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**Unequal Access to Education:**

**Accounting for Change and Counting Costs**

**A Tribute to Chris Colclough[[1]](#footnote-1)**

**Keith M Lewin**

## 1.0 Introduction

This chapter is part of a collection dedicated to Chris Colclough with whom I have shared the journey of education and development since the 1970s. We first worked together in the Human Resource Problem Area Group at the Institute of Development Studies at Sussex in the 1970s. Our first joint paper was for the Bellagio Group Conference of donors in the early 1980s (Lewin, Little and Colclough 1982, 1983) and contributed to a major shift in emphasis in aid to education to basic education and away from higher levels. At the invitation of Richard Jolly we worked together on educational financing for UNICEF in the run up to the World Conference on Education for All (WCEFA) (UNESCO 1990a). Our analysis provided the first global estimates of the costs of Education for All and the reform package that would be necessary to make it affordable (UNESCO 1990b). Fifteen years later Chris and I found ourselves directing sister Research Consortia on Education for the Department for International Development (DFID) exploring access and outcomes related to education and development. WCEFA and the World Education Forum (WEF) (UNESCO 2000) in Dakar in 2000 reaffirmed that knowledge and skill translate into capabilities that underpin development. It is the distribution of access to opportunities to learn that shapes “who gets what?” in the competition for valued lifestyles, jobs, livelihoods and wellbeing (CREATE, 2006) and it is the utility of educational outcomes that determines whether those who acquire knowledge and skill translate these into development (RECOUP, 2006).

Chris and I shared beliefs that education was an investment in human capitals without which development would not take place (Colclough and Manor 1993, Lewin 2000); that greater equity and enhanced learning outcomes were part of any useful definition of educational development (Colclough 1977, Lewin 1985) ; and that investment in mass education systems was an essential public good and that the neo-liberal prescription of privatisation failed the test of equity (Colclough (ed) 1997, Lewin 1994).

This chapter is about counting the cost of financing education sufficient to achieve the targets that governments and the international community set themselves. Article 26 of the UN Charter of Human Rights (United Nations, 1948) asserts that everyone has the right to basic education that is free and that education at all levels should be provided equitably to promote the full development of the human personality and respect for human rights and fundamental freedoms. All of the efforts to realise rights to education over the last seven decades have run up against the problem of how to finance mass education systems. This is especially acute in low income countries where poverty has been endemic, governments have been slow to reform education systems and dilatory in modernising taxation to support public services, and aid has sometimes provided an easy short term option to balance the books but not resolve long term problems.

This chapter explores several questions.

* First, how has the landscape of education and development in low income countries changed over the last three decades and how has this affected perceptions of the problems of educational development?
* Second, what has been happening to the gaps in financing that exist between what governments allocate, what development partners provide in aid, and what would be needed to deliver rights to education consistent with the Sustainable Development Goals?
* Third, what should be the priorities for research to support new approaches to aid to education that can increase efficiency and effectiveness, enhance equity, and close gaps in educational financing in ways that do not lead to aid dependence or increased debt?

Chris Colclough would have recognised all these questions as centrally relevant to future research on education and development.

## 2.0 Changing Patterns of Access since 1990

Since 1990 the topography of educational development has changed in many ways with implications for access, participation and financing (GMR 2015). Seven of the most important transitions are discussed below.

### 2.1 Demographic transition

First, demographic transition from high to low child population growth has occurred in East Asia and China, is well underway in most of South and South East Asia and in South America. In India our predictions are that about half the States are already in demographic transition and most of the remainder will be after 2020. The regional exception is most of Sub-Saharan Africa where transition has been slower to take hold. It will be beyond 2030 before its effects are fully felt (Canning et al 2015). The implications for educational planning and financing are extensive since the most fundamental driver of costs is the size of the school and higher education age group.

Thus an increasing number of Low Income Countries (LICs) and Low Middle Income Countries (LMICs) will experience a contraction in the size of the school age cohort. This means there will be more workers per child, more tax revenue, and more money per child for educational investment at the same level of financial commitment to education in the national budget. The gaps in educational financing will be less expensive to fill and less concessional financing will be needed for this purpose.

An additional dividend should be that as age groups shrink it should be easier to reduce differences in access and educational quality if the resources released by falling enrolments are targeted on enhancing equity and making attendance less burdensome on poor households. The next two decades will be unlike the 1980s and 1990s when the challenge of expanding participation was compounded by the need to keep pace with substantial population growth. No longer are most countries confronting high rates of growth in the child population that in the last millennium meant having to double the number of schools, teachers and learning materials every 20 years.

In Sub-Saharan Africa (SSA) from 1990 to 2015 the number of primary age children in SSA grew by about 2.5% a year and there were nearly twice as many children at the end of the period as at the beginning. Over the same time in the average Gross Enrolment Rate (GER) in primary increased from 74% to 99%. Enrolments in primary school increased at an annual rate of over 4% from about 60 million to over 150 million. Currently child population growth rates in SSA average about 2.1% for the LICs and 1.4% for LMICs and the GER averages 99% for primary (UIS 2018). The prospect is therefore of much slower growth in enrolments at primary of between 1% and 2% a year. The biggest long term challenge we anticipated in 1990 and it is of managing progress towards full enrolment at secondary level. Many poor countries are far from full enrolment and most have historic structures of costs do not recognise realistic resource envelopes as

