

## Access and Equity in Higher Education across the World

José Ferreira Gomes  
Universidade do Porto (Portugal)<sup>1</sup>

### Abstract

The access rate to higher education varies widely across the world. In some regions, massification started right after the second world-war, while in many other countries the university is still today the privilege of a few. The expansion of education in general and of tertiary education in particular is associated with a marked social change and is a prerequisite of economic development. In most societies, higher education is seen as an important factor for upward social mobility. Access has an immense power as the gatekeeper to individual promotion with very important private gains but equally relevant benefits for the whole society. These are more evident when emigration of the best educated occurs in large numbers, as seen today in several regions of the southern hemisphere. Everywhere, the cost of higher education is a limiting factor for individual access and for increased public provision. There is no agreement among the development economists of international bodies about the emphasis that governments in developed or in developing countries should give to higher education vs. basic education. The results of some of these policies can already be evaluated and will be discussed briefly.

The increase of access to higher education is normally justified either on grounds of human capital building or of social cohesion. The relative relevance of these apparently contradictory lines of thought depends on the degree of massification attained and on the social fabric of the particular society. This will be analysed comparing the widely different situations in many parts of the world. It is argued that the social cohesion side has not been given the due importance in most international policy documents and is given only lip service in the political discourse in most countries. It will be argued that the two lines of reasoning should go hand in hand as a strong synergy may develop between them. Without the access widening policies normally aimed at increasing equity and strengthening social cohesion, the recruiting field may be too narrow to maximize the human capital supply. Without the selectivity and quality control normally associated with human capital building policies, widening arguments may lose out in the quality of the student body and in the lowering of the standards of the teaching programs.

Not only participation rates but also the structure of the higher education systems varies widely across different countries and regions. The traditional continental European homogeneous systems are losing to differentiated systems. Some countries are developing dual systems with small very elitist sub-systems amidst large (relatively) massified systems. In these cases, the problems of equity have to be considered at both levels. Whether selection is done by testing or throughout secondary schooling, equity problems deserve attention and special policies should be devised to attenuate them. The equity concern does not end with access to higher education as disadvantaged students need special support to guarantee a fair assessment of their progress. ICT may provide useful instruments to increase participation and, sometimes, to widen the availability of higher education but no simple solutions exist based solely on the technology.

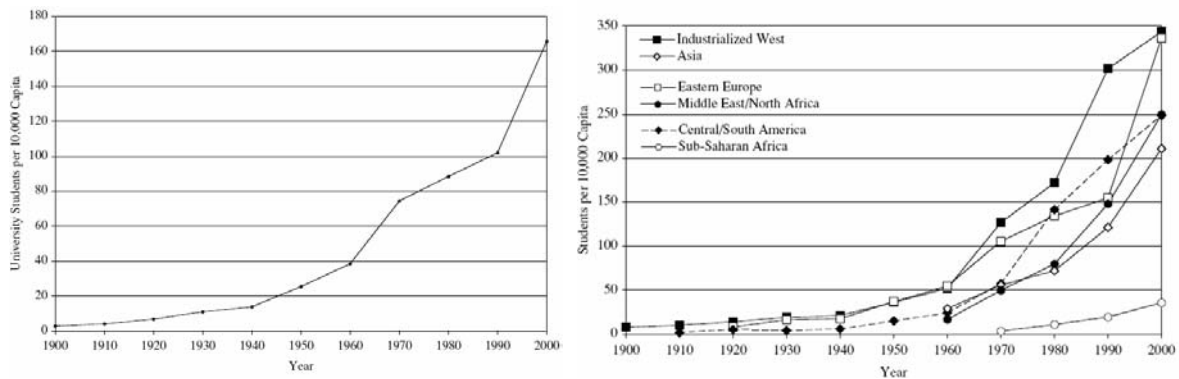
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<sup>1</sup> J.A.N.F. Gomes, REQUIMTE/Faculdade de Ciências, Universidade do Porto, Rua do Campo Alegre, 687, 4169-007 PORTO (Portugal), [jfgomes@fc.up.pt](mailto:jfgomes@fc.up.pt), <http://www.fc.up.pt/pessoas/jfgomes>

## Introduction

Higher education as we know it today started in the 19th century as the compounded result of the industrial revolution, the establishment of the nation-state and the establishment of state educational systems across Europe in the aftermath of the French revolution. What had been an institution reserved to train a few medical doctors and lawyers evolved into a more diverse institution covering new professions as required by the modern state administration. In the US, higher education development followed European models with a strong influence of the self reliance associated with colonial life conditions and this community presence and support is still very important in the American University model of today.

For Spain, the need to train the huge number of lawyers required by the bureaucracy of its American Empire was felt very early on. This led to the growth of its medieval universities and the creation of new ones in Spain and across the Americas. As the modern state developed in the 19<sup>th</sup> century consolidating a complex bureaucracy, the university was asked to satisfy these needs leading to the creation of a new social class of professionals. Science and technology had a very modest presence in the university and the relevance of a formal training to advance industry was a very late recognition. This is an acquisition of the 20th century and largely the result of the success of science during the WW2. Technical areas represent today a large share of higher education.



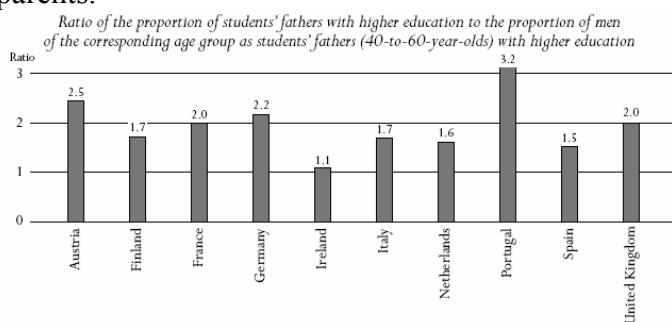
**Figure 1. Higher education students per 10,000 capita world (left) and regional population (right)<sup>1</sup>**

Participation in higher education varies widely across the world with Sub-Saharan Africa in a particularly difficult position. The establishment of higher education started late and participation is very low and is still growing rather slowly. Other parts of the world appear to be catching up rapidly. Of course these global figures hide large variations between countries in the same region and inequalities of the access of different social, economic or ethnic groups within each particular country.

