Chapter 1

Higher education in Latin America: Challenges and opportunities

Higher education is one of the main drivers of economic and social development and therefore is crucial for a sustainable and inclusive development path in Latin America. However, the region performs badly in many higher education dimensions and various challenges remain. Access is low and still very unequal across socio-economic groups. The quality of the higher education system is low when compared with that of OECD countries and other emerging regions. The link with the labour market is not very strong and there are important skill mismatches that lock the potential for growth. Finally, the higher education system is subject to increasing financial pressures and competition from abroad. The incorporation of ICTs in higher education presents an opportunity to overcome these deficiencies.

Higher education is one of the major drivers of economic development and social progress, generating both individual and social benefits. It is particularly relevant to increase innovation and to foster the adoption of new production technologies – a prerequisite for maintaining competitiveness in an increasingly knowledge-based global economy (OECD, 2008). The capacity to innovate, to upgrade production and increase its value-added and to create higher-quality jobs is strongly related to the higher education system's ability to expand the available talent pool and upgrade skills. Additionally, not only does higher education enhance social cohesion and social mobility and foster stronger institutions, it also pays off from an individual standpoint. Better educated individuals have better employment opportunities and higher wages; and they also enjoy significant indirect benefits in terms of better consumption and saving patterns and greater health, satisfaction and life expectancy (Brunner, 2013).

Stepping up economic growth in Latin America, as well as attaining a sustainable and more inclusive development path, requires a higher share of knowledge-based activities on the economy, for which a focus on higher education is crucial. Latin America has experienced a recent period of progress and economic growth which has led to an important expansion of national wealth, along with a substantial reduction in poverty rates from 41.5% in 2003 to 29.6% in 2009 (Socio-Economic Database for Latin America and the Caribbean [SEDLAC]).[1] However, the current development model has not been sufficiently inclusive: the expansion has not led to equally large reductions in inequalities, either from an income perspective or from the point of view of access to and outcomes of higher education. Moreover, this expansion has rested largely on external factors – such as the rise of China and India – and the associated external demand for commodities. Given the moderation of global growth, Latin America should consider ways to increase its competitiveness and both upgrade and diversify its productive structure (OECD/ECLAC, 2012; IDB, 2013). Policies to strengthen and improve the higher education system and to make it more responsive to economic and social needs are therefore crucial.

The transformations that higher education is experiencing as a result of the incorporation of information and communication technologies (ICTs) into teaching and learning represent both a challenge and an opportunity for Latin America. Given the relevance attributed to higher education, a reflection about the challenges it faces is really relevant, particularly in light of the new developments associated to the incorporation of ICTs to teaching and learning and the potential challenges and opportunities brought about by e-learning.

This chapter addresses these issues in two sections. The first section describes the current situation of higher education in Latin America and reflects

upon some of the main challenges facing it today. The second introduces the concept of e-learning and presents some general ideas on how it can help overcome these challenges.

A view of recent trends and challenges in higher education in Latin America

Higher education in Latin America has experienced important developments in recent decades; however, many challenges remain unresolved. This section explores these issues in two parts. First, it reviews the main recent trends and draws a general view of higher education in the region. Second, it identifies and analyses the most crucial challenges, i.e. the inequality in access to and outcomes of higher education, its relatively low levels of quality, its link with the productive system, and the financing difficulties it is facing.

Recent trends and state of higher education

One of the most remarkable events in the field of higher education over past decades across the globe – and particularly in Latin America – has been its massification. From a more exclusive academic model, universities have gradually responded to an increasing demand for higher education, stemming from a combination of factors: accelerated economic growth, an expanding middle class, a larger number of secondary school graduates and a higher component of knowledge-based economic activities, translating into higher returns for investments in high-skill human capital (Brunner, 2013; UNESCO, 2009; UNESCO, 2008).