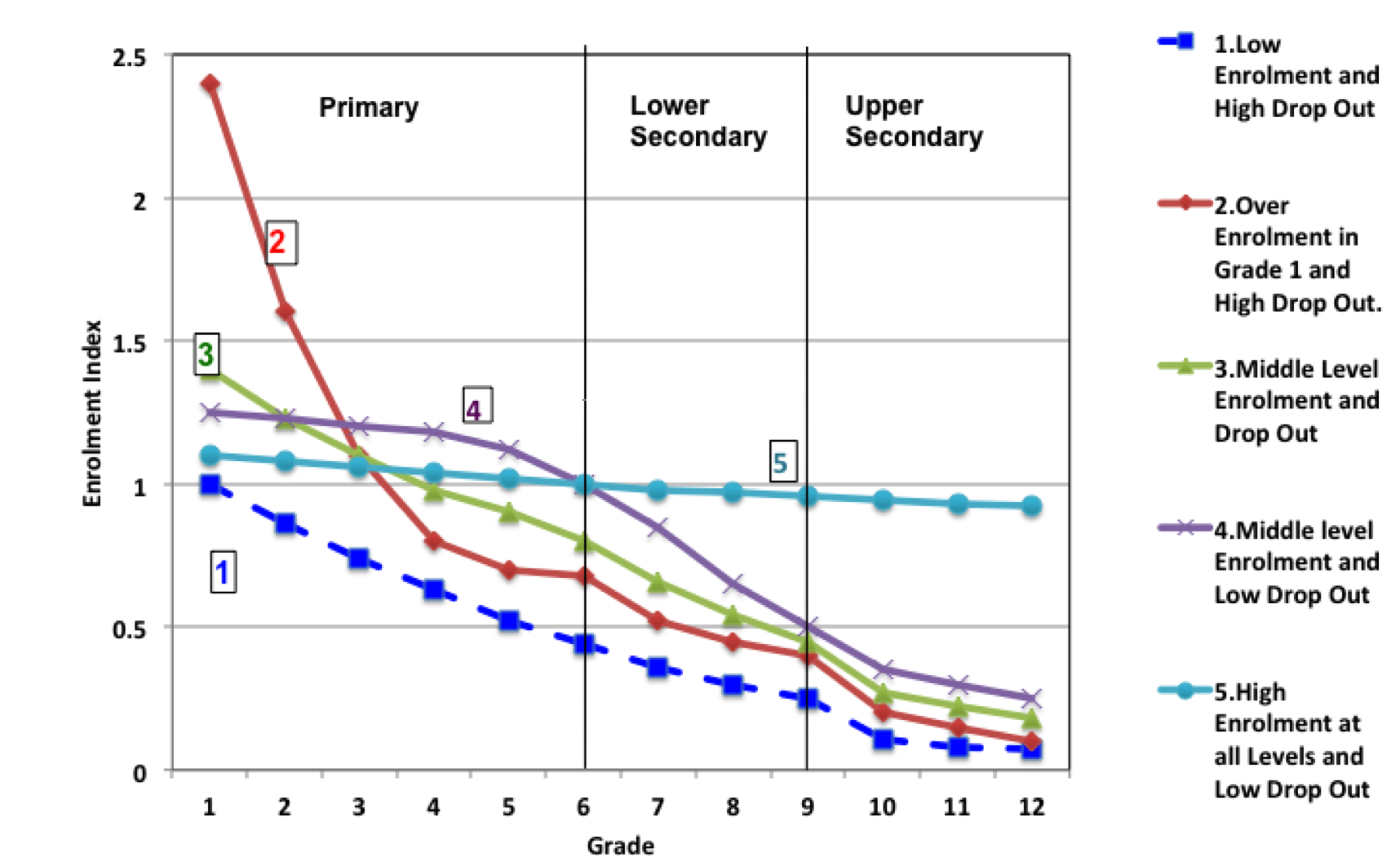
### 2.2 Children In School

Second, patterns of enrolment and attrition in low income countries have shifted dramatically since the 1970s. At that time in many African countries as many as half of all children failed to complete primary school and as many as 30% were never enrolled. A typical low income country had less than full enrolment in grade 1, high drop out in the early grades, and low but stable enrolment in secondary grades of those who graduated from primary school. There were some exceptions of low income countries with high enrolments at least to grade 9 or 10. Most were outside Africa. China and Sri Lanka were obvious examples with specific histories (Colclough with Lewin, 1993:84).

Detailed analysis of flow patterns of children through education systems identifies how many children complete different levels of education, where it is probable that many children are over age, and where there are bottlenecks in the flow that lead to drop out and inequitable progression. Contained within the patterns over time are many stories about “what works” in system improvement.

Since the 1990s enrolment in LICs and LMICs has developed and into five characteristic types (Lewin 2008). Data on enrolments from more than 60 low and low middle income countries have been charted to show patterns of enrolment from grades 1 to grade 12 (Lewin 2017). The method uses an Index that compares enrolments in each grade with the population in the relevant age group. The five patterns are *(1) convex, (2) highly convex, (3) linear decline, (4) concave, and (5) linear full enrolment*. Countries falling into each patterns are listed in Annex 1.

Figure Types of Enrolment by Grade in LICs and LMICs



Source Derived from Lewin 2008, 2017

* Type 1 countries have concave enrolment curves through to grade 12. Intake levels into grade 1 are similar to the number of children in the entry age group. The participation index (number enrolled / number in age group for grade) is close to 1 for grade 1. The tipping point, where there are as many children in the age group than are enrolled in school, is in grade 1 or grade 2. Drop out starts in grade 1 and results in fewer than 50% completing grade 6. Completion rates may be below 40% at primary, and are less than 20% for lower secondary. Development at secondary level is strongly constrained by the output from primary. The priority in these countries is to increase age related entry and progression rates and reduce drop out.
* Type 2 countries have very high rates of over enrolment in the early grades of primary. Enrolment curves are very concave and tipping points are typically around grades 3. Enrolment in grade 1 may exceed 200% of the number of children in the age group. High drop out means that less than 70% of the age group complete grade 6 and less than 50% reach grade 9. Over-enrolment arises from many children entering who are over age, and from high rates of repetition. In some countries this pattern has persisted for more than a decade after universal primary education policy has been announced. The implication is that one equilibrium with low enrolment, low drop out and low completion, has been replaced by another with a very high intake, high enrolments, and a higher rate of drop out leading to low completion rates.
* Type 3 includes countries where the intake rate to grade 1 is high, but is less than 50% times greater than the number of six year olds, and is therefore less than Type 2. Enrolments decline linearly with increasing grade, and the tipping point is around grade 4. No more than 75% of children in an age group reach the end of primary school. There may be serious issues with over-age children and repetition, and with persistent drop out that accumulates from grade to grade such that fewer than 50% complete lower secondary. Primary completion rates constrain expansion of secondary school.
* Type 4 include countries that are close to achieving universal completion of grade 6 but have yet to reach more than about 50% completing grade 9. Enrolment curves are concave and tipping points are around grade 6 or higher. These DCPs are more likely to have regularised intake into grade 1 so that all children are within a year of the appropriate age. Most of those who start primary finish on schedule at the right age. The biggest attrition occurs in lower secondary and less than half of all children succeed in entering upper secondary. These systems are most likely to need support at the post primary level for curriculum development, quality improvement and enhanced equity as well as investment in infrastructure.
* Type 5 countries have full enrolment with similar numbers of children enrolled in each grade as there are in the relevant age cohort. Enrolment curves are linear and track the population growth of single age cohorts of children. There is no tipping point. There may also be evidence of demographic transition where the number of children in the single age population declines each year. These systems have achieved universal enrolment up to the end of lower secondary. They are likely to have problems with quality, achievement, and equity that would benefit from additional investment.

