

Optimizing Talent:

Closing Educational and Social Mobility Gaps Worldwide

Opportunities for All?

The Equity Challenge in Tertiary Education

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1. Introduction

Equality of opportunity: the impertinent courtesy of an invitation offered to unwelcome guests, in the certainty that circumstances will prevent them from accepting it.

R.H. Tawney¹

Any society committed to promoting equity must ensure that their education system, including their tertiary education sector, is accessible to students from the broadest spectrum of underrepresented and traditionally-excluded groups. Supporting the opportunity to seek the benefits affordable by tertiary education in an equitable manner is reasonable and important, as well as just, based on the widespread evidence of the many public and private benefits of attaining a college degree. Individual, private benefits of attending higher education include improved health outcomes, increased earning potential and even greater life satisfaction. On a broader systemic level, the public, societal benefits accrued by having higher levels of education present in the workforce include lower unemployment rates, increased tax revenues, greater civic and volunteer participation and lessened dependency on social services. Because of the known benefits, equity in access and success in tertiary education remains an area requiring deeper analysis.

In spite of the extensive efforts to improve access worldwide, tertiary education—especially the university sector—generally remains elitist, with the majority of enrolled students coming from wealthier segments of society. Although relatively few countries and institutions systematically collect data on the socioeconomic origin of students; where national statistics and household survey data are available, the pattern of inequality is clear. This is illustrated clearly in Latin America. In Chile, for instance, the tertiary level enrollment rate for the wealthiest quintile is almost four times higher than the rate for the poorest. In Argentina the enrollment rate of the wealthiest is five times higher than the rate for the poorest, and in Mexico the rate is 18 times higher than that of the poorest (UNESCO-IESALC, 2008). In the francophone countries of sub-Saharan Africa, the children of the richest quintile account

¹ Tawney, R.H. (1952). “Equality in Historical Perspective,” in Johnston, David (ed), (2000). *Equality.*, pp. 90-106. Indianapolis: Hacket Publishing Company.

for 80 percent of tertiary enrollment while those from the poorest 40 percent of the population group represent only two percent of the student population (World Bank, 2009).

Increased cost-sharing and the rising share of enrollment in private tertiary education have been associated with growing inequality, even in OECD countries. “Although there are valid efficiency arguments for diversifying higher education financing by increasing the non-public share of costs, there is concern that an increased private share could have adverse consequences for equity. Historically, participation in tertiary education has been strongly correlated with family socio-economic status and the educational attainment of parents (OECD, 2006, p. 14).

Inequality and disparities exist across groups and societies, often due to historic discriminatory norms around economic class, minority status defined on the basis of ethnic, linguistic, religious, cultural, or age characteristics, disabilities and gender. Each dimension is deserving of in-depth examination and each is significant in any evaluation of equity of access and access in tertiary education.

In this context, the principal objectives of this article are to (i) propose a conceptual framework to analyze equity issues in tertiary education, (ii) define appropriate measures of inequalities in tertiary education, (iii) document the scope, significance and consequences of disparities in tertiary education opportunities, (iv) throw some light on the main determinants of these inequalities, and (v) offer suggestions about effective equity promotion policies, both monetary and non-financial, directed toward widening participation and improving the chances of success of under-privileged youths.

2. Conceptual Framework

The potential consequences of failure include the corrosion of aspirations, damage to social fabrics, the loss of leadership and other skills that are critical to cohesive societies and the unforgivable waste of human potential.

Emerging Markets Symposium (2012)

Importance of equity for fairness and efficiency purposes

Does it matter who enters and completes tertiary education? After all, as long as developing and transition countries produce sufficient numbers of qualified graduates to respond to labor market and capacity building needs, why should equity be of great concern?

Given the extensive social and private benefits that result from tertiary education, inclusive access and success are essential for achieving social justice and ensuring the realization of the full potential of all young people. While acknowledging fully the impact of disparities in primary and secondary education which shape the size and characteristics of the pool of potential students, there is no doubt that improvements in equity at the tertiary level can offer meaningful and sustainable development potential.

Eliminating inequality is indeed a development imperative for two complementary reasons: fairness and efficiency. In the first instance, religious, philosophical and legal traditions in most cultures emphasize equity as a pervasive concern. The 2006 World Development Report (WDR) on Equity and Development (World Bank, 2006) documents how several major religions endorse the notion of social justice as a basic tenet of their beliefs and values. While there are important differences in how this belief manifests itself across faiths, and even among different groups within the main religions, some analysts see a growing emphasis on this principle of equality within various faiths (World Bank 2006, 76).

The WDR also analyzes notions of equity as a fundamental theme in secular philosophical traditions. In ancient Greece, for example, Plato maintained that “if a state is to avoid ... civil disintegration... extreme poverty and wealth must not be allowed to rise in any section of the citizen-body, because both lead to disasters” (Cowell, 1995, 21). Modern theories of distributive justice have shaped societies’ thinking about equity. The contribution of four prominent thinkers, John Rawls, Amartya Sen, Ronald Dworkin, and John Roemer, is particularly relevant in that respect.

- Rawls (1985) proposed “justice as fairness” as the foundation of a political philosophy for social development in a modern constitutional democracy. “In justice as fairness, social unity is understood by starting with the conception of society as a system of cooperation between free and equal persons” (Rawls, 1985, 249). One of the basic principles that he pushed forward was that all members of society should be allowed to take advantage of opportunities—which he associated with the concept of “primary goods” (Rawls, 1971).

- Sen (1985) developed the notion of “functionings” as the set of actions a person performs and the condition that people value. They represent what people are capable, want to be capable, or should be capable to be or to do. According to Sen, what needs to be equalized across individuals are the possible functionings from which a person is able to choose, which he calls a “capability set”. Capabilities stand for a person’s opportunity and ability to generate valuable outcomes, considering relevant personal characteristics and external factors.
- Dworkin’s definition of justice (1981) implies that people deserve to be compensated for aspects of their circumstances beyond their control. He advocated a distribution of resources that made up for inherent differences for which individuals could not be held responsible, including differences in talent.
- Roemer (1998) recognized that, while individual bear some responsibility for their own welfare, they also face situations over which they have no control, which influence how much effort they can invest and the level of welfare that they are eventually able to achieve. Equity, therefore, demands an “equal opportunity policy” to equalize “advantages” among individuals from groups with different circumstances.

The theories developed by these four thinkers are characterized by significant conceptual differences, but they all converge in moving the traditional focus of social justice from outcomes—such as welfare or utilities—to opportunities. This book endorses this philosophical argument in examining and understanding how equity in access and persistence in tertiary education promotes justice as fairness.

The economic efficiency argument in favor of equity promotion is just as strong. A talented, low-income and/or minority high school graduate who is denied entry into tertiary education represents an absolute loss of human capital for the individual person and for society as a whole. The lack of opportunities for access and success in tertiary education leads to under-developed human resources and a resulting shortfall in the capacity to capture economic and social benefits (Harbison, 1964; Bowen and Bok, 1998; Ramcharan, 2004).

The inequalities Americans face at the starting line — bright children from poor families are less likely to finish college than much less able children of the affluent — aren't just an outrage; they represent a huge waste of the nation's human potential.

Paul Krugman²

As demonstrated by the WDR on Equity and Development, the fact that markets are quite imperfect in developing and transition countries also leads to under-investment by people with less wealth and social status (World Bank, 2006). In many societies, instead of rewarding principally the human capital embodied in individuals, labor market returns are influenced by attributes such as gender, race, or caste, and by people's social capital. As a result, individuals belonging to groups who are the victims of discrimination tend to invest less in their own human capital than members of society who are not subject to overt or implicit prejudice. A recent study in India (Munshi and Rosenzweig, 2009) showed that trade liberalization brought higher returns to knowledge of English to families with connections for access to jobs in the blue-collar sector than to those without the proper connections.

A 2011 survey of global firms—which account today for half of the world's total output—confirms the importance of diversity and inclusion from a productivity viewpoint (Forbes, 2011). In their majority, the 341 senior executives who participated in the interviews stressed that diversity is crucial to innovation and the development of new ideas. It serves, in turn, as a powerful incentive to attract global talent.

A diverse and inclusive workforce is necessary to drive innovation, foster creativity, and guide business strategies. Multiple voices lead to new ideas, new services, and new products, and encourage out-of-the-box thinking. Today, companies no longer view diversity and inclusion efforts as separate from their other business practices, and recognize that a diverse workforce can differentiate them from their competitors by attracting top talent and capturing new clients.

Ensuring equality of opportunities for access and success in tertiary education is central to providing opportunity for increased earning and intergenerational mobility. Birdsall (1999) describes the equity impact of increased access to tertiary education as a mechanism for diluting the concentration of a

² Krugman, P. (6 March 2011). "Degrees and Dollars." The New York Times. Retrieved from <http://www.nytimes.com/2011/03/07/opinion/07krugman.html> on 20 August 2012.

nation's wealth and assets from a small group of land and physical capital holders. Education accumulation spreading more evenly across a population leads to a more equitable distribution of resources and wealth. As observed by Birdsall (1996),

“(T)he social benefits to primary and secondary education may be declining in developing countries as more students complete these levels; and the social benefits to higher education could be increasing, for example, with the opening of many developing economies to global markets and competition. Moreover, even if the social benefits of higher education in most developing countries are not high today, there is ample scope for reforms of financing and governance that would raise quality and improve internal efficiency, thus greatly raising social benefits.” (p. 416)

While very few studies on the economic effects of inequality are available, a recent analysis of the cost of Roma exclusion in Eastern Europe sheds light on the sizeable loss in productivity and fiscal revenues (World Bank, 2010). The study measured economic costs linked to low levels of Roma employment and low earnings among those working as a result of under-investment in their education. Low employment and low earnings, in turn, translate into fiscal costs into lower tax receipts and higher net social security expenditures. For Serbia, the Czech Republic, Bulgaria and Romania combined, the economic costs amount to 5.7 billion Euros annually whereas the fiscal costs are equivalent to close to 2 billion Euros every year. In some of the countries concerned, the loss can represent as much as 4 percent of GDP.

Thus, in the interest of both social justice and economic efficiency, every individual must be given an equal chance to partake in tertiary education and its benefits irrespective of income and other individual characteristics including gender, ethnicity, religion, language, and disability. Considering the strong correlation between tertiary education enrollment and family background (McPherson and Schapiro, 2006), concrete initiatives are necessary to provide better opportunities of access and success for students from lower income families and disadvantaged minority groups. Without such purposeful action, the cycle of inequity can only continue.

In fact, the 2011 protests in the Arab world unequivocally show that equity in access to tertiary education is also important as a way of guaranteeing stability and order in society. The revolutions in Tunisia and Egypt, and the street protests in several Middle Eastern and North African countries stemmed largely from the lack of higher education and graduate employment opportunities.

