.6	24.3
	Seychelles	4.7	13	Zimbabwe	7.1	30.1
	Gabon*	3.9	16.1	Kenya	6.4	27.6
	Mauritania	3.9	14.1	Morocco	6.0	23.2
	Algeria*	3.5	8.7	Tunisia	5.8	20.5
	Nigeria*	3.5	8.6	South Africa	5.3	21.5
	Swaziland	3.5	13.7	Cape Verde	4.9	21.7
	Congo	2.8	10.2			
	Angola	2.6	6.7			
	Eritrea	1.9	7.5			
	Botswana	1.9	4.9			
	Egypt	1.3	5.9			

Note:
Year 2002 or close, «*» stands for total expenditure (including public capital expenditure).
Current public expenditure on education is the combination of those indicators:
1. Government domestic revenues as % of GDP
2. Current public expenditure on education as % of government domestic revenues.

Table 3.1 classifies the countries in six categories.

The countries do not all have the same constraints and do not demonstrate the same priority for education

- **Group A** countries are those whose education systems are the most well provided for: Governments have a high mobilization of the domestic resources and Education has a high budgetary priority. The resources channelled into education in these countries are the highest (an average of 6.5% of GDP in this group, from 4.9% in Cape Verde to 9.6% in Lesotho).

- **Group B** countries are also countries where the education systems are privileged. Education is high on the list of budgetary priorities. They stand out from those of Group A by a slightly lower capacity for mobilization of the domestic resources, essentially due to less significant economic development[48] (the average GDP per capita of this group is only 247 US dollars). The education resources vary in this group from 4.1% of GDP (Gambia) to 5.2% (Ghana) and the group average is 4.6%.

- **Group C** countries benefit from a better than average capacity to mobilize resources but suffer from a lack of budgetary priority for education. Current education expenditure ranges from 1.3% of GDP to 5.9% (average 3.3%) in this group. Owing to a high level of GDP per capita for most of these countries (average of 1,955 US dollars) or substantial oil-producing revenues (Angola, Nigeria, Gabon for example), these countries benefit from quite a high resource for education. **However, there is still room for manoeuvre to increase resources intended for the education system, through a negotiation with the Ministry of Finance and the other Ministries for an increase in the State's budget for education.**

- **Group D** countries are those with a severely limited capacity to mobilize resources (low resources for the Government) but this difficulty is compensated by a high budgetary priority for education. The current education resources range from 1.9% of GDP to 3.7% (average 2.9%) in this group. **The solution in order to increase resources for these countries resides in the macro-economics/fiscal field, whilst bearing in mind that progress in this field is slow and dependent on economic growth.**

- Conversly, **Group E** countries benefit from a greater ability to secure domestic resources (between 16 and 22% of GDP for Government revenues, relatively high in view of the low economic development level of these countries - an average of GDP per capita equal to 312 US dollars, excluding Equatorial Guinea and Mauritius, which are atypical countries in this group) but suffer from a lack of budgetary priority for education. The resources for current education expenditure represent on average 2.7% of GDP (from 0.6 to 3.7% according to the countries). **There is, as for Group C countries, room for negotiating the share for education in the Government budget[49].**

- Finally, **Group F** lists the countries that are exposed to a difficult macro-economics/fiscal context and a lack of priority for the education sector in budgetary discussions. Consequently, the resources available for current education expenditure in these countries are the lowest (only 1.7% of GDP on average, from 0.4% in DRC to 2.7% in Togo). **The recommendations put forward for Groups E and D also apply for the countries in this group: to increase the resources available for the education system, it is important to (1) improve macro-economics/fiscal policy and (2) renegotiate the share of the national budget given over to education.**

The availability of resources is obviously a pre-condition for the development of education systems, but it is not by any means sufficient. The use of available resources is of vital importance, perhaps even greater than the resources themselves. The differences between countries in this field should be documented, by examining current sector and sub-sector policies. This is the subject of part 3.2.

48 Several studies have shown that the fiscal pressure rate increases in relation to GDP, see for example Chambas (2004).

49 Senegal constitutes an exception regarding this recommendation, as the 2004 and 2005 budgets show an important increase in the education allocation.

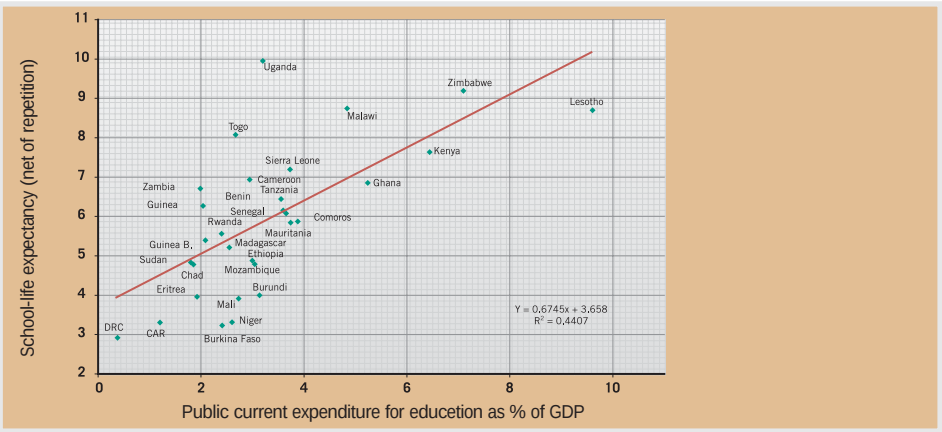
3.2 A genuine efficient sector-wide policy: credible and sustainable policy choices

The availability of resources is not enough to develop education systems. As shown in graph 3.1, there is a tendency towards better results in countries which spend more on education, but there are also variances around this tendency. Certain countries obtain better results for equivalent expenditure, which means a higher capacity for transforming available resources into educational coverage (a better efficiency).

A national financial priority for education is not either a guarantee of equity in the distribution of educational human capital which is, as shown in Section 1, an important condition in order that the education system's progress brings about economic growth. Even if a propensity exists for improved equity in the distribution of resources as education expenditure increases (see graph 3.2), we also observe that within a same level of expenditure the countries differ greatly in terms of concentration of this expenditure to a restricted number of individuals. For example, amongst the countries spending approximately 3% of GDP on the current functioning of their education system, the share of this expenditure accumulated by the 10% of individuals proceeding with the longest studies ranges from 25-30% (Comoros, Guinea Bissau, Togo) to over 60% (Burkina Faso, Burundi, Rwanda, Niger).

The transformation of resources into results counts even more than the resources themselves

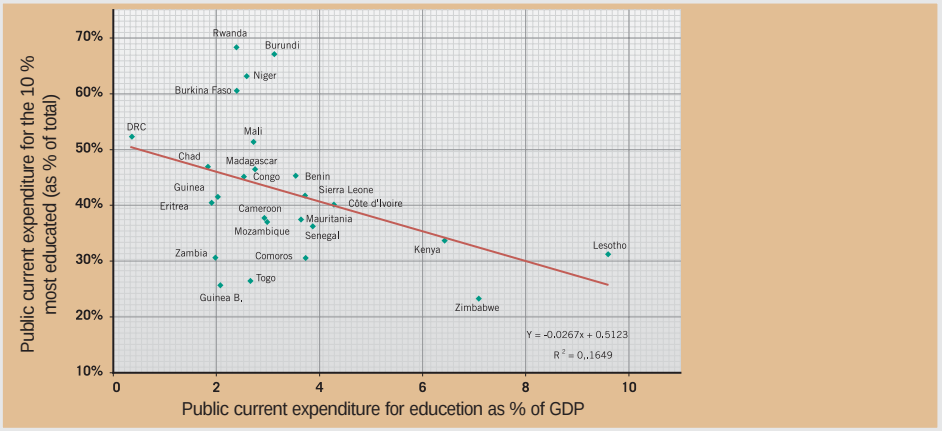
Graph 3.1: Quantitative efficiency of systems



Source:
authors' calculations, countries with GDP per capita under 900 US dollars, year 2002/03 or close; for the school life expectancy (net of repeaters) see Amelewonou et *al* (2003b).

The efficiency of policies varies greatly from one country to another

Graph 3.2: Equity efficiency of systems



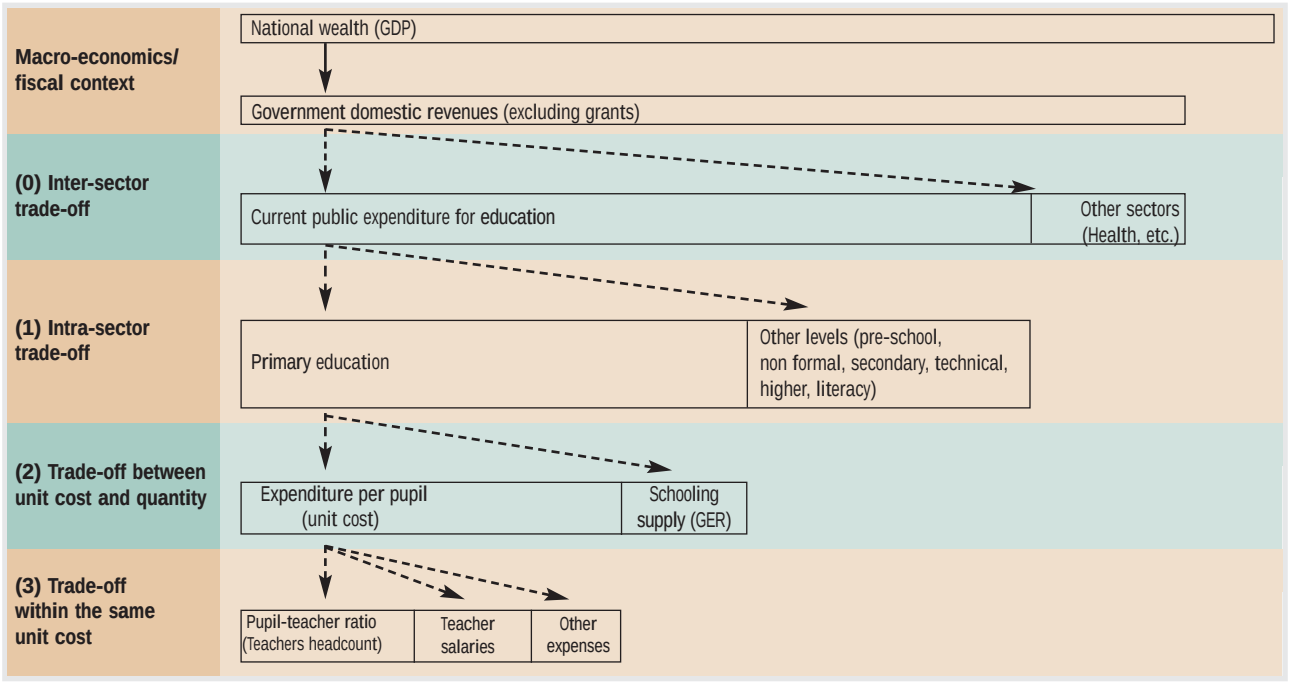
Source:
authors' calculations, countries with GDP per capita under 900 US dollars, year 2002/03 or close; for the % of resource to the 10% more educated people, see inset 1.2 in section 1.

In other words, there are several ways to use the available resources and they are not equally efficient (see also Amelewonou and Brossard, 2003a) whether in terms of quantity of education supply, of equity in the distribution of this supply or of quality (see graph 3.18 in section 3.3.2). It is the choice in the use of the global envelope for education that are the first levers of education policies able to influence results in terms of quantity, equity and quality[50]. **These choices (trade-offs), with which the policy-makers in the education ministry(ies) are confronted, can be ranked at three levels (see graph 3.3):**

The pillars of education policies are the choices in the use of resources

- the first trade-off regards the **choice of allocation of resources to the various sub-sectors or education levels** (pre-school, primary, literacy, non-formal, general secondary, technical and professional, higher education).
- the second major trade-off regards, at each level, **the allocation between the quantity of pupils enrolled and the expenditure per pupil (or unit cost)**, knowing that, within a given budget, the more enrolled pupils there are, the lower the unit allocation, and vice versa.
- the third trade-off is, still for each level, **at a given unit cost**, in the factors which constitute the unit cost (generally speaking, a trade-off between **teacher salaries, the pupil-teacher ratio and expenditure excluding teacher salaries)**.

Graph 3.3: Sequencing of trade-offs in the mobilization and use of the global envelope of resources for education



Education systems always adjust in one way or another within the budgetary constraints at each of these three trade-off (for example, for a given budget, the higher the allocation to primary level, the lesser will be available for other levels). In some countries the choices made result from a societal consultation; in others no explicit policy exists and the implicit choices stem from the effect of habit and the sum of individual pressures and lobbies. The idea here is to document these choices (or absence of choices) in a comparative perspective in order to (1) assess the rooms for manoeuvre and constraints (both different from one country to another) at the different levels and (2) propose consequent steps to be taken to move towards a balanced and efficient sector policy and therefore no longer let the system adjust itself.

50 The options for improving the quality (learning) are dealt with in part 3.3 of this section.

3.2.1 Choosing the distribution of expenditure by level: adapting the intra-sector trade-off to the common good

The first major policy choice is the distribution of resources by level of education

In the same way as the Government resources are shared between the different sectors (education, health, etc.) the resources available for the education sector are shared between the different education levels (from pre-school to higher education), which sometimes come under different ministries[51]. The advocates of each level argue, and one can well understand, that the choice of shares allocated to each level constitutes the linchpin of sector policy. The intra-sector trade-off (the share allocated to education) indicates the surface area of the «sector policy house» under construction. The inter-sector trade-off (the distribution of resources by level) informs us about the number and size of each of the types of room in the house, knowing that these have to be, as much as possible, adapted to the family's needs. For example, if there are more children, it is logical to have more bedrooms (or more sleeping space). In the same way, if a country is behind in primary schooling and if this is the first priority of education policy, this has to be reflected in budgetary terms in the distribution of public expenditure for education. Generally speaking, the intra-sector allocation of resources is the prime lever for giving priority ranking to system development. This hierarchical structuring must as far as possible be consistent with the common good of the nation. As pointed out in Section 1, it requires (1) universalization of the base of the education pyramid (primary education for countries with low achievement rates, and lower secondary for countries more advanced in terms of primary education) and (2) improved adequacy of the top of the pyramid for economic needs (avoid producing students at high cost for the nation, who exit upper secondary, technical and higher education, unable to find a job suited to the training received or not finding a job at all).

51 Amongst information we have on 46 African countries, 21 have only one Ministry of Education, 13 countries have two ministries, 10 countries have three ministries and 2 countries have 4 ministries.

52 Because of lack of data, unfortunately it is impossible to distinguish in the secondary education expenditure between those for lower secondary, upper secondary, and technical education.

53 This result is consistent with the presence of a great number of African countries with (at least) two ministries in charge of education, one for the primary and secondary levels (and therefore the distribution between primary and secondary education is a direct prerogative of this ministry) and one for tertiary education (whose budgetary allocation is chosen outside of the Ministry of Education: very often by the Ministry of Finances and the Parliament).

3.2.1.1 The distribution of resources by level is very variable across countries...

Graph 3.4 shows an inventory of the choices in terms of intra-sector trade-offs existing in African countries. The comparative perspective therefore classifies the countries according to the degree of priority granted to each main level: primary, secondary (including technical education) and higher education[52]. Three main findings emerge from the graph:

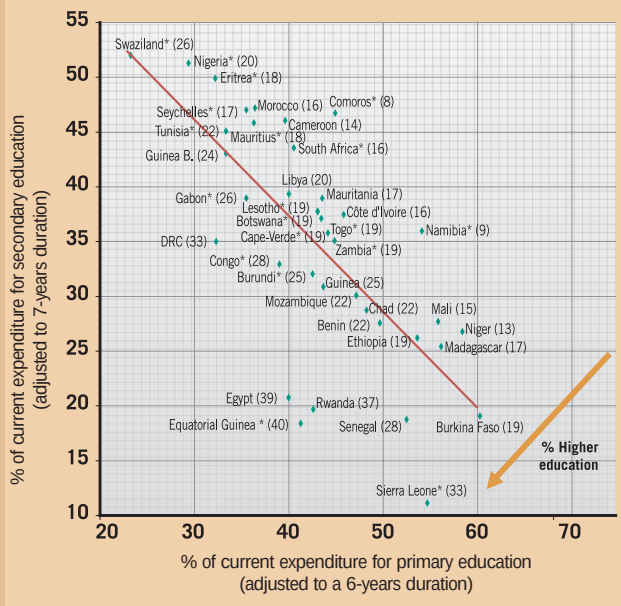
1. There is a great variability between countries with regard to the main levels. The share of current education expenditure allocated to the primary level (taken from a six year enrolment period) varies from 23% to 62% (mid-point 44%), to the secondary level (seven year period) from 11% to 52% (mid-point 36%) and to the tertiary level from 8% to 40% (mid-point 19%).

2. There is a negative correlation between the «primary» share and the «secondary» share (R^2 = 0.52) and the correlation is higher than those observed with the other possible combinations (0.05 between % primary and % tertiary and 0.27 between % secondary and % tertiary). This underlines a trend in the way the trade-offs operate in African countries at the moment: **the share allocated to tertiary is more «exogenous» than those allocated to primary and secondary education, and therefore less favourable to change[53].**This result is important for debating the student flow management policy (cf. Section 3.2.4.2).

3. The straight line shown on the graph represents the average relation between the «primary» share and the «secondary» share. A country's position in relation to the straight line distinguishes between the various countries according to the remaining share, i.e. the part allocated to higher education. The countries below the straight line are those which give the most priority to higher education in the intra-sector budgetary allocation.

The distribution of resources by level of education varies a great deal from one country to another

Graph 3.4: Distribution of the global education public expenditure envelope by main education level



Source: authors' calculation, year 2003 or close.

Inset 3.1: Note relative to graph 3.4

1. Because the financial data on the other levels of education (pre-school, literacy, non-formal) is inadequate, the budgetary shares allocated to these levels (low in relation to the main levels) are not included here and the primary-secondary-higher total has been restored to 100% to compare the countries.

2. Because as the duration of educational cycles vary from one country to another, it is wrong to compare the % of expenditure allocated to each level on the basis of raw figures. To correct this, the percentages have been adjusted to correspond with the structure of the duration of the most common primary and general secondary levels in Africa (6 years duration for the primary level and 7 years duration for the general secondary level).

3. The graph can be read horizontally to obtain the share of the primary level, it can be read vertically to obtain the share of the secondary level but it is also possible to read it diagonally to obtain the share for higher education: the sum of three percentages being equal to 100% (see note 1), the more a country is situated towards the left hand lower corner of the graph (low primary and secondary %) the higher the share allocated to higher education. The % figure allocated to higher education is given in brackets beside the country.

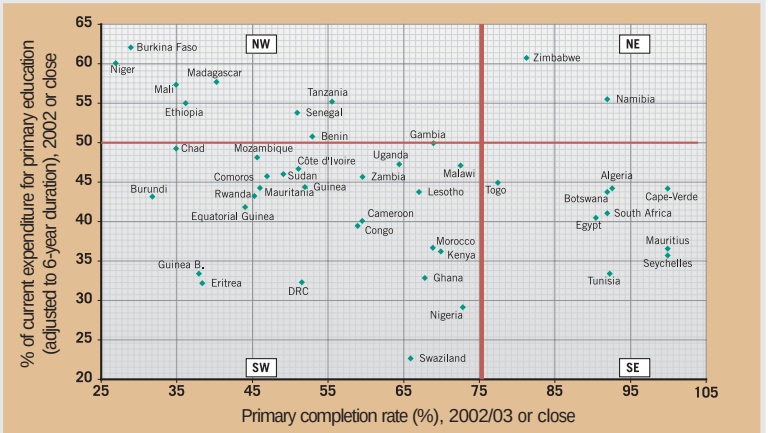
4. The countries with an asterisk are those for which the distribution by level has been calculated from the overall public expenditure (including capital expenditure).

3.2.1.2 …and the priority for primary education varies from one country to another

All African countries, by signing the Dakar framework for Action, have undertaken to make Universal Primary Enrolment their first priority; however, it is important to distinguish between countries according to their progress towards Universal Primary Enrolment (UPE). If it is certainly necessary for the countries far from UPE to allocate a large share of their resources to primary education, this is not true for the countries that have attained or are close to UPE. These countries must now increase the development of the post-primary levels and therefore allocate a larger share to these levels. Graph 3.5 classifies the countries according to the two dimensions, the progress level in terms of primary enrolment and the degree of priority given to this level. The countries are classified in four categories represented by the graph's four quadrants.

The priority for primary education is very variable across countries…

Graph 3.5: Progress towards Universal Primary Enrolment (UPE) and priority given to primary education



Note: countries missing due to lack of data (Angola, Djibouti, Gabon, Liberia, Libya, CAR, Sao Tome and Principe, Sierra Leone, Somalia).
Source: authors' calculation, year 2002/03 or close

- The **North-West** quadrant **(NW)** groups the countries where the primary completion rate is low or average (below 75%) and where primary education is favoured in the distribution of expenditure for education (primary share exceeding 50%[54]). These are the countries for whom the intra-sector trade-off matches their stated aim of making Universal Primary Enrolment a real priority: Burkina Faso, Ethiopia, Gambia, Madagascar, Mali, Niger, Tanzania and, to a lesser degree, Benin and Senegal.

…including across the countries furthest from Universal Primary Enrolment (UPE)

- The **South-East** quadrant **(SE)**, on the other hand, groups the countries for which Universal Primary Enrolment (UPE) is a reality or almost (Primary Completion Rate [PCR] exceeding 75%) and whose current expenditure share allocated to primary education is below 50%. For these countries also, the trade-off is consistent with the shape of the education pyramid; education development priorities are now situated on the side of post-primary levels and the allocation of expenditure is consistent with this policy choice. This group mainly includes the most developed African countries (Tunisia, Mauritius, etc.) and Togo, even though Togo is near the South-west quadrant.