All the systems are likely to have quality and achievement issues not evident from enrolment flow data. LICs are concentrated in Types 1, 2 and 3. LMICs are predominantly Type 4 and Type 5 systems. Thus LICs and LMICs are not distributed evenly between the enrolment types and their rates of progress vary. Time series analysis suggests that many Type 1 LMICs will graduate to become Type 2 or Type 3 within the next decade. It is also probable that Type 1 LICs will become Type 2 systems and Type 2 become Type 3. There remains a distance to travel for most LICs and LMICs to become Type 5 full enrolment systems. Until they do large inequalities are likely to remain. Within countries it is inevitable that wherever there is significant drop out there will also be inequalities of exclusion. The most significant correlate of exclusion is household wealth, followed by location and then by gender.

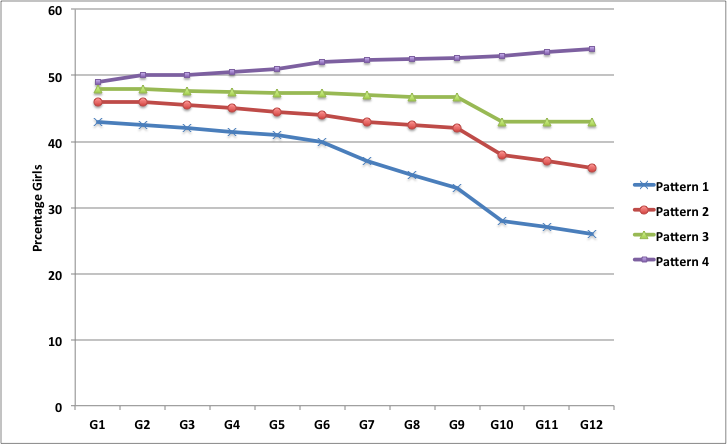
### 2.3 Patterns of Participation and Gender

Third, over the last three decades since WCEFA gender differences in enrolments of boys and girls have been transformed. There was a consistent improvement in the balance of enrolments between girls and boys between 1980 and 1997 despite this including a period of falling enrolment rates as a result of widespread recession (Colclough, Al-Samarrai, Rose, and Tembon, 2003). The detailed patterns are complex. Overall in 1990 the GPI for all developing countries for primary enrolment was 0.87 and for SSA 0.87. By 2015 the value was 0.99 and for SSA 0.94. At secondary the GPI had reached 0.96 globally and 0.88 in SSA. In all regions girls out enrolled boys at tertiary level except in South Asia and SSA. The exclusion of boys has become much more visible especially amongst older age groups at higher educational levels (2018b). Few would have predicted that by 2015 girls would out enrol boys in higher education in Europe, North and South America and the Caribbean by more 130 to 100, suggesting boys suffer from new kinds of social exclusion. In most LICs and LMICs it appears to be the poor who appeared to discriminate most against their girls rather than the rich in terms of enrolment in school.

Patterns of enrolment of girls and boys can also be synthesised from 60 LICs and LMICs into a single chart to profile participation by grade. A parity index indicates the percentage of girls enrolled by grade. The results illustrate the need for different strategies to accelerate progress towards gender equitable enrolments at each level.

There are four different patterns of gendered exclusion in LICs and LMICs. These can be described as *(1) strong exclusion of girls in all grades; (2), weak exclusion of girls in primary, strong exclusion at secondary; (3) near equity in primary and weak exclusion of girls at secondary; and (4) gender equity or enrolment of more girls than boys in most grades*.

LICs and LMICs Classified by Percentage of Girls by Grade



Source: Derived from Lewin 2008, 2017

* Pattern 1 countries have large differences enrolment by gender in favour of boys throughout their education systems. They also are likely to have low overall level of participation for both boys and girls. The priority will be to invest in interventions that increase participation of both girls and boys to much higher levels since higher participation almost invariably leads to greater gender equity.
* Pattern 2 countries have enrolments where 45% or less of enrolments are girls through primary grades. This level of exclusion is often concentrated amongst particular sub-populations e.g. the poorest households, specific social groups, and those in particular geographic areas whose enrolment rates are likely to be low.
* Pattern 3 countries have equal enrolments of girls and boys up to the end of primary (if equity is defined as 48% or more. The problem in these countries is that at secondary level girl’s participation begins to fall off. The common reasons are over-age progression, early marriage, under-achievement, low returns for household investment, and social prejudices against the education of girls. Which factors are most important are country specific.
* Pattern 4 exists where there is close to full enrolment. In these countries there is a tendency for girls to out enrol boys in some higher enrolment countries. In Pattern 4 DCPs there are no strong and systematic gender differences at an aggregate national level. This may or may not conceal differences within particular groups and regions.

In Pattern 1 80% of girls and boys have similar enrolment status but only 5% of countries are in Type 1. In Pattern 2 90% girls and boys have the same participation rates. The problem of more equitable enrolment is concentrated amongst the 10% of children that have different enrolment status suggesting sharply targeted interventions are much most likely to have an impact on the differences. In Pattern 3 and 4 the great majority of girls and boys have the same enrolment status. This does not mean that gender equity is achieved. It does mean that indicators other than enrolment and completion rates are needed to identify, monitor, and reduce forms of gendered preference and differential exclusions of girls or boys.

Analysis of the data sets indicates that in LICs and LMICs i) gendered enrolment patterns tend to diminish as enrolment rates increase and patterns 3 and 4 become the most common ii) gender differences in enrolments are larger for secondary schools than for primary iii) where enrolment rates at secondary are above 50% girls tend to out enrol boys iv) in SSA in most countries girls tend to enrol younger and leave school earlier than boys who repeat more often and remain until greater ages. Time sequence data shows that most LICs and LMICs have made substantial progress towards gender equity and 75% of LICs and LMICs are now either Type 3 or type 4. In contrast data on inequalities related to wealth shows much greater discrimination in chances of enrolment and less change or consistency in the direction of travel (WIDE, 2017).