Equality of opportunities

For the purpose of this article, **equity is defined as providing equal opportunities for access and success in tertiary education**. It means that circumstances beyond an individual's control, such as birth place, gender, ethnicity, religion, language, disability, or parental income should not influence a person's access to tertiary education opportunities and ability to take advantage of them. Following the approach articulated in the 2006 WDR on Equity and Development presented in the previous section, this work is based on the premise that, while recognizing that individual responsibility and effort are the primary determinants of outcomes, public interventions are justified and needed in order to eliminate "disadvantages from circumstances that lie largely beyond the control of individual but that powerfully shape both the outcomes and actions in pursuit of those outcomes" (World Bank, 2006, 78).

Thus, equity is not about treating everyone exactly the same, but about providing equal opportunity. In many cases, this would require a combination of general and special measures to establish a level-playing field that would actually promote equity. Concretely, it means designing and implementing policies aiming at removing systematic differences in tertiary education opportunities for groups and individuals who differ only in terms of their place of birth or residence, ethnic or cultural origin, gender or because of disabilities.

The importance of ensuring equal opportunities is reinforced by recent advances in biology, neurology and genetics which are challenging traditional views about the distinction between innate and acquired abilities. A growing body of evidence is showing that the line between what is attributed to genetic heritage and the psychological, on the one hand, and cultural and social factors that shape each individual's development, on the other hand, is much finer than previously thought. According to Robert Sternberg from Tufts University, the new paradigm views intelligence as a set of competencies in development (BBC, 2011).

It would be folly to suggest that anyone can literally do or become anything. But the new science tells us that it's equally foolish to think that mediocrity is built into most of us... And there are no environmental factors that function independently of the genome. [A trait] emerges only from the interaction of gene and environment... Our abilities are not set in genetic stone. They are soft and sculptable, far into adulthood. With humility, with hope, and

with extraordinary determination, greatness is something to which any kid - of any age - can aspire.

David Shenk (2010)

Dimensions of Disparities: Equity in What?

Too often, equity and access are used as synonyms. Equity is not only about entering a tertiary education institution; it is also about equal opportunities to select from the range of existing institutions and from the full array of academic disciplines, and it is about opportunities to persist, progress, and complete one's studies. For this reason, the study recognizes three main dimensions of equity:

- Equity of access which consists in offering equal opportunities to enroll in tertiary education programs and institutions;
- Equity of results which relates to opportunities to advance in the system and successfully complete tertiary level studies; and
- Equity of outcomes which looks at the labor market outcomes of various groups.

Considering the complex attribution issues involved in identifying the determinants of labor market results, however, this article concentrates on the first two dimensions of equity (access and success).

Definition of Target Groups: Equity for Whom?

This article, which focuses essentially on undergraduate students who are the ones most directly affected by issues of equity in access and success, considers the following main equity target groups:

- Individuals from the lower income groups,
- Groups with a minority status linked to their ethnic, linguistic, religious, cultural, age or residence characteristics,
- Females, and
- People with disabilities.

These categories are not mutually exclusive. In fact, quite the opposite is true. The principal dimensions of inequalities often overlap in several ways. For example, ethnic minorities tend to be more predominant in rural areas and are commonly affected by poverty. Disparities in access to tertiary education for children of immigrants are more of an issue in industrial countries than in developing countries. Being a girl with a disability in a low caste in rural India is almost certainly the passport to a life of exclusion and discrimination.

3. Measuring Inequalities in Tertiary Education

*(N)ot everything that can be counted counts,
and not everything that counts can be counted.*

William Bruce Cameron³

Vertical and horizontal disparities

From a structural viewpoint, two dimensions of equity, vertical and horizontal, deserve to be analyzed in equal measure, particularly as these issues impact systems differently, depending on their stage of educational development. The vertical dimension follows the logical sequence of tertiary education, starting with children's experience at the primary and secondary level, their transition from secondary to tertiary education (admission and enrollment), the progression of students, and the completion of their studies. The vertical dimension looks at who enters tertiary education and who graduates from tertiary education. This is the most salient dimension of an expansionary system, and the most studied one, though retention and completion tend to garner less attention than the admission stage.

The horizontal dimension becomes more significant as systems expand and diversify into a large range of different institutions, often extending academic 'tracking' from primary and secondary education into tertiary. This 'tracking' or 'streaming' of students becomes an increasingly powerful channel of inequality, as equity concerns encompass not only how many students enroll into and complete tertiary education, but what kind of institution they attend and what labor market opportunities various types of qualifications and levels of degrees then offer to graduates.

³ Cameron, W.B. (1963). *Informal Sociology: A Casual Introduction to Sociological Thinking*. New York: Random House.

Metrics of Inequality in Tertiary Education

There is an abundant body of work on non-income dimensions of inequality, especially health inequality. But, studies on education inequality and inequitable attainment of education across countries are relatively more limited, with the notable exceptions of Thomas et al (2001), Zand and Li (2002), and Barros et al (2009). Studies that attempt to measure inequality in tertiary education are rare, particularly in any comparative perspective.

The choice of measures is heavily influenced by the types of data available to analyze the situation of each equity group. Assessing the vertical dimension of equity requires, for each equity group under investigation, information on (i) admission and enrollment in tertiary education of students having completed secondary education, (ii) progression of students enrolled in tertiary education institutions, (iii) completion of degree of students enrolled in tertiary education institutions, (iv) tertiary education learning outcomes, (v) tertiary attainment level of the labor force, and (vi) associated labor market outcomes.

In order to measure the horizontal dimension of equity, which is linked to the degree of institutional diversification of each tertiary education system, the same indicators should be calculated, for each equity group, with a focus on results linked to the various types of institutions and programs available in any given country. This would allow verifying, for example, whether some equity groups are systematically tracked into categories of institutions or programs that are less resourced or recognized in terms of labor market rewards.

Since the institutional configuration of each tertiary education system is specific to the country where it operates, it would be more appropriate to consider the horizontal dimension of equity in the context of country-specific studies. If, however, the purpose of the analysis is to measure and compare the scope of inequalities across nations, then it would have to be limited to the vertical dimension of equity (progression of groups from admission to completion and beyond).

Table 1 shows the level of analysis that can be performed for the various equity groups. The first equity group relates to tertiary education disparities among individuals belonging to different categories of income. In this case, the variable used to define the equity groups is an ordinal variable measured on an interval scale, meaning that there is an inherent rankings among the income groups as the groups can be categorized from the poorest to the richest. This is a fundamental difference with the variables

employed to define the other three equity groups, for which there is no inherent ordering. Indeed, since there is no objective criterion of “superiority” or “inferiority” when it comes to comparing females and males, people with disability and people without disability, or members of various minority groups, the variables used for defining these equity groups are non-ordinal categorical variables from a statistical viewpoint.

Table 1 - Equity Groups and Level of Analysis

Equity Groups	Type of Analysis
Individuals from low income groups	Country-specific studies
	Cross country-comparisons
Individuals from groups with a minority status	Country-specific studies
Females	Country-specific studies
	Cross country-comparisons
People with disabilities	Country-specific studies

Based on a review of metrics commonly used in works on income inequality, the following indices can be considered as possible measures of disparities in tertiary education:

- Simple measures of dispersion (range measure, ratio measure)
- Regression-based index
- Population-attributable risk
- Gini coefficient
- Entropy indices / Atkinson index
- Standard deviation

- Coefficient of variation
- Concentration curve and concentration index
- Dissimilarity index

The synthetic indices that are appropriate for cross-country comparisons cannot necessarily be used for country-specific studies. In the first instance, constructing an index to measure and compare equality of opportunity in tertiary education across countries requires studying disparities among equity groups that are comparable across countries. This limits the analysis of disparities to income and gender groups. Country-specific studies are more appropriate to cover the remaining two categories of equity groups (minority groups and people with disabilities).

When the objective is to make country-specific studies and when the equity groups under consideration are ordered groups with an inherent ordering (e.g. income groups), the **regression-based indices** and the **concentration index** are preferred to alternative measures for three reasons. First, the regression-based indices and the concentration index are sensitive to the direction of the social gradient in education and, as such, measure how educational status varies with socio-economic position. Second, both set of indicators can be derived from an estimate in a multivariate context, which means that it is possible to control for factors that are simultaneously correlated with educational performances in tertiary education and the equity group to which the individual belongs. In addition, confidence intervals associated with the estimated disparity indices can be easily computed. Third, they are appropriate for time comparisons given that, in both cases, they depend on disparities between groups and on the proportion of the population in each of these groups.

Considering these indices are only suitable for social groups with an inherent ordering, however, **simple measures of dispersion** could also be convenient because they are easy to compute and have a straightforward interpretation. Moreover, since simple measures of dispersion can be used with both ordered (e.g. income groups) and unordered groups (gender), a similar framework could be applied to examine disparities in tertiary education across various types of social groups. In addition, these indicators are not data demanding (aggregated education indicators broken down by equity groups) and could, therefore, be used for large cross-country and time comparisons.

When social groups are unordered groups without an inherent ranking, defined by a binary discrete variable (e.g. gender or migrant status), for country-specific studies regression-based indices are most useful for the reasons mentioned in the previous paragraph. When social groups are unordered groups and defined by a categorical variable (e.g., minority groups such as indigenous groups) or by several circumstances combined for the purpose of analysis (e.g., gender, family background and geographical origin), **the dissimilarity index** and / or **entropy indices** should be favored. The dissimilarity index is particularly appealing because it is a well-known metric and can be easily understood. Entropy indices are less intuitive, but the generalized entropy index for the entire population can be decomposed into a weighted average of each social group, generalized entropy index (within social group entropy index) and a between social group index ("unfair" component of inequality) in order to assess the respective contribution of inequality within and between social groups of the population.

As Barros et al (2009) have done in their analysis of inequalities of opportunity for children in primary education in Latin America using a version of the dissimilarity index, it could be possible in theory to combine into a single composite indicator a metric of inequality with an indicator of coverage of tertiary education, should the desired objective be to build an index capturing both the supply of tertiary education and the distribution of opportunities in tertiary education. In the case of primary education, Barros et al calculated the probability of completing the sixth grade on time for children age 12 to 16 linked to proxies of social background such as parents' education, family per capita income, family structure and area of residence.

To be able to conduct this type of empirical analysis in a meaningful way, however, data on the education outcomes of each tertiary education institution in the country would be needed. Indeed, the Barros et al study is based on the assumption that all primary schools are similar in terms of qualitative results (learning outcomes). While this hypothesis may hold true in most industrial countries where the variance among primary schools may not be very marked, it is hardly valid in most developing countries where significant differences exist between rural and urban schools, as well as between public and private schools. The plausibility of this assumption is even weaker when it comes to the tertiary education level, where the quality of teaching and learning varies considerably across institutions along several dimensions: public / private status, university / non university institution, level of funding, qualifications of incoming students and academics, degree of autonomy, quality of leadership, etc (Salmi, 2009; Altbach and Salmi, 2011), in addition to the variance among student objectives in pursuing tertiary education.