- The **North-East** quadrant **(NE)** has the least number of countries (only Zimbabwe and Namibia). These two countries grant a high budgetary priority to primary education (61% and 55% of education expenditure respectively) despite a high primary completion rate (81% and 92% respectively[55]) . In these countries, the post-primary levels could be under-funded (for example, the share allocated to higher education in Namibia is only 8.7%, very much lower than the African mid-point level of 19.4%) and there is probably good reason to review the budgetary trade-offs for secondary and higher education.

- The **South-West** quadrant **(SW)** raises the most questions. It contains countries where primary education budget allocation is not a real priority (primary education share below 50%) despite the fact that they are a long way from the Universal Primary Enrolment goal (PCR below 75%). This absence of priority for the primary cycle favours either secondary education, or higher education, or both. **For these countries, a readjustment of the intra-sector trade-off in favour of primary education is definitely an action strategy to be seriously considered.**

54 50% has been chosen as the reference value due to the fact that it corresponds to the average value observed in the countries achieving the highest levels of UPE, and has been consequently become the target value in the indicative framework of the Fast Track initiative, see Bruns et al (2003).

55 This can be explained by the high unit costs in these two countries. As in Botswana and South Africa (which are near the North East quadrant), these countries, after having lived in a dual education system (one high quality school system for white people and one low quality system for black people) are upgrading the whole system to the higher standard. For example, in Namibia, pupil-teacher ratios are much better than the African average (the pupil-teacher ratio for primary education is 22 as compared with the average which is 42).

3.2.1.3 Options for increasing the primary share in the countries far from Universal Primary Enrolment

Table 3.2 gives the list of countries in the South-West quadrant (those where primary education has a low budgetary priority despite being far from Universal Primary Enrolment (UPE)) and specifies the relative shares of each main education level. This enables us to assess where there is room for manoeuvre (the education levels whose share could be lowered) in order to increase the relative share of the primary level. This does not mean lowering expenditure on these levels, only their share of total public education expenditure.

The room for manoeuvre is shown in bold characters in the table; it corresponds to the relative proportions for secondary and/or higher education higher than the mid-points observed in Africa. By using this criterion, out of the 18 countries for which the data is available, 9 (Equatorial Guinea, Rwanda, Chad, Mozambique, Guinea, Burundi, Congo, Democratic Republic of the Congo and Zambia) seem to have room for manoeuvre as regards the share allocated to higher education, 7 (Côte d'Ivoire, Lesotho, Mauritania, Cameroon, Comoros, Morocco and Eritrea) for the share allocated to secondary education and 2 (Guinea-Bissau and Swaziland) for both.

Table 3.2: Distribution of expenditure and room for manoeuvre for increasing the primary education share, countries far from Universal Primary Enrolment (UPE) and where primary education has a low budgetary priority

Countries	PCR	% primary (6 years)	% secondary (7 years)	% higher
African mid-point	57	44.2	35.4	19.4
Burundi	32	43.1	32.0	24.9
Congo	59	39	32.9	27.8
Cameroon	60	40.0	**46.0**	14.0
Comoros	47	45.7	**46.7**	7.7
Côte d'Ivoire	51	46.6	**37.4**	16.0
Eritrea	38	32.1	**49.8**	18.1
Ghana	68	35.2		
Guinea	52	44.3	30.8	**24.8**
Guinea Bissau	38	33.3	**43.0**	**23.7**
Equatorial Guinea	44	41.8	18.3	**39.9**
Kenya	70	36.1		
Lesotho	67	43.7	**37.7**	18.6
Malawi	73	47.0		
Morocco	69	36.6	**47.1**	16.3
Mauritania	46	44.2	**38.9**	16.9
Mozambique	46	48.0	30.0	**21.9**
Uganda	64	47.2		
Dem. Rep. of Congo	52	32.2	34.9	**32.8**
Rwanda	45	43.2	19.6	**37.3**
Sudan	49	46.0		
Swaziland	66	22.6	**51.9**	**25.5**
Chad	35	49.2	28.7	**22.2**
Zambia	60	45.6	35.0	**19.4**

Source: Authors' calculations, year 2002 or close.

3.2.2 Refining the choice between the number of pupils and expenditure per pupil to achieve a quality universal primary enrolment

Once the number of each of the types of room in the «sector policy house» has been firmly established, these have to be fitted out. In the case of bedrooms, for example, there can be a choice between more beds or fewer beds but of a better quality using the same budget. Better quality beds provide better quality sleep, even if, consequently, some children have to sleep on the floor. Education policy-makers enjoy a similar situation: for each level, they can choose between the number of pupils enrolled and the expenditure per pupil (the unit cost, which is hopefully linked to the quality) knowing that, with a given budget, the more enrolled children there are the lower the unit allocation, and vice versa[56].

A simple mathematical calculation (cf. inset 3.2) reveals the quantity/unit cost trade-off in the form of an equality between, on one side, an indicator of available resources for the level and, on the other, the product of the Gross Enrolment ratio (GER) and of the unit cost of one academic year for one pupil. In other words, with a given level of resources for a level, there is a choice between the system's quantitative offer (represented by the GER) and the unit cost which is hopefully linked to the system's qualitative result.

56 On this subject, see also Brossard (2004).

The second major choice within each level is the choice between the number of pupils enrolled and the expenditure allocated per pupil (unit cost)

Inser 3.2: GER-UC trade-off, example of primary education

$$PCEP = UC \times Ep$$

$$Ep = (1 - \%Pr) \times E$$

$$\frac{PCEP}{GDP} = \frac{UC}{GDP} \times Ep$$

$$\frac{PCEP}{GDP} = \frac{UC}{GDP} \times (1 - \%Pr) \times \frac{E}{SPop} \times \frac{SPop}{Pop} \times Pop = \underbrace{\frac{UC}{GDP/Pop}}_{UCGDPC} \times \underbrace{\frac{E}{SPop}}_{GER} \times \frac{SPop}{Pop} \times (1 - \%Pr)$$

$$\frac{PCEP}{GDPC \times SPop \times (1 - \%Pr)} = UCGDPC \times GER$$

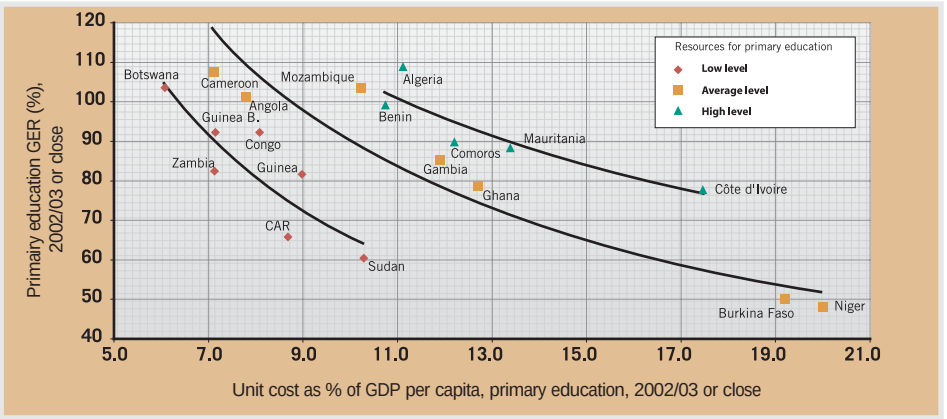
$$\boldsymbol{RCPE_{relative} = UCGDPC \times GER}$$

PCEP = public current expenditure for primary education,
UC = current cost per pupil (unit cost),
Ep = number of pupils enrolled in public schools,
%Pr = percentage of pupils enrolled in private schools,
E = total number of pupils enrolled,
GDP = Gross Domestic Product,
SPop= school-age population (primary education),
Pop = total population,
GDPC = gross domestic product per capita,
UCGDPC = current unit cost in units of GDP per capita,
GER = Gross Enrolment Ratio,
$RCPE_{relative}$ = resources available per child potentially enrollable in public schools, expressed in units of GDP per capita.

3.2.2.1 Choices in terms of quantity/unit cost trade-off are extremely variable from one country to another

Graph 3.6 illustrates the choices made (or imposed by the system itself) for primary education by separating the countries according to resources available.

Graph 3.6: Quantity/unit cost trade-off (by level of resources for primary education)



Note: The countries for which the data is insufficiently consistent are not represented on the graph.
Source: authors' calculations, year 2002/03 or close.

There are large differences between countries regarding the quantity/unit cost trade-off

- There is a wide **variety of unit costs in the different countries**. Whereas certain countries spend 7% of GDP per capita or less for one year of schooling for one primary pupil (Botswana, Gabon, Equatorial Guinea, DRC, Togo) others allocate up to 20% or more (Djibouti, Lesotho, Morocco, Namibia, Niger). This variety is not only explained by the cultural and/or geographical contexts. Geographically and culturally similar countries have very differentiated unit costs. The variety between countries is also very wide for the other levels: from 14% of GDP per capita (in Guinea Bissau, Gabon or Mauritius) to 63% (in Burundi) for secondary education and approximately 50% of GDP per capita (in South Africa, Gabon or Mauritius[57]) to 791% (in Mozambique) for higher education.

57 The lower values observed for certain countries are not considered here because of doubts concerning the data.

- **Excessively high unit costs are detrimental to Universal Primary Enrolment.** For example, amongst the countries with an average level of resources (between 1 and 1.5% of GDP allocated to primary level current expenditure - countries in orange on the graph), we can see that those spending per pupil around 8-10% of GDP per capita (Cameroon, Angola, Mozambique) have Gross Enrolment ratios (GER) exceeding 100% whereas at the opposite extreme, countries whith high unit cost (around 20% of GDP per capita) can only achieve a GER of about 50%, much lower than is necessary to attain UPE. On the other hand, excessively low unit costs can have negative repercussions on quality. This point is dealt with in part 3.3 of this section.

- Because of the link, at a given level of resources, between quantity and unit cost, for a number of countries, achieving Universal Primary Enrolment (GER around 120%[58]) involves either decreasing the unit cost, which is shown on the graph by a movement on the same curve towards the left and therefore towards the top (rise in GER) or increasing the resources available for primary education (see parts 3.1 and 3.2.1), which corresponds to a vertical movement on the graph (for example the movement from one curve to the upper curve), or both.

To achieve UPE some countries must either increase resources or reduce unit cost, or both

3.2.2.2 Identifying the room for manoeuvre as regards increase in expenditure allocated to primary education and reduction of the unit cost

To ascertain the type and scale of room for manoeuvre currently available (increased mobilization of resources for primary education and/or reduction of the unit cost), table 3.3 shows, for the countries with a low primary completion rate, the position of the country in relation to the African countries mid-point on two dimensions: the «expenditure allocated to primary education» dimension (columne) and the «unit cost» dimension (column f).

The comparative approach allows to highlight the room for manoeuvre in the system. One consider that the more a country moves away from the African mid-point on one of the dimensions identified above, the greater the room for manoeuvre available in respect of this dimension. For example, in Eritrea the share of GDP allocated to primary education is 2.6 times smaller than for an African mid-point country (0.6 against 1.6%); which implies that a rise would be possible. Conversely, Tanzania raises above-average resources for primary education (room for manoeuvre ratio 0.7) but has a unit cost 1.5 times greater than the African countries mid-point, showing a possibility of downward adjustment to allow UPE. The room for manoeuvre is pinpointed in columns (e) and (f) of table 3.3 by shaded areas.

A comparison with the value 1 of factors of room for manoeuvre in respect of the two dimensions enables the **countries to be classified in three groups.**

- The Congo (1.5 times less resources for primary education than a mid-point African country), Guinea Bissau (1.9), Guinea (1.8), Mozambique (1.2), Rwanda (1.5), Sudan (1.8), Swaziland (1.5), Chad (1.8) and Zambia (1,5) can definitely work towards an **increase in resources for primary education** (either by an increase in global resources for education, or by an increase in the share allocated to primary education). It is perhaps even advisable in some of these countries for the increase in resources be used to raise unit cost which is too low.

- The Comoros (unit cost 1.1 times higher than a mid-point country), the Côte d'Ivoire (1.6), Ethiopia (1.1), Gambia (1.6), Ghana (1.6), Morocco (1.8), Mauritania (1.2), Niger (1.8), Senegal (1.2) and Tanzania (1.5) have, as far as they are concerned, resource mobilization levels for primary education which it would be difficult to raise, leaving only the possibility of a **reduction of unit costs** as an option to attain UPE

- Finally, Eritrea (in reference to the mid-point country, 2.6 times less resources for primary education and unit cost 1.1 times higher), Burundi (1.2 and 1.1 respectively), and Burkina Faso[59] (1.1 and 1.7 respectively) have **room for manoeuvre in relation to the two dimensions.**

58 See 2.1.1.1 for an explanation of the necessity to have a Gross Enrolment ratio of over 100% in order to achieve Universal Primary Enrolment.

59 Note that in Burkina Faso, the room for manoeuvre for increasing resources is low (factor 1.1) and cannot be found at inter- and intra-sector trade-off level but should be gained from a rise in fiscal pressure (see section 3.1).

3.2.2.3 Simulation of funding gap if the policy parameters on the resources available as % of GDP and on the unit cost remain unchanged

An alternative interpretation of table 3.3. can be made based on column (h) which gives the funding gap (on current expenditure) to reach UPE in 2015 if the resource mobilization policies and the unit cost remain unchanged[60]. This **funding gap varies greatly from one country to another: from 5% of total current expenditure necessary in Morocco to 67% in Eritrea**. Even if the international community has begun to fund current expenditure, particularly through the Fast Track initiative, it is unlikely that the direct donor funding rates of current expenditure reach the necessary levels for all the countries if the policies remain the same[61]. **Excessive dependence on external funding of current expenditure are in any case not recommended** due to the fact that it is:
(1) inconsistent with the strategy of government sustainability of public education policies,
(2) not well adapted to the funding absorption capacities of States, and
(3) very risky in societal terms because of salary funding provided by unpredictable and often variable direct donor aid.

This funding gap indicator can also be seen as the difference between the current policies and the efficient policies wished for in order to achieve UPE.

60 On this subject, see also Pôle de Dakar (2004c).

61 High rates of external funding are often observed for capital expenditure. However, for current expenditure, despite the ascendancy of budget and program support, the proportion of external funding remains lower than that of government funding.

Table 3.3: Room for manoeuvre aimed at achieving Universal Primary Enrolment and funding gap with current policies

Country	PCR (%)	Duration of primary education (years)	% of GDP for current expenditure on primary education	Unit cost at primary education (as a % of GDP per capita)	Room for manoeuvre on expenditure allocated to primary education (relation between the mid-point and the country value)	Room for manoeuvre on expenditure allocated to primary education (relation between the mid-point and the country value)	% of GDP for current expenditure on primary education necessary to achieve UPE with the current unit cost (simulations)	Factor progress necessary on the mobilization of resources with the present unit cost	Funding gap with present mobilization of resources and unit cost (as a % of necessary expenditure)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(g) / (d)	(h) = ((g)-(d))/(g)
Mid-point in African countries	57		1.6	11,2	1.0	1.0			
Eritrea	38	5	0.6	11.8	2.6	1.1	1.8	3.0	67.1
Guinea-Bissau	38	6	0.8	7.2	1.9	0.6	1.3	1.5	35.0
Guinea	52	6	0.9	9,0	1.8	0.8	1.3	1.4	29.0
Sudan	49	6	0.9	10.3	1.8	0.9	1.4	1.6	36.7
Chad	35	6	0.9	11.6	1.8	1.0	2.0	2.2	54.3
Rwanda	45	6	1.1	8.1	1.5	0.7	1.6	1.5	32.4
Congo	59	6	1.1	8.1	1.5	0.7	1.4	1.3	23.1
Swaziland	66	7	1.1	11.2	1.5	1.0	2.4	2.2	54.2
Zambia	60	7	1.1	7.1	1.5	0.6	1.5	1.3	25.5
Mozambique	46	5	1.3	10.2	1.2	0.9	1.8	1.3	23.8
Burundi	32	6	1.4	12.5	1.2	1.1	2.7	2.0	50.5
Burkina Faso	29	6	1.5	19.2	1.1	1.7	3.3	2.2	55.4
Niger	27	6	1.6	20.0	1.0	1.8	3.6	2.3	56.6
Mali	35	6	1.6	10.8	1.0	1.0	1.9	1.2	15.5
Uganda	64	7	1.6	9.8	0.9	0.9	2.1	1.2	18.9
Comoros	48	6	1.7	12,2	0,9	1.1	2.3	1.4	27.0
Ethiopia	36	6	1.7	12.7	0.9	1.1	2.2	1.2	19.1
Benin	53	6	1.8	10.8	0.9	1.0	2.0	1.1	11.1
Ghana	68	6	1.8	17.6	0.9	1.6	2.2	1.2	16.8
Mauritania	46	6	1.8	13.4	0.9	1.2	2.4	1.3	24.8
Senegal	51	6	2.0	13.9	0.8	1.2	2.1	1.1	8.2
Côte d'Ivoire	51	6	2.0	17.5	0.8	1.6	2.8	1.4	28.1
Gambia	69	6	2.1	18.3	0.8	1.6	2.8	1.3	23.8
Tanzania	56	7	2.2	16.3	0.7	1.5	3.0	1.4	26.6
Morocco	69	6	2.4	20.6	0.7	1.8	2.5	1.1	5.4

Note: Countries with unavailable or inconsistent data: Angola, Cameroon, Djibouti, Gabon, Equatorial Guinea, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, CAR, DRC, Sao Tome and Principe, Sierra Leone, Somalia. The countries are classified in decreasing order of the existing room for manoeuvre on the mobilization of resources dimension.
Source: authors' calculations, year 2002/03 or close.

3.2.3 Trade-off inside the unit cost for more and better enrolment

Once the per bed expenditure of the «sector policy house» has been set, several options are still possible: at a given unit cost, thicker but smaller beds can be preferable, or an extra blanket may be wanted for possible cold nights to the detriment of thickness and/or size. Each householder makes his choice according to benefits foreseen to obtain better quality sleep. The situation is similar for the education policy-maker: at a given level of spending per pupil, he has various organization options available and it is his role to choose the best option for the quality of the education (so that the pupils learn). The unit cost is determined by three major factors (see technical inset 3.3): the teachers' salaries (main item of expenditure in all the systems), the other expenditure (salaries of non-teaching staff, teaching aids, administration, etc.) and the pupil-teacher ratio (the less pupils there are per teacher, the higher the cost per pupil). Two systems can spend the same amount per pupil but in different ways; for example, one by giving precedence to the size of classes and the other to recruiting better qualified teachers (so better paid).

The third major choice is the distribution by nature of expenditure: teachers salaries, teachers recruited headcount and other expenditure

As for the upper trade-off levels, this sub-heading will aim to (1) document the choices made (or imposed by the systems themselves), using a comparative framework, regarding the three items of current expenditure and to (2) track down the existing room for manoeuvre in decreasing the unit cost in the countries where this is necessary to reach Universal Primary Enrolment (UPE).

Inset 3.3: Trade-off within a specific unit cost

$$UCGDPC = \frac{PCEP}{Ep} \times \frac{1}{GDPP}$$

$$UCGDPC = TSal \times \frac{PCEP}{TSal} \times \frac{1}{Ep} \times \frac{1}{GDPP}$$

$$\frac{PCEP}{TSal} = \frac{1}{\frac{TSal}{PCEP}} = \frac{1}{\frac{PCEP-OCE}{PCEP}} = \frac{1}{1-\frac{OCE}{PCEP}} = \frac{1}{1-\%OCE}$$

$$UCGDPC = TSal \times \frac{1}{1-\%OCE} \times \frac{1}{Ep} \times \frac{1}{GDPP}$$

$$UCGDPC = ATSal \times \frac{Tp}{Ep} \times \frac{1}{GDPP} \times \frac{1}{1-\%OCE}$$

$$\boldsymbol{UCGDPC = \frac{ATsal_{GDPP}}{PTR} \times \frac{1}{1-\%OCE}}$$

or UCGDPC = current unit cost per pupil in units of GDP per capita,
PCEP = public current expenditure for primary education,
Ep = the number of pupils enrolled in public schools,
GDPP = Gross Domestic Product (GDP) per capita,
TSal = salaries of public school teachers,
OCE = current expenditure other than teacher salaries,
%OCE = Current expenditure other than teacher salaries as % of total current expenditure,
ATSal= average public school teacher salary,
Tp= number of public school teachers,
$ATSal_{GDPP}$ = average public teacher salary in units of GDP per capita,
PTR= Pupil-teacher ratio in public schools.