## 2.4 Children Out of School

Fourth, the number of children thought to be out of school has fallen dramatically. In the late 1980s we estimated that about 130 million children of school age were not enrolled (Colclough and Lewin 1990). By the time of WEF 2000 the number had fallen to about 94 million (UNESCO 2000). When the Incheon World Education Forum convened the number had fallen further to about 60 million (UNESCO 2015). Half of the 60 million out of school primary age children are now in SSA compared to about 40% in 1990. Over 20 million of these are located in just six countries. Ethiopia, Mali, Niger, Nigeria, South Sudan and Tanzania (UIS 2018). Many studies detail the evolution of children out of school (e.g. UNICEF 2014) In 1990 80% of children failed to enrol secondary school in SSA. By 2015 enrolments in secondary had increased fivefold from 11 million to 55 million but still about 60% remained Out-of-School. Other parts of the world succeeded in achieving more equitable access more rapidly to primary and secondary school than did SSA.

Strikingly the problem of out-of-school children is no longer constructed in terms of primary age children aged 6-11 years without access to education, but is about teenagers. In the last five years the global definition of Out-of-School children has expanded to include children above primary school age. Over 370 million children and young adults were not in school or full time education in 2000. By 2014 this number had fallen to about 263 million according to the GEMR (2019).

Over 53% of the 262 million now thought to be out of school are of upper secondary age (16-18) and 23% are of lower secondary age (13-15) (UIS 2018b). This rewrites the map of the problem of Out-of-School children and the cost of addressing it. It raises questions about whether the right to education extends to the end of the teenage years and if so how will the delivery of the right be financed? It also places in sharp focus the equity trade off between “investing more in the most marginalised” or investing at the levels where the largest numbers are excluded (UNESCO 2017, GEMR 2017c)

### 2.5 Expansion of Higher Education

Fifth, the fastest rate of expansion in enrolments has taken place at higher education level especially in SSA where enrolments grew from about 1.6 million in 1990 to 2.5 million by 2000. Subsequent expansion was even more rapid and growth in students was about 8% annually and numbers will more than quadruple by 2020. SSA still only has a higher education enrolment rate of GER 8% and lags far behind the rest of the world where GERs are 23% and 46% in LICs and LMICs (UNESCO/UIS 2018).

Rapid growth will continue. This is important for two reasons. First costs per student tend to increase rapidly with level. In LICs higher education is least 15 times more expensive per student as primary education. Rapid expansion at post primary level therefore places unprecedented pressure on public budgets to allocate more to higher education than lower levels. Some countries in SSA allocate as much as 40% of total public education expenditure to higher education and spend more on universities than on all secondary schools. These cost ratios are the main reason why educational financing is often regressive (Lewin and Caillods, 2000).

The second issue is that access to higher education and beliefs about its value and high private returns are a central part of the motivation that drives participation at lower educational levels. Families allocate disproportionate amounts of household expenditure to bearing the costs of private secondary schooling to gain university entrance. Private fee paying higher education capitalises on the aspirations of those who can afford to buy access. Equity is not well served by expanded higher education without safeguards that discourage rationing by price.

### 2.6 Aid to Education

Sixth, much has been made in the last decade of the fact that aid to education has plateaued since 2010. Aid to education from member States of the Development Assistance Committee (OECD/DAC, 2017) rose from the year 2000 to reach about USD 12 Billion per year by 2010. Since then flows of aid have stagnated and may have slightly declined despite much advocacy to commit a greater proportion of aid to education. Aid to education as a proportion of all aid averaged about 10% for 2000-2010 and then fell to around 7% (OECD/DAC 2017, GEMR 2017b).

Aid to health has grown rapidly and is often compared to aid to education despite the differences being rather more important than the similarities (Colclough 1997). Impatient development partners have convinced themselves that outcomes from investments in health are less ambiguous and produce more short term “results” than investments in education and have largely failed to notice that aid to education is aid to improve health outcomes. Our advocacy

(Colclough, Lewin and Oxenham 1985) that more investment in educational development at primary level was needed was based in part on this proposition.

A longer view provides a reminder that since 1985 aid to education has typically been about 10% of all aid and it was only in the 1970s, in the wake of political independence from colonialism, that it reached higher levels (Coombs 1968, 1985). In 1989 aid to education was 11% of the total and valued at about $5billion, equivalent to $12 billion today (Coombs 1985:295, World Bank 1991). The point is that the global system of aid is currently close to its long term average in allocating aid to education. Previous fluctuations to higher levels have been followed by a fall back to the historic average.

Aid to basic education is now concentrated in a relatively small number of countries. The Global Partnership for Education (GPE 2018a) is a case in point. It is the largest source of concessional finance for education in LICs and it disburses over $500 million year. About 24% of countries receiving this aid account for 68% of all its aid by value. Some large countries like Ethiopia, Pakistan and the DRC are the major beneficiaries. On the other hand 42% of aid recipients receive less than 5% of all aid so there is a long tail of commitments (Lewin 2017:45). Most of these countries are either smaller or richer or both than the average LIC, and they include many small island states. The IFFEd projections of financing gaps produce the unusual result that 64% of the financing gaps are in just 10 countries only one of which is a Sub-Saharan African country. SSA accounts for only 12% of the total education financing gap they calculate. One of the countries with one of the largest projected gaps actually give more aid through there own aid programmes than they receive in aid. Something is awry with the basic arithmetic of these projections.

Aid is becoming less important. The amount the GPE can disburse is little more than 2% of the *additional* amounts needed for recurrent financing for the Education 2030 agenda. Significantly, at the GPE Replenishment conference in Dakar in (GPE 2018b, GEMRa 2018) countries likely to be in receipt of GPE grants pledged to increase spending on education to at least 20% of their public budget and 4%-6% of GDP. These pledges amounted to USD110 Billion dwarfing the USD 2.3 Billion pledged by the donors to the GPE. This was a reminder that most of the financial challenge for education is now for domestic financing not related to aid. Since 1990 DAC countries have committed over $250 billion to aid to education but seem unlikely to commit similar amounts over the next 25 years. The message may be that if educational inequalities persist the heart of the problem does not signal a need for more aid. It indicates the need for more domestic commitment backed by political will to change historic patterns of resource allocation to favour greater equity.

### 2.7 Transitioning countries

Seventh, development is happening in many low and low middle income countries. Our best estimates of growth in GDP amongst LICs and LMICs anticipate an average of nearly 5% p.a. based on the most recent five year projections of the IMF (2014-2018). The range is wide from less than 2% p.a. to over 8%. At 4% growth GDP will increase by 50% in ten years. At 7% it will double in ten years with considerable benefits for the ability to finance education from domestic revenue. Economic growth will move about half of the current LICs into the LMIC category and some will become UMICs by 2030. These transitions will make countries ineligible for grants and concessional loans e.g. IDA. It should, *ceteris paribus,* reduce gaps in educational financing as more revenue is collected.