Higher education is believed to be underfinanced everywhere and this may be the result of the conflict of two very different views, that education and higher education in particular are public goods that should be provided free by the state, on the one hand, and that the private benefits to the students are so large, especially for tertiary education, that its cost should be supported by the student or his family. The current reality varies widely with a growing tendency in many regions of the world for a transfer of costs from the state budget to the student. It should be reminded that this view was taken to an extreme by some international organizations that induced many governments, especially in Africa, to reduce their public finance of higher education with devastating effects on the quality, on the participation and on the social inequality of access. The discussion of the higher education finance policies has a major impact on the participation and its social equity.

In many countries, access to higher education is decided on a very competitive basis and this tends to have very marked social selectivity effects. Good alternative practices exist that show how the educational experience may be improved when academic performance testing is not the sole criterion for admission. A conflict may exist between quality and social equity but the limitations of performance entrance tests are widely known. To serve well social cohesion, active access public policies are required and have been introduced in many countries. Of course, the implementation and the success of these policies depend on the strong involvement of the institutions themselves. This usually follows some national lead with the active participation of academic and non academic staff. In fact, disadvantaged students tend, not only to perform below their potential in entrance tests, but also to find further difficulty in adapting to academic life and need active strategies to avoid mass desertion.

Even in OECD countries, equitable access is a problem that requires a lot of attention. Figure 2 shows how access is biased towards students coming from highly educated parents.



**Figure 2. Educational status of the students' fathers<sup>2</sup>**

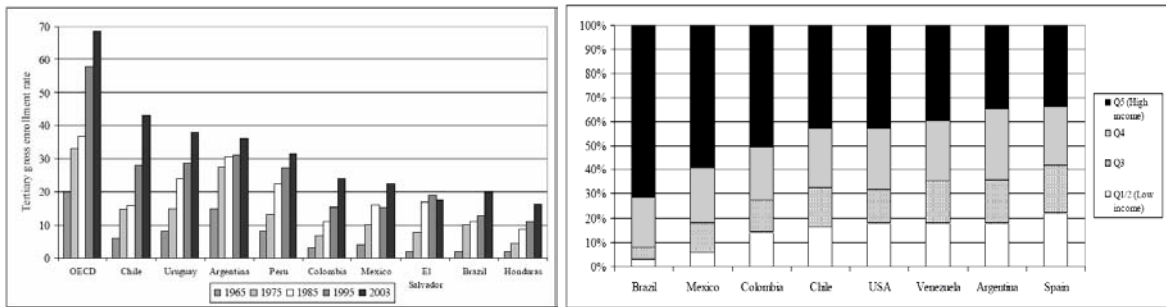
New information and communication technologies (ICT) offer hopes of increasing access far beyond that feasible with traditional delivery. The enormous success of this new means of provision in many countries and regions has to be compared with failed hopes and slow development in other cases. ICT provision is not a cheap alternative to the conventional classroom and it is not a good substitute for an eighteen year old that can not afford traditional university. However, ICT based institutions are offering good quality education to many people in some parts of the world and, for some, this proves to be the sole alternative due to geographical, family, professional or economic constraints.

The great challenge is for quality higher education to survive massification and, indeed, universalization of access to higher education. This requires a set of policies from diversification of the institutions to the personalization of the student experience that will be discussed further down in this paper.

## **1. The growth of higher education provision.**

As shown above (Figure 1), higher education participation has been growing markedly around the world, especially since the 1960s. Variations among world regions and among countries in the same region are very large. A good case in point is Latin America<sup>3</sup> where social inequality is particularly striking and education policies vary widely. As seen in Figure 3, participation rates have been growing steadily with Argentina losing now its traditional leading position. Brazil has still a low participation as national policies in the last fifty years were bent on supporting a high quality federal university system and a

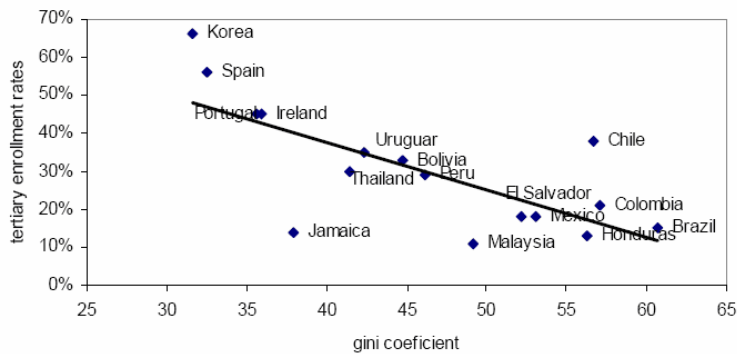
uniquely strong research training system associated with research master and PhD programs.



**Figure 3. Gross education enrolment and fraction of student population enrolled in higher education from each income quintile<sup>3</sup>**

In many Latin American countries, fiscal constraints lead to the early development of a private university system with widely different standards which has grown strongly in recent years. Research intensity varies widely from country to country and is mostly linked to public universities. In some countries, however the most prestigious degree programs of a professional character are already in the private sector.

The social inequality of access is shown in the right hand side of figure 3 where the student’s family income distribution is shown for a few selected countries. The statistical evidence taken from the aggregate student body may not show the full reality as students from lower economic backgrounds may have more difficulty to accede the more prestigious institutions and this is particularly important in Latin America. It is not uncommon that lower income students go in larger numbers to private institutions where they have to pay the full cost of tuition while better off students could afford a better secondary education that opened for them the gates of the more prestigious universities where public support reduces the cost of fees. Social inequality usually correlates well with low participation rates as shown in figure 4 where data from a selection of countries in Europe, South America and Asia is used.