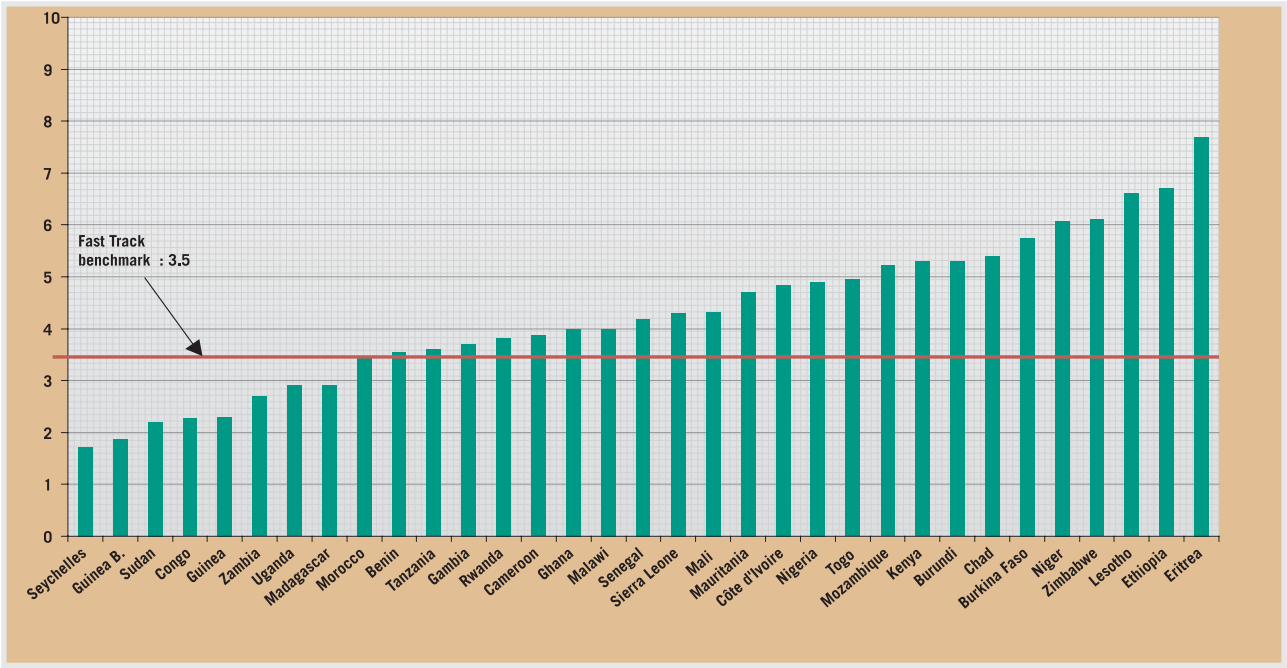
3.2.3.1 Country-specific expenditure allocations

Graphs 3.7 and 3.8 present the situation of African countries regarding the three major spending items making up the unit cost. Like in other education policy parameters, differences from one country to another are significant.

Teachers' salaries vary across countries by a factor of 1 to 5

The average teacher's salary varies from 2 units of GDP per capita or less (Seychelles, Guinea Bissau, Sudan, Congo or Guinea) **to about 7 units** (Lesotho, Ethiopia or Eritrea). The cross-country average is established at 4.1 Units of GDP per capita, slightly above the value observed in the countries that have been most successful in achieving UPE (3.5) - reference value for the Fast Track initiative Indicative framework (Bruns et al., 2003). Even if this reference does not constitute a standard, it is of interest to compare the value of each country against this yardstick.

Graph 3.7: Country-specific differential in teachers' average salary (as units of GDP per capita)



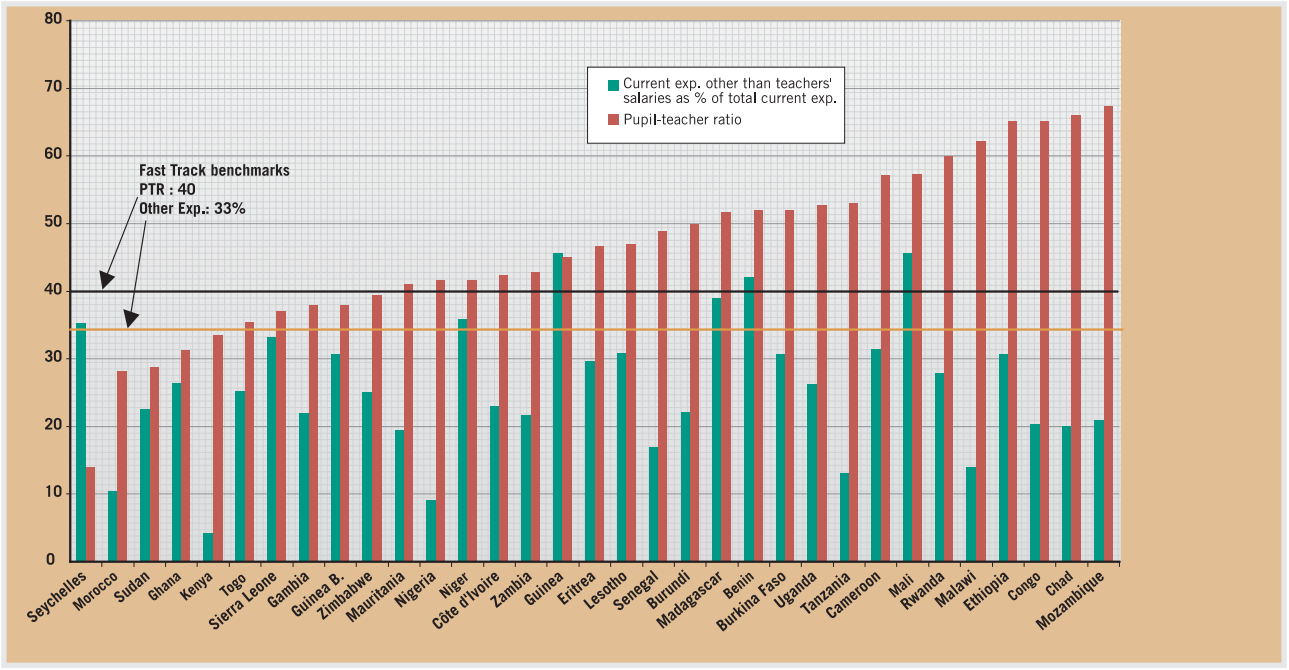
Source: see appended Table 4.

The pupil-teacher ratios vary by a factor of 1 to 4, and the current non-salary expenditure by a factor of 1 to 10

The **pupil-teacher ratio** also varies dramatically from one country to another, by fewer than 30 pupils per teacher in Seychelles, Morocco or Sudan to almost 70 in Congo, Chad or Mozambique. The cross-country average is 41 pupils per teacher, which is very close to the Fast Track reference value (40).

Lastly, **there is also a differential in the percentage of current expenditure excluding teachers' salary** (salaries of non-teachers staff, pedagogical material, administrative expenses). It amounts to 24.8 % on average but ranges from 4% in Kenya to approximately 45% in Mali and Guinea.

Graph 3.8: Country-specific differential in pupil-teacher ratio and % of expenditure excluding teachers' salary



Note: Only shown here are the countries for which both data is available. Countries for which only one piece of data is available are referred to in the appended Table 4.
Source: See appended Table 4.

3.2.3.2 Identification of rooms for manoeuvre within unit cost for the 3 spending items

The differential observed between culturally/geographically similar countries is proof that rooms for manoeuvre exist. This assures opportunities for change towards UPE. If in some countries policies do not change, chances are that the system will continue being self-adjusting for access to a complete primary cycle for only an elite. Similarly to what was presented for the quantity/unit cost trade-off, Table 3.4 sets out, by countries and using a comparative perspective, the nature and scope of the rooms for manoeuvre existing for the three main current spending items. The table focuses on countries with a low or average completion rate (PCR smaller than 75%) whose unit cost is relatively high (greater than 10% of the GDP per capita). **These are countries for which decreasing unit cost is not optional, but compulsory if UPE is to remain a credible target. The rooms for manoeuvre available to cut unit cost vary from one country to another.** These are identified in the table by the shaded areas.

Among the 20 countries considered[62]:

- **Pupil-teacher ratio (PTR) room for manoeuvre**: 6 countries have a PTR lower than what is observed on average in Africa (41.3) whereby demonstrating a potential room for manoeuvre for reducing unit cost by increasing the number of pupils per teacher-these are Morocco (PTR: 28.2), Gambia (37.9), Ghana (31.3), Comoros (26.8), Swaziland (31.1) and Sudan (28.8). The reference value of the Fast Track Indicative framework i.e. 40 pupils per teacher, may be-for these countries-a reasonable target value which does not adversely affect quality[63] .

- **Non-teacher salary expenditure room for manoeuvre**: 8 countries show non-teacher salary expenditure greater than the African average. In this regard, expenses may be saved in those countries (Lesotho, Niger, Burkina Faso, Ghana, Ethiopia, Eritrea, Mali and Benin). However, caution is required in terms of recommendations at this stage

62 The sum of the number of countries in each group is not equal to the total because some countries may be included in several groups.

63 For this purpose, it is necessary that teacher deployment in individual schools reflect the actual needs. This will be discussed in Section 3.3.

All countries that must cut their unit cost to attain UPE do not have the same rooms for manoeuvre

because this expenditure includes pedagogical material (whose impact on quality can be significant, see Section 3.3) and administrative spending (salaries of non-teaching staff; goods and services) which can certainly be streamlined. A more fine-tuned diagnosis of this expenditure country by country is required to ensure that the relative reduction of this expenditure allows a quantitative improvement of the system without diminishing its qualitative performance.

- **Teachers' average salary room for manoeuvre**: 10 countries have teachers' average salaries that are greater than the cross-country average (4.1 Units of GDP per capita). These are Ethiopia (6.7 Units of GDP per capita), Lesotho (6.6), Niger (6.1), Burkina Faso (5.7), Côte d'Ivoire (4.8), Mauritania (4.7), Burundi (5.3), Eritrea (7.7), Chad (5.4) and Mozambique (5.2).

  Although the remuneration of teachers is an eminently sensitive issue, it would certainly be a mistake not to address this topic. In many of the countries where the average teachers' salaries are higher than the African average, the following is observed (see, inter alia, Mingat, 2004a):

(1) a budgetary constraint which precludes moving towards UPE by taking on civil servant teachers only;

(2) dramatic differences in salary according to status that are difficult to accept for people exercising the same function (sometimes by a factor of 1 to 10 between community-based and civil servant teachers);

(3) a lack of training for teachers in the lower income segment (contract-based and community-based teachers); and

(4) community-based teachers often deployed in the most challenging areas and whose (low) remuneration is paid for by the poorest families.

Even though cutting the salaries of the presently employed teachers is not an option, it is surely important in these countries, if not already so (1) to document the implications on the school coverage and quality[64] that such high average remuneration levels (in proportion to the national wealth) may have, (2) to foresee recruitment of new, sufficiently trained teachers of different status, but paid a lower salary (see Inset 3.3), (3) to fund and increase the salaries of the lower paid teachers, especially community-based teachers and (4) to train untrained teachers.

64 The issue of the impact of the teacher's status and his/her salary on quality will be described in Section 3.3.

Table 3.4: Room for manoeuvre to reduce the unit cost in countries with low completion rate and high unit cost

Countries	PCR	Unit cost (as % of GDP per capita)	Teachers' average salary (as units of GDP per capita)	Current non-teachers' salary expenditure as % of total current expenditure	Pupil-teacher ratio[65]	Teachers' average salary room for manoeuvre (ratio between country value and average)	Non-teachers' salary expenditure room for manoeuvre (ratio between country value and average)	Pupil-teacher ratio room for manoeuvre (ratio between average and country value)
Average / African countries	60.9	12.4	4.1	24.8	41.3	1	1	1
Chad	35.0	11.6	5.4	20.1	66.0	*1.31*	0.81	0.63
Burundi	31.8	12.5	5.3	22.1	49.9	*1.28*	0.89	0.83
Mozambique	45.7	10.2	5.2	20.9	67.2	*1.26*	0.84	0.61
Côte d'Ivoire	51.1	17.5	4.8	23.0	42.4	*1.17*	0.93	0.98
Mauritania	46.1	13.4	4.7	19.4	41.1	*1.14*	0.78	1.01
Lesotho	67.1	23.8	6.6	30.8	47.0	*1.60*	*1.24*	0.88
Niger	27.0	20.0	6.1	35.9	41.7	*1.47*	*1.45*	0.99
Burkina Faso	29.0	19.2	5.7	30.6	52	*1.39*	*1.23*	0.79
Ethiopia	36.2	12.7	6.7	30.7	65.1	*1.62*	*1.24*	0.63
Eritrea	38.4	11.8	7.7	29.6	46.7	*1.87*	*1.19*	0.88
Mali	35.0	10.8	4.3	45.5	57.3	1.05	*1.84*	0.72
Benin	53.0	10.8	3.6	42.1	52.0	0.86	*1.70*	0.79
Ghana	67.9	17.6	4.0	26.4	31.3	0.97	*1.06*	*1.32*
Morocco	68,9	20.6	3.4	10.5	28.2	0.83	0,42	*1.47*
Gambia	69.0	18.3	3.7	22	37.9	0.90	0,89	*1.09*
Comoros	48.0	12.2	NA	NA	36.8	NA	NA	*1.12*
Swaziland	66.0	11.2	NA	NA	31.1	NA	NA	*1.33*
Sudan	49.2	10.3	2.2	22.5	28.8	0.53	0,91	*1.44*
Tanzania	55.6	16.3	3.6	13.1	53.0	0.87	0,53	0.78
Senegal	51.0	12.5	4.2	16.8	48.9	1.01	0,68	0.85

Note: Countries with unavailable or insufficiently consistent data: Angola, Cameroon, Congo, Djibouti, Gabon, Guinea, Guinea-Bissau, Equatorial Guinea, Kenya, Liberia, Libya, Madagascar, Malawi, Central African Republic, Democratic Republic of the Congo, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Uganda, Zambia, year 2002/03 or close.
Source: see specific source in appended Table 4.

65 It is more accurate to present the pupil-teacher ratio calculated only on the public system (see Inset 3.4), but on account of unavailable data, the figure presented is the average value for the entire system (including private).

Inset 3.4: Quantitative impact of recruitment of non-civil servant teachers

African education systems have long operated with a single body of civil servant teachers. For some years, two new teacher categories have emerged:

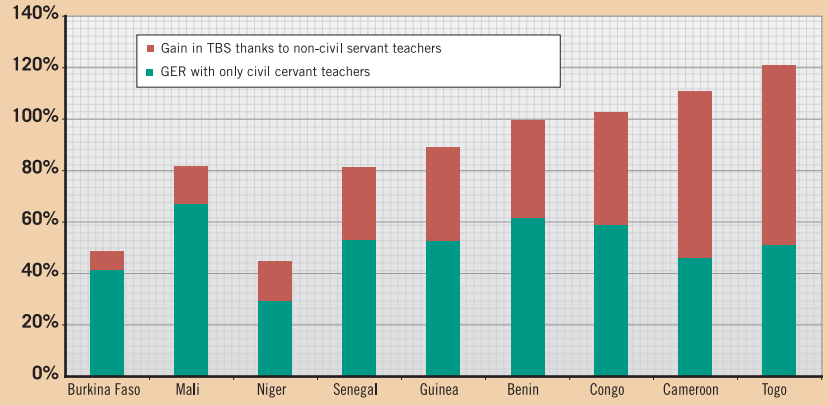
1. Owing to the budgetary constraint and in order to recruit enough teachers to raise the school coverage, certain States (for example Niger, Mali, Senegal) have created a new category of teachers. Often named «**contract-based teachers**», these teachers are paid at lower salary levels than those of civil servant teachers.

2. Faced with the government's incapacity to provide a school, the parents, often in the most underprivileged areas, organize themselves, create a school, recruit locally and pay the teachers themselves; these teachers are often called «**community-based teachers» or «parent-teachers»**. This situation exists, for example in Chad, in Benin and in Cameroon.

The two categories can merge when the State begins to support all or part of these teachers' salaries (as is the case in Benin and in Chad).

Details of the salaries of the 'new' teachers and civil servant teachers still in service allows to estimate the gain, in terms of school enrolment (and therefore GER), associated with the recruitment of non-civil servant teachers as compared with a situation where only civil servant teachers would have been recruited. The results of these simulations are shown in the graph below.
The recruitment of non-civil servant teachers leads to a rise in GER which varies from +7 to +70 percentage points depending on the country considered. On average in the 9 countries shown on the graph, the effect is equivalent to a 36-point rise in GER. In the case of Togo (+70), of Cameroon (+65), of Congo (+44) and of Benin (+38) the presence of non-civil servant teachers contributes significantly to the rise in average school coverage. It is useful, as a complement to the study of the quantative impact, to document the impact of non-civil servant teacher recruitment on quality, see section 3.3.

Gain in GER linked to recruitment of non-civil servant teachers



Source: Bernard, Tiyab and Vianou (2004) and authors' calculation.

3.2.4 Managing the student flow to prevent the system from adjusting itself to a sum of individual interest different from the common good

Better student flow management must be encouraged

It is interesting to distinguish, in this part, between in-cycle and cross-cycle student flow management. The first sub-heading deals with the in-cycle management by analysing the impact of repetition, including the impact on pupil drop-out rates, which remain the main obstacle to attaining UPE. The second sub-heading deals with cross-cycle flow regulation policies

3.2.4.1 In-cycle student flow management: impact of the repetition rate and survival rate

The debate on the repetition issue is not new. Supporters claim the sequential nature of learning, the need for classes to be homogenous, the pupil's loss of motivation due to his position in the class, the motivating effect of sanctions; whilst the opponents of repetition point out the cost of an extra school year, the pupil's loss of motivation (first step towards dropping out), or the subjective aspects in the decision to apply this sanction. Knowledge, on the basis of solid empirical studies, has progressed, particularly in the context of African countries and **the main results show the negative effects of too high a level of repetition** Irepetition which can be summed up as follows:

a) The decision to oblige a pupil to repeat a year is not always fair

The pupil's knowledge and skills are not the only explanation for a decision to repeat a year. Decisions often depend on «subjective» factors such as the pupil's relative position in the class, the environment, the schooling conditions and the teacher's qualifications (PASEC, 1999). In the Côte d'Ivoire, for example, more than 30% of repeaters are not in the lower third of pupils at national level as measured by the standard PASEC assessment test.

b) Impact on learning achievement is not empirically proven

Macro analyses show that the argument aimed at justifying pupils' repetition for reasons linked to the quality of the education cannot be empirically verified (Mingat and Sosale, 2000). **Good education systems (high level of student learning) can have high or low repetition rate: there is no significant relationship between the pupils' learning achievement and the frequency of repetitions.** The same is shown in the studies at school level (for instance in Benin, Chad and Cameroon) which conclude that, with equal resources and environment, the schools where the pupils have repeated grades the most do not have better results at the end of the cycle (Brossard, 2003a; CSR Chad; CSR Cameroon). Finally, the analyses at an individual level show that the pupils (except for those who are especially weak) who are made to repeat a year do not progress better by repeating than if they had moved up to the next grade (PASEC, 1999; PASEC 2004b).

c) A significant negative effect on pupils dropping out

Studies at country, school and individual levels also coincide on this point.

- At **macro level**, Mingat and Sosale (2000) and Pôle de Dakar (2002) studies show that the practise of repetition increases the drop-out rates during the cycle, and this remains the main disincentive for reaching Universal Primary Enrolment (see section 2). Families feel that the fact their child is obliged to repeat a year means that he is unsuccessful and that he does not benefit from being at school. As the opportunity costs always constitute an argument against school attendance, the sanction encourages parents to take their child out of school. Mingat and Sosale estimate that one more percentage point of repeaters results in a 0.8 percentage point increase in the drop-out rate. They also show that these negative impacts are even more distinct amongst the population groups where the demand for schooling is lower (girls, children from an underprivileged economic environ-

ment). For the girls, the effect of one more percentage point is estimated at 1.1 point increase in the drop-out rate.

Too high repetition rate is an obstacle to UPE

- The results of analyses **at school level** take the same direction. In Chad, for example, one more percentage point of repetition is related, all other factors being equal, to 0.53 less percentage point of survival rate (CSR Chad).

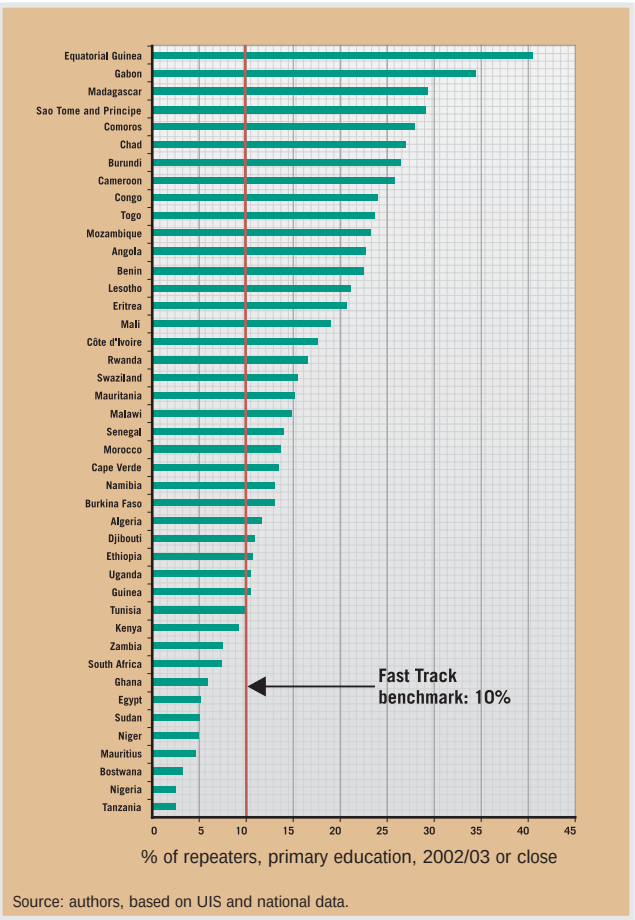
- **At individual level**, the studies confirm this trend; in Senegal, at a given pupil level, the decision to make a grade 2 pupil repeat a year increases the risk of this pupil dropping out at the end of the year by 11% (PASEC, 2004b).

d) An impact on costs

Repetition costs the system two years of study while only one year is validated. In other words, for a given budget constraint, repeating pupils occupy places which overload the classes and/or prevent other children from going to school.