In one of the most stunning pieces of a perverse logic for more “gap filling aid” the International Finance Facility for Education has argued that as countries get richer they need to receive more aid, not less.

“ As countries transition from LIC to LMIC status, aid falls faster than tax receipts rise. Just when many countries start to emerge from very low per capita income, their growth is constrained as domestic taxes and market related public borrowing fail to expand fast enough to compensate for loss of concessional finance” (IFFEd Strategic Case 2019:13).

“Compensation” is a strange idea that both Easterly (2013) and Alice in Wonderland would enjoy. If aid was guaranteed despite aid related development targets being met this would provide a perverse incentive to suppress domestic revenue collection and underinvest in education. There is an assumption that more lending will drive more growth. This is a not so much a theory of change but of a pathway towards dependence and default (Lensick and White 1999) when 22 SSA countries are formally in debt distress or at high risk according to the IMF. Economic transition should lead to less demand for concessionary loans and grants and more financing from domestic revenue.

## 3.0 Revisiting the Financing Gaps and the Costs of Educating Nearly Everyone

The macro shifts detailed above have rewritten parts of the education and development landscape. They have also had profound consequences for educational financing and for shifts in both the analysis and proposed responses to the persistence of “financing gaps” that governments highlight and aid agencies attempt to fill.

### 3.1 Educational Financing Gaps in Retrospect

In the run up to the Jomtien WCEFA in 1990 Chris and I undertook an analytic study which set the tone for as series of subsequent studies of financing education in low income countries including most recently that undertaken by IFFEd (2106). Our policy paper on financing for UNICEF for WCEFA (Colclough and Lewin, UNESCO 1990) mapped out the costs of EFA for the first time and identified what would be necessary in terms of international assistance to achieve the goals that were set in the World Declaration on Education for All. This led to agreement in the *Framework for Action to Meet Basic Learning Needs* (UNESCO 1990b). This was a clear commitment to enhanced learning that has recently been rediscovered by those arguing that what is needed now is *access plus learning* as if learning was not always a priority (LMTF 2015). Heyneman and Loxley (1983) had pointed out well before WCEFA that access and completion of school was likely to be more important in low income countries than rich countries – the Heyneman-Loxley effect. Schools provide the gateway to learning where other opportunities to learn in households with limited cultural capital are scarce. The final report from WCEFA stressed the importance learning. It even anticipated what would now be called social networks and demand led peer to peer learning in its discussion of the “third way” of delivering education through new kinds of mass media and the information technology driven informal sector.

WCEFA committed the international community to mobilise up to $2 billion a year over and above existing levels of expenditure to meet the financial challenges of Education for All (Usher, 1990:8). The amount would have been higher without the kinds of reforms that were suggested to control costs, improve quality, and generate enough finance to support Schooling for All (SFA). Cost saving and quality enhancing reforms would be needed to make the cost equations affordable with imaginable levels of domestic revenue and external assistance. A package was needed to reduce costs per student and simultaneously find ways of improving learning.

The first set of reforms were *cost saving* and included double shifting, class size and teaching load management, and community based classroom assistants to extend the reach of qualified teachers. The second group of reforms were *cost shifting* reforms included the dividend for the public budget that comes from being permissive of self financed private schools, community contributions to the costs of school building, and a freezing of higher education subsidies unless or until tertiary education became more cost efficient and equitably accessed. The third set of reforms were *quality enhancing*. These included higher levels of investment in learning materials, increases in teacher’s salaries where these were below levels sufficient to ensure recruitment and motivation, and measures to increase internal efficiency through reducing repetition and drop out as a result of improved management of learning, limits to the costs to household of attendance, and more supportive circles of support around children.

Our analysis concluded that an additional $2 billion a year of external assistance would be sufficient to realise Schooling for All - defined as having all eligible children in primary schools of minimal acceptable quality - in all countries committed to the goal (Colclough with Lewin 1993:239). This assumed they embraced the necessary reforms and were able to increase the share of revenues given to education to approach 6% of GDP. This volume of aid needed represented a 40% increase in the level of aid to education in 1990. It was a very affordable amount equivalent to two Aircraft carriers at a time when defence spending was averaging about 5% of GDP. A small peace dividend would have paid the bills.

The proposals we made were designed to balance competing ambitions.

* Remain within plausible increases in aid needed
* Focus on universal basic education and restrain growth at higher levels
* Assume assistance would largely take the form of grants not loans
* Anticipate that economic growth and increased government allocations to education would close financing gaps after 2005
* Limit aid to levels that did not create long term dependence
* Allocate most aid to countries where the needs were greatest
* Gain political and professional commitment to the proposed reform agenda

### 3.2 Financing Gaps in Prospect

Fast forward to 2019 and the financing dilemma facing LICs and LMICs echoes the analysis Chris and I did in 1990. Despite the changing context the dimensions remain the same. However, the level of ambition has changed beyond recognition, as have the magnitudes of external assistance that might be required. The Sustainable Development Goals, and in particular the education specific SDG 4, anticipate universal enrolment to grade 12 and substantially expanded pre-school, higher education and Technical and Vocational Education (United Nations 2015). This generates very large gaps between the resources currently allocated to education by governments in LICs and LMICs and the funding necessary to achieve the SDGs (UNESCO 2016). The external aid needed as identified by the IFFEd (2016: 105) is about $ 50 billion a year. This is at least at least ten times the projected amount that was needed for SFA in 1990. These new estimates seem to be the result of ambition untempered by credible planning and available financing. They also seem untroubled by what can be learned from the experience of Highly Indebted Poor Countries (HIPC) post 1996, and the 2008 financial crisis and sub-prime lending.

Five key issues can be identified all of which have relevance to the kind of sustainable financing that can create the conditions for reducing inequalities. First, recent modelling for the GPE (Lewin 2017:54) indicates that if both primary and lower secondary school were to be universalized with imaginable efficiency gains, the amounts needed for education would average 6.2 percent of GDP in Low Income Countries (LICs) and 6.3 percent in Low Middle Income Countries (LMICs). This scenario would still leave almost half of all children in LICs without access to upper secondary and less than 15% enrolling in higher education. Providing universal access to preschool would add 15 percent to the total cost. The current estimated total public expenditure on education across the LICs is about US$19 billion and for LMICs US$68 billion, representing 3.8 percent and 4.8 percent of GDP, respectively. This includes current aid contributions. To reach or exceed 6 percent of GDP would cost at least another US$13 billion per year for the LICs and US$22 billion for the LMICs totalling over US$ 35 billion a year[[2]](#footnote-2).

