

Chapter 5

Tertiary education in Colombia

This chapter covers tertiary education (TE) and the key policy issues Colombia faces as it seeks to transform a higher education sector focused on academic education into an integrated system that encompasses all institutions, including technical, technological and professional education. It explores how Colombia can continue improving the quality and relevance of TE while also attracting and accommodating a larger and increasingly diverse student body. It highlights the need for enhanced efforts to guide and support students throughout their TE career, in particular young people from disadvantaged backgrounds, and address the economic and geographical obstacles to access. It also examines policies to reinforce the quality assurance system to guarantee a minimum quality of provision and foster a culture of improvement. Finally, the chapter looks at the system-level changes needed to deliver these reforms successfully, including a fundamental revision of tertiary funding and stronger local governance to connect TE institutions with the economy and labour market.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Tertiary education (TE) refers to all formal post-secondary education, university and non-university, lasting at least two years (ISCED levels 5-8).¹ In Colombia, as across OECD countries, the diversification of education providers and changing labour-market demands for skills has led to an increasingly complex TE landscape where traditional institutional boundaries are becoming blurred. A major priority for the country is to manage the transition from a higher education sector (*educación superior*) focused mainly on academic education, to a more diverse but integrated system that encompasses all forms of education leading to tertiary qualifications, including technical, technological and professional education.

TE is vital if a nation is to succeed and prosper. A growing body of evidence shows the positive impact of higher levels of educational attainment on a wide range of social and economic outcomes, from wage growth and productivity to political engagement and social equality (OECD, 2015b; Arango and Bonilla, 2015). The growing importance of TE is reflected in surging demand, in particular in emerging economies, like Colombia, where the skills needed are fast evolving. Today, Colombia's gross enrolment rate in TE is close to 50%, double that of a decade ago, and 21% of 25-64 year-olds had attained a tertiary-level education. Of these, around half have graduated from programmes at the bachelor's degree level or equivalent,² while the rest have degrees from shorter, vocational tertiary programmes³ (UNESCO-UIS, 2015; OECD, 2015a). Around 84% of those with TE are in employment, compared to 72% among those with an upper secondary level of education (OECD, 2015a). Importantly, Colombian tertiary graduates are more likely to be in formal employment, which is better paid and more secure, than those who did not progress beyond school (Castaño, 2012). A recent national consultation showed that some 98% of Colombians consider TE to be important to the future of the country, and strengthening the TE system is a central plank of the government's National Development Plan 2014-2018 (*Plan Nacional de Desarrollo 2014-2018*, PND) (CESU, 2014; DNP, 2015).

In 2012, the OECD and the World Bank undertook a detailed review of TE policy in Colombia at the request of the government (OECD/IBRD/The World Bank, 2013). It noted many achievements, but also identified several issues and challenges (Box 5.1). These were echoed in the *Commitment for Excellence 2034*, the final report of an extensive consultative evaluation undertaken between 2012 and 2014 by the National Council of Higher Education (*Consejo Nacional de Educación Superior*, CESU) (Box 5.4). The report concluded:

“The current system of tertiary education (principally but not totally structured around Law 30, 1992) faces enormous challenges to quality, requires a more equitable and universal funding model, needs a less confusing system design for the country, demands greater accountability and transparency and greater efficiency of tertiary education institutional management, to provide an

education consistent with the regional national context and relevant to the world. There is awareness that barriers to access should be “eliminated to encourage interaction, integration and mobility between institutions and between the different actors within tertiary education” (CESU, 2014: 24).

Box 5.1. Main findings of the 2012 OECD-World Bank review of tertiary education in Colombia

1. Though the principle of fair and equitable access to tertiary opportunities is widely supported, this has yet to be achieved in practice.
2. Colombia’s school leavers are far less ready and well-prepared to enter and succeed in tertiary education (TE) than their counterparts in competitor countries. They are younger and have achieved lower educational standards, unless they attended elite private schools. This results in inequity in the access of less advantaged students and high dropout rates.
3. The systems for allocating public resources between tertiary education institutions (TEIs) are not well aligned with the country’s economic needs and student aspirations. Nor do they take enough account of how institutions differ in quality, performance and value for money.
4. The tertiary quality assurance system still needs considerable improvement, particularly as it applies to non-university programmes and institutions.
5. Technological and professional technical education, vital to the country’s economy, is regarded as the poor relation of the university sector by students, their families and tertiary providers alike. Large numbers of technical and technological (T&T) providers would prefer to upgrade to university level than focus on becoming excellent T&T institutions; large numbers of their students want to move on to university rather than into the labour market when they graduate.
6. Colombia still has some way to go to establish ladders and pathways through the system for students wishing to progress up through the tertiary levels. A simpler and clearer hierarchy of tertiary degrees and qualifications would be helpful.
7. There is also scope for improving the links between institutions, particularly public universities, and employers; the level of investment in research; the transparency of many important processes and decisions, including the financial arrangements of private institutions; accountability for outcomes and use of resources; and the internationalisation of the tertiary system.

Source: OECD/IBRD/The World Bank (2013), *Reviews of National Policies for Education: Tertiary Education in Colombia 2012*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264180697-en>.

This chapter looks at Colombia’s progress on reforming TE since 2012 and how policy priorities have evolved. It provides an overview of the main characteristics of TE and identifies three policy issues that the sector needs to

address if it is to realise its potential for national development: equitable access, higher and consistent quality, and effective governance and funding.

Context and main features

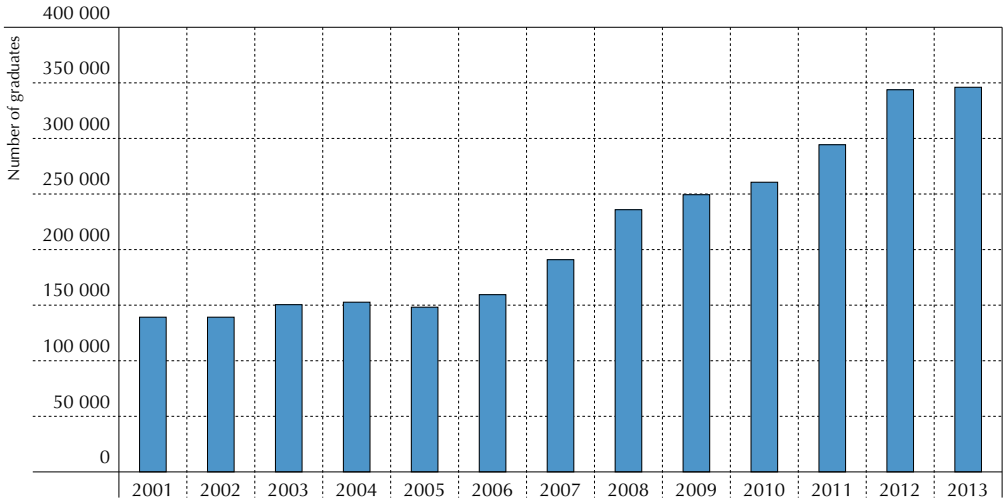
Recent developments and current policy goals

The Colombian tertiary education system has made remarkable progress over the last decade. Rising numbers of young people, particularly students from low-income households, have entered and graduated from TE (OLE, n.d; DNP, 2015 and Figure 5.1). The range of programmes has widened, giving access to an increasing, and increasingly diverse, student population. Colombia's very best universities are achieving international standards and many more young people have attained the professional technical and technological knowledge and skills needed to expand Colombia's economy. In the Colombian Institute for Student Loans and Study Abroad (*Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior*, ICETEX), the country has an excellent student loans system, the first in the world, which has given students from less advantaged families better and fairer chances to undertake TE. The country's National Training Service (*Servicio Nacional de Aprendizaje*, SENA), is generally agreed to be a useful and business-friendly provider of technical and technological (T&T) education. Impressive information systems have been set up for gathering data on education institutions, analysing the reasons for student dropout rates and evaluating student performance. With the introduction in 2009 of the national standardised assessment, SABER PRO, Colombia established itself as a pioneer in assessing the value-added of TE to students' skills.

The PND 2014-2018 outlines how Colombia plans to build on these achievements in the years ahead. It recognises that if TE is to support national development goals, it needs to offer greater access to students from disadvantaged groups and regions, higher quality and more relevant programmes, and better integration between levels to remove barriers to the progressive acquisition of higher skills. In order to achieve these overarching objectives, the PND 2014-2018 introduces the following principal policies:

- Establish the National System of Tertiary Education (*Sistema Nacional de Educación Terciaria*, SNET) to restructure all education and training after upper secondary education into two pillars: a university pillar and a tertiary vocational education and training (VET) pillar.
- Complete and implement the National Qualifications Framework (*Marco Nacional de Cualificaciones*, NQF) to classify and structure knowledge, skills and attitudes into levels. The NQF will also enable all graduates to demonstrate to future employers their skills and competencies.

Figure 5.1. Tertiary education graduates (2002-13)



Source: OLE (n.d.), “Estadística de interés”, Observatorio Laboral Para la Educación website, www.graduadoscolombia.edu.co.

- Establish a National System for Credit Accumulation and Transfer (*Sistema Nacional de Acumulación y Transferencia de Créditos, SNACT*), with guidelines to be defined by the Ministry of National Education (*Ministerio de Educación Nacional, MEN*). Along with the NQF, this system is intended to facilitate mobility between educational institutions, levels of training and programmes.
- Support tertiary education institutions (TEIs) in improving quality, and improve the efficiency and relevance of the quality assurance system. A National Quality System for Tertiary Education (*Sistema Nacional de Calidad de la Educación Superior, SISNACES*) will be established to bring together existing quality strategies and agencies.
- Design and implement the government’s “master plan” for expansion of coverage with quality: the aim of this plan is to close access, equity and quality gaps between rural and urban areas and between Colombian regions or departments.
- Support advanced training of teachers. In particular, strengthen training at master’s and doctorate levels, ensuring that programmes meet the necessary quality standards, and promote research from these levels.

Governance

Tertiary education is regulated by Law 30 of 1992,⁴ and the freedom of teaching, learning and research for tertiary institutions guaranteed by the constitution. The national government, through the MEN and the Deputy Ministry of Higher Education, has lead responsibility for TE policy making, management and oversight, as it does for every stage of human capital development in Colombia. However, many other national bodies and agencies support the work of the MEN, creating a particularly complex governance structure. Governance is rendered all the more diffuse by the considerable autonomy of tertiary institutions in the country.

The National Council for Higher Education (*Consejo Nacional de Educacion Superior*, CESU), an agency with planning and co-ordinating functions, provides advice and recommendations to the MEN on TE development and quality assurance. CESU is chaired by the Minister of Education and its members come from academia, science, business and other public agencies. The MEN's management and administration system is complemented by the National Inter-sectorial Commission for Higher Education Quality Assurance (*Comisión Nacional para el Aseguramiento de la Calidad de la Educación Superior*, CONACES), which evaluates the basic requirements for the creation of academic institutions and programmes, and the National Accreditation Council (*Consejo Nacional de Acreditación*, CNA), which evaluates the voluntary "high quality accreditation" system (see below). In addition, the Association of Colombian Universities (*Asociación Colombiana de Universidades*, ASCUN) represents and acts as an interlocutor for Colombian universities with the government for the promotion of TE quality, autonomy and social responsibility.

SENA, which is part of the Ministry of Labour, not the MEN, also plays a significant role in shaping the development and delivery of TE. An increasingly important provider of vocation courses at the upper secondary level, SENA already dominates the provision of tertiary VET programmes, as well as being the most important provider of non-formal VET (known as education for work and human development, EWHHD). SENA has considerable autonomy in relation to the national government, although new systems for accreditation and certification are intended to improve its integration into the TE sector.