The link between repetition rate and pupil-teacher ratio is shown empirically (Mingat and Sosale, 2000 and Pôle de Dakar, 2002).

Graph 3.9: The large variety of repetition rate



Source: authors, based on UIS and national data.

Bruns et al. (2003) observed that among the highest performing African countries during the decade from 1990-2000 (in terms of UPE), the average proportion of repeaters was 10%, which is lower than the current African average (16%). Consequently, this benchmark of 10% has been established as a reference value within the Indicative framework of the Fast Track initiative. Graph 3.9 provides an overview of the situation in 2002/03; the practises (because it is really a case of practises and habits rather than an objective system of remedial action designed to improve student learning) in terms of repetition vary greatly. The percentage of repeaters ranges from under 3% to 40%. 31 of the 43 countries for which data is available have repeaters of over 10%. In all, the analysis does not suggest generalized automatic promotion to the next grade (which poses other problems), but leads us to conclude that a figure of 10% of repeaters is both desirable and possible.

Aware of this need for a reduction in repetition rates, a number of African countries have chosen to: (1) set in place three sub-cycles, each lasting two years, within the primary cycle, corresponding to well-defined units of skills, (2) no longer allow repetitions within these two-year sub-cycles and (3) limit the frequency of repetitions between consecutive sub-cycles[66].

This strategy has proven its efficiency: Niger has reduced repetition in primary education from 18% in 1992/93 to 7% in 2002/03, and in Guinea repetition has decreased even more rapidly (from 21% in 2001/02 to 11% in 2003/04).

In conclusion, **efficient in-cycle flow management necessitates**:

1. an improvement in the «survival rate» during the cycle
The elimination of drop-outs during the primary cycle is obligatory in order to attain UPE. In the other cycles, in view of the fact that the learning programs are put together according to the homogenous units per education cycle, the drop-outs during a cycle represent a waste of resources; the system invests for years of studies which do not yield the expected results (completion of a cycle).

2. the reduction of repetitions in the countries where these are high
Although the requirements of teachers making pupils repeat a year when they have not acquired all the knowledge expected in the syllabus is understandable, education systems can not realistically allow repetition rate over 10% to be accepted. This represents an additional cost for which the pedagogical efficiency is not proven. Then, it seriously reduces the chances of achieving full Universal Primary Enrolment.

3.2.4.2 Cross-cycle student flow management: the need to back up education system management by public policies to reshape the education pyramid

Section 1 showed that in several countries there was a discrepancy between the distribution of trained individuals and the requirements of the employment sector. This finding leads us to study the possibility of reshaping the education pyramid (the distribution of outgoing pupils from each education cycle) to reduce loss production (unemployment, overqualification, etc.) of one part of the system. Section 2 showed (1) that despite the commitment to give priority to the primary cycle, the number of pupils in the post-primary cycles has grown more than for those of the primary cycle, (2) that there is no student flow regulation in several countries (the cross-cycle transition rates are often higher than the in-cycle survival rate), and (3) that lower secondary universal enrolment in countries with a low Primary Completion Rate (PCR) was logistically impossible by 2015. The beginning of section 3 has shown that primary education resources are often out of step with requirements, and that to take charge of the whole system again by making the necessary trade-offs was not an option but a necessity in order to retain a good chance of attaining UPE by 2015.

An unregulated student flow across levels has negative effects on equity and quality

Capitalising these results, the risks connected to non-management of pupil flow between cycles must be detailed here by recourse to empirical observations. What are the negative consequences when there are no cross-cycle student flow regulation policies? How does the system adjust itself without being regulated?

a) The risks connected to absence of student flow management

- **Financial displacement away from primary education**

The first danger arising from a lack of regulation is found in the intra-sector trade-off process. Heading 3.2.2 has shown that there is a substantial interconnection between primary and secondary resources (a strong negative relation between the «primary» and «secondary» share of education budget). If the number of post-primary pupils rises faster than primary pupils, this creates pressure to increase the financial resources of post-primary levels more sizeably than those allocated to the primary level; this is not desirable in countries that are far from attaining UPE, as shown at the beginning of section 3.2.1.

- **Drop in the unit cost at post-primary levels**

If the intra-sector trade-off does not shift towards post-primary levels, an increase of pupils, without the financial envelope rising at the same rate, means a fall in unit cost is a direct result. This has been observed for the last few years in Benin, in Guinea and in Mali for example (see graph 3.11) in higher education. For example, in Guinea, the increase between 1995/96 and

66 In order to be effective this policy must be accompanied by (1) a consciousness-raising strategy to help teachers to become aware of the negative effects of excessive number of repeaters and (2) an assessment policy for detecting the shortcomings of pupils during the sub-cycle.

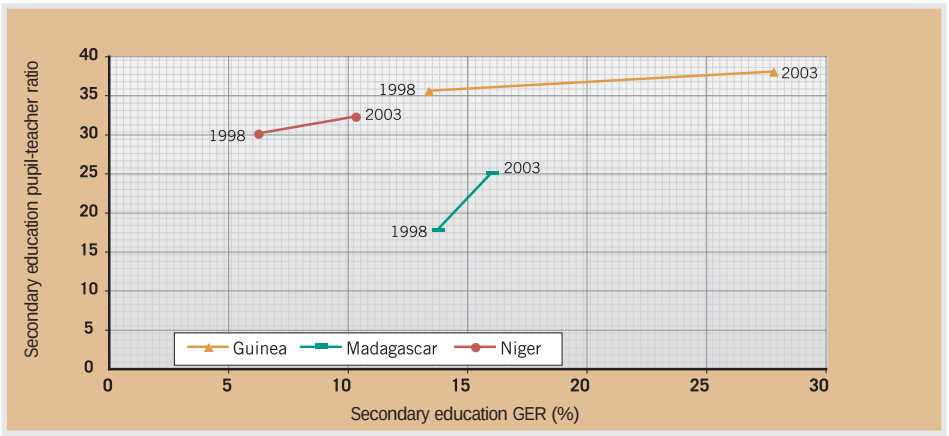
20002/03 from 118 students per 100,000 inhabitants to 196 without the same increase in resources is expressed by a reduction of unit cost by half (from 4.2 to 2.3 units of GDP per capita).

As we saw in the preceding section, three major factors make up unit cost: teachers' salaries, pupil-teacher ratio and other expenditures (in particular, pedagogical material). Because teachers' salaries are often structurally stable, the drop in the unit cost tends to have effects for the two other expenditure items, that is the pupil-teacher ratios and expenditure on pedagogical material.

For example, graph 3.10 shows that, with the unregulated increase in pupils at secondary education and the relative stability of salaries and other expenditure in Congo, in Guinea, in Madagascar and in Niger, the system adjusted itself and resulted in a deterioration of pupil-teacher ratios. In Madagascar, the pupil-teacher ratio passed from 18 pupils per teacher in 1997/98 to 25 in 2002/03.

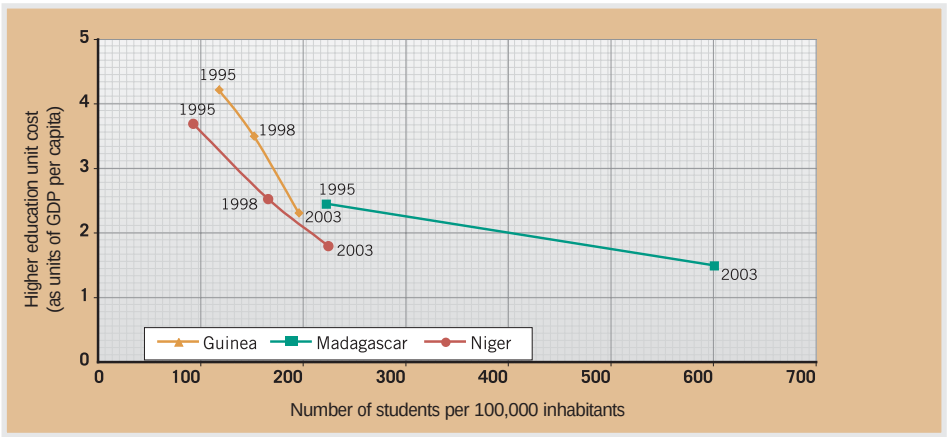
In Guinea the ratio which was already high in 1997/98 rose again to 38 pupils per teacher in 2002/03 (that is, an average class size of 64 pupils!! in view of the variance between the number of teachers' service hours and the number of pupils' learning hours).

Graph 3.10: Adjustment of system by a deterioration of education conditions, secondary level



Graph 3.11: Adjustment of system by a fall in unit cost, higher education

Systems tend to adjust themselves if there is no student flow management



Source:
authors, based on UIS data.

- **Increase in family contributions, growth in inequalities and social discontent**

At lower secondary level community-based teachers appear in some countries. These teachers are paid, as those of primary education, by the parents in the poorest areas and often have little or no training. In Chad, for example, the proportion of these teachers in lower secondary education reaches 48%.

The entry flow for higher education is not regulated and together with an insufficent increase in public funding this often forces the government to (1) drastically increase the family contribution (inscription fee) and (2) reduce the level of grants (including those given to the poorest on the grounds of merit).

For example, in Benin the annual inscription fees for university increased from CFA F5,000 to CFA F25,000 at the start of the school year 2004/05, only leaving the affluent with a chance to enter higher education. Furthermore, these measures often arouse student discontent; causing them to go on strike and bring the system to a standstill. These examples show the danger of an absence of student flow regulation, leaving the system to adjust itself, often to the detriment of the poorest and/or of quality.

b) Options for cross-cycle student flow management policy: influencing the transition rates in accordance with the dynamics of the educational pyramid

Effective cross-cycle student flow management dictates **the setting up of genuine regulation policy for the whole system**, obviously to be adapted from one country to another according to the current education pyramid (and particularly the level of progress towards UPE), **accompanied by a root and branch review of post-primary development.**

››› The primary→lower secondary transition: regulation, perspectives for primary school-completers and gains for the education system

It is legitimate to wonder what would happen, if UPE is attained in 2015, to the large number of children completing the primary cycle (on the whole 1.5 times more than in 2002/03 for Africa, and 3 to 4 times more for the less-developed countries, cf. the simulations represented in the country profiles at the end of the report). As the saying goes in Algeria «*even if the snake runs, he does not go quicker than his head*»: if some countries which have already reached or nearly reached UPE must consider a universalization of lower secondary, for all the others, it is essential to be realistic, this goal is not feasible (financially as well as logistically) by 2015 (Mingat, 2004d).

Some countries can consider increasing transition rate or maintaining it at their present level by trying to improve the efficiency of lower secondary (reducing unit cost without penalising quality).

For example, an increase in the duration of primary cycle can be considered. It allows the progressive integration of pupils of lower secondary to a school functioning at a **primary education unit cost (on average twice as low as the unit cost of lower secondary);** some English-speaking African countries have chosen that way of doing. The use of a greater number of polyvalent teachers (cf. Bernard and Robert, 2004) and/or a larger financial contribution from families in privileged urban areas are also possible ways.

The primary→lower secondary and lower→upper secondary transitions are very important policy levers for building an adequate educational pyramid

However, **most countries will not be able to increase transition rate to lower secondary nor maintain them at the current level and must even consider reducing it in order to preserve quality** (effect on the unit cost previously described). There will therefore be **primary school-completers who will not move up to general secondary level.** Some of them could enter a vocational secondary training (more targeted on the more employment sector demanded fields of study), but this channel remains an option for only a minority. Consequently, in 2015, a proportion of primary school completers (according to the lower secondary physical and financial capacity to accept students without cutting back on quality) will end their studies at that level. This is obviously not an ideal situation, but **it is vital to understand that the student flow regulation between primary and lower secondary** -if UPE is indeed achieved - **will not be expressed by a deterioration of the systems. On the contrary, there will be an outstanding development of the education systems** for three main reasons:

a. Currently, only 59% of African children complete the primary cycle, either because they never go to school (approx. 9%), or because they leave the system during the cycle (approximately 32%). Achieving UPE therefore means a gain for the system, and also for pupils completing their studies at the end of the primary cycle; instead of never going to school or dropping out during the cycle, these children (1) will have a good chance to acquire long-lasting literacy, and (2) could gain access to a traditional work sector (which will remain the main sector of employment in several countries in 2015) and be more productive (and therefore contribute more to the economic growth of the nation).

b. **Bolstering access to the secondary cycle on the basis of merit.** Currently in the countries that have not completed UPE and where the transition rate is high, the selection process comes into play before the end of the primary cycle (either on admission to the grade 1 of primary, or by dropping out during the cycle). This selection process is therefore very dependent on socio-economic factors (as shown in section 2.1.1.2, the more underprivileged [poor, rural and female] have less access to school and drop out more often). The regulation between primary and lower secondary on a competitive entrance examination basis allows the best pupil to be selected amongst those completing the primary cycle, which, if UPE is achieved, concerns all children.

c. The stagnation or the reduction of transition rates does not mean the stagnation or the reduction of the number of secondary pupils; on the contrary. Demographic growth combined with UPE will mean **a very substantial increase lower secondary pupils,** even in the event of transition rate reductions. For example, in Benin, the ten-year plan education sector plan aims at doubling the number of lower secondary education pupils between 2004 and 2015 (more than 500,000 pupils in 2015 compared with 260,000 in 2004) despite a transition rate reduction from 72% to 50%. In comparison, the number of primary education pupils will only increase by a factor of 1.6.

Student flow regulation policies between primary and lower secondary education must be accompanied by policies which stimulate demand for primary education because flow regulation at the entry to lower secondary can constitute a disincentive on demand for primary education.

››› The lower→upper secondary and upper secondary→higher education transitions: regulation and action to improve quality

The question of the lower→upper secondary and upper secondary→higher education transitions are different because (1) the unit costs of upper secondary and higher education are much higher (on average twice as high as those of lower secondary for upper secondary and eight times higher for higher education- cf. CSR Guinea, 2004), (2) the economic returns from these levels are more of a private issue (better income for individuals) than a social issue (cf. section 1), (3) certain countries «over-produce» at these levels in relation to economic needs (the modern employment sector) and (4) these two stages are better perceived as final stages of education.

These findings encourage favouring quality rather than quantity in these education levels. Although it is true that the two are connected (cf. section 3.2.2), (1) economic needs for trained human resources must be nationally identified, (2) private financing must be encouraged (section 1 showed that high level public financing of the system was not always optimal) and (3) flow must be regulated during the two transitions[67] to match the quantity factors with the requirements of the national economy and to avoid reducing unit cost, a quality factor.

Once again, implementing a regulation policy does not mean cutting pupil numbers in upper secondary, technical, and higher education, which will continue to increase.

3.3 An efficient management of education systems for the successful implementation of quality education

As well as sufficient mobilization of resources and efficient policies, a third condition is needed to achieve ambitious goals; this regards system management. The questions of management are even more important because the systems, if they move nearer to UPE, will have high growth rates; management difficulties of systems with few pupils are even more problematic when the number of pupils increases. This report does not claim to be exhaustive concerning these questions although it seems worthwhile to **(1) deal with this subject from an empirical point of view and to compare the countries by mobilizing the available data, and (2) pave the way to really implementing (and not only talking about) result-based management.**

Resources and efficient policies are not enough, the system management must fairly allocate resources to individual schools and schools should better turn resources into results

In order for pupils to learn well, (1) the schools must receive the sufficient resources (human and material) for classes to operate correctly, which involves, in the event of scarcity of resources, equitable distribution of resources between the schools and (2) these resources must effectively been turned into results (that the pupils do not drop out of the school and learn enough). This section concentrates on primary education (cycle for which the issue is more important and for which more data is available) even if most of the conclusions presented and the strategies proposed for improvement are valid for the other levels.

3.3.1 The search for equity when allocating school resources

3.3.1.1 First lever: matching resources with needs

Logically, schools enrolling the most pupils and those located in the worst environments should be those which receive the most resources. Is this really the case? The first step in replying to this question is to compare the difference between the real situation (as observed in the school data collected by the ministries of education) and a situation where schools which have the same number of pupils have the same resources. This difference can be measured by what is known as the degree of randomness in resources' allocation to individual schools (see inset 3.5). Table 3.5 presents the situation in 22 countries for primary education, regarding consistency in teacher deployment (teachers represent the most important item of resources required).

67 In some countries, the examination at the end of upper secondary (the Baccalaureate) is the only requirement for admission to university. It limits the regulation possibilities between upper secondary and tertiary and encourages the student flow regulation beforehand (between lower and upper secondary levels).

Inset 3.5: Degree of randomness in teachers' allocation to individual primary schools in 22 African countries, year 2002/03 or close

Countries	Degree of randomness [1- R^2] in %	Countries	Degree of randomness [1- R^2] in %
Sao Tome and Principe	3	Gabon	26
Guinea	7	Burkina Faso	28
Mozambique	15	Madagascar	28
Namibia	15	Ethiopia	29
Niger	15	Côte-d'Ivoire	33
Guinea Bissau	16	Malawi	34
Chad	18	Uganda	34
Senegal	19	Benin	39
Mauritania	20	Togo	39
Zambia	20	Mali	42
Rwanda	21	Cameroon	45
Average of 22 countries: 24.8			

Source: Mingat (2003b).

Inset 3.5: Degree of randomness in teachers' allocation to individual schools

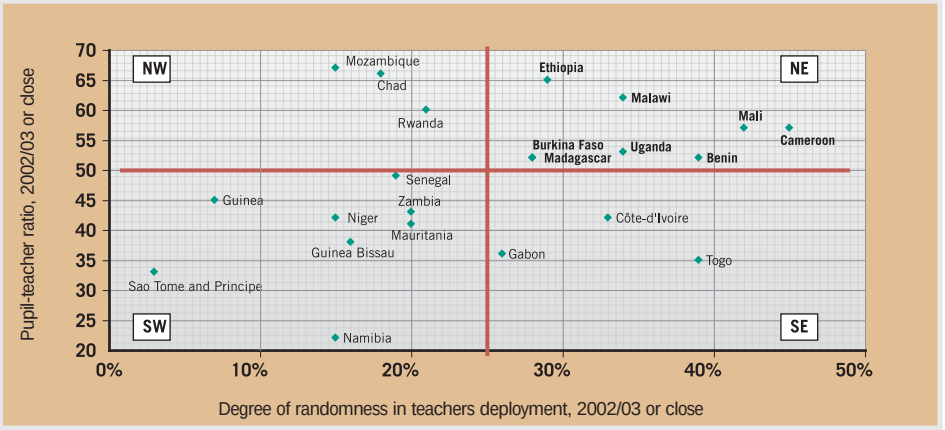
To provide the same teaching conditions (class sizes) for all pupils, a human resources manager from the Ministry of Education must theoretically deploy more teachers to large schools than to small ones. The R^2 statistical indicator (known as the determination coefficient) between the number of pupils and the number of teachers, calculated on the set of all schools, assesses to what extent the number of teachers in schools is proportional to the one of pupils. This measurement is between 0 and 1 (or 0 and 100%); the nearer it is to 100% the higher the teacher deployment to individual schools depends on the number of pupils. Conversely, the further it is from 100%, the more the deployment is granted based on other criteria, according to a «randomness». The complement at 100% of R^2 (100% - R^2) is therefore a measurement of the degree of this «randomness», that is the ratio of situations where the number of teachers is not accounted for by the number of pupils. The degree of randomness is a measurement of the variation in the size of classes accross schools.

The results in terms of teachers deployment consistency vary a great deal from one country to another

The average degree of randomness for the 22 countries is established at 24.8%; in other words, on average in the countries studied (and there is no reason to think that the situation is different in the African countries which are not shown in the sample), **a quarter of teacher deployment is not granted according to the number of pupils in the schools.**

This average figure, however, must not hide the large differences between countries; whereas in certain countries the degree of randomness exceeds 35% (Benin, Mali, Cameroon and Togo), in others it is estimated at 15% or less (Sao Tome and Principe, Guinea, Mozambique, Namibia and Niger), thus showing that situations can improve in the least successful countries[68]. Improvement requirements are even greater in the countries where the average pupil-teacher ratio is higher (North-East quadrant [NE] of graph 3.12, countries represented in bold type). The combination of a high pupil-teacher ratio and a large inconsistency in teachers' deployment results in, for certain children in these countries, class sizes exceeding 100 or even 150 pupils!!!

Graph 3.12: Class size average and variance



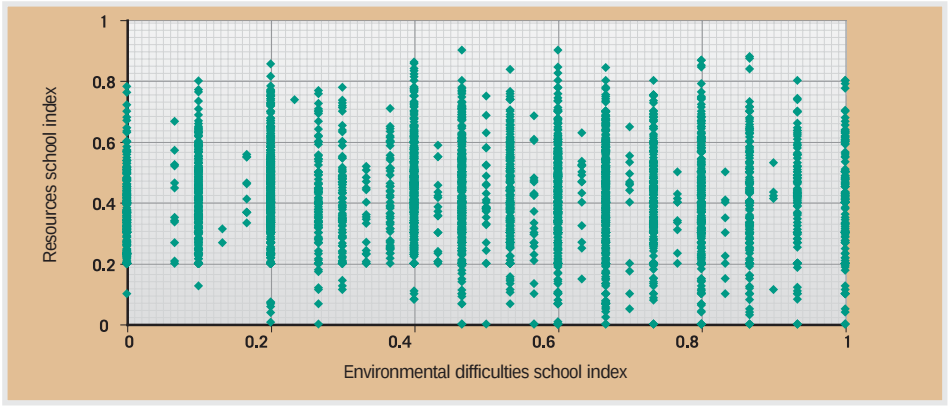
Source: Mingat (2003b) and UIS.

68 On this subject, it will certainly be useful for the countries to share experiences so that the least successful countries, through short missions for example, can be inspired by the current teacher deployment process and practice in the most successful countries.