**Figure 4. Inequality and enrolment rate<sup>4</sup>**

The reasons for this growth in the student population come both from the supply and the demand side. On the supply side, development economics theory created the concept of human capital and stressed its importance as an important factor to accelerate economic growth. This, in turn, led to public policies designed to increase the access to general education and to higher education, in particular. For the USA, this is the case of the Land Grant initiative in the late 19<sup>th</sup> century and the GI bill at the end of the WW2. Many other countries followed the assumption that increasing the education supply would necessary lead to economic development. This early massification of access was driven by public

initiative but it run into difficulties when the share of fiscal resources required grew too large and doubts were expressed by many economists about the regressive character of a policy that would pay the training of those that would later receive the highest income during their active lives. The view that the tax money should not be wasted with higher education was taken to an extreme by the international bodies in charge of coordinating the help to less developed countries and in particular African countries. The end result was that most sub-Saharan countries disinvested from higher education with the disastrous results that we can see in Figure 1. These countries lack the higher education infrastructure needed to supply the highly trained people required for their development. Furthermore, those few that complete their training, especially when this is done abroad, are reluctant to go back home. The end result is that developed countries have maintained public support to their citizens in higher education and still allow themselves to drain the best among those coming from other parts of the world, especially Africa, Latin America, South and Southeast Asia. When we consider the current position, together with current policy trends in key countries around the world, it is clear that the massification process will continue to run its course. Sub-Saharan Africa may find it more difficult to recover quickly but the trend is clear and universal.

It is less clear if this process will go further on and the gross participation of about 50% now associated with massification may raise in future up to values as high as 80% in wide regions. Of course, everything depends on the definition of higher education and there is no agreement on the boundaries of what should be considered so. In most countries, higher education is rather heterogeneous with very different institutions providing education and training to widely different needs of a heterogeneous student body and considering the diverse requirements of employers and of society at large. The pretense of homogeneity is still kept in some European countries but appears to be loosing ground as the more traditional academic quality standards collide with students' goals and the job market realities. The general conclusion is that growth in higher education participation does not by itself guarantee equity and that special policies must be put in place to attain that goal.

## **2. Attracting and retaining a diverse student body.**

The first question is why we should aim at having a diverse student body with a fair representation of all relevant groups in society, men and women, rich and poor, different ethnic groups. This was not always thought to be so important and higher education was even used as a means to perpetuate the particular advantages of certain groups in society. This status quo is not compatible with the democratic ideal of giving equal opportunities to all citizens if this is understood in real rather than simple formalistic terms. On the other hand, a very pragmatic concern with social cohesion leads to guaranteeing real educational opportunities to social groups that in the past might feel content with their inherited role in society as manual workers for whom education was an unnecessary and dangerous luxury. Finally, a third stream of reasons comes from the need of modern knowledge societies of a larger share of workers with a better education and more advanced professional training and this requires the enlistment of wider social groups. For whatever reason you may care most, the reality is that the number of students in education and, particularly, of those staying on up to post secondary education is growing in numbers and in social diversity. Two major reasons for the low participation of socially disadvantaged students are economic and cultural. Economical because the total direct costs of going to higher education may be too high or the opportunity cost, i.e. the loss of the salary of that

particular member of the family may discourage the continuation of studies. Still more common is for social disadvantaged students to abandon school at an earlier stage or to perform below the required standards. Cultural reasons may be very important for women or for certain ethnic groups but also for students coming from working class families in developed societies where no member of the family ever took that option in the past. It should be clear that in both cases money may not be enough to change the situation. First, students must consider higher education as an option at a very early age and this requires counselling together with extra support along the trajectory of the student to allow him or her to compensate for his or her social disadvantage. His or her family or social group may not value school highly enough to encourage him/her to stay on and give due attention to coursework. The ambience at home may be less conducive to him/her doing home work regularly and parental support may be totally lacking. Frequently teachers expect parents to help in the homework required from pupils as a device to get them involved in school activities but this works as a further segregating factor for pupils from disadvantaged backgrounds where parents will not be able or wishing to help. To obtain results later on, special care must be put in school from a very early age to guarantee equal opportunities to all children. Access to higher education institutions is frequently decided on past performance in school or on the results of tests. It is known, however, that this evaluation of past learning is a poor predictor of the student's potential for future study or to active life performance. Furthermore, testing is normally biased towards the assessment of the information stored by the student as "intelligence" testing is more illusive. No testing is totally immune to good coaching thus reproducing the social inequalities among those that can and cannot afford it and weakening further the always poor predicting power of the test for the performance of the student in the degree program. A fair ability test to be passed to a heterogeneous population simply does not exist. This implies that, even from an economical point of view, it is advisable to look for alternative ways to select students that should be allowed into higher education or should receive special support to that end. When well defined ethnic or social groups exist, affirmative action has proved its ability to contribute to attenuating the unfairness of pure performance testing. Examples of the success and of the controversies associated with affirmative action favouring disadvantaged ethnic or social groups may be found in the US, in England and in Brazil. Race has been a factor considered in US higher education for many years with some success in balancing participation but it is also arising constitutional litigation of the possible unequal treatment of all citizenry. More recently Brazil is playing with similar policies and trying to avoid false pretences in self declaration by prospective students. Another social divide in Brazil shows up between public and private schooling. In some relevant regions of the country, most entrants in the best (public) universities come from private schools while they represent only a small share of the school population. A similar effort is being made in England to increase access of socially disadvantaged students coming from government schools while many highly prestigious private schools are very well known to admission officers, especially in the best universities.

Institutional policies to retain students from minorities or socially disadvantaged groups are crucial for these students to succeed. It is to be expected that these students will have more difficulty to adapt to university life socially and academically. The economic conditions of these students are sometimes de major reason for their difficulty to integrate and this can only be solved by financial support in cash or in kind. But this may be the easiest part as a full response should involve both teaching and non teaching staff and other students. To get some measure of success at this wide level, the involvement of the institutional leadership at the highest level is usually required.