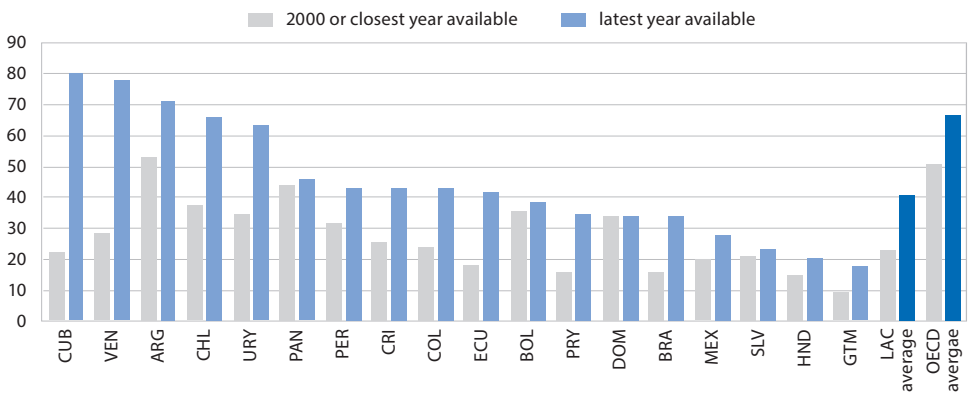
This has translated into an extraordinary expansion of access to higher education in the region. In particular, average gross enrolment ratios for the region almost doubled between 2000 and 2010, from a ratio of slightly above 20% at the beginning of the 2000s to around 40% at the end of the decade. Differences across countries in the region remain quite significant. Cuba, Venezuela, Argentina and Chile showed enrolment rates equal to or above the OECD average. Other countries, such as El Salvador, Honduras and Guatemala, still lagged well behind the Latin American average. Despite progress in the region, the gap between its average enrolment rate (40.5%) and the OECD rate (66.6%) in 2011 was still large (see Figure 1.1).

The expansion in higher education enrolment rates has been associated with a significant enlargement of the private supply of higher education. The increase in demand for higher education has been largely absorbed by private higher education institutions (HEIs), which have grown at a faster pace than public ones. Latin America has the highest percentage (48.6%) of private enrolment in the world (PROPHE, 2010), well above that of the OECD (30%). However, differences within the region are significant. While private institutions in Brazil, Chile, El Salvador, Paraguay and Peru account for over half of higher education enrolment, they have little or no presence in other countries, such as Cuba, Uruguay and Argentina (see Figure 1.2). In some countries, higher education enrolment has mainly expanded through a stepped-up presence of the private sector (Brunner and Ferrada, 2011). Consequently, higher education in Latin America is increasingly commercialised (UNESCO, 2009).

A relevant feature of this expanded access has been the increase in female participation, which has jumped above male participation in most of the region's countries. Around 55% of students enrolled in tertiary education in 2008 were women (UNESCO, 2010). Enrolment across fields of study varies by gender. Women focus more on social sciences, administration, education

Figure 1.1. **Gross enrolment in tertiary education (%)**

Expansion over 2000-11 and comparison across Latin American and Caribbean countries and with the OECD

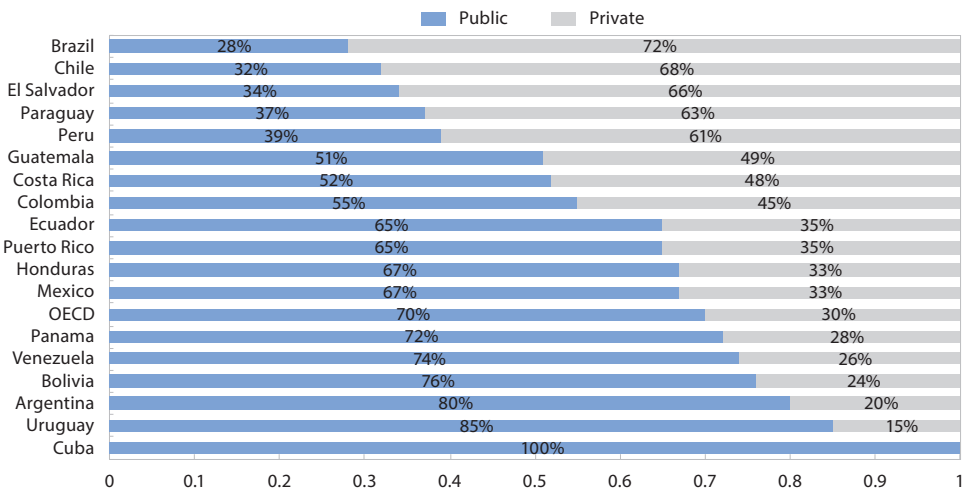


Note: Gross enrolment rates refer to "total enrolment in tertiary education (International Standard Classification of Education 5 and 6), regardless of age, expressed as a percentage of total population of the five-year group following on from secondary school leaving" (UNESCO Institute of Statistics, UNESCO).