It is hoped that the resources' allocation to individual schools is not solely related to the number of pupils if we wish to help schools in the most difficult areas. In this case it is relevant to set in place a positive discrimination policy proposing additional allocations for schools in the most disadvantaged environments. For example, Benin has put in place a system whereby the schools are classified into different groups according to the environmental context (obstacles to school access, absence of water, etc.) and a bonus is paid to teachers in schools classified in the most difficult areas. However, these measures, albeit very well targeted, do not explain the considerable differences between schools in the resources received. To highlight this fact, one need only study graph 3.13 which compares the school's environmental difficulty indicators of all public schools in Benin (based on information such as area type-urban/rural-, presence of water, electricity, the accessibility of the school) with an indicator of the resources received by the school (based on the pupil-teacher ratio and the availability of school inputs). The graph shows (1) that the resources received vary considerably from one school to another and (2) these differences in subsidy cannot be explained by the environmental difficulties (there is no link between the environmental difficulty individual school index and resources individual school index).

The same analysis can be made at a region level in a country. Graph 3.14 shows the regional situation in Niger. There is no relation between environmental difficulty and resources allocated (for each region the two dimensions are measured by averaging data of all public schools in the region). In other words, the unfavourable geographical and environmental characteristics in a region are not systematically compensated for by a greater allocation of human and material resources. For example, Dosso, Tillabery, Tahoua and Maradi are exposed to more difficult conditions, yet the resources allocated to their schools are lower than average.

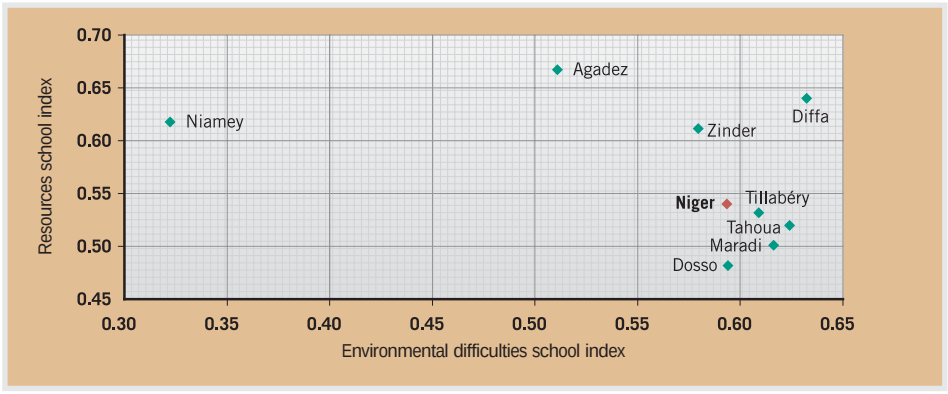
Graph 3.13: Comparison of environmental difficulties and resources allocated, school level, public schools, Benin 2002/03



Source: Brossard (2003b).

The results in terms of teachers deployment consistency vary a great deal from one country to another

Graph 3.14: Comparison of environmental difficulties and resources allocated, region level, Niger 2003/04



Source: Brossard, Duret and Ledoux (2005).

3.3.1.2 Second lever: optimising student grouping

a) The harmful effects of an inadequacy between teachers allocated and needs in individual schools

The inadequacy between needs and deployment of teachers in individual schools creates a double problem: (1) it results in inequity in teaching conditions and (2) as a result of the overall lack of teachers, the over-endowment in teachers of some certain schools leads to an under-endowment of others and therefore generally results in the **persistent existence of incomplete schools** (or schools that cannot provide a continuity in schooling for pupils)[69].

The second point is essential because **discontinuity of schooling offer is responsible for large numbers of pupils dropping out of the school system, and this is the principal cause of non-achievement of universal completion of the primary cycle** (as pointed out in section 2, many countries have achieved or are close to achieving universal access to grade 1 of the cycle, but pupil survival rates during the cycle remain low). For example, 28% of pupils in rural locations in Mauritania are in schools that do not offer a continuity in schooling until the end of the cycle, and consequently many of these pupils are highly likely to drop out of the school system (the survival rate in rural locations is only 22%) if they do not live close to another school which is more complete. On average out of the six countries for which we have collected data (cf. table 3.6), around 15% of children schooled in rural areas find themselves in this situation and this explains, at least partially, the low survival rates[70] in rural areas (51.6% on average in the same countries). Graphs 3.15 and 3.16 show the examples of Mauritania and Guinea and compare, in respect of the national departments, the % of schooling discontinuity and the survival rate. The relation between the % of pupils faced with schooling discontinuity and the survival rate is statistically significant[71] ; on average 1 percentage point better as regards schooling continuity is linked to a 1.8 percentage point higher survival rate in Guinea (0.8 points in Mauritania).

69 Schooling discontinuity is said to exist in a school if the pupils cannot progress in the primary cycle due to the fact that the next grade is not offered in the following year.

70 The relationship estimated on the five countries indicates that on average in rural areas, one more percentage point of schooling discontinuity is linked to a reduction of 2 percentage points in the survival rate.

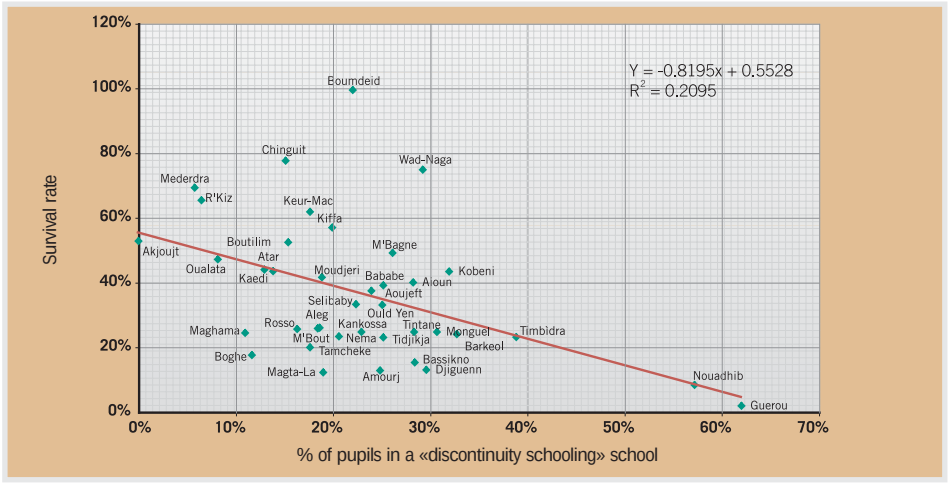
71 Statistically significant at 1%-level in Guinea and 5%-level in Mauritania.

Table 3.6: % of pupils enrolled in schools not offering schooling continuity throughout the cycle and survival rates (rural area only)

	Senegal 2002/03	Niger 2003/04	Guinea 2003/04	Mauritania 2002/03	Chad 2003/04	Mali 2002/03	Average of all countries
% of pupils in a school not offering schooling continuity	5.9	12.8	60.4	27.9	19.4	16.3	14.6
Survival rate (%)	57.9	65.5	11.4	22	na	46.4	51.6

na: not available.
Source: Brossard and Ndém (2005).

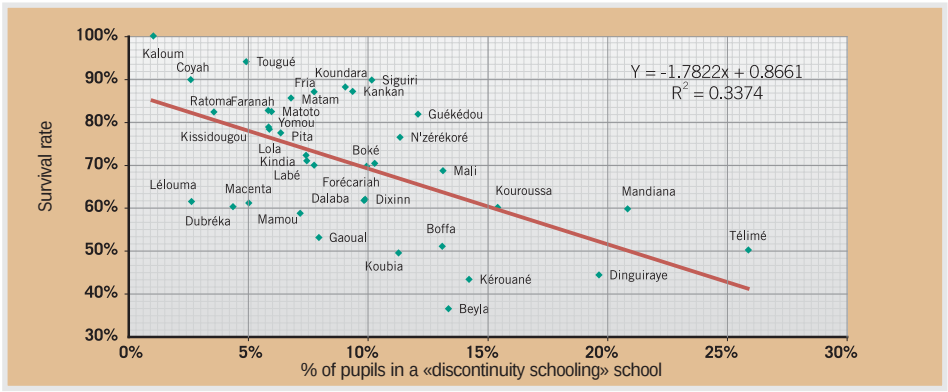
Graph 3.15: % of pupils enrolled in schools not providing schooling continuity throughout the cycle and survival rate, Moukhataa (department) level, Mauritania 2002/03



Source: Brossard and Ndém (2005).

The shortage of teachers orces pupils to drop out before the end of the primary cycle

Graph 3.16: % of pupils enrolled at the schools not providing schooling continuity throughout the cycle and survival rate, department level, Guinea 2003/04



Source: calculations of the authors based on data from CSR Guinea.

In **rural areas**, in the regions where the population density is low (particularly in remote and/or nomadic areas), the size of the pupil-cohorts (one age group) is very often lower than the average class size noted in the country. **The conventional school organisation pattern of single flow/single shift** (one teacher in a classroom for a group of pupils all at the same grade) **is then extremely costly for the system** (pupil-teacher ratio is very low) and it becomes difficult to recruit enough teachers to cover all the classes. Due to budgetary constraints (the number of teachers that the State can recruit is limited) and to the lack of qualified teachers at a local level, the system very often adapts automatically itself and produces schooling discontinuity, that as we know leads to pupils dropping out.

In **urban areas**, the opposite phenomena often occur: the number of children to be enrolled is excessive and education supply (especially teachers and classrooms) is often below requirements. **The exclusive use of the conventional single flow pattern then leads to outsized classes which are detrimental to quality**.

b) Student grouping: the possible options

To overcome these difficulties, most of the African countries have set up, to different extents, alternative student grouping methods (see table 3.6 for examples of names and exact definitions of the different grouping patterns). **In rural areas**, **multigrade classes** (with pupils at different grades taught by the same teacher) and **alternate enrolment** (the schools only open a grade 1 class every three years, for example, this class accommodates children from three age groups who will undertake all their schooling together) are used to reduce costs and eradicate schooling discontinuity. **In urban areas**, the system of **double flow/double shift**, (two groups of pupils share the same classroom and/or teacher and come into the classroom one after the other) makes it possible to reduce the class sizes when there are not enough classrooms or teachers.

As highlighted in table 3.7, the use of these alternative methods varies greatly from one country to another. In the sample of 7 countries studied, the proportion of pupils in a multigrade class varies from 7% in Guinea to 55% in Chad. The alternate enrolment method varies from 15% of pupils in Mali to 43% in Niger and the double flow/double shift method can not be employed at all (Mauritania and Chad) or concern 20% or more of the pupils (Mali, Guinea and Senegal).

Table 3.7: Distribution of the pupils according to student grouping method or school enrolment system (%)

	Senegal 2002/03	Niger 2003/04	Guinea 2003/04	Mali 2002/03	Burkina Faso 2002/03	Mauritania 2002/03	Chad 2003/04	Average for 7 countries
Single flow	69	83	72	64	74	60	46	67
Multigrade	9	14	7	16	19	40	55	23
Double flow/double shift	22	3	21	20	6	0	-	12
Total	100	100	100	100	100	100	100	100
Alternate enrolment schools	16	43	20	15	23	31	34	26

Source: Brossard and Ndém (2005).

Inset 3.6: Definition of student grouping methods in different countries

Country	Double shift («double vacation» in french)	Double flow («double flux» in french)	Multigrade
Burkina Faso	/	2 teachers, 1 room and 2 groups of pupils successively	1 teacher, 1 room, 2 levels simultaneously
Cameroon	One school group occupies the classrooms in the morning and the other in afternoon alternately		Same definition
Congo	1 teacher, 1 room, 1 level and 2 groups of pupils successively	/	1 teacher, 1 room, several levels simultaneously
Côte d'Ivoire	/	1 teacher, 1 room, 1 level and 2 groups of pupils successively	1 teacher, 1 room, several levels simultaneously
Guinea	1 teacher, 1 room, 1 level and 2 groups of pupils successively	/	1 teacher, 1 room, 2 levels simultaneously
Madagascar	/	/	1 teacher, 1 room, 2 levels simultaneously
Mali	- 1 teacher, 1 room, 2 groups of pupils of the same level or of two different levels successively - 2 teachers, 1 room, two groups of pupils of the same level or of different levels	/	Or double division,1 teacher, 1 room, 2 levels simultaneously
Niger	2 teachers, 2 classrooms and 3 groups of pupils	1 teacher, 1 room, 1 level and 2 groups of pupils successively	Or twinned, 1 teacher, 1 room, 2 to 3 levels simultaneously
Senegal	/	Same definition as in Niger	1 teacher, 1 room, 2 levels simultaneously
Togo	1 teacher, 1 room, 1 level and 2 groups of pupils successively	/	Or twinned, 1 teacher, 1 room, 2 levels simultaneously

Note:
Some student grouping methods are specific to certain countries:

Senegal: double utilisation 2 teachers, 1 civil servant and 1 contract-based, 1 room, 1 level in 2 groups simultaneously

Madagascar: staggered classes 1 teacher, 1 class, 5 levels, 2 groups of pupils successively.
Grades 1, 2 and 3 for 2 hours 30 mins then Grades 4 and 5 for 2 hours 30 mins.
This type of organisation is being gradually replaced by the multigrade method.

Source:
Working document of the PASEC/CONFEMEN international workshop, Bamako (Mali), 2001.

c) The impact of the student grouping on the redeployment of the teachers and on GER

The use of these alternative methods of student grouping serves to save teachers who can then teach to more students. It is possible to simulate. the number of teachers in a school as if it were operating solely with the single flow method, and to compare it with the number of teachers actually present (taking account of the pupil grouping pattern currently in use)[72]. The difference between these two amounts represents the number of teachers «saved» who can teach to additional pupils in another school. It is thus possible to simulate, country by country, the gain in gross enrolment ratio made possible by the different grouping methods.

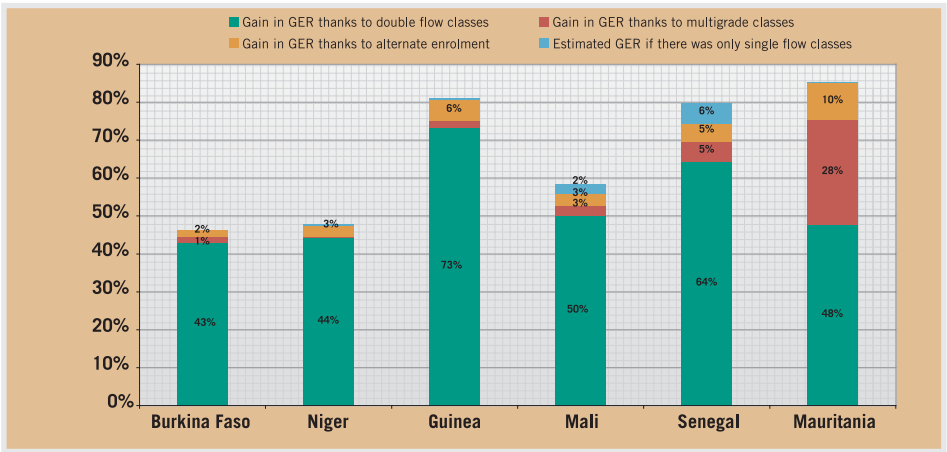
The results, set out in graph 3.17 speak for themselves: the combined use of the multigrade method and alternate enrolment has enabled Mauritania to increase its GER by 38 percentage points (if the system used only the single flow method the GER would have been only 48% whilst it is currently 86%). In Senegal, the use of alternative methods also enables considerable gains to be made in GER (16 percentage points by combining the effects of the multigrade, alternate enrolment and double flow methods). The results are more moderate (but nevertheless exist) in the four other countries considered, either because the alternative methods are less prevalent or because their use is not optimised (management problems).

Some countries rationalise teachers deployment by using alternative methods of pupil grouping and hence accommodate more children

These examples of student grouping management should certainly be reproduced, and adapted to suit the national context, in a large number of countries to facilitate progress towards universal schooling, particularly in the context of relative scarcity of resources.

Finally, it should be noted that the analyses made regarding the impact of the pupil grouping methods on quality (learning efficiency) does not provide tough results[73]. The quantitative gains (obtained by an optimization of student grouping) are not offset by any negative qualitative effects.

Graph 3.17: Simulations of the gains in GER linked to optimisation of student grouping



Note: the countries are ranked by increasing order of gain in GER. Gains of less than 1 percentage point do not figure on the graph.
Source: Brossard and Ndém (2005).

72 The simulation consists in using an econometric model explaining the number of teachers in a school by the student grouping method variables and the number of pupils at the school.

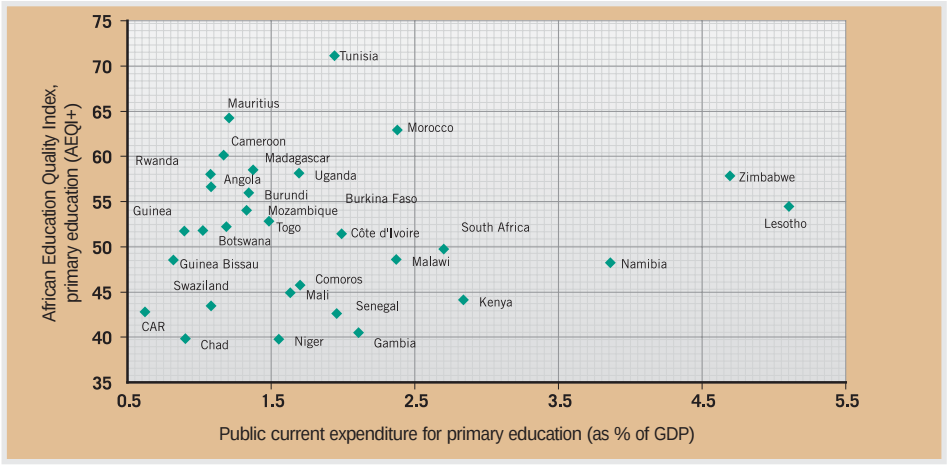
73 See particularly Mingat and Suchaut (2000). Certain studies show positive effects, others negative effects and others no effects.

3.3.2 The search for a better transformation of resources into results

The link between resources and results is weak, hardly existent.

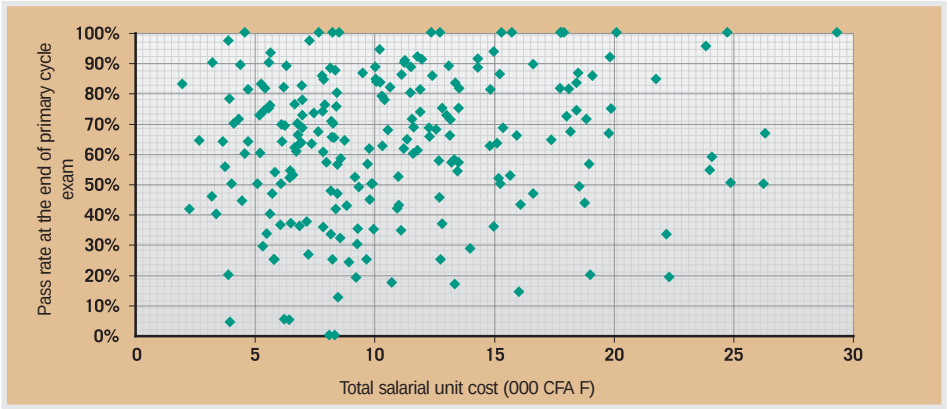
It is not enough for each school to receive equitably resources, it is also necessary for these resources to be effectively transformed into results, that is, for the primary cycle, for the children to stay in school until the end of the cycle and to attain the basic standards of knowledge. As shown in graphs 3.18 and 3.19, whether the analysis is made at country level or at school level in a country, the **link between investment of resources and results is weak, and even non-existent.**

Graph 3.18: Relationship between resources and results, country level



Source: authors' calculations.

Graph 3.19: Relationship between resources and results, school level, Chad, 2001/02



Source: CSR Chad.

There are three main potential reasons for the absence of a link between resources and results:

(1) the socio-economic characteristics of the individuals and the local environment have a significant influence on student learning, that the resources made available to the schools cannot compensate,
(2) the combination of the school inputs (teaching material, classroom equipment, teachers' characteristics, etc.) is not the most cost effective, and
(3) the practices and pedagogical methods employed by the teacher in the class (difficult to measure and quantify in financial terms) have an important impact on the student learning process in schools.

The following parts explore each of these three points and propose action strategies.