The governance arrangements for TEIs are marked by considerable autonomy, though this varies by institutional type. All TEIs are autonomous legal entities, with fewer restrictions and controls than in most developed countries, although their degree of autonomy might be compared with universities in the United Kingdom. In Colombia, TEIs may generate and modify their own statutes; create, organise and develop their own academic programmes; define and organise their own academic, teaching, scientific

and cultural activities; grant their own degrees; select their own teachers; decide their own criteria for admitting students; and decide how to spend their institutional resources.

Private-sector TEIs may be private non-profit corporations, foundations or solidarity institutions; they are governed according to the law and accounting requirements applicable to other organisations in their category. The OECD-World Bank 2012 report observed that Colombia's rules and requirements for private non-profit corporations are not sufficient to ensure the transparency of TEIs that a well-functioning, student-centred system requires when it comes to financial arrangements, processes, decision making and value for money from publicly funded student support (OECD/IBRD/The World Bank, 2013).

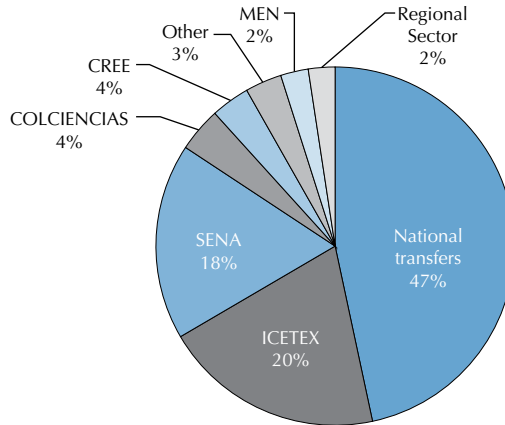
At the institutional level, most TEIs have a traditional governance structure in which the rector and the governing board are the main decision makers. Governing boards include a range of stakeholders, notably the rector and his/her staff, faculty, students and sometimes government representatives. Interviews conducted during the review visit pointed to the lack of any representatives of the wider public interest, in particular the private sector and employers, and the limited incorporation of national and regional development goals in institutional decision making, a concern also expressed in the OECD-World Bank 2012 report (OECD/IBRD/The World Bank, 2013).

Funding

In 2013, total public spending for TE amounted to COP 5.6 trillion (Colombian pesos; USD 2 billion, as at October 2015), of which close to half (47%) was in the form of direct transfers from the national government to TEIs (MEN, 2015a and Figure 5.2). An additional 20% was provided through student loans via ICETEX, the national government body for student loans. The majority of ICETEX loans go to less affluent students, though ICETEX also supports Colombian graduates studying outside the country and short-term visitors from abroad. SENA contributed 18% of total TE funding and regional governments (departments and municipalities) just 2.4%. Other agencies that fund TE include the Administrative Department of Science, Technology and Innovation (*Departamento Administrativo de Ciencia, Tecnología e Innovación*, COLCIENCIAS), which directs and co-ordinates national policy on science, technology and innovation; and the Fund for the Development of Higher Education (*Fondo de Desarrollo de la Educación Superior*, FODESEP), which helps fund special projects for TEIs through various credit options, both directly and through commercial banks. These include loans to T&T institutions to develop computer networks or acquire equipment. The PND 2014-2018 plans for FODESEP to be integrated within ICETEX. Public institutions can also charge fees and generate income from research contracts

and donations. Self-generated income makes up around 47% of the total income of Colombian public tertiary institutions (CESU, 2014).

Figure 5.2. **Public spending on tertiary education (2013)**



Source: MEN (2015a), “OECD-Colombia education and skills accession policy review: Country background report”, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.

The bulk of national transfers to TEIs are based on historical allocations set over two decades ago. While enrolment has increased five-fold over this period, allocations have not evolved to reflect student numbers, nor to address significant changes and differences in per student cost across institutions and programmes. Considerably more public resources are allocated to universities than to other public TEIs. In 2012, USD 2 385 was allocated for every university student, USD 130 for students in university institutions and USD 520 for students in T&T institutions. Some public universities receive a much higher subsidy per student than others: in 2012 the government subsidy varied from USD 5 682 for the National University of Colombia to USD 294 for the Francisco José de Caldas District University (MEN, 2015a). As the OECD and World Bank 2012 report noted:

“According to Law 30 of 1992, the main reference criteria for distributing direct government contributions to public universities and institutions are the budget and costs recorded in 1993, adjusted for inflation. The present allocation model does not take unit costs into consideration; [...] no allowance is made for the distribution of students by levels and academic programme. The model does not reward institutions for efficiency (minimising dropout, maximising completion rates) or relevance (employment outcomes of graduates),

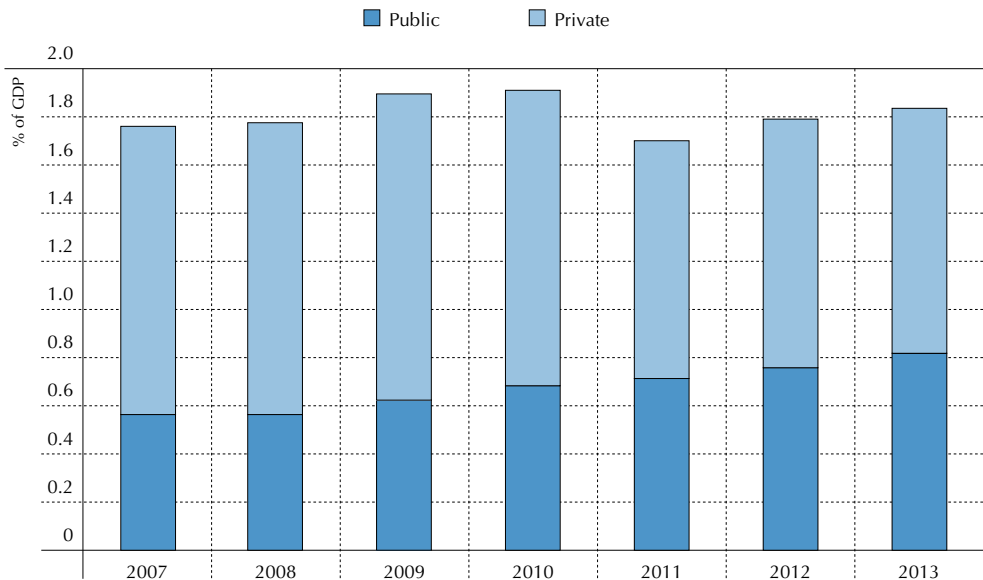
and does not even meet the additional costs that institutions incur as a result of increases in the number of enrolled students,” (OECD/IBRD/The World Bank, 2013: 278-279).

The Colombian government put forward useful proposals to reform the allocation system in 2011, but these fell when the bill to amend Law 30 was withdrawn. Notwithstanding efforts to improve the effectiveness of resource allocations through student loans and other measures, the present unreformed system of national transfers has serious implications for the quality and scope of provision at the different institutions (see Policy Issue 3).

Private institutions are funded by students’ fees. The 2012 OECD and World Bank report found that fees in private institutions were about six times those in public institutions (OECD/IBRD/The World Bank, 2013). Students in private institutions can also access ICETEX loans if their institution has signed an agreement with ICETEX.

Over the period 2007-13, private spending on TE has been somewhat higher than the public-sector contribution, but the difference has narrowed as the public sector contribution rose (Figure 5.3). Total TE expenditure as a percentage of gross domestic product (GDP) peaked at 1.9% in 2010, falling to 1.7% in 2011 and then rising again, to 1.8% in 2013.

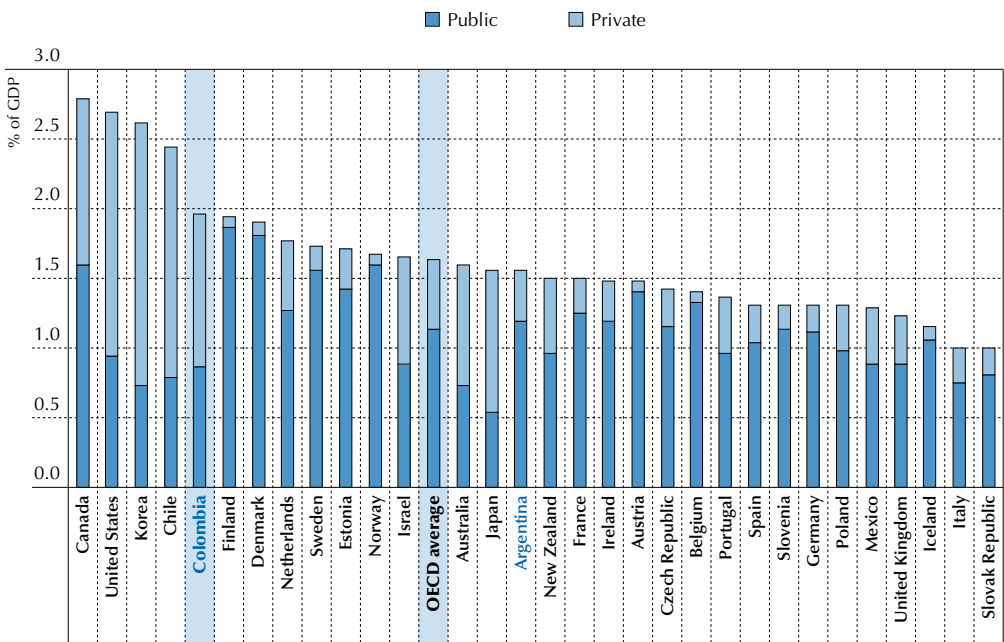
Figure 5.3. **Expenditure on tertiary education from public and private sources, percentage of GDP (2007-13)**



Source: MEN (2015a), “OECD-Colombia education and skills accession policy review: Country background report”, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.

As Figure 5.4 shows, in 2011 Colombia spent more on TE as a percentage of GDP than the averages for OECD and Latin America and the Caribbean (LAC) countries, and more than most of the OECD countries shown, except Canada, Chile, Korea and the United States. Colombia resembles Chile, Japan, Korea and the United States in having a greater share of private rather than public investment in TE. Public spending per student as a percentage of GDP per capita, while below the OECD and LAC averages, is similar to levels in Australia and the United States, and above Chile and Korea (OECD, 2014b).

Figure 5.4. Expenditure on tertiary educational institutions from public and private sources, percentage of GDP (2011)



Note: Non-OECD countries are shown in blue.

Source: OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.

Recently, several new sources of funding have been established for TE investment. Since 2012, 10% of Colombia’s oil and mining royalties have been earmarked to fund science, technology and innovation. Law 1607 of December 2012 created a special allocation for public institutions to be funded from the Income Tax for Equality (CREE)⁵ which could be used to supplement institutional strengthening projects. The CREE was reformed in 2014 to become

a permanent tax and to increase funds for TE from 0.4% to 0.6% of the tax base from 2016. In 2013, the government confirmed the National Pro-University Stamp Law (*Ley de Estampilla Pro-Universidad Nacional*), extending a stamp tax to the National University of Colombia and other public universities to help with infrastructure improvements, development of research and innovation, student welfare programmes and the reduction of fees for the poorest students, those in income strata 1, 2 and 3 (out of six). Most recently, the government created 10 000 new scholarships a year for four years from 2014 (known as Hard Work Pays Off, *Ser Pilo Paga*), which has significantly increased loan financing for students from low-income groups with good results in the national exit exam from upper secondary education, SABER 11. In 2015, the government also introduced a new ICETEX student loan known as Choose (*Tú Eliges*) which offers more flexible repayment schemes for disadvantaged students from SISBEN levels 1-3⁶ with SABER 11 results higher than 280 points.

Tertiary institutions

Colombia's tertiary system is more complex than most. It has four categories of TEIs offering six different levels of tertiary qualification. Institutions in higher categories may offer programmes appropriate to lower categories, but not vice versa.