Source: based on UNESCO Institute for Statistics (UIS) database, UNESCO, www.uis.unesco.org/Pages/default.aspx.

and services, while men are relatively more present in the areas of science and technology, and engineering, industry and construction (UNESCO, 2010). Female participation is higher than male participation throughout the region, except in Bolivia, Chile and Colombia, where it is slightly lower (Brunner and Ferrada, 2011). However, female participation in the region still remains below the OECD average (UNESCO, 2010).

Figure 1.2. **Enrolment rates in public and private HEIs**



Source: based on UIS Database, UNESCO, www.uis.unesco.org/Pages/default.aspx.

In the last decades, higher education has become more heterogeneous and diverse in terms of types of educational institutions, student bodies, areas of knowledge and regional dispersion. The model of a small number of selective universities has given way to a "diversification into hundreds of institutions with distinct missions and sizes; types of ownership, control and management; programme qualities; selectivity levels; commitment to their environment, local roots or international projection; social composition of their student bodies; expenditure per student, and relations with the state, civil society, and different stakeholders" (Brunner, 2013).

Remaining and upcoming challenges

Today, more people have an opportunity to access and benefit from the positive impact of higher education. However, important gaps still remain in different dimensions of higher education, both within the region and

when compared with other regions. This section explores these deficiencies, focusing on the inequalities in access to and performance in the higher education system, on its quality, on its link with the productive sectors and on its financing.

Inequality in access and performance

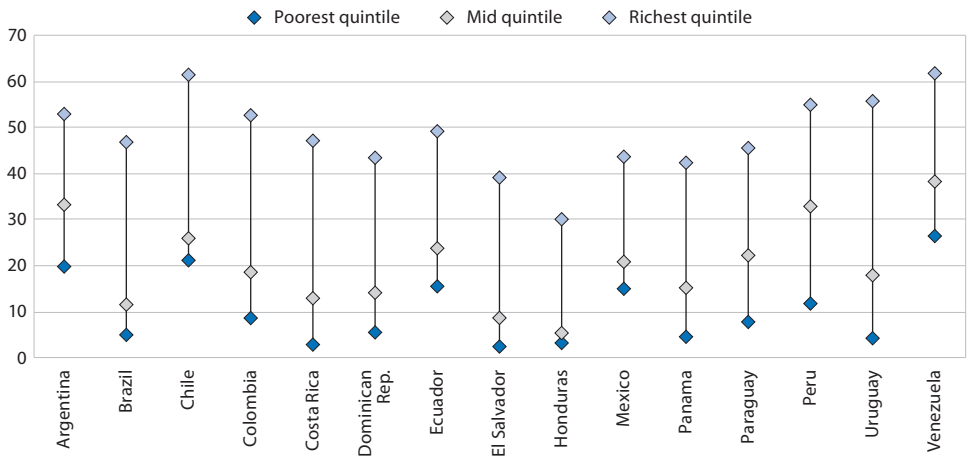
Although higher education has expanded to larger segments of the population, important inequalities in access and performance persist across different socio-economic groups in the region. The increase in access to higher education has not always been distributed evenly across socio-economic groups. In this sense, successful participation in higher education is still reserved for a relatively small segment of the young population. Factors such as income, educational and family background, geographical location or ethnic origin seem to explain much of the divergences across different segments of the population (ECLAC, 2010).

In particular, income remains as a strong determinant of access to higher education. Enrolment rates show significant differences across income groups (Figure 1.3). The poorest quintile rarely shows an enrolment rate above 20%, and even below 10% for many countries in the region. Meanwhile, the richest quintile generally shows an enrolment rate well above 40%, and even above 50% for many countries. Finally, the 10-30% enrolment rates for the mid-quintile further strengthen the idea that access to tertiary education remains far from equitable between income groups, with their enrolment rates being closer to the poorest quintile than to the richest quintile in most countries.