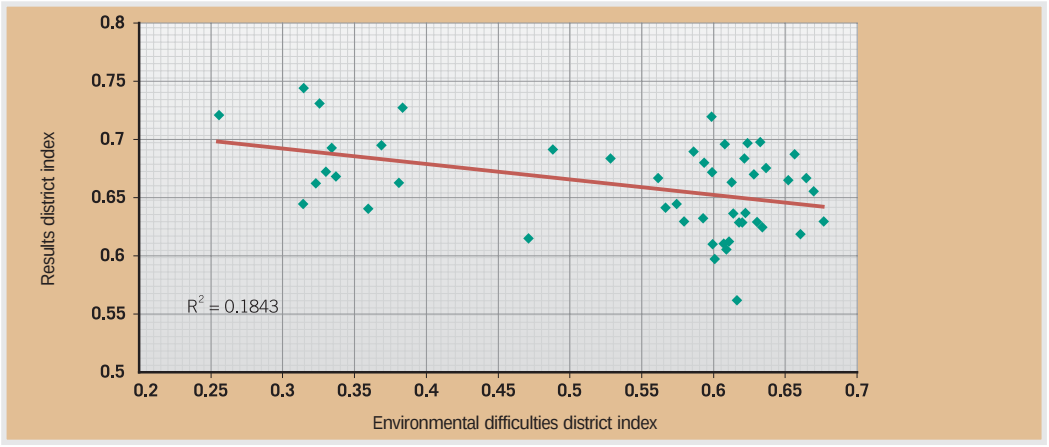
3.3.2.1 The influence of the socio-economic factors and of the local context on results: reducing the initial situational disparities

The socio-economic factors and the local context have an influence on the results achieved in schools

The socio-economic factors and the local context have an empirically proven influence on education results. For example, in Niger (cf. graph 3.20), the differences in the local environmental context (urban-rural location, accessibility of the school, presence of water, etc.) explains 18% of the differences observed between districts in the results (survival, exam success, % of repeaters). As regards the socio-economic characteristics of the pupils[74], the results of the PASEC assessments[75], are also very clear (cf. table 3.8). Even though the impact varies from one country to another, the individual social factors have an influence on student learning, an influence which increases as the level of teaching rises through the school. On average in the 4 countries described, the share of the socio-economic factors in the student learning progress explained by all the different variables (socio-economic and school inputs factors) is estimated at 26% in grade 2 and 38% in grade 5. **This data supports the idea set out in part 3.3.1.1, that it is worthwhile encouraging, in the allocation of resources and in the monitoring, priority allocation in schools located in difficult areas, in order to balance the negative effects of a disadvantaged local context**.

While the effects of the local socio-economic context are well-established, they do not explain the whole picture. Another interpretation of the graph and the preceding table shows up the following: (1) 82% of the differences in results between districts in Niger are not explained by the environmental context but by other factors, and (2) school inputs[76] have two to three times more impact on student learning than socio-economic factors.

Graph 3.20: Index of environmental difficulties and index of results in primary schools, district level, Niger 2003/04



Source: Brossard, Duret and Ledoux (2005).

Table 3.8: Distribution of progress explanation (socio-economic factors and school inputs variables)

	Socio-economic factors	Schooling variables
Burkina Faso Grade 2	18%	82%
Burkina Faso Grade 5	34%	66%
Cameroon Grade 2	27%	73%
Cameroon Grade 5	39%	61%
Côte d'Ivoire Grade 2	30%	70%
Côte d'Ivoire Grade 5	39%	61%
Senegal Grade 2	28%	72%
Senegal Grade 5	39%	61%
Average Grade 2	26%	74%
Average Grade 5	38%	62%

Source: PASEC (1999).

74 Age of the pupil, standard of living, nutrition, help with homework, French spoken in the home, sex and social environment (urban-rural).

75 The PASEC assessments have the advantage of testing the pupils at the beginning and end of the school year and of collecting the information regarding the pupils and the school inputs available in the class. Thus they measure the impact of numerous factors on the progress of the pupils during the school year.

76 Possession of textbooks, characteristics of the teachers (seniority, sex, academic level, initial and continuing professional training), student grouping pattern, class sizes.

All school inputs are not equally cost effective. The search for the best combination can allow improvements in results

3.3.2.2 The influence of school inputs factors on results: identifying the winning combination

The second strategy envisaged to improve quality is based on the combination of school inputs allocated to the classes. It is important to carry out a meticulous analysis of the benefits in terms of student learning of each school organisation or inputs and compare them with their costs. This cost-efficiency analysis must be performed at national level, either based on data concerning national examinations, or on the data from the standardised assessments of learning achievement (of the PASEC type), or by combining the two (as for example the data for Guinea, in table 3.9).

Table 3.9: The impact of schooling factors on results at primary education compared with costs (Guinea 2003)

	Impact			Cost	Policy
	Pass rate in end of primary cycle exam	PASEC	Global		
Better classroom quality	0		0	+ + +	Limited construction projects
Better classroom equipement			+ +	+	Positive
Existence of toilets	+ + +		+ + +	+	Very positive
Existence of a library	+ +		+ +	+	Very positive
Textbooks	+				
Reading			+ +	+	Positive
Arithmetic			0	+	0
Reduction in % of repeaters	+ + +	+	+ +	- -	Very positive
Reduction of class sizes	+	+	+	+ + +	0
Teaching in multigrade	+		+	- -	Positive
Teaching in double shift		- -	- -	- -	Negative
Teachers					
Female teachers	+ +	- -	-	0	
Academic level		BEPC OK	BEPC OK		BEPC
FIMG / traditional training	+	-	0	-	Positive
Contract-based / civil servant	0	-	-	- - but	Positive but

Note: the impact shown by means of + or - signs which means that the variable, as described in the 1st column, has a favourable or unfavourable impact on the result; the number of signs is a qualitative measure of the impact recorded. BEPC stands for the end of lower secondary exam.

Source: CSR Guinea (2004).

Assessments of the impact of the main schooling policy options concerning the different school organisation differ from one country and from one study to another, showing that there is no miracle solution that can be implemented across the board. A review of the literature[77] (cf. table 3.10) shows that apart from school textbooks, canteens (for which the studies concord upon a strongly positive effect) and the type of building (generally no effect), the effects of the other school inputs as observed in the surveys do not highlight any sharp results.

77 Sources: Mingat and Suchaut (2000), PASEC (1999), Hanushek (2003), UNESCO (2004), Pôle de Dakar (2002).

Table 3.10: Effects of the school organisation and measured school inputs on learning achievement as described in the literature, primary education, African countries

School organisation and school inputs	Effect on learning achievement recorded in the different studies
SCHOOL ORGANISATION	
Class size	Variable (negative effect above 70 pupils per class)
Student grouping method	Variable (rather positive effect for multigrade, rather negative effect for double flow)
Teachers' characteristics	
Academic level /contractual status	Variable
Initial and continuing training	Variable
Salary	Variable
Seniority	Negative effect
INTRANTS SCOLAIRES	
Textbooks	Very positive effect
Tables-benches	Positive effect
OTHERS	
Type of classroom building	No effect
Support with school dinners	Very positive effect

Note: Another important assessment factor: all these variables generally explain (depending on which year and which country is considered) only 5 to 10% of the differences in student learning (PASEC, 1999).
Sources: Mingat and Suchaut (2000), PASEC (1999), Hanushek (2003), UNESCO (2004), Pôle de Dakar (2002).

3.3.2.3 The fundamental role of the teacher: deciphering class teaching practises

These results incite to explore the third strategy described in the introduction; if the socio-economic conditions (individual and in the local environment) and the logistic school organisation and inputs, as measured in the surveys, only explain a small part of the differences observed between student learning, this means, by default, that the **unmeasured practises (since they are difficult to observe) actually employed in the classroom, are certainly factors which influence the most learning achievment.**

Classroom teachers practices are certainly the factors which affect the most learning achievement

Table 3.11: Global «teacher» effect and effect of the teachers' measured characteristics on learning achievement (% of variance explained, average of grade 2 and 5, primary education)

	Burkina Faso	Cameroon	Côte d'Ivoire	Madagascar	Senegal	Guinea	Mali	Niger	Togo	Average 9 countries	Developed countries
Global «teacher» effect	18.5	28.9	17.6	37.9	12.8	38.1	42.5	31.2	19.1	27.4	between 5 and 15
Effect of the teachers' measured characteristics	2.6	4.8	2.2	4.3	1.4	4.7	3	5	2.5	3.4	
Effect of other characteristics of the teachers to be ascertained	15.9	24.1	15.4	33.6	11.4	33.4	39.5	26.2	16.6	24	

Source: Bernard et *alii* (2004).

Empirical results encourage progress towards result-based management

Bernard et *alii*. have recently explored this channel and have achieved particularly interesting results on the basis of the PASEC assessments carried out in nine countries. The approach consists in estimating for each country «*what difference it makes whether a pupil is in one class rather than another, in terms of explaining the pupils' learning achievements. We consider that, in view of all the individual and environmental variables*[78]*, the most important variable in terms of effect on the class is the teacher. This measurement is called the teacher effect*». The effect of the teachers' measured characteristics (contractual basis, training, academic level, seniority, etc), which is part of the global teacher effect, is also estimated for the same countries. The results (cf. table 3.11) are extremely revealing:

- The global teacher effect is very important in Africa: It is estimated at 27.4% on average in the nine countries and rises to around 40% for some of them (Madagascar, Guinea and Mali). A useful comparison can be made; the same estimations made in the developed countries produce figures of between 5 and 15%. **The teacher is the cornerstone underpinning the quality of teaching in Africa.**

- **The effect of teachers' measured characteristics does exist, but is very slight**: it is calculated in the nine countries at 3.4% on average (from 1.4 to 5% according to the country considered). The status (contractual/civil servant/community-based), the academic level, the training received, the seniority (and thus the salary level, which is the resultant of all these factors) only amounts to 12% of the global teacher effect on student learning. **This result, which is reliable (it is observed in all the countries assessed), contradicts the commonly held view that an improvement in quality can only be achieved by recruiting teachers with civil servant status, a high academic level and having received long professional training**. 88% of the global teacher effect is not due to the measured characteristics (varying from 83% in Cameroon to 93% in Mali).

- **The effect of non-observable characteristics of the teachers is very strong. The teacher's motivation**[79]**, the effective teaching time** (which are related due to the fact that low motivation causes teachers' absenteeism) and the **teaching methods** certainly make up a large part of these unmeasured characteristics which have a strong impact on student learning. There is a good case for working towards the setting in place of management systems, the purpose of which would be to enhance these factors. The most promising strategies reside in (1) reinforcing the structures and mechanisms of incentives and monitoring aimed at improving motivation and reducing absenteeism and (2) adapting the school calendar to the social environment (adjusting it according to local life: harvest season, market day, etc.) in order to increase the effective teaching time.

Conclusion:

(1) the local socio-economic conditions affect learning achievement,
(2) the resources and logistic methods have an impact, but this is not as significant as is commonly believed (particularly for the teachers' observable characteristics) and
(3) the factors which have the greatest influence on learning achievement are the «hidden» factors (or factors which are difficult to measure) relating to actual practises in the classroom (teaching time, teacher motivation, teaching methods) that the public authorities have never considered it necessary to monitor or assess (the normal focus is the management of systems on a resources-based way).

This situation leads us to advocate progress in the direction of a clearly **results-based management** (this is by the way also the conclusion of the work of Bernard et *alii*.).

78 Including the teaching material and classroom equipment available to the class.

79 As regards teacher motivation, Michaleowa (2001) showed that motivation decreased in relation to the academic level of the teacher; teachers with the baccalaureate and higher are less professionally satisfactory than are teachers with a BEPC level by a statistically significant amount. The zero effect (or even negative effect in some countries) of the academic level of the teacher may be considered as the consequence of the positive effect of a higher standard of the most qualified teachers and the negative effect of lower motivation.

3.3.3 Results-based management: a necessity

How can we convert results-based management from a theoretical concept into a practical reality? This is a real challenge, since it amounts to a change in culture and practices of the system's stakeholders. This change in culture demands the introduction of an assessment culture and of increased «accountability» (the requirement to account for one's actions) of the stakeholders. The current results (set out above) show that the education systems do not always know how to deal with the problems of inefficiency (poor results despite a high level of resources) recorded in some schools. There are three pre-requisites for this change of culture[80] to come about:

Result-based management involves a change in culture: more assessment, more accountability and transparency and a more prominent role for local communities

1. Regular data collection concerning the schools (environment, resources and results)

To manage through results, it must first be possible to collect the results, as often as possible. The idea therefore is to compare results with resources and contexts at school level. This comparative data between schools must be distributed as widely as possible in order to motivate the least efficient schools. For example, Niger began distributing school report cards at the start of 2005 (one page data sheet per school detailing the context, the available resources and the school results compared with other schools) to individual schools.

2. Setting in place efficient management systems and practises

• improving equity in the distribution of resources

Equity in teaching conditions necessitates an improvement in adequacy between needs and resources allocated to schools. This is especially true in respect of the allocation of teachers, so as to reduce the number of over-sized classes. Positive discrimination policies could also be advantageously set in place in order to balance the environmental difficulties in certain areas through the allocation of additional resources.

• allowing schools to actually receive the resources

Frequently, central government resources do not actually reach the schools. To remedy this situation, the practise of direct allocation of supplies from the supplier to the schools has proven successful in some countries, particularly as regards school textbooks for which the in-transit loss rate is often high. The practice of circulating information to schools relating to the resources to be allocated is also to be encouraged. One example of this is set out in the World Development Report (World Bank, 2004, pages 62-63), and taken from Uganda. In 1996, a public expenditure tracking survey highlighted the fact that only 13% of the unit allocations (per pupil) actually reached the schools. To deal with this problem, the Ugandan government decided to publish the amounts transferred to each district on a monthly basis and to also broadcast it via local radio stations. The results speak for themselves: the rate of delivery is now assessed at around 80% [81].

• providing incentives for efficient practises by the stakeholders

As was underlined by Bernard et *alii* «*although differences in motivation between individual teachers are inevitable, education systems cannot accept they bring about considerable differences in student learning. This brings us back to the question of the efficiency of the existing monitoring and incentive measures*». Real results-based management necessitates:

- a clarification of the «rules of the game» for all the stakeholders in the system (cf. table 3.12 for example): Who does what? Who account for to whom? How? Which remedial mechanisms apply in the event of discrepancies observed regarding set responsibilities?

80 The IEMAC (Improvement of Education Management in African Countries) initiative, supervised by the World Bank, with technical support from the Pôle de Dakar and with the participation of five countries (Burkina Faso, Mauritania, Madagascar, Mozambique and Niger) adheres to the strategy aimed at changing the culture and helping countries to build up the technical and institutional instruments required for this change.

81 In the same way Burkina Faso has experimented with the decentralisation of «school funds» and the first assessment is very positive.

- the setting in place or strenghtening of teachers' bonus and promotion schemes, no longer just related to seniority, but also according to student learning results.

- the rationalisation of the school inspection system. In many countries the number of inspectors and the resources available to them are inadequate to inspect all schools regularly. Prioritizing inspections of inefficient schools (low results in comparison to resources) would make it possible to optimise the inspection system. Inspections could also serve to check the accuracy of the data declared by schools especially in view of the fact that results-based management may lead some to make false declarations (for example if declaring greater requirements allows them to obtain greater resources).

- the capitalisation of efficient practises. Visits to the most efficient schools (good results in comparison to the resources allocated) would make it possible to observe the most effective practices with a view to replicating these methods in the least efficient schools.

Table 3.12: Example of global structure of responsibilities for education system management

	Direction action	Monitoring action
Teacher	[A] Practises: presence (timetable), syllabus, preparation, assessment, remedial action, behaviour	
	[B] Results: Common assessment at the end of the year, exams	
Parents/community	Make an undertaking regarding the regular presence of the children during school time defined in collaboration with the educational authorities	Supervise presence/behaviour of the teachers and [C], [D] [E], [F], [G] and [I]
School Headmaster	[C] Determine the weekly teaching timetable	[H] Supervise [A]
	[D] Provide pedagogical support to teachers	
	[E] Organise the upkeep of the infrastructures	
	[F] Organise relations with the community	
	[G] Collect school data	
Inspector	[I] Allocate resources and staff to schools	[M] Supervise [B], [C] , [D] , [E], [F], [G] and [H]
	[J] Regroup, check and circulate data from schools	
	[K] Prepare the common end-of-year examinations	
	[L] Takes steps to improve inefficient schools	
Regional director	[N] Allocate resources and staff to districts	[Q] Supervise [I], [J[, [K] , [L] and [M]
	[O] Produce regional statistics and distribute to districts	
	[P] Take steps to improve the performance of inefficient inspectors	
Central directorate	[R] Allocate resources and teachers to the regions	[V] Supervise [N], [O], [P] and [Q]
	[S] Produce and distribute national education statistics	
	[T] Establish the rules, criteria and instruments	
	[U] Take steps to improve the performance of inefficient regional directors	
National Council		Supervise the whole system

Source: Mingat (2004c).

3. Bolster the role of the local communities

As advocated by the World Development Report (World Bank, 2004), it would be advisable to shorten the accountability path between suppliers of education services (essentially the State and in a less concentrated manner the teaching agents paid by the State) and the recipients of the service (the pupils). **Because those who have most interest in ensuring student lear-**

ning are the parents, it is pertinent to reinforce their role in order to monitor and check what actually takes place in the classroom. If the teachers and school headmasters are required to report to the village community, this will encourage better practises. Some countries (Niger and Benin for example) have embarked upon this policy by setting up school management committees (made up of the school headmaster, teachers, parents, union representatives, the head of the village and sometimes even pupils). The main purpose of these school management committees is to ensure that the school is well run, notably by supervising the arrival of resources and monitoring the presence and practises of teachers in the classroom.

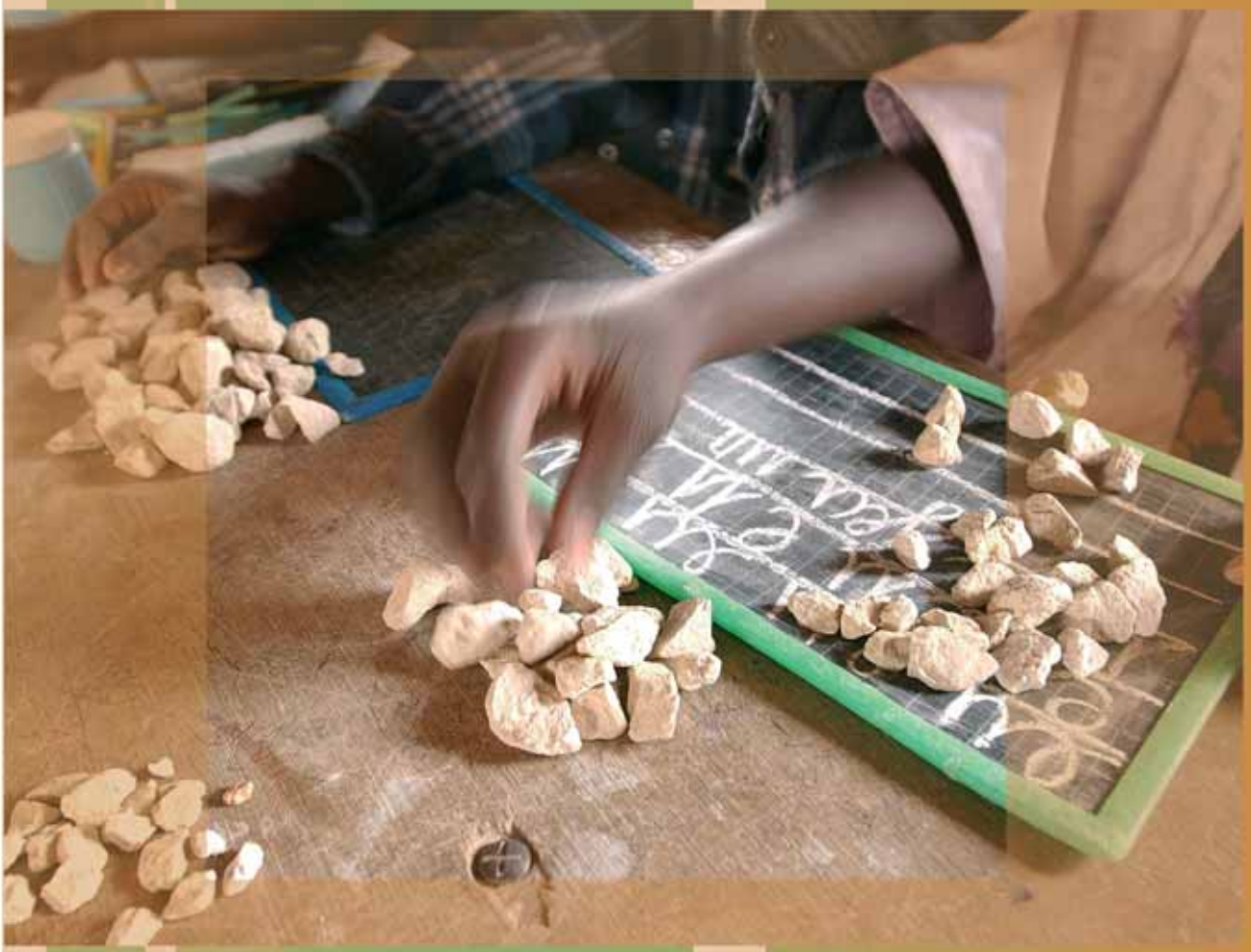
3.4 Conclusion: education systems can change their scale of operation in Africa

The diversity of situations within the African continent underlines the existence of room for manoeuvre in relation to the key parameters of education policy that must be continually researched in order to ascertain the best courses of action to set in motion. The matrix in table 3.13 proposes a summary of Section 3 which provides an overview of all the options open to the education authorities on the African continent and enables them to make real headway in developing education systems for the future.