Second, the IFFEd has generated much higher costs for the SDGs to be achieved in LICs and LMICs (IFFEd 2016 :105). In their estimates DAC donors would have to increase aid to education in LICs alone from $13 billion to $49 Billion a year or nearly four times current levels. Their modelling makes the heroic assumption that it is realistic for the LICs to spend nearly 12% of their total budget on education with half of that being financed by aid. This would seem to fall outside the envelop of the “credible plan” advanced at the WEF 2000 as the criteria for external financing of education in LICs. This is four times as big as the Marshall Plan to reconstruct Europe after the second World War which ran at only 3% of GDP. It is also planned to last three times as long. If such large volumes were mobilised lasting aid dependence would be the result with as much as half of all educational spending in many LICs being externally financed.

Third, the Education 2030 Framework for Action agreed at WEF 2015 “urges adherence to the international and regional benchmarks of allocating efficiently at least 4 – 6% of Gross Domestic Product and/or at least 15 – 20% of total public expenditure to education”. If the share of the government budget for education was not to exceed 20 percent (which is 33 percent greater than the current average for LICs and LMICs), and the amount collected from domestic revenue was the LIC/LMIC average of 16% of GDP then this would result in education expenditure being only 3.2% of GDP without aid (i.e. 20% of 16%). It would need at least 30% of the government budget to provide 5.8% of GDP which would barely be enough for Education 2030. The targets need revisiting.

Currently 40 percent of LICs and LMICs spend less than 4 percent of GDP on education (of which about a third is aid-related) and less than 15% allocate more than 6% of GDP. Fewer than 20 percent of LICs and LMICs spend more than 20 percent of their government budgets on education. These allocation levels have remained remarkably persistent over time. The proportion of GDP allocated to education in low income countries rose from around 2.5% in the 1960s to about 4% in 1975 (Coombs 1985 :140). In 1990 at the time of WCEFA and after a period of austerity the average fell to 3.5% and then recovered to 4.1%. (GMR 2003:382). In 2015 the value for LICs was 3.7% and LMICs 4.6% averaging 4.25% of GDP. The proportion of government budgets allocated to education in low income countries has also remained remarkably resistant to change. The proportion of public spending allocated to education in developing countries increased to 12% in 1960 to 15% in 1975 (Lockheed and Verspoor 1990: Table 15). Forty years later in 2015 LICs averaged 16% and LMICs averaged 17% (GEMR 2017:404).

Thus public expenditure on education in LICs and LMICs appears to equilibrate around 4% and governments tend to allocate around 15% of total public spending to education. Investment in education arises from a political economy of possibilities and preferences and conventional aid does not seem to have succeeded in changing the outcome of budgetary choices in a way that is resilient or sufficient to meet financing gaps. Only economic growth seems to shift the needle in a resilient way.

Fourth, although there is a small industry around identifying alternative methods of financing educational investment in low income countries it has yet to demonstrate abilities to generate the volume of recurrent finance necessary to meet the needs that have been identified. This is not surprising. No high enrolment high performance national education system uses innovative finance to fund the bulk of their school systems not least because it cannot provide reliable recurrent financing to pay teachers’ salaries. Nor is much of their core financing from the private sector. Private sectors in LICs and LMICs are small and unlikely to finance and subsidise public education systems delivering services to those on less than USD1.90 per day.

Fifth, the good news is that national revenue raising systems are modernising. This is transforming the landscape of educational financing and the “gaps” that exist between what is currently financed and what is needed. Aid to Africa was greater than tax receipts from 1986 to 1995. Since then it has fallen relative to GDP and tax revenues are now twice the value of aid (Moore, Prichard and Fjeldstadt, 2018). This trend is likely to continue with aid shrinking and tax revenues growing. Indeed, this is what is supposed to happen when countries develop and when aid programmes are effective. As low income economies grow direct taxes become a larger share of revenue, and total revenue should grow faster than the economy as the modern sector increases its share of economic activity. Taxes will also become more difficult to avoid with better biometric identification, electronic tracking of transactions, and compliance with international transparency requirements.

The importance of the evolution of low income countries towards becoming “Fiscal States” that have the capacity to borrow to invest and grow without reference to aid and its conditionalities has immense significance. By 2030 tax, not aid, will be the dominant source of public finance in most countries. More and more governments will be able to finance their own development and take control of their development agenda and their own allocative choices. If there is a “low learning trap” (WDR 2018) it is in large part a “low financing trap”. It may be that “this year poses some real opportunities to unlock education for everyone - but only if we nail down exactly how we are going to do it and where the money is going to come from” (GEMR 2019) but both these kind of questions have answers located firmly within countries and determined by the national political economy of possibilities rather than in more aid.

Greater learning achievement that is sustainable requires many things (GMR 2014). From a financing point of view serious fiscal reform, much more effective revenue collection, and awareness of the costs of learning sit at centre stage. If there is a learning crisis it is now mostly to be located and resolved within the political economies and national social contracts of governments accountable to their taxpayers for investing fairly and effectively (GEMR 2017a). The only sustainable solutions will be domestically driven. The problems of gaps in educational finance are shifting from the absolute shortages of domestic revenue in the 1990s, to problems of unbalanced allocation, inefficient mobilisation, and poor conversion of inputs and assets into outcomes.

## 4.0 Priorities for Research and an Agenda Beyond 2030

In practical terms the message from this retrospective review of counting the cost of educating all the children in LICs ad LMIC leads to a two pronged strategy for research that can diminish gaps in financing which lead to inequalities and exclusions between and within low income countries.

### 4.1 Priority One: Efficiency and Effectiveness to Increase Access and Equity and Learning

**First,** the focus of research should be on ways of improving educational delivery systems so that they are more *efficient* and *effective*. LICs and LMICs, especially in Africa, spend relatively more on education and get relatively less in terms of access and learning outcomes than most other parts of the world. Learning is also very unevenly distributed. Three generations of aid to education since the 1960s have not yet succeeded in catalysing a transition to more efficient and effective systems in many of the countries. These systems are now expected to deliver access to education to all through to grade 12, and finance publicly funded mass higher education systems free to those who cannot afford to pay. All this needs to be achieved at costs that can be financed without indefinite dependence on grants and loans.