All this suggests that despite the general increase in access to tertiary education in all income groups, inequalities remain large. Some differences in higher education enrolment across income groups stem from their different graduation rates from secondary school and from the strong inequalities among secondary education systems across Latin America (Brunner and Ferrada, 2011). In Chile, for example, income group inequalities in higher education enrolment are significantly larger than in secondary education graduation, indicating that certain additional equity issues arise in the transition from secondary to tertiary education (OECD/World Bank, 2009). Inequalities are present in all the region's countries, although countries such as Argentina, Ecuador, Mexico and Venezuela show relatively smaller gaps in access between the richest and the poorest (Figure 1.3).

Students' performance once enrolled in the higher education system is poor and it also varies significantly across income groups, with large dropout rates mainly among lower income segments. This is partially explained by the fact that the higher education system remains highly fragmented between "elite" universities and the rest. Non-elite institutions have absorbed a great share of students, and in particular those from poorer or less favoured socio-economic backgrounds, thus sometimes further accentuating existing inequalities. In Colombia, for example, the poorest quintile saw proportionally less growth in access than the richest (OECD/IBRD/World Bank, 2013).

Figure 1.3. **Net enrolment rates (%) in tertiary education by income quintiles, 2012 or latest year available**



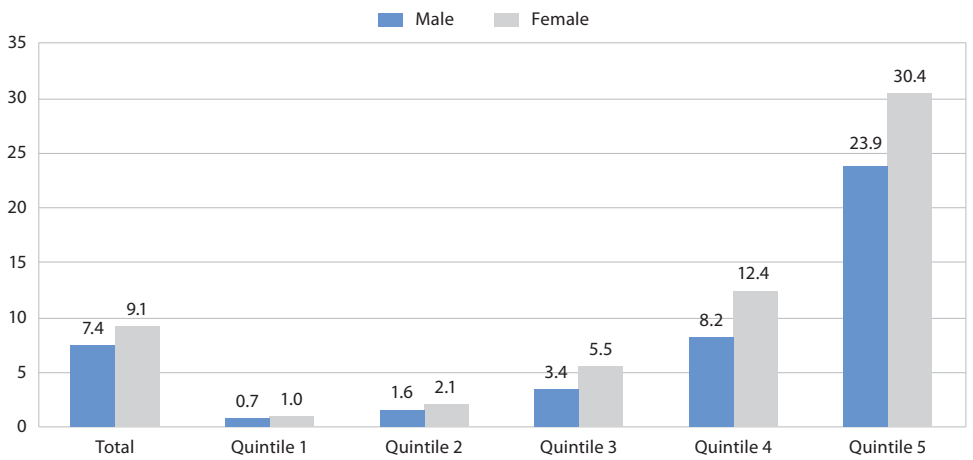
Source: CEDLAS and World Bank (2014), Socio-Economic Database for Latin America and the Caribbean, http://sedlac.econo.unlp.edu.ar/eng.

An analysis of the rates of completion among young people aged 25-29 in the region shows that only 8.3% on average complete at least five years of post-secondary education (the usual duration of a university degree), with a slightly higher completion rate among women than men. When analysed by income quintiles, the differences in completion rates stand out: 27% of students from the richest quintile complete five years of post-secondary education, compared with only 1% of the poorest. Completion rates amongst women are higher across all income quintiles (Figure 1.4) (ECLAC, 2010). A comparison of completion rates with enrolment rates shows that many students drop out during their studies. In fact, according to some studies (ECLAC, 2003; UNESCO-IESALC, 2006) the average dropout rate is around 50%. Some recent

studies (De Wries et al., 2011) question the magnitude of the problem. They claim the dropout rates do not account for the fact that some students leave their degrees to begin other tertiary education studies or access the labour market and argue that the problem is therefore more limited. Nevertheless, dropout rates in the region remain large and affect more deeply students in the lower income quintiles, fostering inequality (UNESCO-IESALC, 2006; OECD/World Bank, 2009). While the reasons behind these dropout rates vary, they are strongly related to socio-economic circumstances. These include not only income, but also the student's cultural background or place of residence and the need to work for self-subsistence or to contribute to the family finances, among others.