Table 2 presents, in a summary form, the most appropriate inequality measures for tertiary education, considering the present state of data availability in developing countries.

Table 2 – Suggested Inequality Measures at the Tertiary Education Level

Measure	Data	Pros	Cons	Level of Analysis
Ratio	Aggregated by social group	<p>Easy to compute and interpret</p> <p>No restrictions on the characteristics of the grouping variable</p>	<p>If more than 2 groups, intermediary groups not taken into consideration</p> <p>Not sensitive to the distribution of the population among groups</p>	Cross-country comparisons
Regression-based index	Aggregated by social group and individual data	<p>Indicates which groups are advantaged</p> <p>Possibility to control for other confounding factors</p> <p>Sensitive to distribution of population across groups</p>	<p>Relationship between education variable and social group must be linear</p>	<p>Cross-country comparisons</p> <p>Country-specific studies (if ordered groups such as income groups) or binary discrete variable (gender)</p>

Entropy indices / Atkinson index	Aggregated by social group and individual data	<p>Entropy indices decomposable into within and between components</p> <p>Atkinson index: can take into account level of aversion to inequality</p> <p>Sensitive to distribution of population between groups</p> <p>Good statistical properties</p>	<p>Does not indicate which social groups are disadvantaged</p> <p>Education variable must be continuous</p>	Country-specific studies (if- unordered equity groups or defined by several circumstances)
Concentration index	Aggregated by social group and individual data	<p>Indicates which groups are advantaged</p> <p>Possibility to control for other confounding factors</p> <p>Good statistical properties</p>	Equity group must be defined on an interval scale	<p>Cross-country comparisons</p> <p>Country-specific studies (if ordered equity groups, i.e., income)</p>
Dissimilarity index	Aggregated by social group	<p>Summary index of disparities easy to compute and interpret</p> <p>No restrictions on characteristics of grouping variables</p>	Does not indicate which social groups are disadvantaged	Cross-country comparisons

In summary, it is important to understand the differences among the indices that are appropriate for cross-country comparisons and those that are more adapted for country-specific studies. The review of possible equity measures suggests that cross-country comparisons should be limited to disparities across social groups that are recognizable and can be compared across countries. Such a restriction

limits any benchmarking exercise to measuring and comparing disparities in tertiary education by sex and/or income quintile. In addition, given that benchmarking requires comparable indicators across countries and over time, the efforts should first be applied to compiling tertiary education indicators at the aggregated level (country level), broken down by equity groups. In that respect, the simple measures of dispersion (range and ratio measures), may, therefore, be the more appropriate indicators of disparities in tertiary education. When social groups are defined on the basis of income, the analysis could be complemented by calculating the concentration index or doing a regression-based analysis.

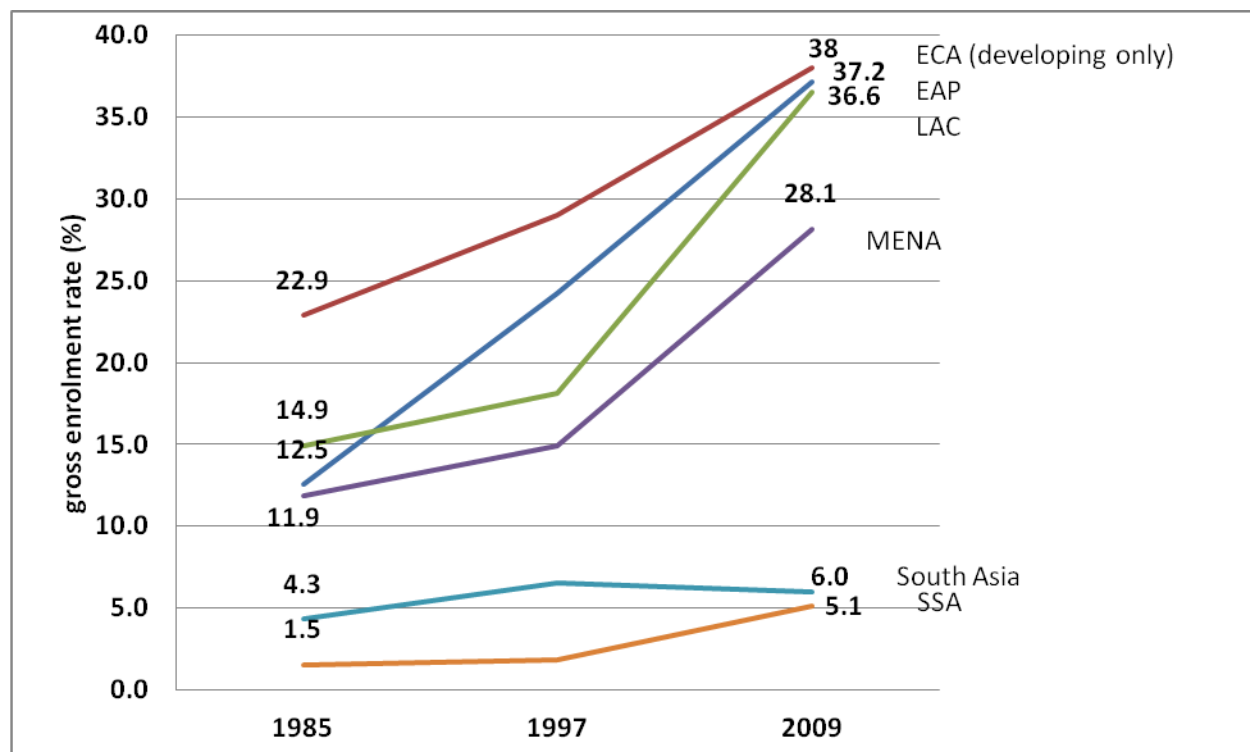
In the end, any work on disparities in tertiary education requires a compromise between what would be the ideal international comparative examination of equity with what is reliable data, to determine those realms where generalizations may be made about equity and where country, region, or equity group-specific examinations might be more illustrative.

4. The Scope of Disparities in Tertiary Education

Monopoly in education is – together with monopoly of ownership of land – the most fundamental basis of inequality, and that retains its hold more strongly in the poor countries.

G. Myrdal

One of the common features observed in developing countries all over the world has been the rapid growth in tertiary level enrollment since independence. In the past decade, the achievement of universal primary education and ensuing secondary education expansion in many countries has contributed to accelerating demand for tertiary education. Figure 3.1, which shows the evolution of tertiary education enrollment rates in various parts of the globe, illustrates these trends in a clear way.

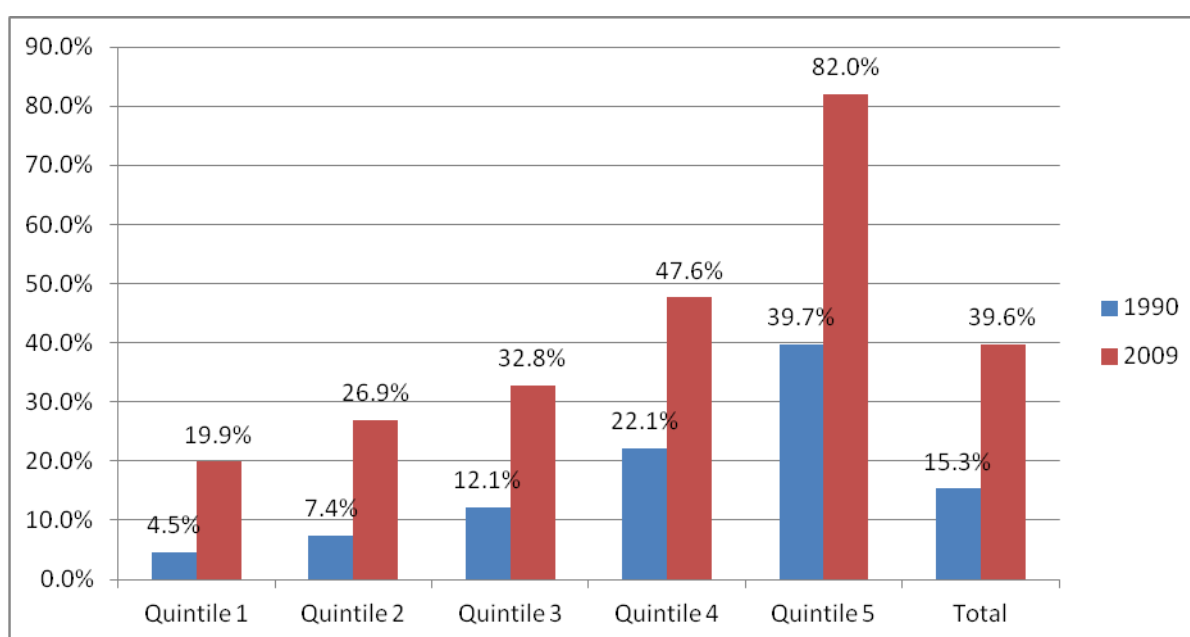
Figure 1 – Evolution of Enrollment Rates by Region(%)

Source: UNESCO Institute of Statistics

The logical implication would be that tertiary education systems all over the world have become more inclusive as a larger share of the tertiary age cohort (19-25) has been given the opportunity to study. Statistics from Chile, showing the evolution of the tertiary enrollment rate between 1996 and 2009, attest to the progress achieved by the lower income groups (Figure 2). The graph presents the percentage of the population enrolled in tertiary education in 1990 and 2009, by income quintile. Clearly, over this period, the chances of going into tertiary education dramatically improved for young

people from poorer families. Participation from the lowest income quintile almost quintupled between 1990 and 2009, while participation from the second lowest income quintile more than trebled. Enrollment growth has been fueled, to a large extent, by the rapid expansion of the private sector, which accounts today for about 70% of overall enrolment.