Table 3.13: Matrix of policy levers

Policy levers: level/parameters	The principles of education policy	The possible options depending on the situation in the country
ROOM FOR MANOEUVRE in the KEY TRADE-OFFS of EDUCATION POLICY		
Inter-sector trade-off Parameters (i) the share of overall current education expenditure in the domestic government revenues	Mobilise national resources for education as agreed during international conferences (Education for all and the Millennium Development Goals)	- For countries that do not reach the threshold of 20%: increase the share of the budget allocated to education - For countries that exceed the threshold of 20%: maintain the share of the budget according to the aims of the education policies, and particularly for the post-primary sector
Intra-sector trade-off Parameters (i) the share of the overall current public education expenditure allocated to primary education (ii) the share of the overall current public education expenditure allocated to secondary education (iii) the share of the overall current public education expenditure allocated to higher education (iv) etc…	Protect the primary cycle until Universal Primary Education is attained in order to establish a sound minimum educational level throughout the nation	For countries furthest from UPE and with low budgetary priority for primary education - Option 1: increase the budget share for primary education by reducing the share for secondary education when this is greater than the mid-point observed in the African countries - Option 2: increase the budget share for primary education by reducing the share for higher education when this is greater than the mid-point observed in the African countries - Option 3: option1 + option2 when the shares of secondary and higher education are higher than the mid-points observed in the African countries
Quantity-unit cost trade-off (for the primary cycle) Paramètres (i) the overall public current expenditure for primary education as % of GDP (ii) the current expenditure per pupil (unit cost)	Allow quantitative development without reducing the quality	For countries furthest from the Universal Primary Education - Option 1: increase the volume of resources for the primary cycle in the countries where the % of GDP allocated to overall expenditure in the primary cycle is less than the mid-point in the African countries - Option 2: reduce the unit cost in the countries where the unit cost of primary education is higher than the mid-point in the African countries - Option 3: option 1 + option 2
Trade-offs within unit cost Parameters (i) the number of teachers regarded with the pupil-teacher ratio (ii) the average teacher salary in units of GDP per capita (iii) the current expenditure excluding teachers' expenditure in % of total current expenditure	Allow quantitative development of primary education without reducing the quality	For countries furthest from the Universal Primary Education whith a high unit cost - Option 1: increase the average size of the classes if this is lower than the average value observed in Africa - Option 2: reduce the average salary of the teachers by recruiting lower paid teachers if the average salary is higher than the average value observed in Africa - Option 3: reduce the % allocated to current expenditure excluding teachers' salaries to the average value observed in Africa - Option 4: option 1 + option 2 ; Option 5: option 1 + option 3 - Option 6: option 2 + option 3 ; - Option 7: option 1 + option 2 + option 3

Policy levers: level/parameters	The principles of education policy	The possible options depending on the situation in the country
ROOM FOR MANOEUVRE in STUDENT FLOW MANAGEMENT		
In-cycle flow management Parameters - the % of repeaters within the primary cycle - the % of repeaters within the lower secondary cycle , etc.	Take steps to prevent pupils repeating years and to reduce dropping out	Option: reduce the % of repeaters in countries where it is over 10%, for example by setting up sub-cycles accompanied by a communication strategy explaining the negative effects of too high a repetition rate
Cross-cycle flow management Parameters - the primary → lower secondary transition rate	Maximum enlargement of lower secondary education and regulation of the transition on the basis of physical and financial feasibility of expansion	- Option 1: increase in transition rate (rare) - Option 2:maintaining the transition rate at current level (rare) - Option 3: reduction of the transition rate (option for the majority of the African countries far from universal primary education) and reflection on the measures for the support of those leaving the system
Parameters - the lower→upper secondary transition rate - the upper→higher education transition rate	From lower to upper secondary: increase enrolment taking into account the planned development of higher education. From upper to higher education: development of enrolment linked to the demands of the economy.	- Option 1: increase in the transition rate between lower and upper secondary (rare) - Option 2: maintain the transition rate between lower and upper secondary - Option 3: reduction of the transition rate, reinforcement of the quality of the post-primary cycles and reflection on the support measures for those leaving the system Note: if enrolment in upper secondary education is set according to the «desirable» number of higher education students, the transition rate between upper secondary and higher education is no longer an «active» parameter of education policy
ROOM FOR MANOEUVRE in PEDAGOGICAL and ADMINISTRATIVE MANAGEMENT		
Allocation of resources to individual schools Parameters - the environmental factors - the socio-economic factors - deployment of the teachers - allocation of material resources	Reduce the disparities in allocations Compensate for inequalities (difficult environments)	Wide diversity of options, in particular: - Allocate additional resources to schools in the most difficult environments - Optimise student groupings so as to save teachers in order to redeploy them in under-resourced areas or assign them to different classes
Transformation of resources into results Parameters the schooling factors (i) the school organisation (ii) the school inputs (iii) the role of the teacher	Give priority to school organisation which have a positively discriminative impact on quality Ascertain the most efficient combination of school inputs Ascertain the teaching practises which are decisive in pupils' learning achievement process	Wide diversity of options, in particular: - A firmly results-based management system - Enhance the role of the local communities - Improve accountability of the players in the system



Section 4

Trends in external support - a difficult transition from theory to practice

4.1 An international awareness...

At the Dakar Forum in 2000, the international community voted for a resolution whose impact proved to be profound: «no country seriously committed to basic education (with a credible plan) will be thwarted in their achievement of this goal by a lack of resources».

This Dakar Declaration was reinforced, a few months later, by including two goals for education amongst the Millennium Goals adopted by the United Nations in September 2000: eliminating gender disparities in education and achieving Universal Primary Education by 2015.

This is setting a pact, no longer only on national level, but on a global level, for goals of Education For All.

4.2 ...followed by an increase in Official Development Aid (ODA)

4.2.1 Overall Level and Africa's contribution

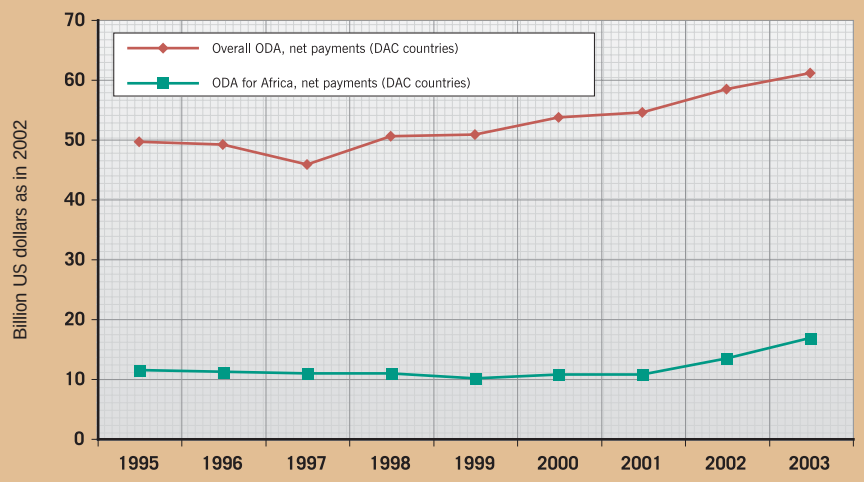
These international pledges are made through international mobilization for sustainable development, they include reconsideration and increase in external aid.

In fact, the «aid fatigue phenomenon», which involved an erosion in Official Development Aid (ODA) in the 1990s, has, since the dawn of the new millennium, been succeeded by a recovery. This increase must be put in perspective: the total amount of aid distributed by the members of the DAC increased in par value from 58.3 billion US dollars in 2002 to 69 billion in 2003. But from this 10.7 billion US dollar increase, approximately 7.9 billion dollars are the combined effects of inflation and the fall in the external value of the dollar. In percentage of national wealth (ODA/Gross National Product), it is a meagre improvement: from 0.22% in 2001 to 0.25% in 2003, which is still far from the 0.33% for the period 1980-92. The pledges made at the Monterrey Conference should reinforce the progression in real terms for 2006, and the pledges made since, often unilaterally, if they are kept, could give us hope for a ODA amount exceeding 100 billion US dollars in 2010 (2003 price and exchange rate).

This is probably optimistic; however, it is possible with political willingness: according to the Millennium Project Report which was submitted to the General Secretary of the United Nations in January 2005, 50 billion extra US dollars would be required to reach the millennium goals.

The other encouraging sign is the recovery - announced and promised long ago in international conferences - of the aid allocated to Africa. For the Sub-Saharan Africa, the increase noted between 2001 and 2003 was amounted to approximately two thirds.

Graph 4.1: Overall and African Official Development Aid



Note: After contradictions and hesitations from 1995 to 1997, the ODA started recovering in 2001. The amount of aid distributed by the DAC members increased by 7% in real terms between 2001 and 2002, then by 5% in 2003.
Aid destined for Africa increased from 13 to 19 billion US dollars over the same period (22% to 28%).

Source: OECD, 2005, Database on aid

International commitments to increase Official Development Aid (ODA) is beginning to bear fruit

4.2.2 For Africa, an increased share of education in public development aid, but uncertainty over the proportion allocated to basic education.

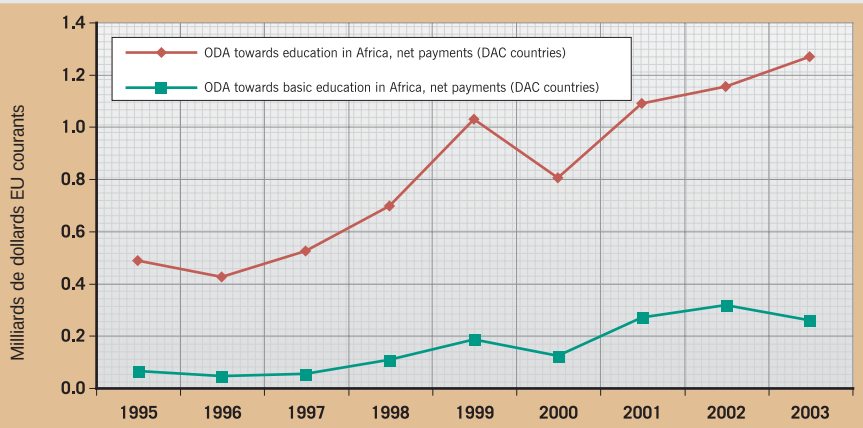
Over and above the level of aid and its reallocation where it is most needed (thus Africa), the dynamic of the Millennium Goals called for an internal reallocation of this aid: in a way more beneficial to social sectors and, with in them, to basic social needs.

On a world-wide level, the starting point today is a total of education aid, both bi-and multilateral, amounting to 5.45 billion US dollars for 2001/02 (average over two years, in US dollars as in 2001). Within that, the volume devoted to basic education is estimated at 1.54 billion US dollars.

For Africa, priority to basic education within Official Development Aid (ODA) is still uncertain

For Africa the situation is still uncertain: allocation in the education sector in general seems to experience a recovery, yet the share of basic education is very inconsistent: it is positive over a long period, but it is still unstable and even negative some years. This is most probably a case of inconsistency in terms of reaching the goals of Education For All, between the international pledges of donors and the reality of payments.

Graph 4.2: The dynamic of the ODA for the education sector



Note: ODA for the education sector increased from 0.6 to 1.4 million US dollars between 1995 and 2003. For the basic education sub-sector, it increased from 0.1 to 0.3 billion US dollars (i.e. from 13 to 20% of sector aid).

Source: OECD, 2005, Database on aid.

4.3 …based on a new development partnership…

Over and above the issues of overall cost, geographic, sector-wide (and sub-sectoral for fight against poverty) distribution, it had to be proved that ODA - which was much-criticised for its opacity and lack of efficiency by several reports - is an instrument of renewed international solidarity

Thinking over establishing the international doctrine finally lead to a new doctrine expressed by the «consensus» of the 2002 Monterrey conference on financing development.

The reform of aid modalities as a prerequisite for its effectiveness: the Monterrey consensus

The Monterrey consensus consists of the following transformations:

- Going from external management of aid to a management by contract where each partner becomes co-responsible for resources and results according to a long-term commitment;
- Going from an ex ante conditionality of resources to an ex-post conditionality on outcomes?
- Going from a management by each donor to a co-ordinated and synchronized intervention for each country, which means the development of the program-based approach;
- Going from a national budget by-pass strategy through external aid to a rehabilitation of this budget as a tool for implementing the national development policy.

This consensus should respect the balance of interventions and their insertion in national policies; the junction point with the mobilization of donors was often done through the drawing up and implementation of poverty reduction strategic framework which structure the articulation between macro and sector-wide goals and pave the way for the remission of debt.

In this new context international sector-wide initiatives appeared to make international pledges part of concrete systems and operate new international aid concepts.

Inset 4.1: The program-based approach

Program-based approach, sector-wide support, SWAP (Sector Wide APproach), many are the terms that have, over the past few years, with a few very slight differences in meaning, defined the new concept of development aid per sector. This new concept highlights the principles of ownership, national «leadership», co-responsibility, outcomes based management, integrated planning, harmonization with countries' systems and procedures, and harmonization of aid modalities.

The OECD's development assistance committee, that deals with the issue of the efficiency of development aid, gives the following definition:

«Program-based approaches share the following features:
a) leadership by the host country or organisation;
b) a single comprehensive program and budget framework;
c) a formalised process for co-ordination and harmonization of donor procedures for reporting, budgeting, financial management and procurement;
d) efforts to increase the use of local systems for program design and implementation, financial management, monitoring and evaluation.»

And so, the program-based approach implies an evolution in practices on both sides: in government's practices on the one hand, on its partners' practices on the other.

The program-based approach: designed to serve a long-term sectorial vision and co-responsibility of countries and external partners

Principles

For the government, the principle of setting a program, which includes all actions for the education sector, i.e.:
- actions taken by the government and other partners (donors, NGOs, the community, etc.)
- investments as well as current expenditures and transfers

This program should reflect the sector's activity in the most comprehensive and acute way possible.

This ten-year (in most countries which already use it) plan, must also be divided in shorter periods in order to allow for close monitoring of the operations as well as regular adjustments. The implication for full program-based approach are as follow:

- dividing in phases (3 or 4 years each in general), which correspond to intermediate goals and lead to medium-terms action programs. Dividing into phases usually goes together with a medium-term sector-wide expenditure framework (with a longer time span). Phases are also useful for designing external financial and technical support.
- **budgeted annual action plans,** which present on the one hand expenditure (planned actions with their cost) and on the other hand, revenues (domestic and external resources)
- drawing up procurement plans, cash flow plans, etc. and all instruments that organise the implementation of the program and prove its feasibility according to set schedules.

For its partners, it consequently involves aligning the interventions with the general framework set by the government; it does not strictly prejudge the aid transfer conditions, yet this **national ownership incites progressive change towards an overall or sector-wide logic of budgetary aid** as a completion of the use of national systems.
The system is one of a prior allocation of resources, with a retroactive assessment of the outcomes obtained: based on the narrative and financial report of the past year's activities, on the one hand, and the action plan for the following year on the other, presented and discussed in general terms in a sector review (sometimes called a joint monitoring mission), technical and financial partners accept to proceed with the payment of their funding (for some, the level of cash flow also influences the decision).

In this spirit:

- the stand alone aid project, i.e. disconnected from the national strategy, is no longer really applicable. When it is outstanding, it must at least conform to national goals and so appear in the program description, and target actions for which this type of support has a real comparative advantage (like for example, capacity building, see infra).
- Program or project management units, working for a bilateral agency and bypassing State services, are called to disappear progressively, as are agency-specific procedure handbooks.

Key factors of success and stakes

For the government, the program-based approach paves the way to a better national ownership of the education strategy's implementation, to the extend that it aims at giving the Government the resources for overall responsibility: it establishes a comprehensive program, national execution procedures and channels of public expenditure are used as much as possible, and action's outcomes are assessed against the targets set by the Government. The concept of **results based management**, more often proclaimed than implemented, therefore becomes real.

This approach changes the rules of the game, in favor of a vision of partnership and mutual accountability.
A certain number of stakes are involved, which should receive special attention:

Countries must be in a position to give themselves over to programming exercises based on resources which are both national (the Ministry of Finance is increasingly called to establish its budgetary allocations on the basis of a Medium Term Expenditure Framework - MTEF -) comprising international aid. To achieve this end, the following is required:

- disposing of **tools**: on the one hand: it is obvious that programming must be able to lean on a high-performance **information system** up to the most decentralized levels of the systems. In fact, drawing up action plans once a year or more, sometimes grouped together under the heading of programming by goals, also goes through an **ascending phase** which allows us to achieve local conditions of reaching national goals, by starting from the most decentralized level of the administration, up to the central ministry.
  The difficulty therefore consists of setting up an iterative mechanism for drawing up action plans. Take note that an imbalance is often observed in this matter: the mechanism for sending information upwards is set up, yet it desperately lacks a «descending» symmetry: not only is the initial strategic and budgetary framework within which the programming should operate not always transmitted (which eventually means local plans that are too ambitious in comparison with the available budget or they are unaligned with the general goals, which hampers consolidation on national level), but above all, once the programming is finalised by consolidation on national level, which often requires trade-offs between the offers of the decentralized structures, the **information does not filter down** to them.

  It is therefore not surprising that the stakeholders, who have no idea of how their work was used, neither appropriate the financial year nor use it as a steering instrument.

  In addition, drawing up realistic action plans requires the ability to appreciate the system's **physical and financial absorption capacity**: when 400 classrooms were built per year, is it realistic, in order to reach the system's expansion goals, to plan for 1,200 or is it better to limit the number to 1,000? Do procurement procedures allow for such an acceleration of the pace? Are there enough «approved» technical operators to do this, etc.? The methodological tools to answer this type of questions, by carrying out an assessment of the last resources available and the system's bottlenecks, are still desperately lacking.

- disposing of **skills**: on the other hand. Since these exercises are relatively new, they require new skills in terms financial planning, monitoring and assessment, etc. and that requires a **priority to capacity building or development.**

For technical and financial partners, the issue at stake is firstly the ability to make each donor's **internal procedures evolve with the aim of encouraging the harmonization** at the heart of the program approach. This calls for (i) an adjustment to lead aid agencies' financial support instruments and modalities towards convergence, like for example the development of pooled funds; (ii) setting up **incentive measures for co-operation agents** who work in the countries, so that they themselves are no longer only assessed on the basis of individual or even accounting success of the support of the agency they represent, but also on their co-ordination and harmonization efforts, and overall maybe on the contribution of their action to a reduction of aid transactions costs for national governments.

Then, this change of approach requires a **vocational change** for these agency representatives, which does not occur immediately: From now on, following the example of national executives, and in order to usefully contribute to the technical dialogue, co-operation agents should be able to master planning mechanisms, budgetary procedures and the macroeconomic framework of which this sector-wide program is part; this requires **internal training**, and **and improved articulation between the macroeconomic and sector services.**

4.4 ...and materialised by the implementation of the Fast Track Initiative

The Education For All - **Fast Track Initiative**, centred on the common goal of the Dakar Forum and the Millennium Summit of Universal Primary Education by 2015 is, in particular, the **first attempt at practically implementing the «Monterrey consensus»** and therefore testing the principle of co-responsibility and mutual commitment surrounding the achievement of the MDG. It relates to an order by the G8 and involves a technical instruction by the World Bank which hosts the secretariat since the launch of the initiative in April 2002. The Fast Track Initiative today gathers all the main multi- and bilateral education donors.

The Fast-Track Initiative: an operationalisation of Dakar's commitment to fund credible plans

■ Inset 4.2: Some key items of the Fast Track Initiative («FTI»)

1. Principles

The Fast Track Initiative combines the advantages of being a global partnership and being implemented in the national framework of education sector programs and in that avoiding the creation of a parallel logic. As such, it reinforces the existing efforts of aid harmonization.

For the countries, the election to the Fast Track Initiative constitutes a quality label that sends a signal to the international community that informs on the quality and sustainability of a sector-wide strategy that includes the millennium goal of Universal Primary Education. This is an incentive for donors to finalise the funding of this strategy for the part that exceeds the capacities of mobilizing national resources. This is a long-term (2015) commitment from donors which makes aid more predictable.

For donors, the FTI encourages the improvement better efficiency of aid and calls for more of it. It encourages new donors to the sector or a country by reducing the instruction/transaction and monitoring costs of this aid, particularly due to the voluntary promotion of the mutualisation of aid funding channels.

2. Financial and technical support

2.1 An increase in financial support: Fast Track countries in which enough donors are already involved at the time of endorsement experience an increase in their aid which is also better co-ordinated. New donors may also decide to join in.

*2.2 Special treatment for «orphan» countries: Fast Track countries in which not many donors are involved or even absent all together, but which present a useful absorption capacity of external funds, are eligible for temporary funding (**catalytic funds**), for a period of three years, whilst waiting for new donors to contribute.*

*2.3 Guidance for capacity development: the initiative disposes of an education **program development fund**. in order to raise a country's sector-wide program to the quality level required for election to the Fast Track Initiative.*

3. Expansion prospects of the Fast Track Initiative

The eligibility to the Fast Track Initiative is open to all low-income countries that are seriously committed to achieving the goal of Universal Primary Education. Countries can move from a status of eligibility to being elected through an appraisal process that is carried out on a national level. In April 2005, 13 countries were elected to the initiative, 8 of which are African: Burkina Faso, Ethiopia, the Gambia, Ghana, Guinea, Mauritania, Mozambique and Niger.

During the next two years (2005/2006), approximately 25 other low-income countries, mainly African, could be elected to the initiative. But this expansion requires more financial pledges from donors to the initiative and more reforms from the eligible countries.

Further information on the initiative is available on FTI's website:
http://www.worldbank.org/education/efafti

4.4.1 A progressive convergence of the estimates of the external funding need of UPE by 2015…

The Fast Track Initiative is based on an extensive assessment on the conditions for reaching the goal of Universal Primary Education (UPE) by 2015. This work, performed by a World Bank team, initially set out to estimate the cost of UPE not according to the prevailing conditions in the less-developed countries' education systems, that are the initiative's priority, but in reference to the reform scenarios on mobilizing resources on national level and on the choice of educational policy parameters (the much talked-about «Fast Track indicative framework») substantially improving the efficiency of policies. As part of this initial prospect, the election to the initiative exactly corresponded to the Dakar and Monterrey spirit of a long-term commitment from donors on the achievement of an outcome as an acknowledgement of the credibility of a policy adopted on national level.

The conclusions of this assessment, performed in 2002, are of particular interest to Africa: it established an **average external funding need** for the UPE goal, only for low-income countries (which today concentrates 75% of out-of-school children) of approximately 3 billion US dollars per year, of which approximately 2.5 billion per year is for Sub-Saharan Africa (and yet which previously only received 10% of the world-wide ODA towards basic education).