1. **Universities** offer academic undergraduate programmes and graduate programmes leading to master's and doctoral degrees (ISCED 2011 levels 6, 7 and 8; see endnote 1), and engage in scientific and technological research.
2. **University institutions** and **technological schools** offer undergraduate programmes up to professional degree level (ISCED 2011 level 6) and a type of graduate programme known as a "specialisation", a career-related qualification above bachelor's but below master's level.
3. **Technological institutions** offer programmes up to technologist level (ISCED 2011 level 5), distinguished from professional technical level by their scientific basis. Students may go beyond this to professional degree level provided the programmes are taught as "propaedeutic cycles", meaning students proceed to their professional degree first via a technical, then a technological qualification, each conferring progressively wider and higher-level knowledge and skills in the same subject area.
4. **Professional technical institutions** offer technical level training for a particular job or occupation (ISCED 2011 level 5).

The latter two groups are known collectively as T&T institutions. Each of the four categories contains both public and private institutions. In 2013 there were 82 public institutions and 206 private (Table 5.1). The number of

institutions has been relatively stable in recent years, growing from 281 to 288 between 2009 and 2015.

Table 5.1. Tertiary education institutions, by type (2013)

Sector/level	Public	Private	Total
University	32	50	82
University institution/ technological school	29	92	121
Technological institution	12	39	51
Professional technical institution	9	25	34
Total	82	206	288

Source: MEN (n.d.a) (2015), “SNIES: Sistema Nacional de Información de la Educación Superior”, Ministerio de Educación Nacional (Ministry of National Education) website, www.mineduccion.gov.co/sistemasdeinformacion/1735/w3-propertyname-2672.html.

In July 2015, Colombian TEIs offered 10 765 different programmes, of which 2% were doctoral programmes, 17% master’s degrees, 25% specialisations, 35% undergraduate degrees and 21% non-university degrees (MEN, n.d.a). Universities offered 67% of all programmes, university institutions offered 21%, technological institutions offered 8% and professional technical institutions offered 4% (CESU, 2014). Of the 10 765 programmes, 63% were offered by private institutions (MEN, n.d.a).

SENA provides over half of all technological and professional technical education programmes in Colombia – 58% in 2013 – although it is not formally considered a T&T institution. Originally funded by a levy on employers of 2% of their payroll, and now through CREE, SENA is able to provide a wide range of training programmes fee-free to learners, with the result that its courses are very popular, but also very oversubscribed.

Quality assurance and information systems

Colombia is in the process of reforming its quality assurance system. The adoption of Law 1740 on 23 December 2014 has increased the MEN’s capacity to collect information from institutions, guarantee reasonable use of institutional revenues and assets, and carry out its inspection and supervisory functions. Law 1740 also required the national government to present within one year a bill to Congress to establish a Superintendency for Education to oversee compliance with administrative and financial procedures. Efforts are underway to define the role of this new entity, whose functions are likely to

include guaranteeing the right to education; the constitutional and legal goals of education; university autonomy; the rights of the different groups that make up the academic community; and the quality, efficiency and continuity of educational services. How it will fit in to Colombia's already complex governance structure is unclear.

Colombia's quality assurance system for TE currently relies on two main instruments. The first, administered by CONACES, is intended to ensure that all programmes and TEIs meet minimum standards. CONACES checks that programmes comply with a number of quality-related conditions. If so, they are authorised by MEN and added to the Register of Qualified Programmes (*Registro Calificado*). New programmes and institutions need to be authorised before they can recruit students. Programmes on the register must renew their qualified status every seven years. The OECD-World Bank report of 2012 noted that the minimum standards secured by admittance to the Register of Qualified Programmes were quite low.

The second instrument is known as Voluntary High Quality Accreditation (VHQA). VHQA is a "peer review" process designed to encourage continuous self-evaluation, self-regulation and institutional/programme improvement. Institutions choose whether to apply as institutions, and which programmes to apply for. The CNA, composed of members representing the academic and scientific community, sets the quality criteria, carries out the evaluation process, and makes recommendations to the MEN on whether or not to grant accreditation, and if so, for how long. How soon institutions have to apply for re-accreditation depends on the length of the original accreditation, which can last from three to ten years.

As Table 5.2 shows, as of December 2013, only 12% of institutions and 9% of programmes had achieved VHQA. The lists is dominated by the universities which make up 28% of all TEIs but hold 82% of all institutional accreditations, and offer 67% of all programmes but hold 82% of all programme accreditations. Private universities constitute 60% of all universities and hold 60% of the institutional accreditations. Very few T&T institutions, or their programmes, have achieved VHQA status.

However, it cannot be assumed that all unaccredited institutions and programmes are of poor quality. Accreditation is voluntary, and many institutions do not see the need or benefit of putting themselves through the evaluation process, particularly if they perceive that few institutions or programmes of their type succeed.

A more recent instrument for assessing the quality of TE provision is the SABER PRO test, designed and administered by the Colombian Institute for Educational Evaluation (*Instituto Colombiano para la Evaluación de la Educación*, ICFES) which is responsible for all national standardised tests

and exams. The innovative SABER PRO tests are taken by undergraduates who have successfully passed at least 75% of their academic credits for their programme. The results of these tests can be compared directly to the SABER 11 results, taken at the end of upper secondary education, enabling judgments to be made about the “value added” by individual institutions and the system as a whole, in a way attempted by few other countries. Box 5.2 describes this pioneering Colombian development more fully.

Table 5.2. **Institutions and programmes with VHQA, by type (December 2013)**

Type of TEI	Number of institutions	Number (%) of institutions with VHQA	Number of programmes	Number (%) of programmes with VHQA
Technical	36	0 (0)	373	3 (0.8)
Technological	50	4 (8)	801	22 (2.7)
University institution/ technological school	119	2 (2)	1 964	125 (6.4)
University	81	27 (33)	6 470	663 (10.2)
Total	286	33 (11.5)	9 608	813 (8.5)

Source: CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

Box 5.2. SABER PRO

SABER PRO (formerly State of the Quality of Higher Education, *Estado de Calidad de la Educación Superior*) is a set of tertiary exit examinations. These exams assess the individual competencies of final-year undergraduate students, and have been compulsory for graduation from Colombian TEIs since 2010. This innovative programme was designed to produce tertiary indicators to give a true assessment of outcomes from TE, to inform the pedagogical process and institutional approaches to TE, and to monitor performance trends. It is at the forefront of current thinking on how to measure tertiary outcomes and provides valuable accountability information, as well as measures of value added by TEIs when combined with SABER 11 results.

SABER PRO exams now include five generic competency tests – writing, critical reading, quantitative reasoning, English and citizenship competencies – and tests in a number of “common competencies” relevant to the programme studied. The Colombian Institute for Educational Evaluation (*Instituto Colombiano para la Evaluación de la Educación*, ICFES) has established 30 reference groups bringing together academic programmes with similar characteristics and covering 22 academic areas. These 30 reference groups facilitate the process of obtaining comparable results across disciplines for the common competencies exams, and differentiate the analysis of results for three levels of institutions: technical, technological and university.

Box 5.2. SABER PRO (Continued)

By placing performance in the context of comparable reference groups, these exams provide more than just scores – they establish performance levels for all modules and for different disciplines.

SABER PRO results are communicated to students and to institutions. They are reported by module; there is no aggregate score for the whole battery of tests. When students receive their results, they receive their scores, their level of performance descriptor, the average scores in the corresponding reference group and the standard deviation of the scores of the corresponding reference group. Institutions receive individual student scores (for their students), distribution by levels of performance (quintiles) and their average scores in relation to the averages and standard deviations of scores of the reference group and the national data.

Source: ICFES (2015), “Information on the SABER PRO exams”, Instituto Colombiano para la Evaluación de la Educación (Colombian Institute for the Evaluation of Education) website, www.icfes.gov.co/index.php/instituciones-educativas/saber-pro/informacion-de-la-prueba-saber-pro#.

Information systems also form an important part of the TE sector, providing the MEN, TEIs and key stakeholders with statistical data and analysis on the quality of institutions and programmes and other performance indicators. Colombian TE information systems include:

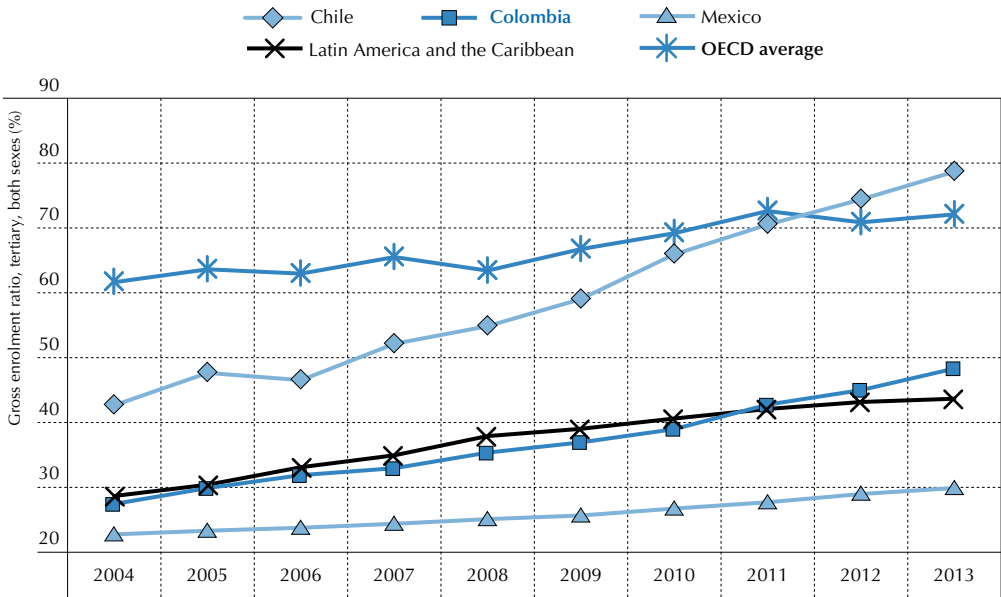
- The National System of Information about Tertiary Education (*Sistema Nacional de Información de la Educación Superior*, SNIES), a statistical service which collects, disseminates and organises information relevant to planning, monitoring, evaluation, assessment and inspection of Colombian higher education.
- The Labour Observatory for Education (*Observatorio Laboral para la Educación*, OLE), which collects statistical information about graduates, average salaries paid to recent labour market entrants, courses or programmes in the regions and the performance of graduates in the labour market.
- The System for the Prevention and Analysis of Dropout at Higher Education Institutions (*Sistema para la Prevención de la Deserción de la Educación Superior*, SPADIES). This monitors dropout rates from higher education and relates recruitment and retention to student characteristics.
- The Tertiary Education Quality Assurance System (*Sistema de Información para el Aseguramiento de la Calidad de la Educación Superior*, SACES), which provides statistics, indicators and reports on the registration and accreditation status of programmes and institutions.

Most recently, in 2015, the government introduced the Model Performance Indicators for Education (*Modelo de Indicadores del Desempeño de la Educación*, MIDE) to provide comparative information on core dimensions of institutional quality, including student performance in SABER PRO, graduation rates, research, institutional capacity and internationalisation. MIDE includes a ranking of the performance of 187 universities and university institutions (see Policy Issue 2).

Trends in access, equity and quality

In 2013, 2.1 million students were enrolled in Colombian TE, a gross enrolment rate of 48%, compared to just 28% in 2004. This is similar to the Latin America and Caribbean average (44%), but clearly below the levels reached by Chile (79%) and the OECD average (72%) (Figure 5.5) (UNESCO-UIS, 2015).

Figure 5.5. Tertiary education gross enrolment rates, by country (2004-13)



Source: UNESCO-UIS (2015), “Browse by theme: Education”, *Data Centre*, UNESCO Institute for Statistics, www.uis.unesco.org/DataCentre/Pages/BrowseEducation.aspx (assessed 10 July 2015).