Figure 2 - Tertiary Coverage in Chile by Household Income Quintiles (%)
(1990-2009)



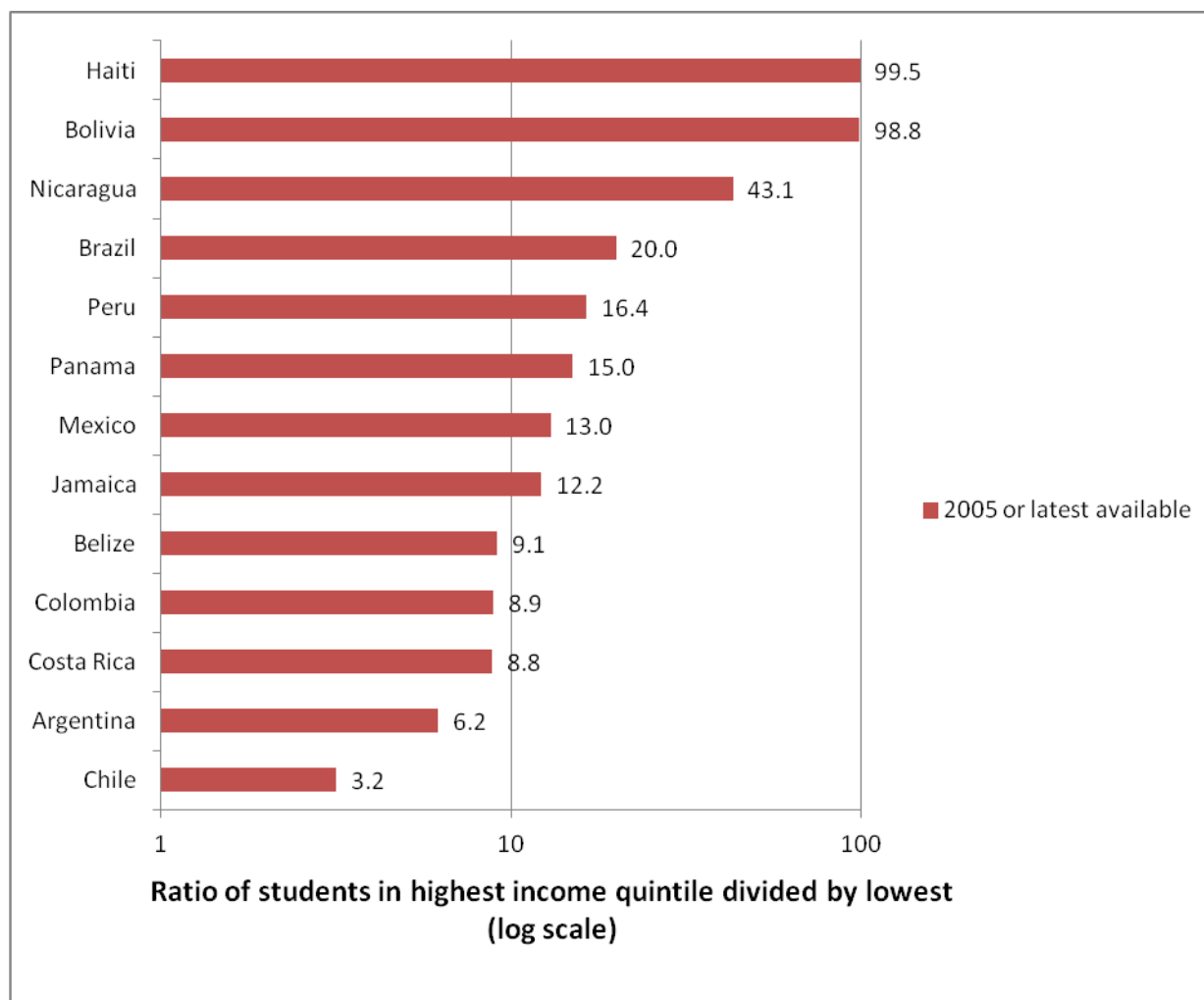
Source: CASEN Survey – respective years

Overall expansion of tertiary education systems does not automatically translate into reduced inequality, however. The example of Chile—selected here because of the richness of available data on the distribution of students by socio-economic origin and its evolution over time—demonstrates that a country can make impressive progress in terms of increased opportunities for low-income students even as the gap between the richest quintile and the poorest quintile grows larger. As Figure 2 indicates, the gap was 35 points in 1990, rising to 62 points in 2009, representing a 177 percent increase.

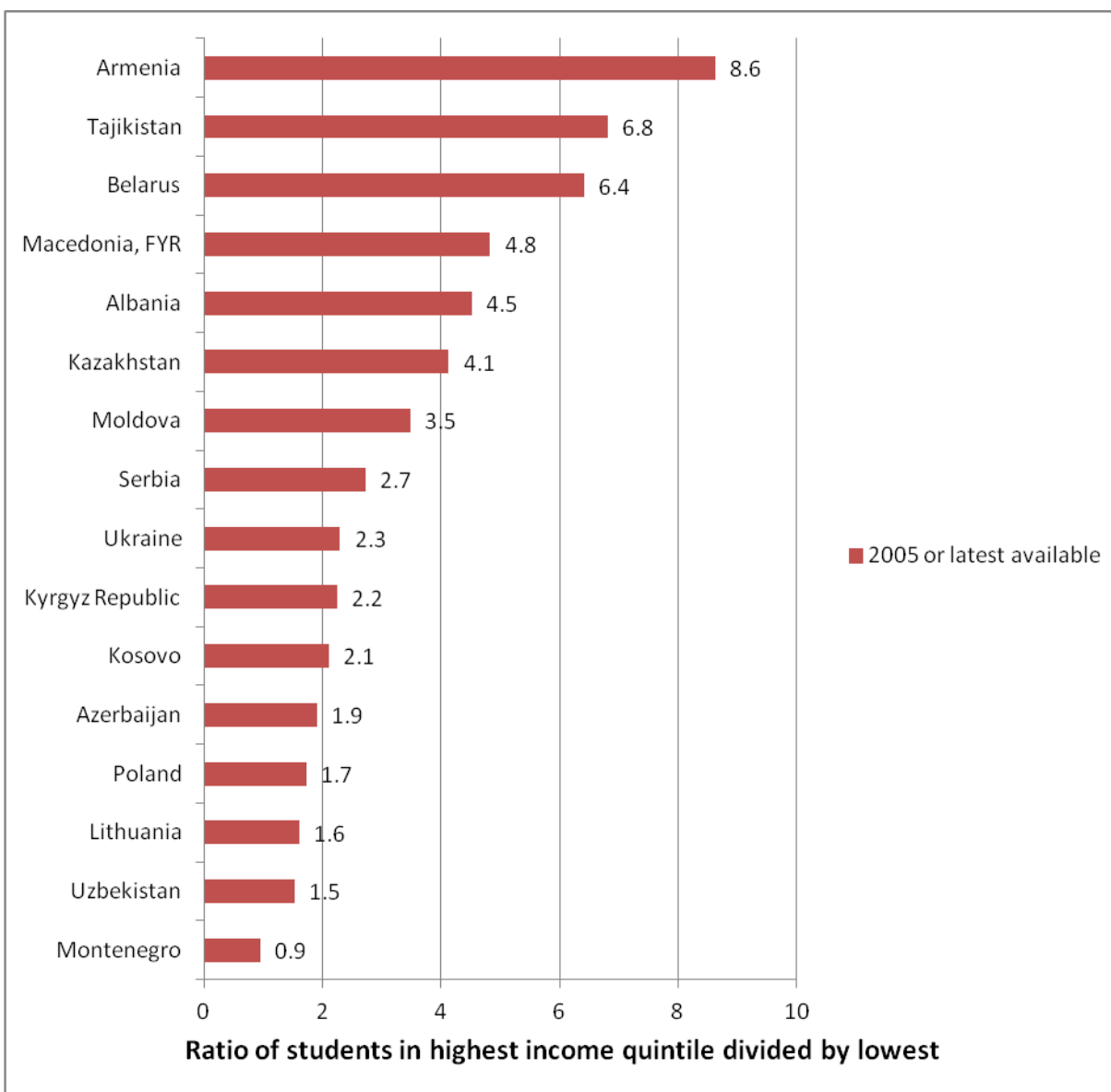
These data show that the expansion of tertiary education experienced over the last decades all over the world does not necessarily mean that tertiary education systems have become equally accessible to all social groups. Increased tertiary education rates can result from the participation of a greater proportion of students from families with a relatively high socio-economic status. Therefore, it is essential to go beyond simply observing the rapid enrollment growth that has taken place in most countries by looking closely at how various equity groups have fared in the context of that growth and how much intergenerational mobility has taken place—intergenerational mobility being defined as the ability of an individual to access and participate in tertiary education regardless of his or her economic or social background.

Socio-Economic Disparities

As discussed in the previous section, one of the most relevant ways of looking at the extent of disparities is to calculate the ratio of tertiary education enrollment rate for the highest quintile divided by the corresponding enrollment rate for the lowest quintile. Figure 3 and 4 present, for illustrative purposes, the ratio for all countries for which relevant household data are available in Latin America and Eastern Europe / Central Asia.

Figure 3 – Disparity Ratios in Latin America and the Caribbean (LAC)

Source: Household Surveys

Figure 4 – Disparity Ratios in Eastern Europe and Central Asia (ECA)

Source: Household Surveys

Table 3 below summarizes the results for the various regions of the world, showing both the average disparity ratio and the range for each region.

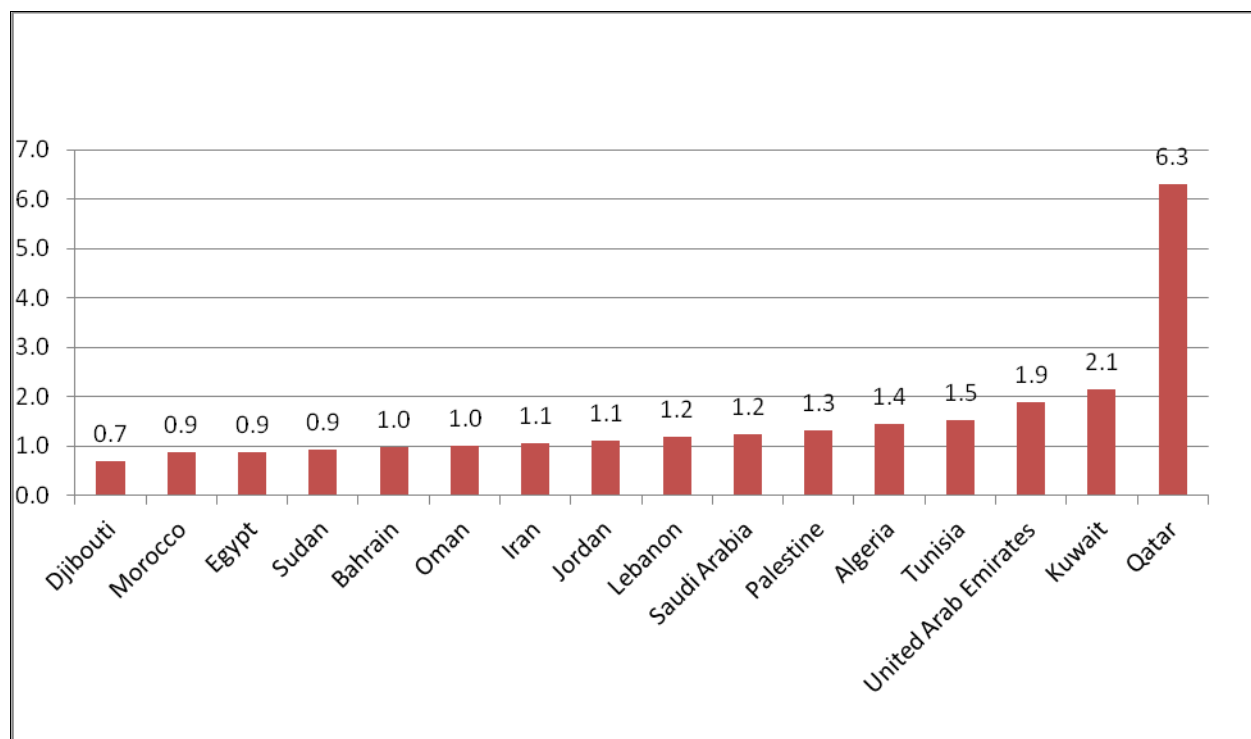
Table 3 – Summary Results by Region

Country Groupings	Mean Disparity Ratio	Range	Average Enrollment Rate in 2009
East Asia	16.0	1 - 61	37.2
Eastern Europe and Central Asia	3.5	1 - 9	38.0
Latin America and the Caribbean	27.0	3 - 100	36.6
Middle East and North Africa	28.2	7 - 89	28.1
South Asia	21.1	7 - 45	6.0
Sub-Saharan Africa	99.3	4 - 200	5.1

East European and Central Asian countries stand out with the lowest degree of inequality overall. Their much lower levels and range of inequality reflect the positive legacy of decades of socialist policies that emphasized quality primary and secondary education for all. In the developing world, South Asia is the most homogenous region, owing to the fact that the region regroups a much smaller number of countries which are at relatively similar levels of tertiary education development. Sub-Saharan Africa shows the worst pattern of inequality in tertiary education, owing to the low level of development at that level and the elitist nature of universities.