A new estimate (2004) has since been made by the World Bank, which takes into account two years of debate on calculation parameters and which enlarges the number of countries considered; it rather suggests that between 5 and 7 billion US dollars on average per year of external funding is required by 2015. This estimate still depends on linking the large education policy parameters of countries to the values targeted in the indicative fast track framework. In this new estimate, Africa has an external funding need of little more than 3.1 billion US dollars per year by 2015. Finally, estimates, which have for a long time been divergent (the Fast Track Initiative estimate was for a long time considered much too low), are starting to converge. The last report of the education task force of the millennium project is quite close to the figure put forward by the fast track study. **It would from now on involve mobilizing 5-6 billion US dollars per year for the contribution of external funding of the MDG of universal primary education.** On a world-wide level, it involves **multiplying, by at least 3, the current level of official development assistance for basic education.** And of this total **Sub-Saharan Africa represents a little more than half of the external funding need.**

4.4.2 … which validates the chosen method…

In the final analysis, it is important that the method of calculating the external funding need is accepted, i.e. that the figure results in a **dynamic calculation that suggests the best mobilization of national resources and reforms for the most effective policies,** instead of «accepting» the costs, and therefore inefficiencies, such as current structures present of the education systems that face this challenge of achieving UPE.

Estimates of the external financing gap are starting to converge: the resulting need is within reach of a better targeted ODA

4.4.3 … for a goal within reach of the ODA.

As part of a debate centred on increasing the volume of development aid to more than 100 billion, the quality on cost ratio of the Fast Track Initiative to reach one of the millennium goals is unequalled. A simple calculation of a combined increase in the volume of ODA and re-allocation of ODA both in favour of basic education and to the benefit of Sub-Saharan Africa brings a high level of optimism. The goal of universal primary education by 2015 is within financial reach of the countries and the donor community's joint efforts.

4.5 What lessons for the implementation of international solidarity for reaching the Education For All goals?

The Fast Track Initiative **establishes an outcome based strategy on an international scale** in the education sector. As regards the donors, it involves giving an account of their more sustained financial commitments for basic education and their efforts in terms of co-ordinating and harmonising the procedures for transmitting aid. For the recipient countries, it involves giving an account of mobilising domestic resources at the level of the sector's stakes and setting up sector reforms that are coherent with the achievement of the goal of universal primary education.

From this point of view, the education sector is probably one of the most advanced sectors for setting up a program-based approach as the framework for implementing sector policies; this framework promotes properly rolling out these policies for the government. This framework also favours the proper integration of external technical and financial support.

This is perhaps the first time ever that the willingness to set operational bases for aid principles around common goals carried out by the international community goes that far.

However, the Fast Track Initiative questions the practices of large bi- and multilateral agencies, as well as that of recipient countries. The issue of a common assessment framework (with at its core an indicative framework for the large education policy parameters) to judge the credibility of education sector policies including the goal of universal primary education, still generates much debate, even if today, it was voted that this common framework of appreciation and the endorsement of a country in the initiative is the result of a dialogue opened on local level between national authorities and technical and financial partners.

The education sector is leading the way in the reform of aid modalities, but this progress has highlighted the obstacles that are yet to be overcome

Finally, the **global solidarity pact on the Education For All goals** only has a chance to be decisive in achieving the Dakar goals if, **in each country**, it is based on **a social education pact** that is already organising, upstream from aid, the political, social and technical dialogue on priorities, choices and implementation of educational policies.

Official development assistance is therefore in a position to bring its comparative advantage into play: that is, by shifting the cost constraint, it can make some trade-offs less painful; moreover, from a structural point of view, it is mobilised to yield differed returns.

What counts though is not to use this comparative advantage by shifting the responsibility of poverty alleviation and the inequalities on the site of the donors. It is the government and school partners' responsibility to materialise its concerns and the achievement thereof.

Technical and financial partners would therefore benefit from supporting goals on educational for all in the framework of overall sector-wide support. Situations of eviction will thus be avoided: technical and financial partners' «good» expenditure that benefit basics needs or target the hight profitability areas of the system, that chase national resource funding towards «bad» expenditure. **For, in a re-established education sector policy, there is no longer either bad or good expenditure, but an acknowledgement of the complementarity of goals and resources.**

The agreement, based on an unambiguous contract in the spirit of Monterrey, must therefore be made **on a sector-wide policy that integrates the goals of Education For All**, that is to say an efficient policy and for which overall funding can henceforth be available.

Conclusion

From technical issues to politics and policies: towards a pact for education which serves the general interest

5.1 Responses to meet the challenge

So far, genuine progress has been made by the majority of African countries. In particular, massive efforts have gone into increasing the capacity of education systems to accommodate children. On average, access to the first grade of the primary cycle has increased across the continent: from 7 out of 10 children in 1990/91 to 9 children in 10 in 2002/03. However, there is still a long way to go from initial access to the completion of a full cycle of primary education, which lays the foundation for life-long literacy. In 2002/03, an average of 4 African children out of 10 were still failing to complete the primary cycle, meaning that around half will not go on to become permanently literate. Forecasts of future trends, based on how the systems are currently organised, are hardly more optimistic: **the majority of African countries are not on course to achieve the goal of high quality universal primary education between now and 2015**. If the scale of the response in terms of education policy does not improve radically, this will have two major consequences :

- The first consequence will be the exclusion of millions of children and future adults from the social and economic benefits linked to the achievement of lasting literacy.

- The second consequence will be the perpetuation of the poverty trap in Africa because of the failure to reach the critical threshold of schooling that enables all of the other investments to bear fruit, thus stimulating long-term growth.

However, the analysis presented in this report, based on real examples that are representative of the rest of the continent, shows that national solutions are capable of responding to the challenge. In reality, there is considerable room for manoeuvre in the mobilization of internal resources, choice of education policy and the pedagogical and administrative management of these systems. **The countries therefore have the opportunity to make significant progress**. How well this room for manoeuvre is integrated into public education policies could make all the difference between the stagnation and success of the education system. And success, allied to a clearly-stated national resolve is a powerful incentive for the international funding that is essential for the achievement of the Education For All goals in Africa.

The ambition of this report is to demonstrate the feasibility of the major educational goals. As its authors are well aware, it is limited by the fact that this technical demonstration is only effective when the political and institutional context is favourable. As yet, this context is not positive enough to encourage the adoption and implementation of voluntarist public policies. Here too, things can change and the authors share the conviction that **the same potential for progress exists in the institutional and political environment as at the financial and technical levels**. Thus, it is important to analyse any obstacles of an institutional and political nature, and to consider how to manage these constraints in order to make best use of the room for manoeuvre that exists at the financial and technical levels. For this to happen, there is a logical need to clarify the pact established in Dakar in 2000 at national and international levels for the benefit of the generation of children who represent Africa's future.

5.2 The political economics of the success of the EFA goals

For expertise to be useful it must be put to good use in an institutional and political environment favourable to trade-offs

It is essential to resolve the following contradiction: as a whole, EFA goals are shared by the leaders of education systems, but the choices of education policies (including choosing not to make a choice) appear to lack consistency with these very goals, and are sometimes in opposition to them. As an example, this is what happens in many countries, where priority is allegedly given to the goal of Universal Primary Education, but where, in reality, the most significant progress is seen in the cycles of secondary and higher education.

These contradictions cannot be understood without first recognising the existence of an institutional and political constraint that is particularly strong in Africa: **the difficulty to make the general interest emerge from the public decision-making process.** There are two possible explanations for this problem.

The unequal capacity of the players to make their voices heard and the dispersal of decision-making centres militate against the emergence of the common good

The first explanation relates to the **unequal abilities of the different groups of participants in the education system to make their voices heard**. The most disadvantaged of these groups is made up of children without access to schooling. Not only are these children excluded from the education system, they also belong to the social groups that are least able to participate in public debates (children from poor, mainly rural families, with high rates of illiteracy). Conversely, certain groups are able to exert a disproportionate influence over the decision-making process: students, professionals (senior administrative managers and teachers), parents of pupils in the secondary cycle, etc.

The second explanation seems to be linked to the **politico-administrative operation of education systems**, which tends to favour the horizontal management of the stated interests rather than ranking all of the interests (whether stated or not) in order of priority in accordance with their power to achieve the system's ultimate objectives. Several such examples can be given. Firstly, at the institutional organisation level, when several technical ministries are involved in managing a system, it seems difficult to establish any overall regulation of the system when there is no higher authority to perform this function. Then, at the operational level, there is a tendency to manage the interests of each category on a day-to-day basis, rather than using methods that afford equal protection to all users of the system.

What is important is whether or not an organised system actually exists, because an approach to education which fails to embrace the goals of universalization in its lower levels and does not target the needs of the job market in its upper level makes the issues of prioritising and regulation much more difficult for those who are in charge of policy. Priorities and regulations involve a cost for certain sub-sectors or participants and if the benefits produced by the system do not justify this cost, it is much more difficult to implement policy decisions, especially when in education, more than in any other field, costs are immediate and benefits are only seen much later.

These political economics considerations allow to re-introduce the rationality of the actors into education systems, instead of seemingly incoherent behaviour. They also allow us to understand why developments in education systems tend to be peripheral when fundamental modifications seem to be called for. **Thus, if we are to move from the status quo towards decisive reforms, it seems appropriate to re-examine the rules that govern education from every angle**. We can do this firstly by making sure that everyone connected with the educational community is involved with the decisions, and secondly, by ensuring that the State is the guarantor of an explicit pact for education.

5.3 Clarifying the pact for education established at Dakar

Making EFA the keystone of a social pact for education

At the international level, since the Dakar world forum (April 2000) and the Millennium Declaration (September 2000), the Education For All goals have been unanimously adopted by all countries, forming an essential part of their educational strategies. However, it has been shown that at the national level, the functional integration of these EFA goals has not always been incorporated into a sector policy encompassing all cycles and providers of education, due to the lack of an explicit pact for education. Indeed, **what has been lacking is the capacity to promote these EFA goals as an integrated part of an education public good and of the general interest.**

Recognition of their importance firstly involves protecting these goals until they are achieved, and secondly, following the principles linked to the creation of public benefits for society, the most important of which are completion of the primary cycle and the provision of free access. The benefit of such a pact established upstream would be to **fix one of the parameters of sector negotiation** and enable the system to be adapted to a goal that has been accepted by all and to which resources must then be allocated.

Consequently, **several major principles for the definition of education sector strategies** emerge from this pact for education. In the first place, this involves **the protection of the goals of Universal Primary Education**. Next, there is the importance of **extending lower secondary education**, within the limits of physical and financial expansion, in addition to the parallel **development of the other cycles and branches of education in accordance with the needs of society and the demands of the economy.**

But the importance of the pact for education is not limited to these principles for the definition of strategies; it also contains benefits for the implementation of these policies at both national and international levels.

5.4 The implementation of the Pact for Education at the national level: a public responsibility

The pact for education at the national level sees the Education for All goals as representing a basic social service that is upheld by the authority of the State and accountable to citizens and users.

This is a strict requirement; in practice, however, it leaves room for considerable variations in organisation and running of this basic education service.

5.4.1 Public responsibility and the variety of solutions for the provision of educational services :

Certain forms of state and government predetermine the levels of definition, responsibility and organisation of the education service, the idea being that, without being neutral, these varied forms are neither intrinsically favourable nor unfavourable to the establishment of a basic education service. Thus, with respect to educational coverage as well as the quality of learning, comparing centralized systems with devolved/decentralized systems does not reveal any appreciable differences. This does not mean that devolution or decentralisation are bad ideas (Section 3 states the case for local management, especially by the local communities). Instead, it implies that, on its own, no single solution is enough: everything depends on the concrete arrangements for the implementation of policies, which can be validated by the results that are observed.

Thus, regional organisational structures could be used (federal States or structures created by laws governing to decentralization), leaving federal or central government little responsibility for education. Likewise, rigid modes of organisation or curricular and linguistic choices could benefit from local modifications. **Whether or not the system is federal, decentralized or devolved the equality of access to the basic education service can and should be checked throughout the whole of the territory**. In this way, financing the education service on the basis of local taxes offers considerable advantages with respect to the involvement of the local authorities and community-based management. On the other hand, financing the public education system in this way could result in inequalities based on regional variations in wealth. This brings us back to the need for a mechanism to restore the balance at the national level.

Whatever their choices, especially as regards territorial organisation, the Government remains the guarantor of the right to Education For All

But, leaving aside the legacies and past examples of the development of education systems, is there a method to help make the choices that are most likely to achieve the social pact for education ?

5.4.1.1 A decision-making structure for choosing a system of provision…

Generally speaking, the choice of public service provision modalities can be based on a public or private provider, using a centralized or decentralized system which may or may not be free for the user. For education, this choice may not necessarily be the same for all of the different levels of education. A decision-making structure to assist in making these choices is proposed in the 2004 World Development Report, based on three questions :

(i) Will society benefit? i.e. is financing a matter for private individuals or the national community? The answer will certainly be very different according to the level of education in question (involving financing by the national, or sometimes international, communities for primary education - which is considered to be of considerable public value - but with an increasing proportion of private finance seen at each successive level of education, in which the logic of individual returns justifies greater investments by the individual students themselves and their families). Once again, it is important that this private financing does not result in the doors to these higher levels of education being closed on the poorest members of society;

(ii) Can we provide this service in a uniform manner across the whole of the territory? If the answer is yes, the method of delivery can be uniform, if not, decentralized policies will need to be applied and differentiated according to the specific areas and needs;

(iii) Is the provision of this service easy to evaluate? If the answer is yes, non-public providers (private, community, etc.) could be entrusted with the delivery of this service, as it would be easy to monitor their performance. If not, it would be better to leave it in the hands of the public service, which is better placed to respond to a complex list of requirements, thanks to its ability to react to incentives and direct commands at the same time.

5.4.1.2 … that is appropriate for the situation and issues relating to education in Africa

In Africa, the implementation of this decision-making structure, and especially the final question, often means that there is a preference **for the public provision of primary education** (the State, or decentralized body, is the provider as well as the sponsor and provider of finance for the service). **In reality, the education service is more difficult to evaluate than other services**. While it is easy to assess whether or not drinking water has been made available in a given area, for example, providing all children with access to a high quality service of primary schooling is a multidimensional goal with a number of different degrees to each dimension. What is more, the service itself involves much more than a

simple technological choice, incorporating as it does human, social and political dimensions which depend on a policy in the full and complex meaning of the word.
While the preceding arguments tend to show that choosing a public system is consistent with the achievement of the social pact for education at the primary level, this does not exclude the possibility of using a private service or community-based solutions, if only for reasons of educational freedom or as the best way to reach certain groups.

The social pact for education and considerations on the nature of the educational service can legitimate the common choice for public provision of primary education

Thus, the preference of African countries for a public education system could simply be seen as the traditional choice, but the clarification of the social pact for education offers a new justification for this choice, which corresponds to the desire to obtain a better basic education service.

As a consequence, while the pact for education has been reaffirmed, particularly by the highest State authorities, the relative erosion of the size and reputation of the public system, as can be seen in a number of countries, is a worrying phenomenon. The damage, however, is reversible, in that it is a consequence of the deterioration of the public service, rather than doubts about social and political choices based on reason.

To breathe new life into this idea of schooling for everyone, it is not just a question of reaffirming the pact for education. It is also important to involve the present and future sponsors, as well as the beneficiaries of the actions, i.e. individual citizens, politicians, users… and those who are currently denied access, in the efforts to transform these ideas into reality.

5.4.2 Ensuring the monitoring of the public education service

Tensions exist structurally **between the universal nature** of the public education service, guaranteed, in general, by the power of the State and the **local provision** of this service (schools must be located where there are children, i.e. everywhere). So long as children are excluded from school, this will be more of a certainty than a possibility. Tension will always be there, but one way to reduce it is to refocus the management structures on the system's ultimate goals (leadership by results, contracts for achieving goals, etc.)

5.4.2.1 An outline for the definition of responsibilities

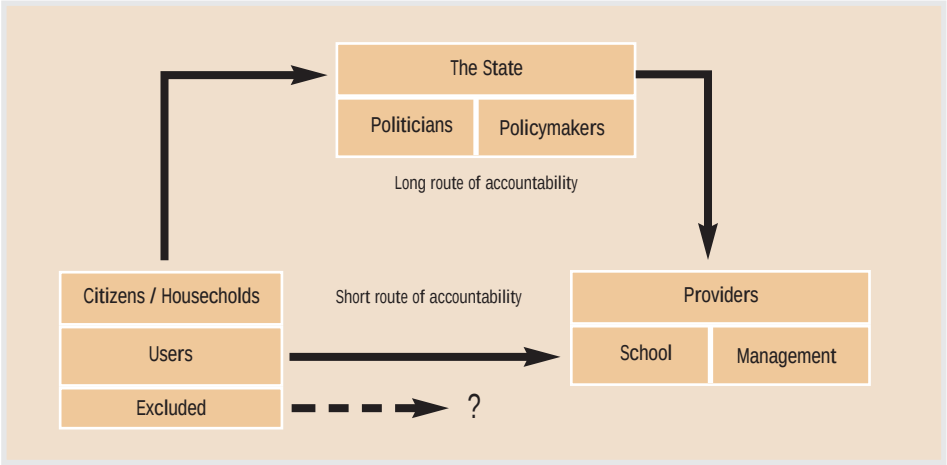
It is important to define the issue of responsibility, and the World Bank's 2004 World Development Report proposes a practical paradigm, which aims to rethink the provision of educational services in relation to the respective roles of the three key participants in the process: **users, sponsors and service providers**.

The user, for whom the efficiency of the educational service is of the greatest importance, usually has a «long route» of control over the service provider. Firstly, this extends from the citizen towards the government (sponsor) and then returns to the level of the school establishment via a circuit that varies from pure administrative hierarchies to different forms of contract-based structures.

This long route, while essential for the democratic handling of the major choices of education policy, has little to offer in terms of local control. This is where the «direct route» of local control by the community is important, which today in Africa is considered to be one of the methods that is most likely to give control to the poor (and also the less poor) members of society of the service which is intended for them.
In this outline, the different positions of the sponsor and the service provider can be clearly seen. Sometimes, these positions are obvious, such as when the State is the sponsor and the private or community sector is the service provider. However, it is sometimes appropriate for

the State to be both Sponsor and provider of the service, especially at the primary level. In this case, it is of the utmost importance to make a functional distinction between these two roles, to allow for the impartial evaluation of the service. Without this condition, the «long control» route will be ineffective.

Diagram 5.1 : Users' power in the service delivery framework



Source: adapted from the World Monitoring Report 2004.

The operation of the education system requires the definition of a structure of responsibility and accountability between sponsors and service providers

5.4.2.2 Limits to the application of this outline of responsibility in the context of poverty and possible adjustments

a) Limits

One of the flaws of such an outline, when applied to situations of poverty is the exclusion of disadvantaged groups from the two forms of control: control by the citizen, which requires a capacity for social participation that illiteracy and other factors make very difficult, and direct control over the local service, which is hindered by all of the economic, social and cultural barriers that stand between schools and these groups.

Here, once again, reaffirmation of the social pact for education is of paramount importance. Without this pact, schools can actually exacerbate the problem of exclusion, by sanctioning and perpetuating social divisions. On the other hand, schools that make this pact an integral part of their principles and operations provide the ideal way to improve social and economic integration.

b) Adjustments

All institutional and organisational structures are not equal when it comes to promoting these different levels of control and implementing the pact for education. Mention has just been made of the choice between public and private service providers and the need to distinguish between the roles and positions of the different participants in the process. From this point of view, the educational environment is changing: educational establishments, schools in particular, are changing their status to give greater priority to the various members of the

educational community (parents' associations, management committees, etc.)
At more integrated levels, groups of users, unions and opinion leaders (politicians and journalists) all have a role to play, for although the start of this debate has been notable for its lack of public discussion, the way forward is not through less debate, but through general support for a social pact for education at the national level and opening up the debate to those who are currently excluded.

However, to inform the debate and control the provision of public education at all levels (using the «long» and «direct» routes shown in the outline), there is a need for relevant information and transparency within the system. This forms the subject of the following paragraph concerning evaluation issues.

5.4.3 Evaluation in support of the implementation of the social pact for education

Information and transparency are strategic for the actual implementation of the social pact for education

Organising the provision of the education service and letting citizens and users play a part in its control are consequences of the implementation of a public education service. Thus, it is important to be properly equipped for the management and control of this service by using appropriate procedures and information. This starts at the school level, where the learning actually occurs and extends to the national level, where we find the major goals relating to quantity, quality and equity. The aim is to facilitate evaluation at all levels of the system in order to make management more transparent and promote the implementation of the most effective decisions and practices. In reality, market forces do not apply to the process of creating social benefits from public financing : **State or fully subsidized schools that are failing in their mission do not cease to operate. This necessitates the setting up of evaluation procedures to prevent the perpetuation of situations that involve the denial of education or the waste of resources that could be better used elsewhere.**

The organisation of a genuine national evaluation system is of major concern for national education systems. The following issues needed to be considered when setting up this new organisation :

- Results of the national goals are taking a long time to be transformed into measurable indicators at all levels of the system,
- Structures concerning incentives and responsibility for participants in the educational process are rarely in line with the goals of the system.

These issues do not merely involve the education system and those who manage it. **The idea is for the evaluation policy to be not just a tool for the administration, but also for the citizen**. One commonly stated way to achieve this aim is the establishment of national evaluation units at the political level, which may be independent of the Ministry of Education.

There remains a need for **transparency** concerning the issues and running of education systems. In this way, the social pact for education can be transformed into agreement in favour of strong sector policies where the interest of children comes first.