In Colombia the distribution of enrolment between public and private sector institutions is fairly even: in 2013, 52% of students were enrolled in the public sector. However, the private institutions' share of the student population has been growing, slowly but consistently, from 45% in 2009 to 48% in 2013 (CESU, 2014). When compared to other Latin American countries, private-sector enrolment is in the mid-range, well below Chile (84%) and Brazil (71%) but higher than Uruguay (14%) or Argentina (26%) (UNESCO-UIS, 2015; most recent year available⁷).

Across programmes the greatest numbers of students are in bachelor's degree programmes, followed by technological students (Table 5.3). The Colombian government has sought to encourage more tertiary students into T&T programmes in the interests of the national economy, with some success. Although Table 5.3 shows enrolment in professional technical training fell by just under 4% over the period 2010-2013, the rates of change for each year were -50% in 2010, -11% in 2011, -4% in 2012 and +6% in 2013, indicating that a steep decline in interest in training at this level seems to have been reversed. Technological training grew in popularity every year from 2010 to 2013, although the growth was strongest in 2010, at 51%. It is possible that some programmes were upgraded or re-designated from professional technical to technological in that year.

Table 5.3. **Enrolment by level (2013*) and change in rates (2010-13*)**

Level	Enrolment	Share of total enrolment (%)	Annualised change in enrolment 2010-2013 (%)
Professional technical	83 483	4.0	-3.54
Technological	604 410	28.7	10.39
Bachelor's degree	1 295 528	61.4	7.41
Specialisation	82 515	3.9	10.99
Master's	39 488	1.9	18.37
PhD	3 800	0.2	17.78
TOTAL	2 109 224	100.0	8.00

Note: *Preliminary Data, MEN-SNIES.

Source: CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

The very high dropout rate of the Colombian tertiary system makes it considerably inefficient. A study of the dropout rate by cohort concluded: “an average of one in two cases does not complete his/her TE studies. [...]

The cumulative dropout rate reaches 33% by the end of the first semester and 71% by the tenth. At the university level the dropout rate climbs from 19% in the first semester to 47% by the tenth semester” (Melo, Ramos and Hernández, 2014). The highest dropout rates are found in the lowest level tertiary programmes, even though these are usually shorter: in 2013 the proportion of students who dropped out over the course of the programme was 45% for universities, 54% for technological institutions and 62% for professional technical institutions. Of those who do complete their courses, many – if not most – take longer than the course’s nominal length. Only around one-third of university students complete their studies in 14 semesters, even though most undergraduate programmes have a nominal length of 5 years, or 10 semesters.

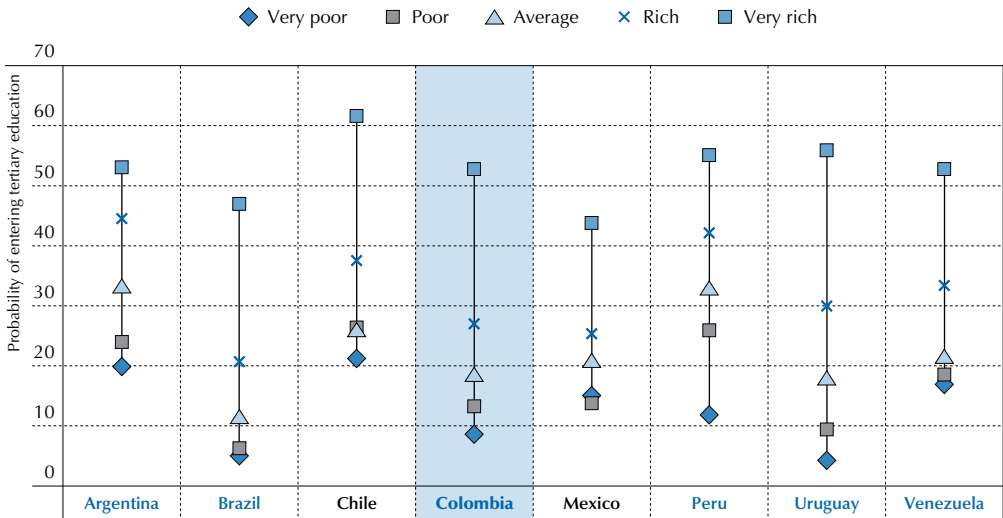
Recent policy efforts have helped to reduce dropout rates slightly (see Policy Issue 1). Between 2004 and 2013, the dropout rate by cohort fell from 48% to 45% and the dropout rate by year fell from 16% to 10% (MEN, 2014). Although the trend is downwards, dropout rates remain inefficiently high and completion rates inefficiently low. Dropping out is also an equity issue. The highest dropout rates are experienced by the very groups that the governments is trying hardest to bring into the tertiary system in greater numbers – T&T students, students from poorer or less well-educated families, and those from under-represented regions and schools.

Colombia also faces a number of other access and equity concerns. The first major issue is equity between different socio-economic groups. In 2011 while 53% of young people from Colombia’s richest quintile were enrolled in TE, the figure was just 9% in the poorest quintile; only Brazil and Uruguay enrolled a lower proportion of their poorest youth out of the eight Latin American countries shown in Figure 5.6. Participation by students from the poorest families seems to be improving, though not at a rate that would redress this imbalance. From 2010 to 2013, the proportion of students with a family income of less than the Colombian minimum salary increased from 15% to 17%, and the proportion of students with a family income of less than twice the minimum salary rose from 56% to 59% (CESU, 2014). Participation by students from families earning seven or more times the minimum salary also rose between these years, while participation by students from families earning between two and seven minimum salaries fell. Data from the SPADIES information system confirms, however, that students from poorer families take longer on average to complete their courses and will be more likely to drop out before graduation.

The second major access and equity issue is the unequal opportunities of students from different departments (regions) of Colombia. The departments of Bogotá Federal District, Antioquia, Valle del Cauca, Santander and Atlántico between them account for more than two-thirds of all enrolment in

undergraduate programmes, although they are home to less than half of the Colombian population. In 2013, the gross tertiary enrolment rate by Colombian department varied from under 15% in Vaupés, Putumayo and Amazonas to close to 60% in Quindío and Santander (CESU, 2014). Just three departments, Bogotá, Antioquia and Valle del Cauca, are home to 67% of all institutions with high quality accreditation.

Figure 5.6. **Probability of entering tertiary education, by socio-economic quintile**



Notes: Reference year for Argentina, 2012; Brazil, Chile, Colombia, Peru, Uruguay, 2011; Mexico, 2010; and Venezuela, 2006. Non-OECD countries are shown in blue.

Source: CEDLAS/World Bank (2015) “Education”, *Socio-Economic Database for Latin America and the Caribbean*, Centro de Estudios Distributivos, Laborales y Sociales, Universidad Nacional de La Plata, and World Bank, <http://sedlac.econo.unlp.edu.ar/eng/statistics-detalle.php?idE=37>.

Table 5.4 summarises the situation for each department with enrolment and dropout rates, numbers of quality programmes and poverty levels. It demonstrates just a few of the many differences between the regions in Colombia. School graduates in Bogotá Federal District have a choice of 280 accredited programmes and the vast majority of their peers will pursue tertiary studies. Similarly high-achieving school leavers born in Sucre would have the choice of just two quality programmes or have to find the resources to travel to another department. They would be in a minority in choosing to enrol in TE and face a greater than one in ten likelihood of dropping out.

Table 5.4. **Enrolment, dropout rates, share of accredited programmes and poverty levels, by department (2013)**

Department	Gross enrolment rate (%)	Accredited programmes (2014)	Annual dropout rate (%)	Poverty level (%)
Amazonas	9.1	1	n/a	n/a
Antioquia	49.5	191	10.8	24.2
Arauca	13.6	n/a	n/a	n/a
Atlántico	49.3	32	10.7	32.4
Bogotá D.C.	92.5	280	10.9	10.2
Bolívar	35.7	33	13.5	41.8
Boyacá	48.9	20	8.1	39.3
Caldas	45.2	32	7.3	32.2
Caquetá	20.9	n/a	12.6	42.4
Casanare	25.7	n/a	16.8	n/a
Cauca	28.4	8	8.7	58.4
Cesar	28.3	1	12.9	44.8
Chocó	23.8	n/a	8.3	63.1
Córdoba	22.5	7	10.3	51.8
Cundinamarca	26.5	13	7.0	18.9
Guainía	10.1	n/a	n/a	n/a
Guaviare	16.4	n/a	n/a	n/a
Huila	17.0	9	8.2	47.3
La Guajira	31.0	n/a	12.0	55.8
Magdalena	30.2	7	11.8	50.5
Meta	34.1	2	9.7	27.1
Nariño	23	11	10.3	47.6
Norte de Santander	46.2	5	10.5	39.4
Putumayo	10.5	n/a	n/a	n/a
Quindío	61.2	8	12.6	35.6
Risaralda	51.3	25	13.3	28.8
San Andrés	17.8	n/a	n/a	n/a
Santander	59.7	35	9.8	19.5
Sucre	21.8	2	13.2	47.3
Tolima	36.0	14	9.8	34.8
Valle del Cauca	37.0	75	13.5	27.2

Table 5.4. **Enrolment, dropout rates, share of accredited programmes and poverty levels, by department (2013) (Continued)**

Department	Gross enrolment rate (%)	Accredited programmes (2014)	Annual dropout rate (%)	Poverty level (%)
Vaupés	7.4	n/a	n/a	n/a
Vichada	10.0	n/a	n/a	n/a
National	45.5	813	10.4	30.6

Note: n/a refers to data not being available in the given source. All indicators are from 2013 unless otherwise indicated.

Sources: DANE (2015), “Pobreza y desigualdad”, *Pobreza y Condiciones de Vida*, Departamento Administrativo Nacional de Estadística (National Department of Statistics), www.dane.gov.co/index.php/estadisticas-sociales/pobreza; MEN (2015a), “OECD-Colombia education and skills accession policy review: Country background report”, Ministerio de Educación Nacional (Ministry of National Education), Bogotá; CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

It is difficult to measure the quality of a country’s tertiary education. National tertiary systems vary so much that there is no agreed international method of assessing their quality. Comparisons between countries are most defensible at the top of each national system, where the best universities operate internationally and are willing to be judged by international standards against their peers. Colombia had just five universities in the QS Latin American Top 50 ranking in 2015, although these included Los Andes at 7th and the National University at 13th (Quacquarelli Symonds, 2015). In comparison, Brazil had 17 including 5 of the top 10; Chile had 8 including the 3rd and 4th; Mexico had 7 including the 6th and 9th; and Argentina had 8, but the highest placed was 15th.

Cross-country reviews have identified a number of characteristics commonly associated with high-quality TE (OECD, 2008). These include, but are not confined to, the entry standards of tertiary students, the number of students progressing from undergraduate to higher levels of study and the qualifications of academic staff. Data for these indicators suggest considerable quality concerns for Colombia. For example, many students entering the tertiary system are ill-prepared to learn. In 2013, only 32% of students in public schools and 68% of students in private schools performed above average (“high”, “superior” and “very superior” levels) in SABER 11 (see Chapter 4). In addition, 32% of students in public schools and 16% of private school students performed below standard (“low” and “inferior” levels). This points to some of the challenges that TEIs in Colombia face in striving to reach international standards, helping students meet their

aspirations for further study and employment, and meeting the skills needs of the national and local economy.

Analysis of the 2014 SABER PRO results shows a high share of low performance among students in all areas of the assessment. In quantitative reasoning, 70% scored level 1 out of 3. English proficiency and writing skills could also be improved, as only 25% of students achieved an intermediate level (B level) or higher on the English proficiency test and only 45% of students demonstrated acceptable levels of writing (above level 5 of 8) on the writing section. As would be expected, university programmes account for more top performers than other institutions, with 14% of university students scoring at the highest level for quantitative reasoning and critical reading, compared with only 6% of non-university students (ICFES, 2014).