Gender Disparities

The Gender Parity index measures the gross enrolment rate of females over the gross enrolment rate of males in tertiary education in a given country. Figure 5 below shows the gender balance in tertiary education in the Middle East and North Africa region in 2009.

Figure 5 – Gender Parity Ratios in Middle East and North Africa (2009)

Source: Unesco Institute of Statistics (UIS)

Table 4 below summarizes the results for the various regions of the world, showing both the average gender parity, the range for each region, and the evolution between 1990 and 2009.

Table 4 – Gender Parity across the World (2009)

Country Groupings	Mean Disparity Ratio	Range	Progress 2009/1990	Average Enrollment Rate in 2009
East Asia	1.1	0.5-1.8	1.3	51.7
Eastern Europe and Central Asia	1.3	0.4-1.8	1.2	50.9

Latin America and the Caribbean	1.7	0.8-5.0	1.5	40.9
OECD countries	1.3	0.5-1.9	1.3	65.0
Middle East and North Africa	1.6	0.4-6.3	1.4	25.8
South Asia	0.7	0.2-1.1	1.3	16.0
Sub-Saharan Africa	0.6	0.2-1.3	1.9	5.2

Source: UIS

The tables above show a marked change in the ratio of females to males in tertiary education in 1990 versus 2009. In 1990, the proportion of women in tertiary education slightly exceeded men in Eastern Europe and Central Asia, Latin America and Caribbean, OECD countries and the Middle East and North Africa. In the case of Eastern Europe and Central Asia the limited levels of gender equality is, as mentioned in the discussion on income inequality, a legacy of decades of socialist policies emphasizing primary and secondary education for all. In 1990, East Asia is close to realizing gender parity with a ratio of 0.8 females to males in tertiary education. The same was not the case in South Asia and Sub-Saharan Africa where on average for every woman enrolled in tertiary studies, there were three men.

Fast forwarding to 2009, it is evident that all countries have significantly increased female participation in tertiary education to the extent that in some regions there is a situation where there are significantly more women than men enrolled in tertiary education. This has been the trend in the East Europe and Central Asian, Middle East and North Africa, Latin America and Caribbean, and OECD countries. While South Asia and Sub-Saharan Africa still have considerably fewer females enrolled in tertiary education in comparison to the proportion enrolled in other regions, they are close to achieving gender parity. The near doubling of female participation in South Asia and Sub-Saharan African was supported by the joint efforts of governments and the international donor community in promoting access to primary and secondary education for young girls and women through the Millennium Development Goals.

Disparities Affecting Minorities

Very few countries collect statistics on the participation of minorities in education, especially at the tertiary education level. Where data are available, however, they do point at significant disparities, as illustrated in this section. Table 5 compares, for a few countries in Africa, Asia and Latin America, the share of the student population from a given minority relative to the proportion of that minority group in the overall population.

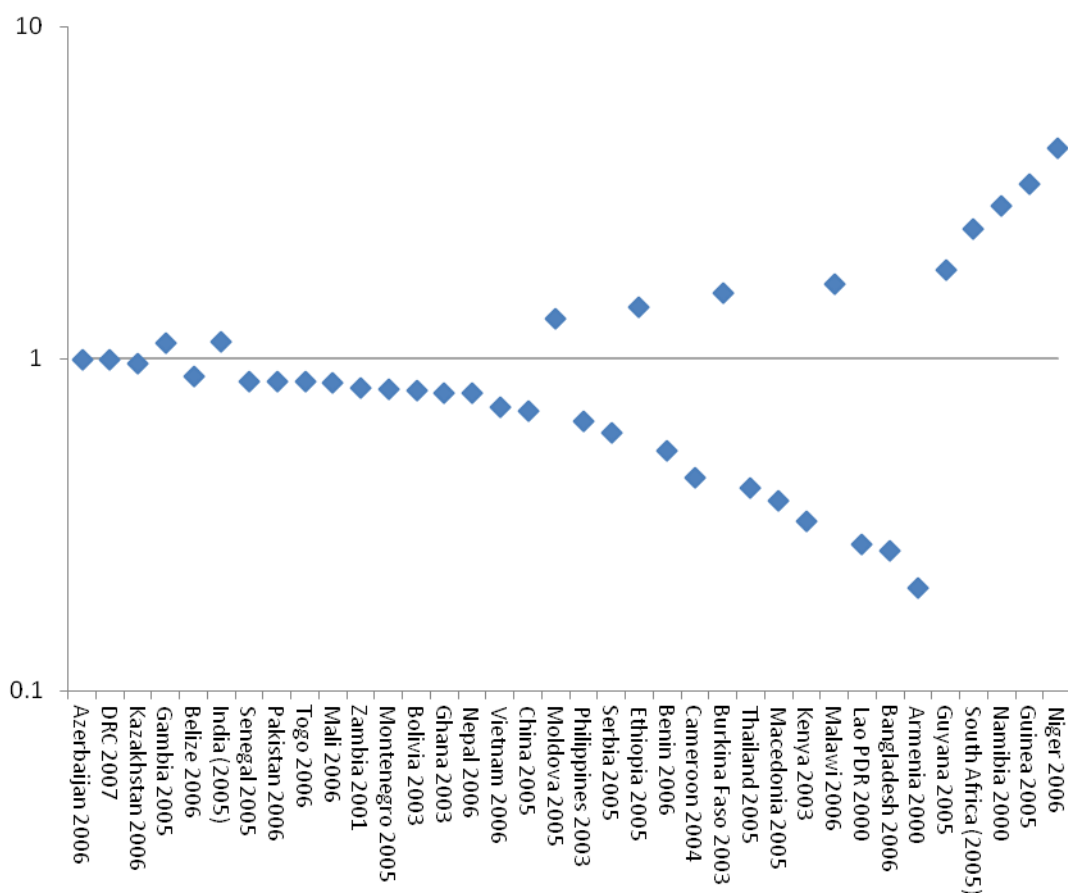
Table 5 – Share of Minority Students in Selected Countries

Region / Country	Type of Minority Group	Share of Total Population (%) (A)	Share of Student Population (%) (B)	Measure of Dispersion ((A-B)/A)
<i>Africa</i>				
South Africa	African	79.4	65.0	0.18
South Africa	Colored	8.8	6.0	0.32
<i>Asia</i>				
China	Ethnic Minorities	8.4	6.0	0.28
Vietnam	Lao Theung	23.0	2.0	0.91
Vietnam	Lao Sung	10.0	5.0	0.50
<i>Latin America</i>				
Brazil	Indigenous	0.4	0.06	0.86
Chile	Indigenous	8.0	5.0	0.38
Colombia	Indigenous	10.0	5.0	0.50
Guatemala	Indigenous	41.0	10.7	0,74

Source: Household Surveys ??

Among the four Latin American nations featured, Chile seems to have been the most successful in integrating its indigenous population at the tertiary level. By contrast, Guatemala offers the picture of a country whose large indigenous population—the second largest after Bolivia—enjoys very limited tertiary education opportunities. In the Asian context, China appears to have more egalitarian access policies than Vietnam. Finally, the results for South Africa show significant progress since the end of apartheid.

Figure 6 below presents another way of looking at the extent to which ethnicity matters as a determinant of access to tertiary education, based on the results of household surveys in a large sample of countries from all continents. The figure shows the ratio of probability of attending tertiary between minorities and the majority (or largest minority). Ratios less than one suggest that the minorities are less likely to attend tertiary compared to the majority (or largest minority) population group, while ratios greater than one suggest that the minorities are more likely. Consequently, ethnicity matters more for countries with ratios furthest from one or, as shown in this figure, further to the right.

Figure 6 – Probability of Attending Tertiary Education for Ethnic Minorities

Source: González Rubio, A. and Macdonald, K., 2011.

Students with Disabilities

Data providing insights into access to tertiary education of students with disabilities are scarce and available data sources tend to be more fragmented and unreliable than data describing educational access and attainment of disabled children and youths at lower levels of education. Data are often collected on an ad hoc basis and typically originate from a multitude of sources.

While there is evidence of a nascent trend within middle-income countries to include data on persons with disability and their access to tertiary education within national surveys, censuses and tertiary education management information systems those data sources typically continue to be fragmented. Some emerging data sources indicate a slow but noticeable increase in the number of students with disabilities accessing tertiary education. However, wide disparities in access to tertiary education between persons with disabilities and their non-disabled peers continue to prevail.

In low-income countries information on students with disabilities accessing tertiary education continues to be based mostly on anecdotal accounts with limited, if any, national and institutional data collection mechanisms in place. As a result data tend to be fragmented and unreliable.

In Thailand the latest available statistics indicate an increase in the number of students with disabilities from 1,024 in 2005 to 1,308 in 2008 to 1,953 in 2010, out of a total of 276,129 young people with disabilities, i.e. a proportion of less than 1 percent (Kachondham, 2010). In South Africa, in 2009, there were 4,666 students with disabilities in public higher education, representing about 0.6 percent of the total student enrollment, up from 4,325 students in 2007 (Nzimande, Address by the Minister of Higher Education and Training, 2010; Department of Education, 2008, p. 48). This compares to an estimated disability prevalence of 3.5 percent within the corresponding age group (20-29 years of age).