The implications for external assistance to reduce finance gaps is to co-finance investments in research and development on enhanced efficiency and effectiveness. Gains from reforms could greatly reduce the size of financing gaps. *Sustainable* development is not about filling gaps temporarily, but about inputs that generate lasting benefits in access, quality and capability that do not depend on sporadic external financing. Critically this kind of research must be embedded *in* systems not undertaken *on* systems by others, so that ownership is translated into action. Systems research has to be done by those who actually run systems who may then be motivated to generate political will reflected in actions that endure beyond short term funding cycles.

The most attractive options will be based on system specific diagnosis and receptiveness to change. Some possible research questions (RQs) are listed below:

* RQ1. How do children flow through educations systems, where are the pinch points that increase costs, reinforce inequalities, and signify learning deficits, and how can flows be better managed with less wastage? Many systems in LICs and LMICs have uneven flows of children through them and no mechanisms to address the causes of uneven progression.
* RQ2. How can the relatively high costs per student to the state and to households of secondary and higher education be addressed without undermining quality? No country that has post primary costs per student more than twice those at primary is likely to achieve universalise access to secondary schooling. If costs per student are more than 15% of GDP per capita at primary, and 25% at secondary universal enrolment will be unaffordable (Lewin 2008).
* RQ3. How can over-age entry and progression, which contribute to both inefficiencies and inequities be eliminated? Many LICs and in some LMICs have young populations with half of all people below 18 years of age. They have old education systems with many students over-age. Over 40% of lower secondary children in LICs and 20% of those in LMICs are two or more years overage for their grade. Being over-age is systematically associated with low achievement and subsequent drop out, and is strongly associated with household income (Lewin 2011).
* RQ4. How can small schools be pedagogically configured and staffed so that national curricula can be delivered effectively at less than twice average cost? Schools with only 150 students can have costs per student four times those of schools with 750 enrolled. In some districts in some countries half of all schools have less than 150 students and “reaching the most marginalised” involves more small schools. Multi-grade pedagogies have much potential but how effective are they (Little 2006)?
* RQ5. How can teacher education become more cost effective and a better balance be achieved between supply and demand especially where there is high attrition after first appointment? The “half life” of a trained teacher – the time it takes for half those who have been trained to leave the profession – can be as little as three years especially in STEM subjects (Lewin and Stuart, 2003).
* RQ6. How can access to effective Science Technology Engineering and Maths (STEM) education be greatly expanded at affordable costs. The ratio of R and D scientists in Africa per million people is 1% of the level in the USA. How can the human resource gap in STEM be closed?
* RQ7. How can schools and schools systems be planned to respect new commitments to education for sustainable development and minimise energy consumption, pollution, solid waste generation, and the carbon burden of school choice? School location and wide variations in school quality are responsible for large amounts of road traffic, urban air pollution and the massive opportunity costs of gridlocked cities.

Efficiency and effectiveness gains could easily generate many billions of dollars of savings and reduce educational financing gaps. Conversely many billions of dollars of additional funding without enhanced efficiency and effectiveness is unlikely to produce sustainable educational development that is worth financing.

### 4.2 Second Research Priority: Fiscal Reforms for Fiscal States

**Second**, research is needed on fiscal reforms that can increase domestic revenue to levels that approach what is needed to achieve the targets set by national governments and the SDGs. If the political will exists in a country to invest in equitable growth of quality educational provision, and social conflict or economic collapse are not over-riding obstacles to development, then the main constraint to sustainable educational development will be under-funding of public education systems. Learning crises, where they exist, have their origins and solutions within the education systems that manifest their symptoms. So do financing gaps.

The new insight is therefore that the goal of external financing should be to reduce the need for more external financing. This sounds blindingly obvious but the record suggests that it is yet to be a reality, especially in SSA. The IFFEd is proposing the largest increase in aid to education in history. An unstated but a clear implication is that assistance at this level would generate arrangement fees, annual charges, audit costs, overheads, and direct delivery costs for the international financial institutions involved that could be as much as the total current volume of aid to education in SSA. That would be a high cost to bear. If it were based on the idea that transition to higher income status justified more concessional aid rather than less it would break the pact that underlies the “New Meaning of Development” outlined by Seers in 1977. This is that increased long term dependence always overrides gains in other aspects of development since it recreates economic and political colonialisms.

Borrowing has been increasing since 2008 and the IMF has issued warnings that ten countries in SSA have excessive repayment burdens. A further ten countries have been increasing their debt rapidly (IMF 2018). More borrowing to cover recurrent costs of education systems will lead to a repeat of the debt crises of the 1980s. The headroom for more lending to LMICs is uncertain and based more on signals from lenders than evidence of new demand from borrowers. Heyneman and Lee (2016) and many others have noted the growing risks of continued aid dependence and the new imperatives to recognise the limitations of endogenously driven development that is rarely sustainable and often historically disowned by its presumed beneficiaries. There are better ways to raise revenue and increase educational spending that do not carry the risks of non-accrual and default, and which genuinely transfer ownership, accountability and responsibility to those who are part of their own national political economy of development.

The best estimates suggest in LICs and LMICS in Africa income tax charged on personal income collects between 5% and 10% of all tax revenue. This compares with a share of over 40% in OECD countries. More particularly income tax is only paid by about 5% of all people who live in Africa, compared to 50% of adults in the OECD. Most of the personal tax that is paid is paid by mid-level employees of government and large companies. In the UK 28% of all income tax is paid by just 1% of very wealthy tax payers. In one East African country only 5% of all company Directors pay any income tax, and few of the wealthiest officials pay any income tax at all. It has become clear that about 5,000 Africans held assets of over $6 billion in just one Swiss Bank. The wealthiest client with a personal account balance of over $700 million came from one of Africa’s poorest countries. This suggests that large amounts of income and assets are diverted off shore and are likely to remain untaxed. The result is gaps in educational financing.

There is plenty of scope to raise more revenue and reduce the need for aid to temporarily fill “financing gaps”. This is a subject of current research with key stakeholders. The fundamental point is that a 1% increase in collection of revenue in SSA would be roughly equivalent to all the aid to basic education from DAC countries. It would not have to be replenished on an ad hoc basis every three years. It would be complemented and increased by real economic growth that would result in more revenue to fund more services. More domestic revenue will be generated in most African countries as economies grow and revenue collection becomes more efficient, evasion more difficult, and money transfers more transparent. The uncertainty is more about how additional revenue will be spent than whether more will be collected. The critical shift in perspective is to realise that supporting fiscal reform is aid to education.