### 3. Funding

The cost of higher education varies widely, both in absolute terms and relative to GDP. For most countries, the cost per student is between 30% and 50% of the GDP per capita. This relatively large variation depends not only on difference of quality standards but also on the type of education and training that is considered tertiary education across the world and also on some accountancy discrepancies. Among OECD countries, it is generally accepted that European higher education is under funded but there is no political consensus on how to find the extra finance required.

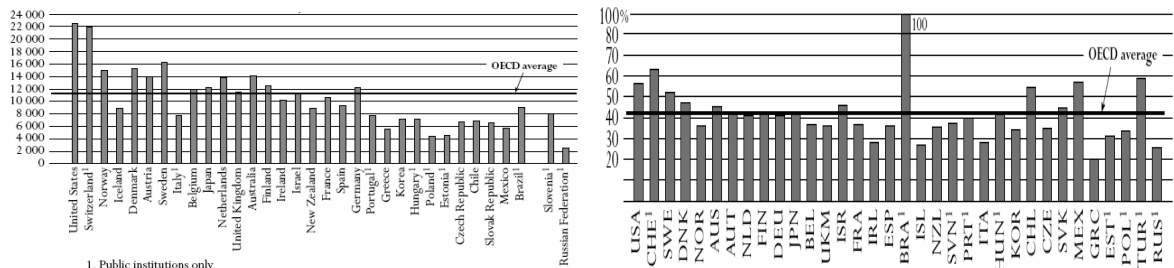


Figure 5. Expenditure per student in equivalent (PPP) USD and relative to the GDP per capita <sup>2</sup>

Most countries have found it difficult to maintain the degree of public support of their institutions and some international institutions like the International Monetary Fund have insisted in the regressiveness of using tax money. The argument goes that this support ends up in the less needy social groups and in people that are likely to have the best employment in future. This line of reasoning, and the heavy weight that international bodies have on budgetary decisions of fiscally strained countries, led most African countries to withdraw finance from their universities and helped to rationalize the decisions of European governments that felt compelled to reduce higher education finance to maintain their social support programs. With Korea, the US appears as the champion of private finance of higher education. This should be read with some caution as private fundraising in US institutions plays a role that is not matched in any other country.

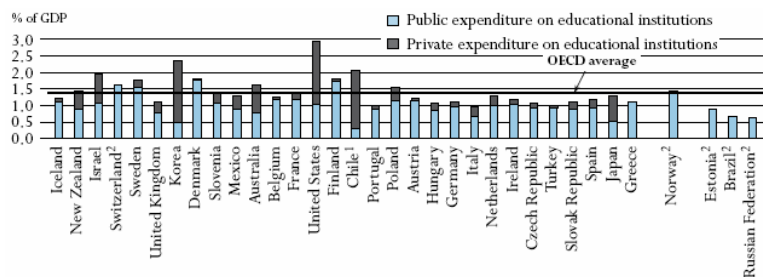


Figure 6. Public and private expenditure on tertiary education institutions as a percentage of GDP <sup>5</sup>

In the US, fees have been growing faster than inflation but student support has partially offset this. The actual net value of the fees paid by students was estimated<sup>6</sup> to be, on average, just US\$100 in public 2-yr colleges against an average posted value of US\$2.272 and they take in about 40% of all students; the average net fees in public 4-yr colleges and universities is US\$2.700 against a posted average of US\$5.836 while for private colleges and universities these values are US\$13.200 and US\$22.218. Of course, this does not include room and board that is estimated at US\$7.000 to 8.000.

Among the schemes governments have been playing with around the world to make students pay at least part of the tuition costs, income contingent loans are perhaps the one preferred by experts and tested in some form in Australia, New Zealand and Britain.

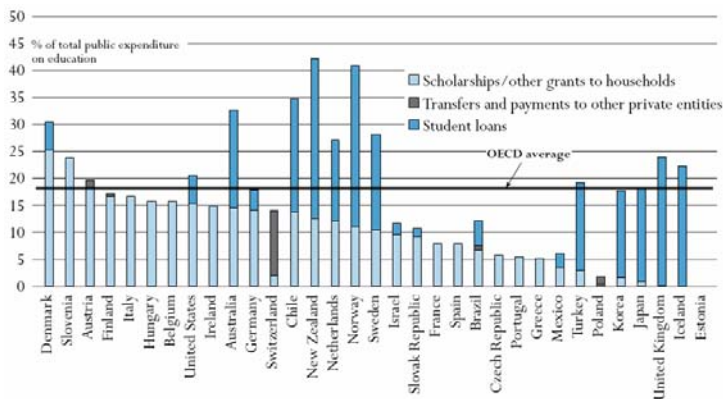
Basically, students are required to pay the institutions' fees out of a bank loan that is guaranteed by the government so that interest may be as low as that of a government bond. The student will pay back his loan as soon as he gets a salary above a given threshold limit. The short term experience with this model appears to be positive with a good repayment rate but adjustments were already introduced to avoid the huge debts (or personal bankruptcy) that many students were facing when starting active life. Another problem comes from the relatively long time lag until the scheme may be expected to enter into a stationary state with a good flow of money coming in from the graduates it supported earlier on. An important aspect is that the scheme has to be designed in a way that worse off students are not frightened away and some direct financial public support may be always needed to avoid this pitfall. Another difficulty is that this is likely to be impossible to apply in less developed societies where acceptance by prospective students may be more difficult and repayment of the debt is certainly very uncertain and therefore costly in terms of the government guarantee. The system worked well so far when the repayment was made together with income tax and this is inapplicable in countries where the tax system is not fully developed.