In Colombia data on the distribution of students with a disability within the formal education system suggest limited progression to higher levels of education for this equity group. The decrease in attendance rates between primary and secondary education suggests that students with disabilities are at a high risk of early exit. Of all persons with a disability enrolled in formal education (pre-primary, primary and secondary education) 66 percent are enrolled in primary education, 20 percent are enrolled in lower secondary education and 4.4 percent in upper secondary education. Overall, children with disabilities in Colombia enter the education system later and tend to drop out in greater numbers than

students without disabilities (Sarmiento Gomez, 2010). For the age range 6-11 year 27.4 percent of children with disabilities attend school in comparison with 85 percent of non-disabled children. These data explain the limited demand for access of students with disabilities at the level of tertiary education (Sarmiento Gomez, 2010). Out of all students with disabilities enrolled in the Colombian education system, the proportion attending a tertiary education institution is 6.7 percent. But for non-disabled students, those studying at the tertiary level account for 12.5% of the overall student population.

In summary, in spite of the data and methodological limitations affecting the analysis of disparities at the tertiary education level in many countries, there is strong and overwhelming evidence of acute inequalities in most parts of the world, playing out along the various dimensions of equity: socio-economic, gender, minorities-related, and affecting people with disability.

These disparities usually have an overlapping and, more often than not, cumulative effect across equity groups. Gender discrimination tends to impact low-income groups girls more prominently. For example, in Peru and Mexico, where female enrollment is lower than male enrollment—contrary to the general trend in Latin America—the difference between low income and high group students is striking. In Peru, the enrollment rates of girls from the poorest and richest groups are 13.3 and 24.9%; in Mexico, they are 9.1% and 37.4% respectively (Fanelli and Jacinto, 2011, p. 21). Several studies have documented how poverty, ethnicity and rurality are also closely linked in Latin America. Similarly, poverty will amplify the obstacles encountered by people with disability and girls with disability have a lower probability of entering tertiary education or completing a degree than boys.

Finally, the wide degree of variation in the depth and scope of disparities across regions, countries and equity groups which share similar circumstances indicates that policies matter and can make a significant difference. There is therefore a need to understand better where the disparities characterizing tertiary education come from and which policies are more effective in reducing inequality at that level in the education ladder.

5. The Determinants of Inequality

A child born in rural Bolivia has a 1.7 percent probability of attending tertiary education, compared to a 51 percent chance for the daughter or son of a professional in La Paz. Like the children of Bolivia, most

children in developing countries face challenging circumstances beyond their own control—race, gender, geographical origin, socioeconomic background—that drastically affect their opportunities to go to school, to stay in school and to complete secondary education. At the tertiary level, young people from underprivileged groups encounter additional barriers reflecting the cost of studies, their insufficient academic preparation, low motivation and lack of access to information about the labor market prospects of various institutions and academic programs.

Non-financial barriers

Inadequate academic preparation and schooling, low educational expectations and aspirations, absence of college knowledge or awareness, scarcity of support for tertiary planning, competing family or cultural interests and personal uncertainties are just some of the barriers preventing students from marginalized communities from successful participation in tertiary education (Eggins, 2010). Indeed, information access, motivation, inflexibility of university admission processes (Gerald and Haycock, 2006), and family environment and others forms of cultural capital are some of the non-monetary reasons that have been recognized as important factors in explaining poor participation of low-income individuals in tertiary education (Nybroten, 2003; Finnie et al, 2004).

Academic preparation is among the most powerful predictors of students' enrollment in tertiary education (Adelman, 1999). Students who have lower grades in high school and/or who do not get much support for their academic work from their parents are less likely to attain the necessary grades to go to university. Such students are also less likely to be motivated to partake in tertiary education. Such disparities in information and experience with tertiary education are at the core of any debate about equity promotion policies regarding tertiary education.

Students from disadvantaged backgrounds may, for a variety of non-academic reasons, believe that tertiary education is not a viable option for their futures. Based on their low expectations, many disadvantaged students never develop an ambition to attend tertiary education. Others may entertain aspirations to pursue tertiary education, but, because they do not really expect to realize that goal, never seek out information or other supports that could break down perceived barriers. In either case, low expectations interfere with disadvantaged students' development of aspirations to pursue tertiary education, effectively making it inaccessible. In order to help disadvantaged students see tertiary

education as a viable option, many programs seek to build college awareness and enrollment aspirations.

The low expectations of students from disadvantaged backgrounds can be partly understood as a social phenomenon. Students whose families or community members have not historically had access to tertiary education may not be exposed to role models who illustrate the possibility and promise of advanced study. Moreover, in these communities, school officials—teachers, counselors, administrators—also often have complex and challenging environments that lead to a focus on persistence in secondary education and low expectations for their students' accessing tertiary education. In these instances, norms for promoting access to post-secondary education are not emphasized or institutionalized. Instead, students and their communities may assume that tertiary education is only accessible and valuable to those with more advantaged backgrounds. Awareness and aspiration-building outreach programs therefore aim to disrupt low expectations and narrow the information gap, facilitating the development of aspirations that include tertiary education. In each of these areas, however, there is no question that these non-financial barriers are intertwined with financial barriers.

Financial barriers

Junor & Usher (2004; Usher 2005) defined three main categories of monetary barriers to accessing tertiary education: the cost-benefit barrier, the liquidity (cash-constraint) barrier, and the debt aversion (internalized liquidity constraint) barrier. First, the cost-benefit barrier occurs when an individual decides that the costs of attending university (including tuition and living expenses as well as opportunity costs of not working during the duration of the course) outweigh the returns to their education. The accuracy of a cost-benefit analysis depends on the correctness of the information used in the calculations of both costs and benefits. Recent research (Usher, 2005) has shown that low-income students are less likely to have access to and use accurate information.

Liquidity barriers refer to a student's inability to gather the necessary resources to pursue tertiary education after having decided that the benefits do outweigh the costs. The amount of personal resources, resources from family and friends, scholarships, grants and/or loans are not enough to cover tertiary education costs, and they either do not have access to or are unaware of financing alternatives to supplement their existing resources.

When evaluated at mean characteristics, a \$1,000 increase in the net direct costs of college was associated with a five-percentage-point decline in the likelihood of college enrollment (for black high school graduates), from .45 to .40.

Kane, 1994, p. 892

Finally, debt aversion constraints occur when a student values the benefits of tertiary education relative to its costs, can borrow to access to sufficient financial resources, but, regardless of these factors, chooses not to matriculate because the financial resources available to him/her include loans. Potential students with debt aversion simply do not wish to or are afraid to incur debt that must be repaid at some point in time.

Differences in equity in access

According to Murakami and Blom (2008), differences in equity in access are likely to stem from a combination of at least six factors: (i) a country's overall inequality (social and economic), (ii) inequality in graduation rates from secondary education, (iii) affordability of tertiary education, (iv) government and institutional policies favoring access for low-income students, (v) efficiency of a tertiary education system, and (vi) the composition of tertiary education supply and learning paths available (p. 24). Their working paper on four Latin American countries (Brazil, Colombia, Mexico and Peru) compared the affordability and accessibility of tertiary education in these countries with high-income OECD countries, and found "that families in Latin America have to pay 60 percent of per-capita income for tertiary education per student per year compared with 19 percent in high-income countries. Living costs are significant, at 29 percent of gross domestic product per capita in Latin America (19 percent in high-income countries)" (Murakami and Blom 2008, p. ii). Such disparities in cost and their related impact on accessibility are likely to exist across the spectrum of developing countries, as documented in a recent paper on affordability in South Asia (Blom, Rosenkrantz and Sarr, 2009).

All forms of monetary barriers contribute to rising inequity in tertiary education participation. In the US, for example, a recent study revealed a trend towards greater inequality in terms of student participation, due to a combination of increasing tuition fees and declining student aid (Education Trust, 2007). This trend is likely to accelerate with the present financial crisis.

Resolving financial barrier constraints will not alone solve inequality challenges. Considerable empirical research on the effects of financial aid policies on enrollment in the US has shown that financial interventions, while influential for those predisposed to postsecondary education, are not sufficient to ensure equal access for many economically disadvantaged groups (De La Rosa and Tierney 2006; Perna and Titus 2004; Kim 2004; Cunningham, Redmond, and Merisotis 2003; Pope and Fermin 2003; Perna and Swail 2001; Long and Riley 2007; Carneiro and Heckman 2002; Frenette 2007). There is growing realization that the decision—and ability—to pursue tertiary education is influenced by economics but also largely determined by a confluence of personal, social, and institutional variables.

Similarly, an analysis of youth from lower-income families in Canada concludes that low high school quality and grades, as well as insufficient parental involvement pose greater obstacles to attending university when compared to financial constraints (Frenette, 2007). Others have found that the more troublesome barrier to access for high achieving, low-income students involves the intransigence of institutional norms and processes (Gerald and Haycock, 2006). It must be noted, however, that high school grades, school quality, parental participation, and access to information are linked (directly or indirectly) to family income (Berger & Motte, 2007).

Inequality Traps

The 2006 WDR elaborates on the notion of inequality traps to single out disparities that “tend to perpetuate differences across individuals and groups over time, within and across generations” (World Bank, 2006, 28). Eliminating inequality traps is a priority not only because they are morally unacceptable but also because the reproduction of intergenerational inequalities is likely to hinder a country’s social and economic development. Using nationally representative household survey data, an econometric study looking at the persistence of inequalities of opportunity in Brazil over time (Bourguignon et al, 2005) clearly showed that race, region of origin and father’s occupation continued to be strong predictors of an individual’s education level across generations, even though parental education had increased on average.

Gender disparities are considered as the archetypical inequality trap. In many societies, cultural and religious norms ascribe different roles and spheres of influence to men and women. Because the latter are restricted to serving the household and contributing to its wellbeing from inside the home, their life chances are influenced more through marriage than labor market participation. This explains why parents invest less in their human capital, as evidenced by the lower rates of female enrollment in secondary and tertiary education in most of the developing world. Even when women are active in the labor market, their lower earnings constitute an additional disincentive that works only to buttress traditional views about their social role. Shaped by these social norms, mothers are very likely, in turn, to instill and reinforce the same values and behaviors into their daughters and daughters-in-law.

The 2006 WDR concludes that these inequality traps affect not only the distribution of the products of growth but also the dynamics of economic and social development because of market imperfections and the unequal distribution of power reflected in the way institutions operate. If anything, this confirms the importance of considering equity and efficiency as mutually reinforcing factors rather than in a trade-off perspective.

6. Effective Equity Promotion Policies

Recent research shows that the most effective equity promotion policies to increase opportunities for disadvantaged students at the tertiary level are those that combine financial aid with measures to overcome non-financial obstacles. First of all, there is strong evidence that well-targeted and efficiently managed financial aid can be instrumental in reducing financial barriers to tertiary education. Second, many countries have successfully implemented outreach and bridging programs to secondary schools, reformed selection procedures and/or preferential admission programs, special institutions and programs targeting underprivileged groups, and retention programs to improve completion rates.