Figure 1.4. **Rate of completion of five years of post-secondary education, regional average by income quintile**

(2008 or closest year)



Source: based on ECLAC (2010), *Social Panorama of Latin America 2010*, ECLAC, Santiago de Chile.

New forms of potential inequalities and exclusion are also emerging, such as those related to the "digital gap". The new ICTs are part of today's economies and, as such, they are essential elements of higher education and are increasingly used for teaching and learning. However, differences in access to ICTs are still large across socio-economic groups in the region. Students less familiar with ICTs may face stronger difficulties and more barriers to benefit from the opportunities of their incorporation into education systems. The unweighted average for Latin America for 2008 or the closest year available

shows that 25.2% of households in the richest quintile had access to the Internet, compared with only 1.2% of the poorest quintile (Katzman, 2010). This digital gap risks heightening existing inequalities and excluding students from the opportunities offered by higher education (ECLAC, 2010).

The challenge is for higher education to effectively equalise opportunities and promote social inclusion and social mobility. However, its expansion has been characterised by a "differentiation in the scope of coverage, an increase in the cost of study, and heterogeneity in the levels of quality of institutions of higher education, thus resulting in more exclusion than inclusion" (UNESCO, 2008). The persistence of large divergences in access and attainment across socio-economic groups shows that there is still a big gap which may be a source of reproduction of already existing inequalities.

Quality of higher education

One of the main challenges for higher education in Latin America is related to the fact that its recent expansion has often occurred at the expense of quality. The proliferation of numerous HEIs in response to an increasing demand generally lowered the average levels of quality in different ways: *i)* the influx of students from less educated backgrounds may have affected quality, as some need more support to develop certain competencies and learning habits; *ii)* universities have shifted to a model where teaching is their predominant focus (and in fact, most Latin American HEIs today are teaching-only institutions), which is likely to have a detrimental effect on research activity and knowledge creation; *iii)* the rapid emergence of HEIs in relatively weak regulatory environments may have lessened quality requirements, drawing in inadequately trained teachers; and *iv)* the growing importance of private education is leading to a certain "commercialisation" of higher education, a process by which the student admission mechanism in some universities is uniquely based on the income and capacity to pay fees (Brunner, 2013; Brunner and Ferrada, 2011; World Bank, 2012).

In fact, Latin American universities perform poorly when compared with international institutions. Latin American universities never appear at the top of worldwide university rankings and only a few manage to even be included in these lists. As an example, the Times Higher Education World University Ranking (2014-15)[2] did not place a single Latin American university among the top 100, and only four among the top 400. Additionally, only a few Latin American universities appear recurrently in international rankings, indicating considerable divergences in quality levels among HEIs. This partly explains the

important differences in the economic returns of education among individuals who have completed higher education in Latin America (De la Torre and Messina, 2013). However, other factors at play explain this phenomenon, such as socio-economic background and parental education – which, in addition to other impacts, affect the network to which individuals have access and thus determine their chances of finding good and well-paid jobs –, early childhood factors affecting the ability to learn and discrimination in the labour market against people from certain backgrounds (OECD, 2011). Thus, differences in quality across HEIs can perpetuate existing socio-economic inequalities. In addition, countries in the region have a largely different presence in university rankings. Most top universities are concentrated in Brazil, Mexico, Chile, Argentina and Colombia. As shown by the QS University Rankings in 2014, out of the top 200 universities in Latin America 56 are located in Brazil, 30 in Mexico, 27 in Argentina, 23 in Chile and 24 in Colombia (QS University Rankings, 2014).

Countries' poor performance in these rankings provides valuable information but it fails to capture some relevant dimensions. Thus, alternative measurements of quality of higher education could be developed. These rankings reveal the region's significant lack of excellence in higher education, with a few universities and countries concentrating the higher-quality institutions. However, they use a narrow range of criteria that can create a distorted vision of educational success, failing to capture some relevant elements of the teaching and learning process. Their bias towards established universities and research may penalise Latin American universities, partially ignoring factors such as the quality of teaching, campus atmosphere, or universities' "social" mission (*The Economist*, 2011). To address the shortcomings of current metrics of higher education quality, the OECD recently undertook a feasibility study to establish whether an international assessment of what students in higher education know and can do upon graduation is feasible (Assessment of Higher Education Learning Outcomes [AHELO]). The study concluded in 2012 and provided valuable lessons on what worked well and which aspects proved more challenging and would need to be reconsidered to take the initiative forward. At the time of writing this report, the future AHELO is not yet known but this type of direct and internationally comparable evaluation of higher education student performance looks promising for comparing the performance of teaching-focused higher education institutions on a level playing field (OECD, 2013).