## 5.0 In Conclusion

When Chris and I started working together in the 1970s the belief we shared was that development was increasingly something that could be accelerated by aid but not caused by it. Dependency theory reminded us “to develop” should be an intransitive rather than transitive verb with the onus on countries to develop themselves albeit with judicious assistance to accelerate progress. This fundamental truth remains the case.

This analysis in this chapter should not be misunderstood. More aid is needed but not of the gap filling kind that failed to result in sustainable educational development in the past. Gaps in educational financing are generated by aspirations and by the failure to match these with the political economy of good governance that balances resources with spending, and ambition with accountability. Aid and external assistance should never be a substitute for domestic political will. This has to be expressed in deeds not words, and events not wish lists.

Time may be running out on gap filling aid.

“We cannot depend on other people to finance the education on our continent. I am saying that not to turn my back or to be ungrateful to all these important or noble people who have committed themselves to help, no…..But, if we make our policy dependent on other people when their policy changes, we will suffer. But, if we make the policy for ourselves, then it means that, at all times, we will be in control of our own destiny.” Akufo Addo, President of Ghana, GPE Replenishment, Dakar, Feb 2018.

The next decade will tell if this refreshing rhetoric is matched by a new willingness to curate educational aid towards the new agenda of aid to reduce the need for aid. The purpose of counting the costs of unequal access to education is to find a solution to how to pay costs not once, but once and forever, through fiscal reforms rather than the well intentioned but volatile benevolence of aid. Dudley Seers, the founding Director of the Institute of Development Studies, would have agreed (Seers 1969). There is no solution to closing educational financing gaps that does not depend on the development of fiscal states that can fund public goods from domestic revenue. There is no solution that does not also work to promote efficiency and effectiveness and mobilise resources to best effect and minimise negative effects on the physical and social environment. Enduring solutions are endogenous.

Chris and I were proud of the contributions we were able to make to WCEFA with many others that were precursors of the “Education for All” decades. More aid was mobilised, the focus shifted to basic education, and many millions of children experienced expanded school systems and learned much more than they did before. It is now clearer than ever that purpose of external assistance to education in the future can no longer be to provide finance to fill gaps in recurrent expenditure. It is to accelerate progress towards educational reforms that promote efficiency, effectiveness and equity, that are inextricably linked to well founded fiscal reforms that reduce the need for “gap filling” aid to education in future.

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### Annex 1

LICs and LMICs Classified by Enrolment Types

|  |  |  |  |
| --- | --- | --- | --- |
| **Pattern** | **LICs** | **LMICs** | **Comment** |
|  |  |  |  |
| **Type 1**  **Low Enrolment High Drop Out**  **Concave Curve** | Burkina Faso, Eritrea, Gambia, Guinea, Haiti, Liberia, Mali, Niger, South Sudan, Sierra Leone | Cote D’Ivoire, Mauritania, Pakistan, Senegal | Intake rate and enrolment to grade 1 low and likely to include over-age children; low primary completion rates and very low lower secondary completion; progression strongly associated with household wealth |
| **Type 2**  **Over Enrolment in Grade 1 and High Drop Out**  **Strongly Concave Curve** | Benin, Burundi, Chad, CAR, Comoros, Congo, DRC, Ethiopia, Madagascar, Malawi, Mozambique, Rwanda, Timor Leste, Togo, Uganda, | Cameroon | Intake and enrolment to grade 1 very high with double the number of children in lower grades than in the age group; high drop out with less than 75% completing primary; less than 50% completing lower secondary; progression strongly associated with household wealth |
| **Type 3**  **Middle Level Enrolment and Drop Out**  **Linear Attrition curve** | Afghanistan, Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, | Lao PDR, Yemen, Nigeria | Intake and enrolment to grade 1 up to 40% more than in the age group; most but not all complete primary but less than 50% reach the end of lower secondary; children from richer households survive longer |
| **Type 4**  **Middle Level Enrolment and Low Drop Out**  **Convex Curve** | Tanzania | Bhutan, Ghana, Kenya, Honduras, Lesotho, Nicaragua, STP, Tanzania, Vietnam, Zambia, Zimbabwe | Intake and enrolment rates in grade 1 up to 10% more than in the age group; low drop out through primary with high completion rates; drop out accelerates through lower to upper secondary; children from richer households survive longer |
| **Type 5**  **Full Enrolment and Low Drop Out**  **Linear Curve** | Tajikistan | Albania, Georgia, Kyrgyzstan, Moldova, Mongolia, Uzbekistan, | Full intake and enrolment in primary grades though to grade 9 with little drop out. |

LICs and LMICs Classified by Patterns of Participation by Gender

|  |  |  |  |
| --- | --- | --- | --- |
| Pattern | LICs | LMICs | Comment |
|  |  |  |  |
| Pattern 1  Very Low % of Girls  in All Grades | Afghanistan, CAR, Chad |  | 40%-40% girls in grade 1 falling to less than 35% by grade 9 |
| Pattern 2  Low % of Girls in All Grades | Benin, DRC, Eritrea, Guinea, Mali, Niger, Togo, | Cote d’Ivoire, Pakistan, Yemen | 40-46% girls in grade 1 falling to below 45% by grade 6 and below 40% by grade 9 |
| Pattern 3  Near Equity in Primary but Not Secondary | Burkina Faso, Burundi, Congo, Guinea Bisau, Ethiopia, Liberia, Mozambique, Sierra Leone, Tanzania | Cameroon Lao PDR, Nigeria | 46% to 50% of girls in grade 1 with at least 45% up to grade 6. Grade 9 averages about 45% |
| Pattern 4  Equitable Enrolments of Girls and Boys | Bangladesh, Bhutan, Cambodia, Gambia, Myanmar, Madagascar, Malawi, Nepal, Rwanda, STP, Timor Leste, Uganda, Vietnam, | Ghana, Guyana, Honduras, Kenya, Lesotho, Nicaragua, Senegal, Vietnam, Zambia | Average of 48% of girls in grade 1 and 50% in grade 6 and grade 9; more girls than boys in high enrolment countries; girls increase with grade level. |

1. Published in Rose M, Arnot M, Jeffery R, Singhal N (2021). Reforming Education and Challenging Inequalities in Southern Contexts: Research and Policy in International Development. A Tribute to Christopher Colclough. Routledge Cambridge. [↑](#footnote-ref-1)
2. India is excluded from the analysis since its size skews the results and it now receives little aid for education [↑](#footnote-ref-2)