Student Aid for Overcoming Financial Barriers

The basic principle of equitable tertiary education financing is that no academically qualified student should be denied the opportunity to access and complete tertiary education for lack of financial resources.

When it comes to existing financing strategies, tertiary education systems all over the world can be divided roughly into four main groups:

- Well-funded systems that rely almost exclusively on public funding (more than 1.5% of GDP) and public provision (more than 90% of enrollment). These include the Gulf countries, the Scandinavian countries, Saudi Arabia, Scotland, Singapore, and Switzerland;
- Public systems that are relatively well-funded through a combination of public resources and a significant level of cost-sharing with appropriate student aid. Examples are Australia, Canada, England, Hong-Kong - China, Iceland, the Netherlands, and New Zealand;
- Mixed provision systems (more than 25% private enrolment), relatively well funded through public resources and high levels of cost-sharing in both public and private institutions. These include Chile, China, Japan, South Korea, and the US); and
- Public and mixed provision systems that tend to be insufficiently-funded overall (rest of the world).

Based on this panorama, two possible financing models exist to provide equity of opportunities in tertiary education in a sustainable way: (i) full State funding in the context of a progressive tax system in a few wealthy countries, or (ii) universal cost-sharing integrated with extensive and effective student aid in the majority of countries. Free public tertiary education is not the answer for most countries in the world. More often than not, public funding of tertiary education is usually regressive. Experience all over the world indicates that there is a regressive element in most publicly funded tertiary education systems whereby students from advantaged backgrounds tend to access tertiary education disproportionately at no cost and obtain higher remuneration after graduating, yet rely on less-advantaged general taxpayers to fund their education. Financing of tertiary education would be much more equitable if students from high and middle income families would contribute a larger share of the cost of their education. In addition, in countries with a significant private sector, many low-income

students, who are unable to gain access to public universities, pay for high cost private tertiary education.

Grants and scholarships are non-reimbursable financial aid which can cover both living and tuition expenses. The policy aim of grants is to step in and eliminate family income or wealth as a deterrent to tertiary education access and success. Need-based grants and scholarships should be well-targeted and efficiently managed. Depending on the equity gaps in a particular country, the grants and scholarships could be targeted to reach lower income students, students from certain ethnic minority groups, rural students who are less likely to enroll in tertiary education compared to urban students, women, or students with disability.

In lieu of scholarships or to complement them, tuition fee waivers or subsidies can be used as a form of student financial assistance. Tuition fees can be implemented on a sliding scale based on family/individual income. Families/individuals below a certain income threshold will be exempted from having to pay tuition fees. Certain exceptions can also be made for groups that are under-represented in tertiary education – for example, students from ethnic minorities, rural students, women etc. Catholic universities in Latin America use tuition fee waivers frequently as part of their financial aid package.

Student loans, a more sustainable form of financial aid, exist in one form or the other in more than 70 countries. Many tertiary education institutions also organize and finance their own student loans. To be successful, student loans require a lean administration setup, low subsidies and an effective recovery mechanism, preferably one that is income-contingent. The less funding is available to finance new student loans, the greater the need for targeting. Targeting can become an issue if there is leakage, when the social characteristics of the selected beneficiaries do not correspond to the planned distribution of recipients.

To avoid high levels of repayment default, student loans should be given only for studies at tertiary education institutions with a recognized track record from the point of view of the quality and relevance of their programs. Many countries make participation in the accreditation process a condition of eligibility.

The various student loan models can be defined in the first instance by the type of repayment terms that are applied. Student loan schemes also vary on other important dimensions including: the source of capital, the type of expenses covered, student eligibility rules including applicability to private and distance institutions, and the level of subsidy. Three main types of student loan approaches can be found: (i) direct loans – mortgage type, (ii) guaranteed and shared-risk loans mortgage type, and (iii) universal income-contingent loan systems.

- **Public funding (direct loans – mortgage type).** This is the most common approach world-wide. The Government funds student loans that are repaid monthly after graduation. The main drawback of this approach is that public resources need to be put up to start the scheme and bring it up to scale. To maintain the financial sustainability of these schemes, the administrative costs, the interest subsidy and the level of default must be kept at a minimum. Administrative costs can be reduced significantly by sub-contracting the management of the scheme to private sector institutions. However, in practice many of these schemes end up being financially unsustainable because of high administrative costs, interest rate subsidy and default.
- **Private funding leveraged by the Government (guaranteed and shared-risk loans - mortgage type).** The Government works in partnership with private banks. The Government may offer an interest rate subsidy, and generally provides a guarantee for default; the private banks fund the student loan themselves. This approach presents the great advantage of mobilizing private sector resources with limited Government financial contributions. The experience of the International Finance Corporation shows that a leverage ratio of up to one to seven can be achieved.

Large-scale programs of this nature have had a mixed record, however. In 2000, Canada went back from a shared-risk system to a traditional public funded direct loan scheme because the private banks were not very diligent in seeking repayments from graduates and the financial conditions they demanded to increase their follow up work were too costly. Similarly, in 2012 Chile eliminated the shared risk program that it implemented in 2006 to expand loan opportunities for students enrolled in the rapidly growing private tertiary education sector because of unaffordable debt levels for many of the graduates.

- **Universal income-contingent loan system (Australia, New Zealand, United Kingdom).** Such systems can, in theory, achieve a better balance between effective cost recovery

on the government side and risk to the borrower. Administration is generally simpler and cheaper under such schemes because loan recovery is handled through existing collection mechanisms, such as the income tax administration or the social security system. Income-contingent loans are also more equitable and satisfy more fully the ability-to-pay principle, since graduates' payments are in direct proportion to their income.

Outreach and Bridge Programs:

Research on outreach and bridge policies and programs suggests that, in many countries, unequal K-12 educational systems are seen as key determinants of tertiary enrollment rates, creating an interest in not just programmatic interventions, but also more comprehensive policies that target academic readiness for tertiary study. Policies that insist on "education for all," or "access for all" exist in many parts of the world, signaling the importance of opening the doors to tertiary education for those from marginalized communities. The establishment of national equity policies provides the impetus for the institutional practices and policies around the world.

Interventions reflect modest steps to support students' transitions as they pass through the educational pipeline available to them. The majority of outreach and bridge interventions seek to reduce the academic, aspirational, informational, and personal barriers that restrict access among students currently underrepresented in tertiary education. While there are global efforts to promote successful participation in higher education, there are inconsistencies and gaps in both the existence and the documentation of programs and policies, making it difficult to discern whether initiatives are truly having an impact on young people from disadvantaged backgrounds.

The following recommendations for improved policy and practices are based on a review of policies and practices currently operating around the world. These recommendations seek to promote the existing innovation and expand upon current efforts to foster the most important kind of access –access that leads to degree completion.

- **Create linked programs.** The importance of linking interventions to funding is evident in multi-tiered programs where scholarships and bursaries act as incentives and rewards for successful participation in comprehensive programming. By doing so, students are more likely to receive support for the multiple barriers they face when pursuing tertiary

education, rather than creating dichotomies between their academic, social and financial needs.

- **Balance systemic changes with services directed at students.** With the exception of teacher training, the majority of known outreach programs provide services directly to students. Policymakers should consider establishing goals for systemic growth and improvement that alters the structural contexts in which students learn about and plan for tertiary education. Structural or systemic reform might include building school cultures that value and support tertiary education planning, setting high expectations for participation in tertiary education and offering curriculum that supports student's postsecondary and career development. These strategies, which typically act as universal interventions are especially important in that they motivate students who may have prematurely abandoned any ideas about future tertiary study and would miss or not qualify for other targeted programs.
- **Establish early intervention programs and policies.** Ensuring that students possess adequate skills and aspirations to successfully seek out and enroll in tertiary education must start early. Children's career and educational aspirations are formed in early years of schooling, and negative experiences and messages about their chances for entry into tertiary education likely diminish their motivation and interest, precluding the chances that many of these programs reach them in time. The earliest possible attention to establishing long-term educational aspirations is especially important in those developing countries where enrollment in primary education remains low.
- **Build collaborative partnerships.** Programs and institutions may be able to serve students more effectively over time when they partner with other organizations, such as universities, government agencies, non-profit organizations, or corporate partners. Some benefits to programs may include: financial and operational support, increased institutional capacity through professional development and knowledge-sharing, and dissemination of best practices through publication and outreach. Partner organizations also benefit by gaining access to local expertise about student needs, finding opportunities for research about program effectiveness, and developing a more positive reputation.
- **Consider policies to strengthen partnerships between primary/secondary and tertiary education systems.** Many outreach and bridge programs are guided by existing school-

university partnerships that allow for multi-level interventions and support. These partnerships provide optimal contexts for this work for a few reasons. First, many outreach programs rely on institutional faculty and staff, especially in departments and schools of education. These human resources are extremely beneficial to the primary and secondary institutions with whom they partner. Second, many interventions staff their programs with university students, who volunteer their time as tutors, mentors, as counselors in community centers and advisors to support tertiary preparation and planning in secondary schools. Finally, the presence of a university partner in a school community helps to influence the aspirations of students, expectations of teachers, and possibilities for creating a broader community of learners. For these reasons, partnerships hold great promise for improving secondary school completion rates and access to higher education.

- **Increase policy attention to engaging families in interventions.** It is widely held that parents and extended family members play a key role in tertiary education aspirations, planning, transition and participation. Family support, both monetary and emotional, plays an important role in students' aspiration formation, as well as their academic preparation for tertiary education. The impact of family and community on education aspiration setting is an area that warrants additional attention, especially among communities highly saturated with first generation college-attenders and cultures where access for women has been limited due to cultural beliefs about women. Educating families of these two equity groups about the importance of further education is vital to national goals and values.

Affirmative Action:

Affirmative action, an area of policy directed toward creating differential processes to promote equality of opportunity, is one such option. For disadvantaged groups, providing avenues to promote even considering tertiary education is the first step in a long journey toward success in tertiary education. Providing them with processes and tools that provide points of access (in admission and funding, for instance) must follow. The history of affirmative action has been fraught with controversy and challenges, however. In-depth research into affirmative action across nations and cultures reveals diversity in the mechanisms and procedures that have made up country agendas (Table 6).