Compared with their peers in OECD countries, very few students in Colombia progress from undergraduate to higher levels of study, though the numbers have been increasing. The number of students who had attained a master's degree rose from 5 935 in 2010 to 10 453 in 2013, and the number of those awarded a doctoral (PhD) degree rose from 211 to 329 over the same time period (MEN, 2015a). The steady increase in students progressing to postgraduate levels has helped to raise the number of TE teaching staff and their qualification levels. From 2002 to 2013, the number of academic staff in TE increased by 40%, though the number of students increased by 113% (UNESCO-UIS, 2015). While there were more tertiary teachers with PhD degrees in 2013 than in 2010 (Table 5.5), they represent a small proportion of overall staff, well below the levels in most OECD countries and many Latin American countries. In Chile, for example, in 2012 about 40% of academic staff in universities have a master's or PhD degree (MEN, 2015a).

Table 5.5. Academic staff by level of education (2010 and 2013)

Level of education	2010		2013	
	Amount	Percentage	Amount	Percentage
Undergraduate	34 026	32.4%	43 801	37.5%
Specialisation	37 496	35.7%	39 556	33.9%
Master's	27 048	25.7%	26668	22.8%
PhD	6 595	6.3%	6 794	5.8%
Total	105 165	--	116 819	--

Note: Based on MEN-SNIES preliminary data for 2013 up to 10 May, 2013.

Source: CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

Key policy issues

The Colombian government is introducing legislation to establish a National System of Tertiary Education (*Sistema Nacional de Educación Terciaria*, SNET). The overarching objective, as with reform efforts at all levels, is to close the gaps in access to and quality of education between individuals, population groups and regions, and to bring the country to high international standards. This section examines policies that would enable Colombia to attract and accommodate a larger and increasingly diverse student body while improving and assuring quality. It looks at how Colombia can manage this transformation fairly across the country, and how it can ensure that it meets both student aspirations and the needs of its growing economy. Finally, it examines changes to the governance and financing of TE that would help Colombia steer these reforms successfully.

Policy issue 1: Expanding access and improving equity

Young people from disadvantaged families in Colombia face a greater range and combination of potential difficulties in accessing TE than most students. Compared to the average school leaver, they are likely to have been less well prepared for tertiary education by their upper secondary schooling and achieved lower SABER 11 scores. Other members of their families are far less likely to have had tertiary education themselves, so will give them less useful help in choosing a suitable institution and programme and navigating the entry requirements, meaning they will be less likely to get into their chosen institution. If they live in a relatively poor department or rural area, there may be a very limited range of tertiary opportunities within reach of their home. Without an ICETEX loan, they are unlikely to be able to undertake any TE, but ICETEX is currently unable to fund around 40% of requests. Should they overcome all those barriers and enter TE with a loan, they will find it more difficult to survive financially. Statistically, they are at greater risk of dropping out than the average student, and if they do graduate, they are likely to have taken longer to do so, leaving them with a bigger debt than average. Colombia has introduced a range of policies to help low-income students overcome these barriers. This section looks at the approaches taken and ways that their impact might be enhanced in four important areas of policy reform: managing the transition from upper secondary education, reducing dropout rates, enhancing financial support and reducing regional inequities.

Enabling students to make an informed decision

Students need to choose the TE institution and programme that will best meet their needs and abilities and provide the best employment opportunities. This is especially important for students from low-income backgrounds, who

often cannot rely on parental guidance and face higher opportunity costs and financial risks in choosing the path of further study. Schools can play a role in helping students navigate this difficult decision through better guidance and mentoring services (see Chapter 4). Yet, to do this, schools and students require access to reliable information on the courses available in TEIs, the application procedures and the rates of return from better employment opportunities different programmes are likely to offer.

Not all programmes offer the same labour-market returns to their graduates. The Labour Observatory for Education, (*Observatorio Laboral para la Educación*, OLE), provides extensive and potentially extremely useful information on the labour-market value of different tertiary programmes. Table 5.6 shows the relative value of different degrees according to the OLE database. This aggregated data suggests not only that TE brings benefits to graduates when compared to secondary school leavers regardless of degree level or institution attended, but also that the benefits go on rising as training levels rise (though at each level the advantage reduced slightly between 2012 and 2013).

Table 5.6. **Relative value of different certificates or degrees (2012 and 2013)**

Value of high school certificate = 100

Graduation Level	2012	2013
High school certificate	100	100
Labour technical certificate	141	135
Tertiary Education		
Professional technical qualification	159	152
Technologist qualification	170	163
Bachelor's degree	254	250
Specialisation	432	430
Master's degree	580	547
Doctorate	868	840

Source: OLE (n.d.), “Estadística de interés”, Observatorio Laboral Para la Educación website, www.graduadoscolombia.edu.co, various dates.

During the review visit, stakeholders also echoed the perception that the rates of return from bachelor's degrees are higher than from T&T qualifications, and claimed that this was reflected in student choices, with universities in Colombia receiving many more applications per place for bachelor's degrees than T&T institutions receive for technology degrees. However, a recent study of TE in Chile and Colombia, found that the

economic returns of tertiary education depend crucially on the programme provider, the quality of the programme and how well it meets employer requirements, and could be negative (IDB, 2015). The authors concluded that, on average, 70% of Colombia's university students and only 41% of its T&T students could expect positive net returns from graduation. For some degrees (accounting, for example), choosing a technical pathway could well be the better option, and in many disciplines better returns are available from some T&T institutions than from some universities.

The OLE figures are thus potentially valuable to students but the system is very difficult to navigate and information is not consolidated in a way that is helpful for students. For example, OLE data can be broken down by type of tertiary degree, programme and institution, allowing the labour-market outcomes of different programmes at different institutions to be compared. However, students must analyse the data and do the comparisons for themselves, increasing the likelihood of misinterpretation. As labour-market outcomes are so important to students' choices of institution and programme, it would be very helpful to present this data disaggregated by provider and course. Either OLE could calculate and publish the rate as part of the suite of information available, or it could provide the algorithm on its website so that enquirers could feed in key data and work out the rate of return for themselves. Publicising rates of return would encourage TEIs to work with employers to ensure that graduates find well-paid jobs. It would also support the government's objective of attracting more students to those programmes which are most important to the country's economy. An additional improvement would be to include data on SENA graduates in the OLE system. At present it does not publish the labour-market outcomes of most of SENA's T&T programmes.

A further challenge is the difficulty of navigating the admission procedures of Colombian TEIs (OECD/IBRD/World Bank, 2013). Students have to make a separate application to every institution they wish to attend and given the autonomy of tertiary institutions, each institution decides its own admission criteria on top of the basic requirement of a SABER 11 pass. There is no central source listing the entry arrangements and criteria of each institution and no common date by which applications must be submitted or students told whether they have been accepted. Some countries have central agencies which process all applications to TEIs and eliminate duplicate acceptances, to benefit other students. Examples include the Universities and Colleges Admissions Service in the UK and the clearing-house system administered by CRUCH, the Council of Rectors of Chilean Universities, for those who take the university entry test in Chile. Such agencies make the process of applying for a place much easier and reduce administration costs for the higher education institutions. They also dispel any suspicions that places are being allocated on grounds other than merit, such as hidden

payments, nepotism or discrimination for/against students in particular groups. A central clearing house to process and collect and collate data on tertiary admissions in Colombia would demonstrate the government's commitment to ensuring transparency and impartiality in decisions on who gets a place and who does not – decisions vital to the life chances of young people and to fulfilling the government's access agenda.

Reducing dropout rates and improving retention and completion

To address Colombia's high dropout and non-completion rates effectively, it is necessary to understand the underlying reasons for them. Colombia's student dropout monitoring system, the System for the Prevention and Analysis of Dropout at Higher Education Institutions (*Sistema para la Prevención de la Deserción de la Educación Superior*, SPADIES), offers rich data on the factors and student characteristics associated with different dropout rates. SPADIES data shows that dropout rates are highest in the first semester and taper off thereafter. Dropout rates tend to fall as SABER 11 scores, household incomes and wealth, and mother's education level rise. Rates are lower for females and vary by Colombian department (Table 5.6). Dropout rates are higher for those who were in work when they took their SABER 11 test and who attend lower levels of tertiary education – T&T institutions have higher dropout rates than other tertiary institutions despite their shorter programmes. Dropout rates also vary by discipline, with health sciences having the lowest dropout rate and agronomy and veterinary training the highest (MEN, 2014).

As with other data systems in Colombia, SPADIES could be further exploited and integrated with other information systems to provide more useful guidance to policy makers. For example, local authorities and TEIs could make better use of it to pinpoint areas of weakness, design improvement strategies and improve the effectiveness of resource allocation. It is also important to know what reasons students themselves give for dropping out but SPADIES does not record this information. TEIs keep records for internal purposes, commonly classifying the reasons as academic, economic/financial or personal but they are not required to share this information with the government and there is no system for comparing the data across providers.

The most fundamental problem the Colombian tertiary system faces is the lack of college-readiness among many school leavers, an issue also reported in the 2012 OECD-World Bank report (OECD/IBRD/The World Bank, 2013). SPADIES data and students themselves suggest that inadequate preparation in school is one of the most important factors influencing high dropout rates in Colombia. It is closely related to other financial and personal pressures that push students out of the system, as they struggle to adapt to a

different learning environment, fail to reach required standards and have to support themselves for longer as they fall further behind. Unless they started primary school late or had to repeat school years, young Colombians leave school and enter the tertiary system at 17 years old, which is young compared with most OECD countries and other Latin American countries such as Argentina, Brazil and Chile where the school-leaving age is 18. Results from SABER 11 indicate that the majority will not have acquired the skills required for further learning, such as autonomous study, complex reasoning and problem solving (see Chapters 3 and 4). Bachelor's degrees (known as *licenciatura* in Latin America) are expected to last five years in Colombia and T&T programmes three years, comparable in length to programmes in most other Latin American countries. However, their upper secondary school leavers are generally older and/or have more years of schooling behind them.

The 2012 OECD-World Bank review report outlined various options for addressing this lack of college-readiness, including a suggested additional 12th year of schooling (OECD/IBRD/The World Bank, 2013). With the pressing need to ensure full enrolment in the transition year, and current commitments to achieve full-day schooling and progress towards universal upper secondary enrolment, the introduction of an additional year does not seem feasible. This underscores the importance of TEIs developing strategies and adjusting traditional teaching approaches to receive and support a wider range of students, many with weak skills.

Helpful approaches implemented by some TEIs that the team has noted include: 1) constant monitoring of student progress against expected progress, to identify early on the students who are at risk of leaving the system and give them extra support to catch up without having to repeat years or semesters; 2) teaching methods which are more student-centred, less directive and more participative; 3) training teachers to diagnose students' weak areas and provide tailored help; 4) making remedial maths and language classes available, possibly online, for students to work on as convenient; 5) adding extra weeks at the beginning of semesters for special tuition to help strugglers improve their general competences; 6) setting up a dedicated counselling, mentoring and advice centre for students experiencing problems – particularly important for students in their first semester, when the dropout risk is biggest; and 7) exchanging experiences between institutions, to share knowledge and best practice on averting students dropping out and achieving timely graduation for all.

SPADIES records a gradual but significant rise in the number of students being provided with academic or other non-financial support by their institutions. “Academic support” was given to 2% of students in the second semester of 2004, rising to 7% of students in the second semester of 2014. “Other forms of support” rose from 2% of students in the second semester of

2004 to 5% of students in the first semester of 2014. These numbers remain very small, however. TEIs will need to do much more to support students with weak basic skills if the latter are to have a fair chance of completing their studies successfully. One option could be bridging courses offered to all students, either at the institution where they have been accepted or another TEI with which their institution has arrangements in place, to bring them to a level where they can participate fully in a tertiary programme.