#### **4. Student support**

Typically, there are three channels of support to students. The first consists in the support given to the institution from public or private sources. This may be a block grant for the institution to run its activities or it may be given in the framework of projects to achieve certain aims. This support tends to be indiscriminate, benefiting all students independently of their needs but some may be related with achieving particular goals like improving the access or retention of a special type of students. Most European universities worked on a block grant provided by their government or as a branch of the public administration with itemized budgets defined on historical basis. In the last decades they were given autonomy and responsibility to administer a balance sheet of expenditures and receipts where the public purse is but one of the sources. This transformation requires governments to be more active in steering institutional policies, among them those on access and retention of disadvantaged students. In any case students will benefit from the moneys made available to institutions in kind as subsidized fees or as room and board below market prices. This is the protected environment that most higher education institutions created for their students and was taken for granted in most countries around the world. The situation has been changing in many countries with governments withdrawing from this responsibility and becoming much more selective on their support. Contractual money becomes then directed to certain goals, among them student support.

Another traditional way of supporting students is to keep it separate from the institutional budget for teaching-research-extension. Selected students may receive grants in cash or in kind as free or subsidized tuition, room and board. The third channel of support is through government guaranteed loans that may cover fees plus living costs. Many countries have been testing the application of different models of guaranteed loans with a degree of success. Figure 7 shows the blend of the different channels used for public money into tertiary education with loans gaining the upper hand in a number of countries.





**Figure 7. Public subsidies to households and other private entities as a percentage of total public expenditure on tertiary education <sup>2</sup>**

Of course, money is not enough and it is widely recognized that broadening access depends also on institutional policies that involve the whole academic community in supporting disadvantaged students. Otherwise, these will tend to underperform and leave.

## 5. Maintaining quality through massification

The massification of higher education has been widely criticized as leading to a general lowering of academic standards and more so in what concerns policies aiming at broadening it, giving an opportunity to disadvantaged social groups that had never considered this as an option. Of course this is a real problem and it must be said that mass higher education can never be the same as in the old days when it was reserved to an elite. The point to discuss, however, is whether in those good old days selection meant intellectual or social selection. It was probably a blend of both but the social component should not be underestimated. Children from underprivileged backgrounds have a rough deal right from birth onwards and the education system must give them a special attention if they are to be given a fair chance in life. Access to higher education comes at a very late stage in their development but it is normally an extra barrier that even the most successful find difficult to pass. Given the very different environment they live in, two pupils of similar intellectual potential are very likely to perform differently at the end of secondary school with the less privileged being left out in any competitive entrance system. This means that society at large is wasting the inherent capacity of these young people and is not giving them an equal opportunity to develop their full potential. It is easy to argue this point but it is more difficult to design strategies to counterbalance the unfair reality. A number of very different strategies have been tested with varying degrees of success and social acceptance. Affirmative action with special quotas or favoured criteria has been used with certain ethnic groups or with social groups as defined by the type of school they attended. For some extreme situations, this appears to be virtually the only way to get results quickly and even its critics will agree on some good results obtained. The big question is how large the quota should be to compensate for the underperformance without opening up to those of low potential, without compromising academic standards. Another strategy is to induce institutions to take in a diverse set of candidates for the inherent gain that this brings to the educational experience they will all have in there. In any case it is known that the growing heterogeneity of the intake puts new challenges for the design of the experience offered to the students and that disadvantaged students may need social and

academic support to adapt. This has a cost that must be considered and provided either by the contractual government or by the institution's own funds.

What should be the measure of quality in higher education? There is no simple answer and we should shy from trying to use purely scholarly conventional standards. Especially in the days of massification, the expectations and the needs of students become very diverse and it should be clear that good quality should mean to provide each student with the learning experience that will bring him or her up to the highest potential. This certainly means that we are asking the institution to perform a more complex task than in the past. In elite higher education the university was asked to produce good medical doctors, say. To achieve that, it would take a number of those willing, select those that could achieve the defined standards and teach them the contents thought relevant. This is very different from bringing up a full cohort to the highest potential of each individual person. The solution may lie in diversifying tertiary education.

## 6. Institutional diversification

With massification, the expectations of students seeking higher education become much more diverse and the institutions must respond accordingly, following the equally diverse needs of employers and society at large. The US is perhaps the prototype for tertiary education diversification, with very little in common between an Ivy League university and any of the 2-year colleges. However, both are likely to be equally important for the American youth and society at large and the education and training they offer to students equally fitting to their wishes. Looking for the origin of the current situation, it may be useful to recall the 1960 California Master Plan for Higher Education where it is established the principle of universal access and choice, and differentiation of admissions pools for the segments:

- The University of California was to select from among the top one-eighth (12.5%) of the high school graduating class.
- The California State University was to select from among the top one-third (33.3%) of the high school graduating class.
- The California Community Colleges were to admit any student capable of benefiting from instruction.

The long term result of these policies may be seen in the numbers enrolling and graduating in California.

Table 1. California first time enrolment and degrees awarded in public institutions<sup>7</sup>

Year	All				Degrees	Associate	Bachelors	Masters	Doctorate
	HS Grads	UC FTF	CSU FTF	CCC FTF					
2002	356,685	8,0%	10,7%	33,4%	2002	70,491	96,179	21,455	2,733
2003	373,162	7,7%	10,2%	29,6%	2003	73,549	98,837	22,349	2,817
2004	375,940	7,0%	10,3%	32,0%	2004	75,635	104,32	25,149	2,995
2005	387,691	7,1%	11,3%	29,8%	2005	77,948	107,63	25,745	3,054
2006	382,490	8,1%	12,5%	30,5%	2006	79,213	110,99	26,59	3,327

IAU is committed to maintain a list of higher education institutions around the world<sup>8</sup>. Currently, it includes more than 17,500 institutions in 186 countries following the ISCED (International Standard Classification of Education) and considering only institutions offering at minimum a diploma given after three years. The name university is reserved for institutions offering at least a graduate degree or professional degrees after four years of

study. Of course, the best known classification of higher education institutions is the Carnegie Classification<sup>9</sup> that was originally created as a sampling device in higher education research.