One of the key dimensions determining the quality of higher education is related to the teaching profession, which is not always up to the highest standards in the region. The teaching profession in the region shows various limitations and deficiencies. Many teachers lack postgraduate degrees,

have limited pedagogic training, are not well paid and work within poorly designed incentive schemes (Brunner and Ferrada, 2011). And all this takes place in a changing environment: the massification of higher education, the incorporation of new students and the resulting new learning demands, the proliferation of new programmes and fields of knowledge and the growing scrutiny from public authorities to comply with quality levels create new pressures for teachers. Furthermore, the introduction of ICTs entails additional demands for teachers that can erode their levels of performance, and which have often led school authorities to rely on very young and inexperienced teachers (Brunner and Ferrada, 2011).

In a context of expanding HEIs, mechanisms to assure, measure and evaluate their quality have become increasingly relevant. In fact, this is one of the recent areas of concern in public agendas in the region as public authorities seek to guarantee that higher education serves its economic and social functions. Yet while the number of evaluation agencies has grown (in some countries more than others), there is room for improvement. For example, education authorities need to open up accreditation systems to encompass the diversity of existing HEIs, embrace different institutional models, improve evaluators' qualifications and strengthen quality control processes. Further, given the increasing internationalisation of higher education, ensuring the quality and comparability of degrees becomes even more important. Regional co-operation in this matter takes place through the Ibero-American Network for the Accreditation of Quality in Higher Education (RIACES).

To a great degree, universities' rigid governance models explain their low quality and performance levels in international rankings. In many countries, more flexible governance models and favourable regulatory environments have proved to provide propitious conditions for a dynamic and innovative development of universities (Salmi, 2013). By contrast, many experts point to higher education governance models and national policies in Latin America as one of the main reasons for their low quality and presence in rankings (Bernasconi, 2013). Important areas for improvement include allowing the state to take a more prominent role in higher education policy making, given that most universities do not have quality leadership or the appropriate internal platforms to adopt bold reforms; introducing more long-term and strategic decision making in universities to avoid the limitations imposed by the existing endogamy in HEIs, which leads to sometimes biased, partisan and conservative decision making; and introducing reforms to renew the faculty, devote more resources to research, or enhance effective career structures and salaries for professors (Bernasconi, 2013).

The link with the productive system

Higher education has a role to play in fostering economic dynamism, competitiveness and growth. Creating, disseminating and incorporating knowledge into production processes to increase productivity and the capacity to innovate is crucial to fostering competitiveness in the global and knowledge-based economy. Upgrading human capital in an economy favours the integration and participation into higher segments of global value chains. It also supports the expansion of potential growth. Additionally, providing individuals with better and higher-level education increases their chances of participation in the labour market with better-quality and higher-paid jobs.