Evidence suggests that academic support is likely to be most effective at reducing dropout rates when combined with financial assistance (OECD, 2012; OECD/IBRD/The World Bank, 2013). An important aim of the ICETEX loan system is to reduce dropout rates by removing or minimising the economic/financial reasons for it. The average dropout rate of students with loans is lower in every semester than for students without them, except for students on ICETEX Quality Access to Tertiary Education (ACCES) credits, a special type of loan designed to increase coverage for the most disadvantaged of the students with high SABER 11 scores. Among these students, survival rates in the first semester are lower than for students with no loan at all, though for all later semesters they are better. The longer students have enjoyed financial support, the less likely they are to drop out. This confirms that ICETEX loans, if available, are a very effective way of reducing or minimising dropout rates. However, as discussed below, there are several other ways in which the financial support system in Colombia could be improved to better support disadvantaged students in their access to and timely completion of TE.

Strengthening financial support for low-income students

A major problem that by definition affects low-income students far more than other students is the financial cost of pursuing tertiary studies. ICETEX loans are helping many students from poorer families access tertiary opportunities they could never have had otherwise. The percentage of students with financial support has risen over the years, from less than 5% in the first semester of 2002 to 20% in the second semester of 2014 (MEN, 2015a).

However, despite regular increases in its budget and the priority given to supporting the poorest students, ICETEX state funding cannot support all deserving Colombian students of limited means. Fewer than one in five tertiary students benefit from student loans or scholarships from ICETEX. In 2014, 12% of ICETEX support went to students attending T&T institutions (who tend to be more disadvantaged), 81% to university undergraduates and 7% to postgraduate students. Many eligible students and their families still consider ICETEX funding to be a high-risk loan (CESU, 2014). It is worrying that 30% of credits provided by ACCES are non-performing loans. This illustrates the difficulties faced by low-income students in meeting loan repayments.

The SPADIES information cited above suggests that more investment in repayable loans would bring valuable improvements in access. Since 2011 the Colombian government has tried to help more low-income students to access tertiary programmes by adjusting ICETEX loan conditions, reducing the real interest rate to zero for students from socio-economic levels 1, 2 and 3, and providing more money for the loans portfolio (MEN, 2015a). In appropriate cases individuals have been granted living allowance subsidies as well as loans for fees (140 646 students) or have had their debts cancelled in whole or in part (550 students) (MEN, 2015a). Further reforms are envisaged in 2015, such as zero interest on loans while a student is enrolled, a one-year grace period once a student graduates, and 100% forgiveness of the loan upon graduation for the most disadvantaged students. These are promising developments.

The team suggest a three-pronged approach to increasing the numbers of loan beneficiaries. First, recent gradual increases in ICETEX's allocation from the MEN budget should continue. Second, efforts to identify and obtain student loan funding from other sources – such as the CREE and the stamp duty/withholding tax – should be stepped up. Third, when the occasion arises to reform the system for funding allocations to TEIs (see Policy Issue 3), the opportunity should be taken to encourage and reward institutions which organise their own financial support arrangements for deserving and needy students without ICETEX loans.

The Colombian government's new flagship policy to help students from low-income backgrounds to access high-quality TE is the new Hard Work Pays Off (*Ser Pilo Paga*) scholarship programme. It will grant scholarships to 10 000 students a year for 4 years from 2014. These students receive loans and grants which cover their full tuition and living costs. To qualify, students must have achieved marks above a defined level in their SABER 11 tests (lower if they are from rural areas), and their households must be below SISBEN level 2. Qualifying students are assured of a place at any TEI they choose to study at, as long as it has a high-quality accreditation (VHQA). According to MEN data, by July 2015, 9 470 students were studying in the top TEIs in the country thanks to this programme, the majority in Bogotá (37% of the students who attained a scholarship) and Antioquia (19%).

The *Ser Pilo Paga* programme has many good features. It is enabling large numbers of students who would not previously have had a chance to access and attend the country's best-quality TEIs. It is bringing valuable new public money into the tertiary system, and it has an interesting way of making sure that participating universities do everything they can to ensure that scholarship students complete their programmes: if the student drops out the university cannot reclaim the cost of their tuition from the government. However, it is costing more per student than the government expected; in the

first year 85% of scholarship students chose to study at private universities whose tuition fees are much higher than the public universities, requiring an emergency injection of extra funding from the government. Therefore, the programme can help far fewer poor students for a given amount of public money than standard ICETEX loans, and the students that do drop out are left with particularly large debts. In addition, although SABER 11 results and SISBEN levels offer the best readily available benchmarks of ability and poverty respectively, these are imperfect measures which cannot guarantee that every successful applicant is more able, harder working and from a poorer family than every unsuccessful applicant. Before deciding whether to expand *Ser Pilo Paga* further or extend it beyond 2018, the government should commission an independent evaluation which can consider all these issues.

Improving equity between regions

The CESU report, *Commitment for Excellence 2034* (Box 5.4) recognises that one of the most important challenges facing Colombia's TE system will be achieving greater regional balance in participation (CESU, 2014). There are stark differences between and within Colombian regions in TE enrolment, the distribution of high-quality accredited institutions and public expenditure (Table 5.4). The team can confirm these inequities in access and quality from our institutional field visits. A comprehensive and multidimensional approach is required to address regional imbalances. The aim should not just be to add extra places, but also to ensure that those extra places are of good quality, offer local students adequate choice, are relevant to local needs and contribute effectively to local and regional economic development.

The National Development Plan of 2010-2014 set the objective of ensuring that three-quarters of Colombian municipalities would have at least some tertiary provision by 2014. This aim was met: by 2013, 555 more of Colombia's 1 122 municipalities acquired some tertiary provision, taking the total to 841 municipalities (75%). The PND 2014-2018 now focuses on improving the quality of provision, with the aim of increasing participation in tertiary programmes with high-quality accreditation from 14% in 2013 to 20% by 2018, and to increase the number of departments with a tertiary enrolment rate of 20% from 25 in 2014 to 33 by 2018. Recently, Colombia has also introduced a competitive funding scheme through the CREE to encourage TEIs to apply for additional funding to develop and improve the quality of programmes in less developed regions of Colombia.

A major part of the government's strategy for expanding tertiary access in regions with few places has been the establishment of a network of Regional Centres of Higher Education (*Centros Regionales de Educación*

Superior, CERES). CERES rely on regional resource-sharing partnerships between TEIs, government (local and national) and employers, to deliver regionally relevant tertiary level programmes that correspond with local labour needs. In 2013, CERES enrolled nearly 36 168 students in 155 centres. Although this is an achievement in terms of numbers, concerns have been raised over their quality (OECD/IBRD/The World Bank, 2013). In 2014, the MEN carried out an evaluation of CERES centres' institutional capacity, coverage, quality and relevance. The evaluation found that 73% of the centres cater to students in municipalities where no other provision for tertiary education exists, but the average CERES graduate scored 1-4% lower on the SABER PRO test than their peers (DNP, 2014). The evaluation recommends strengthening guidelines on the creation and management of the centres, integrating CERES data into existing information systems, and increasing access to internships and financial aid for CERES students. However, under current policies, the MEN does not intend to further expand and develop CERES.

One way of increasing coverage in under-represented regions is distance learning. While there is no internationally comparable data on the use of Internet-based or other distance-learning programmes, results from an OECD survey on e-learning in Latin America found that TEIs are increasingly looking at ways to expand virtual learning programmes, with 74% of Latin American universities surveyed already having an e-learning strategy in place and 21% in the process of developing one (OECD, 2015c). A number of established TEIs in Colombia have begun to offer virtual or traditional distance education, in an attempt to overcome the inequality and dispersion of the regional population. However, compared to other Latin American and OECD countries, efforts by Colombian institutions to exploit the potential of distance education remain limited (Altbach and Salmi, 2011). Although enrolment in Internet-based courses has increased – rising by 76% between 2011 and 2013, compared to an increase of 12% in classroom-based programmes over the same period – participation rates remain extremely low. In 2013, only 1.3% of students took part in Internet-based programmes, with 12% enrolled in traditional distance-learning courses (MEN, 2015a). Expansion of these programmes, particularly distance learning online, could make an important contribution to remedying regional imbalances in the future.

The benefits of distance learning are that it is infinitely expandable and, once the programmes and programme material have been developed, relatively cheap to provide. Blended learning, where students learn remotely but also benefit from in-person instruction, can be particularly effective in situations, like Colombia, where students may lack autonomous study skills. Other countries with large underdeveloped rural areas, such as India, Thailand and Turkey, have used distance or blended learning to expand

access for disadvantaged populations and groups. It is vital to ensure that the distance-learning programmes offered to young people who cannot physically attend TEIs are as high in quality and as relevant as the equivalent classroom-based courses, and that distance-learning arrangements include enough teaching and pastoral support. This requires adjustments to the future quality assurance system, considered below. Colombia might also consider setting up a special TEI or network of TEIs dedicated to developing online learning and providing online programmes.

If efforts to improve TE coverage are to help reduce socio-economic disparities between regions, it will be crucial that programmes meet the demands of local economies. The lack of employer engagement in the governance and delivery of TE means that the tertiary education and training on offer is often disconnected from local development and employment needs. Addressing this disconnect will require a more proactive approach by departmental and municipal governments to link TEIs with the local economy and steer the design of tertiary programmes to support local development priorities. Antioquia offers an example of how good co-operation between TEIs, business and government can forge a tertiary system that supports the local economy, job market and research and development (Box 5.3). The regional consultations organised by CESU to develop the *Commitment for Excellence 2034* report offer additional ideas for strengthening local skills ecosystems. One of the most important aspects of the CESU consultations were the Regional Round Tables, which enabled TEIs and other stakeholders, including local business, to discuss common concerns and highlight specific local challenges in national policy dialogue. Colombia might consider institutionalising such platforms. One way might be to create regional co-ordinating councils, bringing together representatives of TEIs, departmental authorities and the private sector. These could build trust and understanding between the business and academic communities, promote the co-ordination of education services across different locations and between tertiary levels, and ensure that tertiary provisions and programmes take full account of local labour market needs, and thereby improve education quality and the employment opportunities of graduates.

The funding of TE in less-developed regions is a key issue. The government confirms that “there exist dramatic imbalances between the support and resources that large universities can rely on and those TEIs in the peripheral regions” (CESU, 2014). Our team visits corroborated this. Peripheral institutions lack the resources to finance the academic standards demanded for VHQA, and thereby to attract the students and the scholarships that would help fund further quality improvements. The low qualification levels of academics is a major concern across the TE system in Colombia, but a particular challenge for regional public universities: most cannot offer

the higher degree programmes that would enable them to upgrade their staff, and lack the resources and reputation to attract more and better-qualified academics (OECD/IBRD/The World Bank, 2013). Reducing these resource gaps will require reform of the system for national resource allocation, as well as measures to increase local investment in education, which accounts for less than 3% of overall tertiary funding (see Policy Issue 3). Stakeholders interviewed by the review team also highlighted the scope for greater institutional co-operation, and in some places mergers, to achieve economies of scale. Local secretaries of education could certainly play a much more active role in helping institutions within their jurisdiction share physical and human resources.

Box 5.3. Antioquia: Tertiary education in regional development

Antioquia illustrates the positive contribution tertiary education (TE) can make to regional and local development. An OECD review in 2012 identified a number of measures that could inform approaches in other regions:

- Antioquia's TEIs are beginning to link more systematically with stakeholders, both in the public and private sector, to match skills supply and demand. Institutional collaboration mechanisms have been set up, such as the University-Firm-State Committee (*Comité Universidad - Empresa - Estado*, CUEE), which have generated a baseline of trust for stronger public-private co-operation.
- Antioquia has also introduced a range of measures to improve the quality and relevance of TE to the labour market. These include the provision of high-quality work-based learning opportunities for students, the inclusion of labour-market representation in TEIs' governance and curriculum and course design, using local private-sector employees as instructors, and supporting the temporary secondment of university and research staff into the private sector.
- Programmes have been revised to focus on the development of core competencies required by the labour market, including transversal skills (how to analyse problems, how to organise time, and how to work in teams and groups). Students' assessments now incorporate feedback from employers who hosted their work placements.
- Antioquia is one of the leading regions in Colombia in making science, technology and innovation (STI) a pillar of its educational and economic development. Antioquia has pioneered new agencies and organisational arrangements to promote STI and created a dedicated fund, derived from income generated from royalties. At the metropolitan level, Medellín is leading cluster-based initiatives to transform itself into a centre of high technology, creative industries and tourism.