**The first Carnegie classification (1971)**

- Doctoral-Granting Institutions
- Comprehensive Colleges
- Liberal Arts Colleges
- All Two-Year Colleges and Institutes
- Professional Schools and Other Specialized Institutions

With the 2005 revision, the single classification system was replaced by a set of multiple, parallel classifications, offering researchers greater flexibility in meeting their analytic needs. Classifying institutions is controversial. What may be initially a research tool or intended as a stakeholder instrument of transparency, may then be used for government policy making, for university profiling or even for ranking. Several researchers<sup>10</sup> in Europe have been considering this problem but no proposal exists so far.

The degree of diversification varies widely across Europe and it takes many forms. Some European countries resist this trend maintaining a supposedly homogeneous higher education system while keeping a separate training network with a role somewhat similar to that of the American 2-year colleges. China's project 211 aiming at strengthening around 100 higher education institutions is part of this trend to massify access while maintaining a network of elite institutions. Among these top institutions a much smaller number is receiving the extraordinary support needed for them to become rapidly reference institutions of international standing. Of course the very high rate of expansion appears to be creating tensions in the Chinese society. On the one hand, finding employment annually for a new and rapidly expanding cohort of graduates is increasingly difficult and uneven across subjects and across the country. In fact these difficulties run parallel to the very fast technological development of some regions that creates a demand that is being filled by the return of expatriate Chinese graduates. Of the 5 million graduates in 2005, it is said<sup>11</sup> that only about half got employment and sometimes at low salaries outside their area of training. On the other hand the very strict entrance exams are a source of social tension and academic criticism on the grounds that it is unequal and unjust while being ineffective in selecting the best candidates to a degree. When Hong Kong University opened up to mainland China residents, it found that some of those that would get the go ahead in the top Chinese universities failed to get admittance there on a broader interview. The entrance exam to the Indian Institutes of Technology is said to be the most competitive in the world with a success rate of less than 1 in 50. This is the result of the development of an elite network of institutions for technology as well as for other professional areas with a very limited student intake. The pressure put to students seeking entrance in these top level institutions in China or India as in South Korea, just to give another Asian example, has been criticized for its shortcomings and unfairness. The costs in coaching a South Korea candidate may be as high as US\$1000 per month<sup>12</sup> creating financial, not intellectual limitations to the access to the most prestigious institutions.

It has been argued in several countries that while an elite strand of institutions is nurtured by governments, most institutions may suffer very strict financial limitations and the quality of their graduates has frequently been put in doubt. This is not diversification to best serve the student population as many of the students entering these mainstream institutions may be offered tuition below the standards they could and wished to achieve.

## 7. The impact of I.C.T.

Web based tuition was seen a few years ago as the future of tertiary education, challenging campus life of traditional universities. This initial enthusiasm has been modulated and the development of all forms of e-learning has been much slower than initially expected. However, it is now perfectly clear that the opportunities created by the use of the information and communication technologies, ICT in short, is enormous and are creeping in all types of education. In tertiary education, two main lines of development should be discussed. On the one hand, open or distance provision where ICT gives an alternative to the traditional paper by mail or radio and TV delivery. There is no doubt that distance education institutions have an enormous opportunity in ICT as they are able to reach out locations and whole countries or world regions previously unthinkable. The quality of the education may also be enriched by the appropriate manipulation of the instruments made available by these new technologies. Excellent examples abound around the world but it is also easy to pinpoint false starts and failures due to an overenthusiastic start. One major shortcoming is that access to ICT varies widely and it requires not only the technological infrastructure but also a good human support system that may be missing in some regions. The entrance barrier to web-based provision is rather high as the production of good materials is very expensive but economies of scale are enormous and it allowed the access of millions of students that otherwise would be left out due to geographical or economical barriers. The great advantage is that each student may decide on his or her particular pace of study, it allows a very personalized education. The biggest shortcoming is perhaps that this new kind of students misses the socialization that campus or presential education allows and this is certainly very important, especially, for youngsters coming in their teens. In many ways, the new forms of internet socialization so common among today's youth may be good substitutes and students in these new distance education institutions have access to platforms of communication that are, in some cases, of exceedingly good quality. The impact of ICT should be also stressed for traditional institutions where it is becoming pervasive. Not only the internal management and communication is becoming completely dematerialized but also the learning is changing. Traditional universities are becoming more and more dependent on web technologies but this may be different from a possible merger of in campus and distance education. By trial and error, traditional universities are learning how best to mix old and new methodologies to create the best learning environment and allow each student to choose what suits him/her best and when. How mega universities are adapting varies widely and the new technology component is frequently still limited by the local circumstances.

Table 2. Mega universities

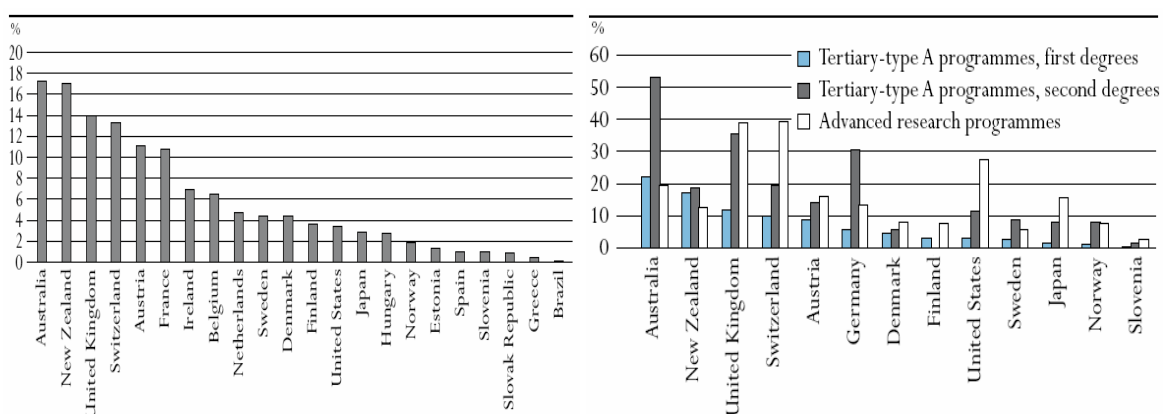
Institution	Town, country	Enrolment	Ref.
China Central Radio and TV University	Beijing, China	2.3 million	<sup>13</sup>
Allama Iqbal Open University	Islamabad, Pakistan	1.8 million	<sup>14</sup>
Indira Gandhi National Open University	New Delhi, India	1.4 million	<sup>15</sup>
Islamic Azad University	Tehran, Iran,	1.3 million	<sup>16</sup>
Anadolu University	Eskisehir, Turkey	1.0 million	<sup>17</sup>
Bangladesh Open University	Gazipur, Bangladesh	0.5 million	<sup>18</sup>