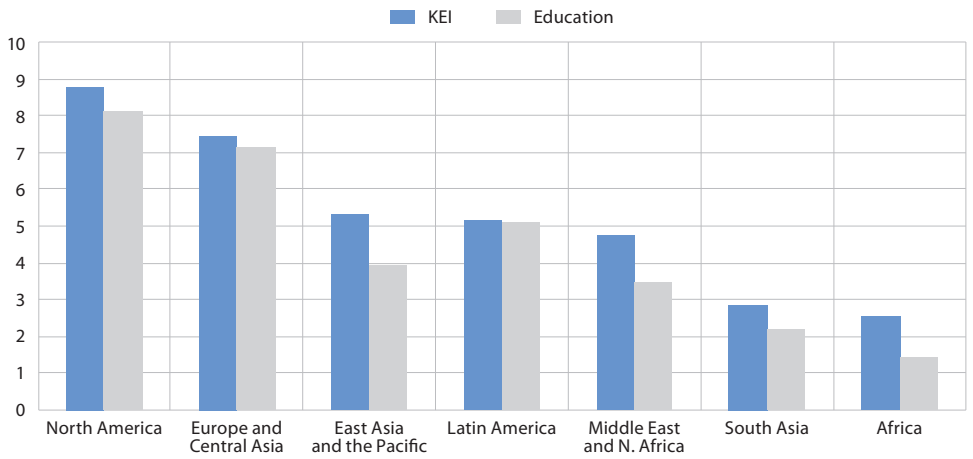
However, a significant mismatch between demands of the productive sectors and supply by the education system means that higher education systems are failing to serve effectively the needs of the economy; around 36% of the region's firms point to the difficulty of hiring adequately trained employees as a major obstacle (OECD/United Nations/ECLAC, 2014). They struggle to find: *i)* soft skills, such as critical thinking, teamwork or problem-solving capacities; and *ii)* technical and technological capacities and the competencies needed for new-economy jobs (IDB, 2012; OECD/ECLAC, 2012). Thus, education systems should enable skilled workers to perform complex tasks and adapt quickly to a changing environment and the evolving needs of the economy. Higher education can play a decisive role in providing these kinds of skills and fostering innovation and the incorporation of technologies into production.

The recent decline in wage premiums for workers with university degrees shows that higher education is less valued, for reasons that go beyond the fact that the higher education system is not supplying the right skills. On the one hand, the low availability of high skills can discourage entrepreneurs from investing in projects requiring highly skilled workers, thus creating a vicious circle wherein the education system prevents the economic structure from upgrading (World Bank, 2012). On the other hand, the region's commodity boom has concentrated the demand for labour in relatively low-skill sectors, thus favouring the unskilled workforce. Meanwhile, the subsequent appreciation in exchange rates may have eroded the competitiveness of some skills-biased sectors with less weight in the economy, thus reducing the demand for skilled workers (Gasparini et al., 2011).

Overall, the higher education system must serve the general objective of fostering competitiveness and inserting the economy in the global knowledge world. The World Bank's Knowledge Economy Index measures the ability

of a country or region to generate, adopt and diffuse knowledge and use it effectively to foster economic development. It shows that Latin America lags well behind the developed world both in an overall index of the level of preparedness for the knowledge economy, as well as in the education component of this index (Figure 1.5). Through its "higher education and training" indicator, the Global Competitiveness Index (World Economic Forum, 2012) provides valuable information on the higher education system's capacity to promote competitiveness. It measures "secondary and tertiary enrolment rates as well as the quality of education as evaluated by the business community" as a main determinant of a country's capacity to compete. It shows that Latin American countries perform very poorly: only Costa Rica (#21), Colombia (#77), Chile (#91), Ecuador (#93) and Bolivia (#96) rank among the top 100 out of 144 countries.

Figure 1.5. **Knowledge Economy Index (KEI) by region, 2012**



Note: The Knowledge Economy Index (KEI) takes into account indicators in four areas: economic incentive and institutional regime; education; innovation; and information and communications technologies. The KEI results from calculating the average of a country's or region's normalised scores in these four areas.

Source: World Bank, Knowledge Assessment Methodology 2012 Database, http://einstitute.worldbank.org/ei/course/using-knowledge-assessment-methodology-kam.

Higher education financing

One of the main challenges for the higher education system is related to its need to find a sustainable funding model that also facilitates its effective contribution to society and the economy. Alongside expanding enrolment, higher education functioning costs have increased. Growing wages for

knowledge-intensive sectors, such as the teaching profession, have led to higher teaching costs, while intense competition has led to higher spending to improve quality and attract students (Brunner, 2013). These combined factors have put higher education systems under financial pressure. A rethinking of methods of obtaining and sharing funding among beneficiaries has been taking place in recent years.

Higher education offers considerable public and private returns and the arguments in favour of cost sharing between the state and students/households are solid. Higher education generates a number of social benefits and public externalities, mainly related to growth, social cohesion, the creation of a knowledge base and the transmission of certain values underpinning institutions and democracy. Public funding therefore continues to be unquestionable. However, the private returns from higher education are also high and given the system's financial constraints, students and graduates could bear some of the costs of the services they receive (Brunner, 2013). This would also allow the allocation of public funds to the areas with social relevance (e.g. through a comprehensive system of student loans or grants, mainly aimed at disadvantaged groups).