Source: OECD (2012), *Higher Education in Regional and City Development: Antioquia, Colombia 2012*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264179028-en>.

Narrowing regional disparities will also require additional measures to support student access to TE. School leavers in the poorer regions of Colombia, where jobs are fewer and salaries lower, will have a particular need for affordable loans with relatively generous repayment terms, or even debt forgiveness in some cases. Some institutions, like the branches of the National University in border areas or the private Universidad Uniminuto, use their own resources to support students in isolated geographic zones. The government might also consider offering school leavers in regions with low tertiary enrolment (particularly indigenous students) extra help to become college ready and achieve good SABER 11 scores, perhaps through online teaching and learning.

Policy issue 2: Ensuring quality and relevance

How to continue to expand enrolment while also improving quality and relevance is one of the greatest challenges in the current phase of Colombia's TE system development, as is the case for many emerging economies faced with surging demand for higher levels of education and skills. Presently, quality varies widely within the system: very high quality tends to be concentrated in a few regions, institutions and a small fraction of the total number of T&T programmes. This section looks at the policies and practices that could help Colombia advance further along the road to quality TE for all students.

Strengthening the quality assurance system

Colombia has a mixed tertiary education system, with public and private institutions that enjoy considerable autonomy. Under these conditions it is essential to have a robust quality assurance system that guarantees a minimum quality of provision for all students and encourages all institutions to aspire to excellence in the areas of their mandate.

Experience from OECD countries suggests that a national system of quality assurance and quality enhancement should aim to:

1. Promote equity, relevance and efficiency.
2. Guarantee minimum standards in order to protect the interests of every student.
3. Foster a culture of quality and professionalism which leads to continuous improvement in both the wider TE system and in the quality assurance process itself.
4. Support the active involvement of stakeholders, especially students and employers, in order to promote responsiveness and relevance of higher education.

5. Allow for the diversity of institutions, programmes and modes of provision of TE, in order to foster its flexibility and fitness for purpose.
6. Embed transparency and openness to inspire trust and confidence.
7. Be open to the experiences of other countries in order to learn from them and to promote international engagement and mobility (Brunner, 2013).

The review team observed several areas where Colombia could further strengthen its quality assurance system to bring it into line with such international standards and best practice.

As discussed above, Colombia’s quality assurance system for TE relies on two instruments: the Register of Qualified Programmes ensures programmes and TEIs meet minimum standards and the VHQA offers a “badge of excellence” for institutions and programmes that choose to apply for it. Both the *Commitment for Excellence 2034* (CESU, 2014) and the OECD-World Bank report (OECD/IBRD/The World Bank, 2013) recommended strengthening Colombia’s tertiary quality assurance system by unifying these two functions. International experience suggests that in countries where TEIs have as much autonomy as they do in Colombia, a single national agency, whose independence is guaranteed by law, should handle all important aspects of quality assurance in TE.

There is recognition that the current minimum standards required for a course to be admitted to the Register of Qualified Programmes need to be reviewed. The OECD-World Bank report of 2012 found the minimum standards for admittance to the Register of Qualified Programmes were quite low, and could be met even by institutions with no credible internal quality assurance system. The review team also heard various opinions about the ease with which registration was achieved. It was suggested that the checks applied to new programmes are too weak to guarantee the level of quality expected by the academic community, professionals, and professional service clients. As the PND has advocated, “the country should proceed toward a redesign of the criteria used to grant qualified registrations and require programmes to function with higher quality standards” (DNP, 2015). The 2012 OECD-World Bank report recommended “Specifically, (i) external evaluators should scrutinise more thoroughly the readiness of institutions to provide the programmes for which they apply; (ii) all institutions should be required to present evidence of sound, impartial outcome evaluations and careful monitoring of student progress for existing programmes, and to demonstrate that their infrastructure is adequate” (OECD/IBRD/The World Bank, 2013).

While the VHQA was shown to work better, with clear and well-enforced standards, its disadvantage was that relatively few institutions and programmes achieved the standards (Table 5.2). The lists of VHQA achievers are dominated by universities and “elite” programmes with very few T&T institutions, or their programmes, achieving the status. The review team heard various opinions as to why: that the criteria applied suit universities better than other types of institutions; that CNA assessors are mainly drawn from the university rather than T&T sector; and that the criteria give insufficient credit for T&T institutions’ strong points. Whatever the reasons, the unsatisfactory result is that many TEIs feel that they and their programmes have little chance of gaining VHQA, are not interested in applying, and so have no incentives to raise their sights higher than the minimum standards of the Register of Qualified Programmes.

The recent IDB study of rates of return from different TE programmes in Chile and Colombia pointed out that “institutional accreditation does not seem to give a clear signal of the net return to higher education degrees” (IDB, 2015). It offered instances where students would be better off after graduation if they chose to study at non-accredited rather than accredited institutions. It also commented that in both countries, “with respect to quality assurance, the minimum requirements for operation of a [TEIs] are lax, and the labour market performance of graduates is not a core input in the accreditation process” (IDB, 2015). Other aspects of tertiary performance which may be given insufficient weight in the VHQA process include dropout rates, time taken to complete programmes compared to their nominal length and the views of students.

The current two-part quality assurance regime also leaves a broad and undefined gap between the minimum level confirmed at the time of granting the qualified registration and the distinct accreditation for excellence. If a quality assurance system is to provide clear and comprehensible information to students, the public and employers then the criteria need to be sharper and more transparent. Every institution and ideally every programme in the system needs to have its quality and relevance (an important aspect of quality) assessed according to clear criteria, initially and at regular intervals thereafter, in a way that allows all stakeholders to draw meaningful conclusions from the published results of the assessment. These quality criteria need to recognise the different mandates of Colombia’s diverse TE providers, and establish standards that encourage excellence in all fields. For instance, the current assessments do not adequately recognise the important components for quality in T&T programmes.

The process of institutional accreditation is not currently obligatory. Making it so would require some adjustment to the current VHQA criteria. The new criteria would need to apply equally to all types and levels of tertiary organisation, and include assessment of the elements identified as

missing from the current assessment. Aspects such as equity, relevance, labour market performance of graduates, rates of return, efficiency (meaning low dropout rates, reasonable times to completion, high graduation rates and reasonable cost per student compared to other similar provision) and involvement of stakeholders can really only be assessed at the programme level; therefore it would make sense for all of an institution's programmes to be considered as part of an obligatory institutional accreditation.

Last but not least, accreditation assessments do not give due weight to programmes' relevance. Involving employers and businesses in developing new consolidated quality assurance processes and standards, as well as in the actual assessments would strengthen the criteria. This will be particularly important for improving the value of accreditation processes for T&T programmes (see below).

Enhancing institutional performance

The government has introduced a range of policies to improve the quality and competitiveness of Colombian universities. They include efforts to improve the proportion of staff with higher qualifications, increase the offer of postgraduate programmes, and boost spending on research and development. The most recent government initiative to enhance institutional performance is a new information and ranking system introduced July 2015, known as Model Performance Indicators for Education (*Modelo de Indicadores del Desempeño de la Educación*, MIDE) which should spur competition between institutions to improve performance.

MIDE seeks to provide clear, objective and transparent information about the current state of 187 universities and university institutions using quality variables and dimensions, such as student performance on SABER PRO, graduate rates, quality of teaching, research, institutional strength and internationalisation. It is not clear whether the system as shown on the MIDE website is yet final. This review observed some gaps in the present system which might diminish its usefulness to students and institutions:

- Not all TEIs are covered. The first version of MIDE was developed for universities and university institutions, and the MEN intends to create another version for T&T institutions. The criteria for assessment would need to be adapted to reflect different institutional types and goals, with separate rankings for different institutions.
- The only figures currently visible on the website at present are the rankings for the 6 dimensions and the 18 variables. It doesn't provide the underlying information for each variable or whether different institutional circumstances have been taken into account, although these are important factors.

- At present, all the variables seem to have equal weighting. For example, within “institutional strength”, the institution’s dropout rate is given the same weight as its revenue-raising capacity. Some variables must surely be more important than others suggesting further consideration should be given to the indicators and weightings.
- No account seems to be taken of differences in institutional circumstances when ranking. For example, all rankings on the performance dimension seem to be based on final SABER PRO scores but to take fair account of the varying entry standards of students, it should be done on the basis of value added/distance travelled between SABER 11 and SABER PRO. Differences in institutional missions and funding levels are also relevant.

In sum, the MIDE ranking system is a potentially useful tool to encourage more focus and transparency around TE quality, but needs further development and a more sophisticated approach to ranking if that potential is to be realised. In particular, If MIDE is to become a useful tool for improvement, rather than just a list of TEIs, it needs to have buy-in from institutions, which does not yet appear to be the case. Rankings have certain uses, but even the best systems have their limitations and need to be interpreted with care. The risks of using ranking as the basis for funding policies or other important policy decisions that affect TEIs have been well documented (van Vught and Westerheijden, 2010; Hazelkorn, 2009). It will be important that MIDE does not distract from or distort efforts to improve quality at the institutional level.

Colombia has also taken steps to increase the funding available to TEIs for quality improvement and encourage institutions to pay more attention to quality and student outcomes. The limited funds available for quality improvement means that incentives should be well designed to focus on policies that can raise standards across the sector. The quality of teaching and research is a key success factor in the development of tertiary excellence (Altbach and Salmi, 2011). In Colombia, government policy to upgrade the academic workforce has focused on increasing the number of staff with postgraduate qualifications and encouraging more research. This is a positive step as Colombia is one of the Latin American countries with the lowest production of scientific papers per capita (OECD/World Bank, 2012).

Improving the quality of undergraduate teaching will also be important for raising standards. The review team was informed that often staff have weak pedagogical skills, use outdated teaching practices and curricula, and have limited capacity to address the learning needs of a highly heterogeneous student population. To improve the quality of teaching, recruitment processes need to consider the teaching ability of academic staff as well as their

qualifications. Existing staff need access to pedagogical courses and more professional development opportunities as well as encouragement to participate in exchange programmes with high-quality national and international institutions.

Improving technical and technological institutions

There are acute concerns over the quality and relevance of T&T programmes in Colombia. T&T programmes make up only for a small number of all tertiary level programmes that have achieved VHQA (CNA, 2015). Data on the places offered by institutions suggest that the institutional landscape is highly fragmented, with a few large providers and a great number of small institutions providing a limited range of programmes. For example, just 10 institutions account for 70% of all professional technical places. Public T&T programmes attract only a small share of all government subsidies and many, in particular smaller institutions, struggle to mobilise additional revenue to fund staff and instructional materials (see Policy Issue 3). While rates of return from T&T programmes vary, they are on average lower than from universities or university institutions, and T&T dropout and non-completion rates are on average higher, despite being shorter programmes.

The structural reforms of the TE sector envisaged under the SNET are intended to significantly enhance the quality and relevance of the T&T institutions in Colombia (MEN, 2015b) (see Policy Issue 3). The review team considers that these structural readjustments will only have the desired impact if they are combined with a reformed quality assurance system and a proactive policy agenda focused on changing teaching and learning practices within institutions and connecting them better with labour-market needs.

