In the past two decades, countries in Latin America and the Caribbean (LAC) liberalized their economy. Together with technological advances and increased globalization, this policy has increased demand for knowledge and workers with tertiary education.

LAC governments also have increased investments in education in the last two decades, for children of low-income families. As a result, graduation rates of primary and secondary education improved significantly. This increased the demand for tertiary education.

As a consequence, the rate of enrollment in tertiary education in LAC has increased annually by 2 percent since 1985. In LAC countries, such as Argentina, Chile, Colombia and Mexico, public and non-governmental universities expanded and diversified to absorb some of the increased pool of qualified students from secondary education. However, LAC countries continue to trail high-income countries in terms of enrollment. In 2003, the tertiary education enrollment rate in high-income countries was about 62 percent compared to 26 percent for LAC countries.

What triggers a comparatively low enrollment rate in LAC? The main factors seem to be: (i) affordability and lack of financing of tertiary education, (ii) insufficient and unequal access to secondary education, (iii) the lack of information, and (iv) low expectations of attending tertiary education among youth from low-income families. Based on surveys of families in Colombia and Mexico, affordability and lack of financing seem to be the main obstacles for families.

Surprisingly, we hardly know how affordable tertiary education is in Latin America compared within a regional and global context. We know that Latin American countries differ in their policies on tertiary education finance. Some have tuition in public institutions, others not. Some promote non-governmental tertiary education with full tuition, others frown of non-governmental education. Some run large student assistance programs, others administer smaller programs. However, we do not know how these differences affect affordability and access for the students. Often, discussion of financing of tertiary education is limited to an ideologically driven debate for or against tuition in public universities. Nevertheless, financing of tertiary education is more than a discussion of the tuition level of public tertiary education. One needs to analyze a comprehensive set of factors when analyzing tertiary education finance.

The goal of a recently released Working Paper is to estimate affordability and accessibility of tertiary education in selected Latin American countries. This seeks to provide more objective information for policymakers. Also, the analysis enables us to better understand the impact of student assistance policies for increased enrollment. Especially, this paper seeks to answer the following research questions:
What are the costs of tertiary education to Latin American families?
How important are living costs for tertiary education?
Is financial aid improving affordability of tertiary education at the national level?

This is the first attempt to compare affordability of tertiary education across Latin American countries. A series of studies looks at how much governments and countries invest in tertiary education. Very few studies examine the costs for the individual student. None of these compare costs internationally. The paper takes into account not only the direct costs of education such as tuition, fees and other costs, but also financial aid to students. Further, the paper compares across countries.

The paper follows the methodology of Usher and Cer-venan (2005) “Global Higher Education Rankings: Affordability and Accessibility in Comparative Perspective”. This enables an international comparison of our findings for Latin American countries. To measure affordability of tertiary education, we estimate education costs (tuition and other fees), living costs (living space and food), grants, and loans. These elements are incorporated into four different affordability indicators: education costs, total costs, net costs, and out-of-pocket costs. To measure accessibility of tertiary education, we compute four indicators: participation rates, educational attainment, educational equality index and gender parity.

Brazil, Colombia, Mexico and Peru were chosen for the analysis for the following four reasons: (i) they represent 66 percent of the region’s population, (ii) they represent relatively different approaches to financing tertiary education, (iii) information and data could be collected to a minimally acceptable degree, and (iv) the World Bank has on-going policy dialogue with these countries within tertiary education. A broader selection of countries would have enriched the study and make it more representative of the entire region if information was available.

Unfortunately, the study relies on different sources of data, in particular for tuition costs. The sources for tuition are administrative data, household survey data, and institutional websites. The paper recognizes the criticism of comparing apple with oranges, and recommends that the findings be treated as indicative. Higher comparability of data is required to reach more reliable results.

**MAIN FINDINGS**

**Affordability of tertiary education in LAC is low compared to high-income countries.** The paper analyzes education costs, living costs and student assistance expressed as a share of GDP per capita, a measure of ability to pay.

**Education costs (tuition and other fees) and Living cost are twice as high in he analyzed Latin American countries compared to high-income countries**, 64 percent for LAC countries compared to 30 percent for high-income countries (See Figure 1).