Table 6 - Barriers to Tertiary Education for Disadvantaged Groups

Barrier	Country	Example
Discriminatory Policies and Practices	South Africa	Apartheid – limited rights for non-White persons, especially Black Africans
	Brazil	Favoritism towards White persons in employment; Differences in educational access, health care, and safety
Academic	India	Differential access to primary and secondary schools for lower castes
	Malaysia, South Africa	The disadvantaged group only had access to low-quality schools
Admissions/ Limited Slots	South Africa, India, Malaysia	Not enough members of the disadvantaged meet university standards to qualify for admission
	Brazil	Black Brazils cannot afford to pay for preparatory courses for the university entrance exam and so score lower
Financial	South Africa	The historically White universities cost more than the historically disadvantaged institutions
	Brazil, India	Tuition prices are high in private universities and financial aid is not sufficient to help poor students

For affirmative action to achieve its goals, a country has to have a clearly identifiable group that would stand to benefit from preferential admissions policies (McMurtrie, Bollag, & Kigotho, 2004). The following policy recommendations should be taken into consideration:

- **Focus on economic differentials instead of racial:** By some accounts, class matters more than ethnicity, so all preference schemes should only be class driven and ethnicity neutral (Deshpande, 2006; Alon, 2010, Francis & Tannuri-Pianto, 2010). In Brazil or other countries with highly racially diverse populations, such a practice might be most effective and more acceptable; particularly where it is racial identification is culturally unusual or politically unpalatable. Likewise, in a context like Malaysia, racial differentials proved politically hazardous, since the original program favored native Malays over those of Chinese heritage and other ethnic groups, apparently weakening the higher-education system. Consequently, the Malaysians government had to take the unusual step of dismantling its affirmative-action program in college admissions, in order to minimize the brain drain of its best non-Malay students.
 - In South Africa, rather than setting an exclusive racial quota to secure a program solely for blacks, a program that includes all individuals from "educationally deprived backgrounds" led to a majority of blacks in the program with a sprinkling of lower-class whites, mainly Afrikaner women or whites with rural backgrounds (Adam, 2000). This mixed classroom atmosphere, even when only one or two students from other racial backgrounds were present, also contributed to the impression that bridging programs are not a racial affair, and made them more effective and inclusive.
- **Do not ignore race, however:** In general, however, "class-based" affirmative action becomes less effective as a substitute for "race-based" affirmative action as a means of changing the racial composition of institutions the greater the extent to which the dispossessed group is a numerical minority and the less wide the gulf in poverty status between them and the dominant group (Darity, 2005). India has by far the most elaborate system in the world, with quotas absorbing half of all the seats in some of its public universities. Brazil is among the countries to introduce affirmative action most recently. The state of Rio de Janeiro instituted preferential admissions policies for black and mixed-race students just last year, yet they have already led to more than 200 lawsuits.

- **Recognize affirmative action expands beyond race and economics:** While the general discourse on affirmative action has focused on race and proxies for race, such as socio-economic/class status, preferential admission policies developed to rectify historic discriminatory practices exist for the full array of under-represented group: women (particularly in science and technology fields), the disabled, and students living in rural or undeveloped areas, for instance. The past and/or present repression or exclusion of groups from accessing avenues to social mobility must be met with thoughtful remedies, to promote the most talent-driven and sustainable development possible. So, while race and class are unquestionably deserving of the extensive dialogue they have received in the debate about affirmative action, these other excluded groups also require calculated, purposeful policies in order to ensure their fair participation in the tertiary education sphere.

Persistence and Retention

There are a myriad of ways to promote student persistence in order to improve institutional retention and increase tertiary education graduation rates. The majority of these programs and policies are focused on providing additional support—financial, academic, personal or structural—in order to promote student success. While there are global efforts to promote persistence, there are inconsistencies and gaps in both the existence and documentation of programs and policies, making it difficult to discern whether initiatives are making a difference in the graduation rates of students globally.

There are a range of retention policies and practices currently operating in tertiary institutions around the world, seeking to provide opportunities for students most in need, but these policies and practices may not be reaching those students most at risk of dropping out. The generally inconsistent availability of information emphasizes the need to undertake additional primary data collection that focuses on specific regions and disadvantaged populations. We offer the following recommendations to further consider the promotion of persistence in tertiary education for all students, not just the elite who are able to successfully complete tertiary education. Tertiary education for all—not just in participation but also through degree completion—is needed for both individual benefit and for the benefit of the home country of the student. It is imperative to think of the public good that can be gained by countries and regions if tertiary graduation rates are improved.

The following recommendations emerged from a review of global persistence and retention practices:

- **Focus on access *and* success.** Equity policies need to focus on outcomes related to tertiary education outcomes rather than just access outcomes. It is important to focus on student success through to their degree completion, utilizing support programs and regular measurement of outcomes such as graduation rates for underrepresented groups at tertiary institutions (Santiago et al., 2008).
- **Connect secondary and tertiary education.** Some of the challenges that students bring with them to institutions of tertiary education result from inadequate secondary education. This is particularly true for women, students from rural areas, and low-income students. Students with inadequate academic preparation are more likely to struggle in tertiary education and are at a higher risk for dropping out before earning a degree. Secondary and tertiary education systems can intervene more purposefully by engaging in coordinated interventions to support academic success and ensure that students are being prepared to continue their education through the highest levels.
- **Seek avenues for collaborative partnerships that extend the capacity of any one program.** Partnerships with other countries and with foundations are recommended in order to facilitate and expand programs that holistically support students on the path to graduation. Programs and institutions may be able to more effectively serve students over time when they partner with other organizations, such as universities, government agencies, non-profit organizations, or corporate partners. Some benefits to programs may include: financial and operational support, increased institutional capacity through professional development and knowledge-sharing, and dissemination of best practices through publication and outreach. Partner organizations also benefit by gaining access to local expertise about student needs, finding opportunities for research about program effectiveness, and developing a more positive reputation.
- **Support the development of robust institutional research departments.** In addition to enrollment data and grades, institutions benefit from well-developed institutional research departments to track students' background characteristics and intentions upon enrollment, course completion by discipline, and the nature of student engagement on campus. In addition, institutions should regularly assess student learning and measure student perceptions of learning and campus climate. This information is needed in order to gain an accurate understanding of the student population and student progress, which in turn enables institutions to design and implement policies and programs that work.

- **Utilize data to promote accountability.** Institutions that strive to maintain transparency with regard to data allow for confidence in their commitment to accountability. It may be necessary for systems to require institutions to make certain student data available to the government and the public in order for the entire system to become more accountable with regard to retention and persistence.
- **Create a clearinghouse of programs and best practices.** A major limitation to understanding the scope of practices related to persistence and retention in tertiary education is that primary data on institutional mechanisms to promote persistence remain challenging to find due to limited documentation. A clearinghouse would provide access to documented programs and policies that institutions could replicate in order to promote persistence.
- **Develop holistic support mechanisms.** While financial challenges are a primary roadblock to persistence for many students, it is not the only one. Institutions and government ministries must examine the possibility of creating programs that partner financial support with academic and personal support services. The most financially disadvantaged students often need academic support to combat inadequate academic preparation, as well as social and structural supports to help in their transition and eventual graduation from tertiary education.
- **Include emotional support services in prevention programming.** While there are numerous examples of financial and academic support programs around the world, there appears to be a lack of emotional support mechanisms available for students at tertiary institutions in developing nations. Postsecondary students worldwide have a myriad of concerns and stresses that can be a barrier to degree completion. For this reason, institutions should further explore emotional support services for students in the form of counseling, mentoring, and advising programs that provide students with the critical emotional support.
- **Maintain efforts to establish and maintain stable funding structures.** Stable funding is needed for institutions to develop and assess programs that promote persistence. Institutions need these stable structures to continue capacity building at their institutions to meet the changing needs of their diverse student populations. The precarious financial and political situations in many countries make it challenging to run an efficient institution and to provide the needed supports for students.

- **Encourage reforms that facilitate faculty stability.** One challenge to institution-based retention initiatives, particularly in developing countries, is the shortage of full-time, engaged faculty members who are committed to the betterment of the institution. Many top faculty members leave for more lucrative opportunities and there is often regular and disruptive turnover. Often, faculty members are only hired on a part-time basis and may be forced to work multiple positions, even outside of academe, in order to make a living. In order for faculty to be invested in students and promote their persistence and well-being, more stability is needed within the faculty.
- **Consider work-study models.** Since institutions in all over the world are under financial constraints that may affect the staffing at an institution, it is recommended that institutions consider the use of students as work-study staffing placements. These placements are a benefit to the students, in terms of providing much needed financial support, and another mechanism through which to develop a support system for students and promote engagement at the institution. Students also develop skills in these placements that may be useful after graduation. The placements also benefit the institution in that they have human resources to help with the functioning of the institution, often at a reduced rate compared to a full-time employee. The University of Zimbabwe's 'Student Part-Time Employment Scheme' is an example of one such program, allowing students to work for pay up to six hours a week at a department at the university such as the library (Ng'ethe et al., 2003).
- **Identify and support the needs of students with disabilities.** While students with disabilities are often considered a target group for directed equity interventions, there is little information available on programs and services available to promote retention for disabled students. While many students with disabilities are easily identifiable due to an obvious physical disability, many other forms of disabilities go unseen due to the fact that these are psychological or learning disabilities. Outreach efforts should include services to teach students how to understand their disability and advocate on behalf of their needs. At the university level, programs should include both individual supports for students and structural supports for faculty and staff.
- **Include non-traditional-age students in programs and interventions.** With the expansion of tertiary education worldwide, many older students, who often work full-time, are starting to enroll in degree programs. Programs mentioned previously, such as Recognition of Prior Learning, work to promote tertiary education for students of all ages. There is a need to focus on the adult student population since these students are often balancing work and family responsibilities along with their coursework (Rowan-Kenyon, Swan, Deutsch & Gansneder, 2010).

7. Conclusion

Findings from the World Bank's study on global issues in equity in tertiary education indicate that the most effective equity promotion policies to increase opportunities for disadvantaged students are those that combine financial aid with measures to overcome non-financial obstacles—addressing the comprehensive equity environment instead of utilizing piecemeal approaches to individual barriers to entry. First, there is strong evidence that well-targeted and efficiently managed financial aid can be instrumental in reducing financial barriers to tertiary education. Financial barriers to tertiary education can be reduced by using a combination of three methods to help students from disadvantaged groups: (1) no tuition fees or low fees; (2) grants; and (3) student loans. Second, many countries have successfully implemented outreach and bridging programs to secondary schools (building partnerships with K-12 institutions and reaching out to students at a very young age to plant the seed of attending university into their minds early), reformed selection procedures and/or preferential admission programs, special institutions and programs targeting underprivileged groups, and retention programs to improve completion rates. No one has solved the mystery of how best to overcome the historic, ingrained barriers to success in tertiary education with one policy directive, but this new understanding of the components of successful complementary policy approaches provides a useful blueprint for developing new and innovative responses down the road.

The extensive policy research work summarized in this article does not in any way constitute an encyclopedic and definitive account of the state of equity in tertiary education on a global basis. The scope of the work is so wide, the data underpinning it is so limited and the extent of knowledge so incomplete that the study presented in this article cannot be seen as more than a first attempt at synthesizing what is known. Ideally, however, the conceptual framework and initial findings presented here can serve to identify gaps in the analysis of the determinants of disparities and understanding of the effectiveness of various equity promotion approaches, in order to orient much-needed further work in this critical area of equality of opportunities in tertiary education.

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