E-learning and recent developments in teaching and learning in higher education

ICTs are transforming the way teaching and learning take place in higher education. Since their emergence, they have been increasingly incorporated into education, not only as a gradually larger curricular component, but more importantly as a means to improve teaching and learning practices.

Broadly defined, e-learning denotes "the use of information and communication technology to enhance and/or support learning in tertiary education" (OECD, 2005). A number of different higher education modalities can be included depending on the different degrees of ICT involvement. The European Union's definition describes e-learning as "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration" (European Commission, 2001) and thus incorporates distance as an important feature of e-learning. In recent times, e-learning has experienced major breakthroughs, already seen by many as an "education revolution" that will change the current understanding of higher education. Many

see the emergence of massive online open courses (MOOCs) as a potential transformative force, allowing students from around the world to access for free or at very low cost courses offered by top universities.

This new approach to education entails some challenges and potential risks that are still difficult to fully envisage. It also offers strong opportunities to expand quality higher education across the globe. E-learning in general, and MOOCs in particular, are here to stay. Alongside these major breakthroughs, a number of interconnected issues are emerging. The future of residential higher education, the role of teachers and classroom experiences with peers, the right balance between online and face-to-face learning, quality assurance and other issues such as certification are still at the heart of an open and vibrant debate. Nevertheless, while many uncertainties remain, HEIs, politicians and public opinion are increasingly aware that these technologies can profoundly transform and democratise higher education globally, improve its outcomes and increase its social and economic impact.

Latin America risks falling behind by failing to adapt to the changing dynamics of higher education. It also has the chance to overcome the challenges and reap the potential benefits these can bring to higher education. E-learning and the emerging higher education patterns can help alleviate the inequalities in access to and outcomes of higher education, its relatively low quality and limited capacity to respond to the needs of the modern economy and the financial pressures brought to bear on the system.

E-learning represents a unique opportunity to attenuate the inequalities in access to higher education and improve access across socio-economic groups. One of the main differentiating factors in access to higher education is income and socio-economic background. In principle, new ICTs facilitate more democratic participation in higher education – as long as a large part of the population has guaranteed access to them – thus reducing the importance of income or the background. New technologies also enable people from rural and isolated areas, as well as disadvantaged and targeted groups, to enrol and participate in higher education. Finally, e-learning introduces more flexibility in teaching and learning practices, thus facilitating participation by different segments of the population (e.g. part-time workers and elderly persons).

E-learning can also offer many potential benefits with regard to quality. First, ICTs are triggering potentially beneficial new learning and teaching practices, with significant room for improvement in pedagogical models and learning methods. Second, programmes from high-quality HEIs can be made available to more people, offering new opportunities to participate and benefit

from the highest standards of teaching and choose a course of study from available courses in the global higher education network.

E-learning can also have a considerable impact on the productive system. First, it trains future workers to use, and engage in problem-solving with, new technologies. Second, it enables the education system to respond to the changing demands of the productive sectors, for example by facilitating workplace or lifelong training. Third, it promotes new learning methods, such as interactive and community learning, which stimulate the development of soft skills that are highly valued by employers and essential to many new-economy jobs.

Finally, new technologies can lower the financial costs of providing higher education. While fixed costs can be high (owing to the need for large technology investments, maintenance and upgrading), marginal costs per student could decrease through reaching a larger audience. However, the financial implications of e-learning for HEIs are still unclear.

The next chapter delves deeper into these issues, focusing on two main areas. First, it analyses the global evolution of e-learning and the main features and potential implications of some of its most recent developments. Second, it frames these issues into the Latin American context and analyses the potential impact in mitigating or exacerbating the main higher education gaps and challenges (i.e. access to and quality of the higher education system, and its link with the productive sectors).

Notes

1. Poverty rates are calculated as a poverty headcount-weighted ratio and presented as a percentage of country population. The poverty line is set at USD 4 at 2005 purchasing power parity.
2. This index uses 13 criteria focusing on 5 main areas: teaching (30%), research (30%), citations (30%), industry income (2.5%) and international outlook (7.5%).

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