However institutions and teachers individually are being forced to change their practice by the use the youngsters are making of ICT in their daily lives making them less prone to conventional methods. The impact of these technologies is being felt in many different ways. In what is learned as the availability of information through the web is shifting the

learning towards the areas of competences and performance; in how students learn as the new technologies facilitate learning strategies centred in the individual student and supply the means for progressive learning construction; in when and where students learn as asynchronous processes are allowed giving the student the freedom to choose the place and the time for his or her learning.

## 8. Cross border provision

Cross border provision of tertiary education has been growing steadily in the last few years and takes many different forms. The expectations are high but suspicions are also present in many quarters. The medieval ideal of student and teacher free mobility was very limited in actual practice and massification created financial constraints that led most students to use proximity as the first choosing criterion. When the student does not find locally an institution appropriate for his/her goals and, if he /she can afford it, moving into another place may be the option. In some regions of the world higher education supply has grown at a slower pace than demand leaving out many students that will then seek an alternative elsewhere, if they can afford it. Finally, the perception of quality may induce students to move to another region or country to find the institution that they perceive as giving them the best career opportunities. This has created an enormous business opportunity that has been taken up by some countries. This way, cross border provision arises by the mobility of students. The number of these mobile students has been growing rapidly in the last few years reaching figures as high as 2.7 million in 2005<sup>2</sup>. Figure 8 shows the percentage international students enrolled in each country. The US has the largest number of international students but this represents a relatively small percentage of the population in tertiary education, while a small number in Switzerland represents a sizable share of the student population. It should be noted that, depending on the country, international students may be those of a foreign nationality or those that made their earlier studies abroad.



**Figure 8. Student mobility in tertiary education (2005)<sup>2</sup>: percentage of international students in the tertiary education population (on the left) and proportion of international graduates in the tertiary graduate output (on the right).**

It should be stressed that the fast growth of the number of international students has been accompanied in recent years with a loss of market share of the three major destinations, the US, the United Kingdom and Germany. In the case of the US, the fall was particularly relevant (from around 26% in 1995 to less than 24% in 2005) but this may be due to the

new visa regulations introduced after 2001. From Figure 8, it is clear that Australia and New Zealand are the countries with the highest impact of international students on their student body. For PhD programs, however, The UK, Switzerland and the US are the biggest players. If for European countries an important share of this inflow comes from neighbouring European Union countries, for Australia New Zealand and the US this is a major inflow of overseas students with a large impact in the institutions and on the human capital formation. In the US a relevant share of the students finishing higher degrees, namely in science related subjects are later incorporated in the work force with a big impact in society.

As clearly stated in the 2005 IAU policy statement “Sharing Quality Higher Education Across Borders”<sup>19</sup>, the reasons behind cross border higher education may be multiform and it can take several formats. To the discussion here it suffices to underline the goal assumed by all signatories of that statement on its relevance to capacity building in the receiving country and good examples can be signalled where that has happened. In some of these countries, foreign universities are welcome to establish their activities in the country to facilitate the access of students. This is frequently done in partnership with a local university with varying degree of local control. In other cases students perceive a foreign education as a good instrument for future success and take this opportunity independently of the alternatives offered at home. This may be a mechanism to accommodate the social pressure to enter tertiary education and economically very important for the foreign competences that this may bring in. The drawback is that many of these youngsters, and they may be among the best, will leave forever if the country can not offer good opportunities of employment. Figure 9 shows that African countries are the most castigated by brain drain and how this correlates with the reality that many of their youngsters seek a foreign education. It should be noted that this out mobility of students has no consequences in the minute European states of Andorra and Luxembourg that do not have proper higher education but are able to attract back home their graduates.

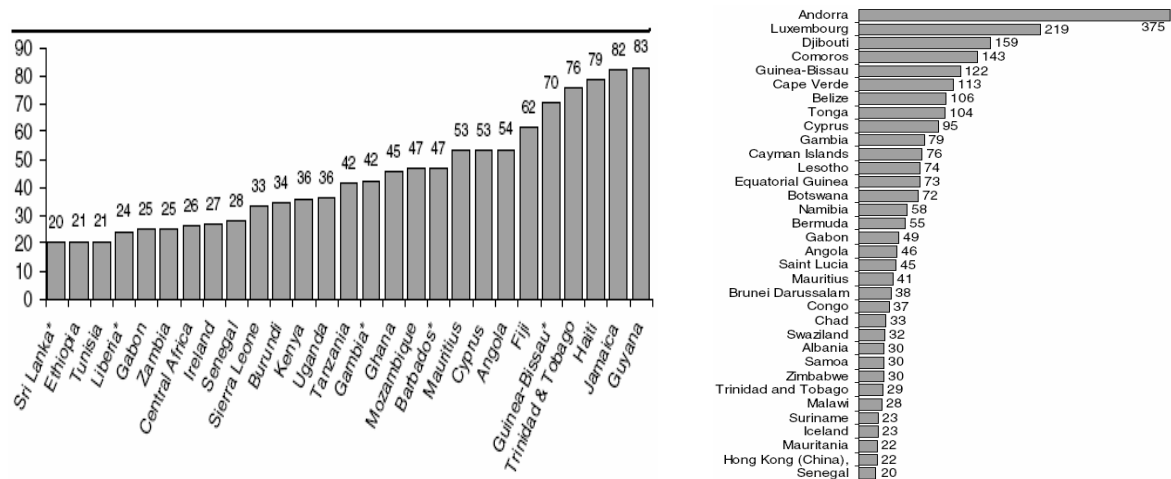
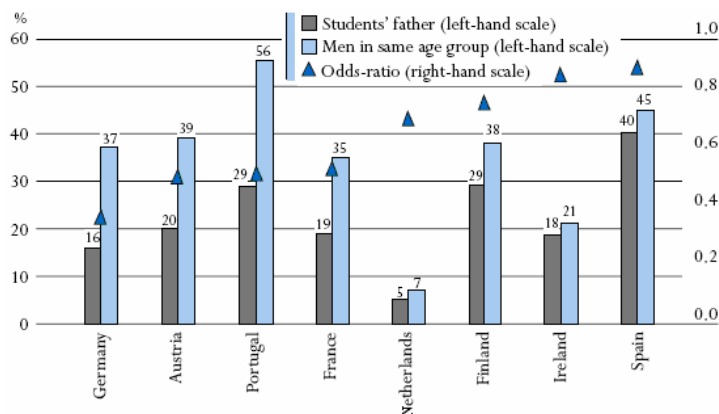