**Living costs are a significant cost of tertiary education.** The cost of living is estimated to 29 percent of GDP per capita for the typical Latin American family. This compares to 19 percent for high-income countries.

**There is a relatively low level of student assistance in Latin America (see Figure 2).** In the four examined Latin American countries, Brazil, Colombia, Mexico and Peru, student assistance—loans and scholarships—amounted to four percent of GDP per capita, divided into two percent for loans and two percent for grants. This compares to nine percent for high-income countries (and 22 percent for Anglo-Saxon countries and 15 percent for Northern Europe).

**Overall, the average family in Latin America pays the equivalent of 60 percent of GDP per capita for tertiary education in LAC.** It compares to 19 percent for families in high-income countries. This is the out-of-pocket costs, which is calculated as the education and living costs less the student assistance. The difference between Latin America and high-income countries is explained by the difference in GDP per capita, higher costs of education due to a more predominant share of private education in Latin America, and a low level of student assistance.

**There is relatively low access to tertiary education.** Our estimation confirms existing evidence of a relatively low accessibility to tertiary education in Latin America, measured by both quantity (participation rates and attainment rates) and equity (socio-economic). However, Latin America is the best region when it comes to equal access for females and males.
There is not necessarily a simple relationship between affordability of tertiary education and accessibility. Hence, high affordability to the families does not necessarily lead to high access. This is likely to be the case for low-income families, where even living costs presents a barrier to access. However, this may not be the case for middle and high-income families. This is explained by the fact that if the families do not contribute to part of the costs, the government has to shoulder the full costs, and this tends to limit available supply of higher education.

The above findings show that the Latin American countries examined in the study finance tertiary education in a different and unique way compared to high-income countries. In Latin America, there is a relatively large private sector with high education costs, a smaller, low-cost public sector, and relatively little student assistance. This contrasts with: (i) the Anglo-Saxon model of financing, which features relatively high education costs together with a large student assistance program, and (ii) the European model with low education costs and a modest level of student assistance. Further, the study shows that there are important differences within Latin America. Policies therefore have to be tailored to each country. The differences and the lack of reliable information also highlight the need to undertake more data collection and research before designing policies.
The first implication that we draw from the analysis is a requirement to take a comprehensive approach to tertiary education financing. Education and living costs, public financing of tertiary education, student assistance and other financing policies should be examined together. Tertiary education finance is more than only the issue of cost-recovery of public universities. Further, it is should be well-known that high affordability does not necessarily lead to high access, because if the families are not contributing to the investment in tertiary education, the government has to foot the entire bill. Without a high level of tax contributions, government budget is insufficient to finance a broad section of the qualified students, and is inequitable in many cases.

The second policy implication is that governments in Latin America have an opportunity to improve affordability of tertiary education through increased student assistance. By doing so, the governments would help families finance the relatively high costs of tertiary education and thereby increase enrollment and equity. This could be done by:

- **Expand availability of student loans.** Student loans allow students to postpone the costs of tertiary education, so that costs—the loan repayments—coincide with the benefits of tertiary education—employment and higher salary. Student loans hold considerable promise in Latin America, because the costs of education are relatively large and prohibit many families from accessing tertiary education. Loans help low, middle, and high-income families finance tertiary education. Further, loans facilitate student-contributions to investments in tertiary education, and thereby contribute to higher investment in tertiary education.

- **Expand availability of grants** (or income-contingent loans) to students from poor families to cover living costs. For many low-income families, free education is not enough of a subsidy to finance access to tertiary education. Living costs need to be covered. Most Latin American countries have large, targeted grant programs, in particular Mexico and Colombia. An income-contingent loan program would be the most cost-efficient way of assisting low-income families gain access to tertiary education.

Following public debate, a successful scaling up of student assistance programs and a comprehensive review of tertiary education financing policies would enable government and families in Latin America to increase access to tertiary education for many more students. This would enhance the productivity, creativity, innovativeness, and technological capacity of the national labor force, and thereby boost economic growth, national competitiveness, and poverty reduction.


About the Authors
Yuki Murakami is an Extended Term Consultant with the Education Group of the Human Development Department in the Latin America and the Caribbean Region of the World Bank. Andreas Blom is a Senior Education Economist in the Human Development Department of the South Asia Region.