Figure 9. Countries with more than 20% of their tertiary educated people expatriated in the OECD area (left) and countries where domestic students enrolled abroad represent more than 20% of the domestic tertiary enrolment (right)<sup>20</sup>.

## 9. Concluding remarks

This paper discusses some policy issues arising from tertiary education massification around the world. Access to tertiary education is generally recognized as an important factor in the improvement of individual opportunities in active life. On a social level, an increased access is viewed as a precondition for social and economic development of nations. This leads to governments pursuing public policies aiming at increasing participation but this frequently conflicts with alternative goals for the always scarce resources available. Tertiary education is expensive and it is generally thought to be under financed in many parts of the world. The scarcity of public funds leads to a growing participation of the students and their families in the finance of their studies and different strategies are being followed, from a simple increase in the fees paid by students to loan systems with a degree of government guarantee. Whatever the solution, government must always be present to regulate the system inducing the appropriate policies that guarantee fair access and making sure that finance is available for institutions to perform at the desired level and to needy students. If at lower level of education, quasi markets have been set up by providing the parents with the money that they can channel to the school of their choice, at higher education, the assumption that the student is a well informed consumer seems to be further from the truth and no good example of such a liberal solution is found anywhere in today's world. Many countries have a large and varied private sector that works in a market with very little government interference but this is never the mainstream. Of course the relatively apparent freedom of US institutions should not be brought into this discussion as they may be private but mostly not-for-profit with a long tradition and high ideals and a degree of external control above federal or state explicit constraints.

From the academic side, the growth of access is generally welcome, provided that finance is available and that a good quality supply of students flows out of the secondary system. However, institutions have come under strong criticism for their wastefulness of resources. On the one hand, traditional academics pursue an ill defined manifold of goals of which the production of new knowledge is the most prestigious and is not easy to bring under bureaucratic control. On the other hand, many higher education systems had traditionally worked with a low rate of student success and this was tolerated by society and governments while it was supposed to be an elite system reserved for the fortunate few. This situation is changing under heavy pressure from the outside and the big challenge is how to increase access while improving retention and success of the students without lowering academic standards. The social mix of the student body in higher education is also open to criticism as it tends to be heavily biased against the disfavoured social groups. Figure 10 shows how this bias may still be present in some European countries. This brings in the other big concern, that with the equity of access as these data shows that massification does not bring in necessarily a more equitable participation of all social groups present in society. For disfavoured students to succeed in higher education public policies are required all the way from kindergarten to tertiary education but some points should be stressed. At junior age, children must be encouraged to go to school and those less privileged must be given special attention if they are to have a fair chance of success. It is particularly important to raise their expectations as they may feel that higher education is not for them and thus relax in their school work. Later on, the access selection process is crucial as underprivileged students may perform below their potential for lack of support and encouragement. Entrance should not be decided on academic performance alone but on a mix of criteria that may best predict the potential of different students seeking a place in that particular institution.



**Figure 10. Students' fathers from blue colour backgrounds, compared with men in the same age group<sup>2</sup>.**

Then getting in does not guarantee a fair chance of success as the underprivileged may need extra social and scholarly support. This may require public policies but also a clear institutional policy at the highest level to guarantee the cooperation of the whole community, students, teaching and non-teaching staff, to succeed.

The application of I.C.T. in education raised the expectation that it would create a cheap means of provision solving all problems of the expansion of tertiary education. For the traditional institutions, it was seen as a threat that might destroy campus life in less than a generation. The burst of the telecom bubble in 2001 changed this picture lowering expectations of the impact of I.C.T. in higher education. No doubt, it provides new opportunities that are slowly coming into the learning environment. In most universities today, teacher/student communication uses web technologies and the student has free access to a volume of information unheard of just a decade ago. However, the teaching and learning process is changing very slowly, finding ways to make best use of the new opportunities. The general view today is that campus life will adapt to achieve a higher level of learning efficiency. At the same time, distance education evolves rapidly with some very successful models providing access to education to students that would otherwise be left out for a variety of reasons. The hope of some governments that this would become a cheap solution for all students was abandoned as it has been recognized that good quality web based provision is expensive to set up but may allow later for enormous economies of scale. It can reasonably be estimated that this means of provision will develop to allow large numbers of students of a new type to accede higher education and that this may be of a very high quality.

Maintaining quality through massification is not an easy issue and it is argued that it can be achieved only through diversification of the tertiary education system. Different students come to higher education with widely different potential and expectations. The institution can not set its own standards independently of the students' goals and society's needs. The aim of each institution must be bringing each student it accepts to his or her highest potential.

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