The current system of licensing and accreditation is ill equipped to assure and enhance the quality of T&T programmes. The standards applied by CONACES and the CNA were designed for academic programmes, and representatives of academia and businesses and employers interviewed by the review team observed that the standards failed to recognise key quality components for T&T courses, such as the level of employer engagement in course design and student assessment, or the existence of work-based learning opportunities. Standards for licensing and accrediting T&T programmes need to be designed with employers to encourage improvements at the institutional level that will prepare T&T graduates for employment.

T&T institutions also regard the SABER PRO assessment to be poorly suited to evaluating the learning outcomes of many T&T courses. Vocational competencies need to be assessed alongside the core academic competencies measured, whether this is through a revised SABER PRO, or a separate assessment for T&T programmes (a SABER TEC). Whatever approach is

chosen, it is important that assessment is designed with employers so that the outcomes are recognised by the labour market.

There has not been an independent in-depth review of T&T programmes in Colombia, and there is a lack of reliable information on the teaching and learning practices in institutions, in particular those managed by SENA. However, anecdotal evidence collected by the review team, and research carried out within the framework of the 2012 OECD-World Bank review, suggest that many T&T institutions in Colombia lack the basic elements required for quality VET (OECD, 2014a). While SENA tertiary level programmes usually include an element of work placement and engage teachers from industry, this does not appear to be common practice in other institutions. In most T&T programmes, especially those offered by small institutions, opportunities for work-based learning seem limited and staff lack up-to-date industry knowledge and experience. The review team also observed a general lack of emphasis on consolidating basic skills, which SABER 11 results shows many T&T students lack, and a lack of pedagogical skills among teachers to integrate basic skills with VET in a way that is engaging for young people and relates to employers' needs.

Policy issue 3: Strengthening governance and financing

International research has identified diversity as an important factor in the provision of successful TE (OECD, 2008). The variety of education providers in Colombia could therefore be an asset in giving more choice for students, being responsive to changing labour market needs, offering opportunities for innovation and providing more flexible programmes to a widening range of students with divergent abilities and interests. However, diversity poses challenges both in terms of quality assurance, as discussed above, and with respect to governance and funding. In a highly differentiated system where institutions have considerable autonomy, improving articulation – clarifying and strengthening the organisational structure and linkages between the tertiary education institutions and programmes – is essential. A shared, long-term vision is important, to facilitate co-operation between institutions, align individual mandates with broader economic and societal goals, and promote common norms, values and ethics. A diverse system also requires a broad-based funding system, which is both sustainable and flexible enough to respond to changing needs and opportunities.

Creating a more integrated system

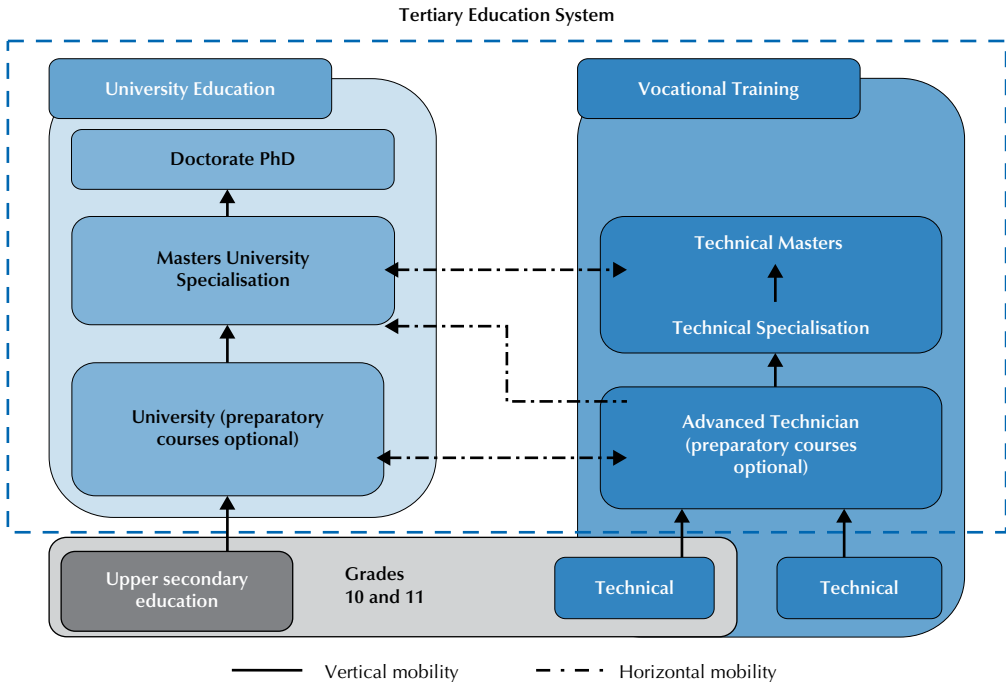
A key objective of current tertiary reforms in Colombia is to improve system articulation. The PND announced several policies, including a National Qualifications Framework (NQF) and a Credit Accumulation

and Transfer System and Information System (*Sistema Nacional de Acumulación y Transferencia de Créditos, SNACT*), intended to create a more integrated tertiary sector. The aim is to move towards a much clearer organisational structure, based on two core pillars: a university pillar (*educación universitaria*) and a tertiary VET pillar (*formación profesional*) (MEN, 2015b). This new structure is intended to address several problems, identified by *the Commitment for Excellence 2034* and documented in many national and international studies. These problems include the lack of clear pathways to enable students to move from one institution to another and from one level to the next; the fragmented information systems that make it difficult for students, employers and the government to assess the value and outcomes of different programmes; and the low quality, low status and weak labour-market links of T&T programmes. The review team shares the government's diagnosis of these challenges, and considers that many of the policies proposed have the potential to improve system articulation and enhance quality, relevance and equity. However, there is an absence of clarity on several important issues, in particular with respect to improving information and integrating SENA. While the overall direction of change is clear, the lack of specificity around implementation, accountability and financing makes it difficult to see how the desired reforms will take effect.

Implementing a shared vision for change

For political and historical reasons countries have developed different ways of structuring tertiary provision. Many OECD countries have, or are moving towards, a relatively unified system. This is the case for Australia, Italy and the United Kingdom, for example, which in recent years have sought to abolish the divide between university and other programmes and encourage wider differentiation within a single institutional type (OECD, 2008). Other countries have built what are described as binary or dual systems, where there is a clearer distinction between different institutions and programmes. This is the path that Colombia has chosen to take, and is an approach adopted by several OECD countries, including Finland, Germany, the Netherlands and, in Latin America, Chile and Mexico (Wissenschaftsrat, 2010; Taylor et al., 2008). While details of Colombia's new institutional architecture are still being developed, current proposals suggest that the core distinction between programmes and institutions will be course duration and the degree of technical specialisation and applied focus (see Figure 5.7). Although both pillars will enable students to progress to a bachelor's (*licenciatura*) and master's degree, the core offer of the tertiary VET pillar will be shorter programmes (a minimum of two years) designed to provide participants with specialised professional knowledge and skills in a specific area.

Figure 5.7. Moving towards a two-pillar tertiary education system



Source: MEN (2015b), *Bases para la Construcción de los Lineamientos de Política Pública del Sistema Nacional de Educación Terciaria (SNET)*, Viceministerio de Educación Superior, Dirección de Fomento de la Educación Superior, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.

For Colombia, having decided to move towards a dual system, it is important that this vision is shared and followed by all stakeholders. An important strength of the current reform proposals is that they are informed by a three-year national consultation, which engaged all actors (students, academics, TEIs, government, employers and the general public), and reached the general conclusion that Colombia would benefit from moving towards a two pillar system (Box 5.4). This provides legitimacy for the general direction of change. The *Commitment for Excellence 2034* report that resulted from the consultation also provides a shared long-term perspective on how TE in Colombia needs to develop over the next 20 years, and on the fundamental values and principles that should guide this transformation. There are few, if any, public policy statements of similar depth, breadth and quality in Latin America, or among OECD countries.

Box 5.4. The National Higher Education Council's long-term vision and strategy

The *Commitment for Excellence 2034*: a proposal for a public policy for excellence in Colombia's higher education system (*Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*), is the title of an ambitious and far reaching report, produced by the National Council of Higher Education (*Consejo Nacional de Educación Superior*, CESU), published in 2014 with the intention of building a national consensus about the future of TE in Colombia. It was conceived after the withdrawal in 2011 of the government's bill to reform Law 30 of 1992. Law 30 was devised when Colombia had less than 500 000 tertiary students, whereas today there are over 2 million; and there has been continuing discontent over the years with the law's rigidity, lack of definition and scope. The opportunity to update the law and address these discontents was lost when one highly controversial clause – to allow for profit tertiary education institutions – caused the whole 2011 reform proposal to fail.

CESU, a collegiate body with representatives from universities, T&T institutions, the general public and industry, then proposed a Grand National Dialogue on Higher Education (*Gran Dialogo Nacional por la Educación Superior*) to develop a national consensus on what Colombians want from their TE system. The dialogue involved an opinion survey, expert meetings, public meetings, regional meetings and online consultations. At the end of this two-year process, 33 000 people had participated. From this consultative process CESU crafted their report, presented as a road map toward the future. They proposed further national consultations in 2018, 2024 and 2034.

The report reached the following key conclusions. The fundamental goals of Colombia's tertiary education system are to increase access and inclusion; improve quality and relevance; and strengthen research, science, technology and innovation. Four vital strategies are needed to achieve these goals: greater regional balance and participation; the creative use of modern information and communication technologies with online and distance learning; internationalisation for both institutions and students; and the building of a culture of educational communities closely linked to citizen responsibilities and co-operation. However none of these goals can be achieved without two others: a reform of the structure and governance of the system, and preservation of its financial sustainability.

The President received the report in July 2014. Though he has not endorsed every detail, some of the report's proposals are to be found in the National Development Plan 2014-2018.

Source: CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

However, translating this broad general consensus into positive improvements in the quality, relevance and equity of TE in Colombia will require important changes in legislation and governance. Current reform proposals do not include any proposal to revisit the 1992 law, which is seen by

both the Commitment for Excellence 2034 and the 2012 OECD and World Bank review as antiquated and a major obstacle to progress. It is hard to envisage how the desired strengthening of T&T institutions and programmes can take effect without establishing their identity in law. At present, there are major overlaps in the roles and responsibilities of different actors which can create both confusion and gaps in accountability. New legislation will also be important for supporting the implementation of proposed policies on qualifications, credit transfer, prior learning recognition and information sharing.

Improving system articulation will require strong and energetic governance at national and regional levels to establish links between institutions, and between TEIs and the economy and labour market. Recent international experience, recorded in the OECD, shows that successful national systems require models of system governance which guarantee university autonomy, permit the effective intervention by national governments to regulate the system and involve the full participation of major stakeholders (Gornitzka and Stensaker, 2014; De Boer, Enders and Schimank, 2008).

Supporting student mobility and avoiding dead ends

Ensuring that students can progress between different institutions and levels is even more important in a differentiated system than in a unified one. At present, the only way students in Colombia can be sure that graduation from a lower-level programme will entitle them to enter a higher level programme without having to go back to the beginning, is by going through a propaedeutic cycle within the same institution. However, in many places and many disciplines, propaedeutic cycles are not available. Very few students in Colombia make the transition from a T&T institution to a public university. In 2011, only 4% of university programmes could be accessed by graduation from T&T programmes. The PND announced three strategies intended to build clearer pathways, ladders and bridges to enable students to progress between different institutions and programmes: a national qualifications framework, a national system for credit accumulation and transfer, and improvements in the information system.

The development of the NQF offers an excellent opportunity to review, simplify and clarify Colombia's over-elaborate hierarchy of degrees and qualifications, as recommended in the 2012 OECD and World Bank report. Colombia has been discussing this since 2004. The current timetable for its introduction is: design 2014-16, adoption 2016, early implementation 2017-18, full implementation in 2019, although several stakeholders interviewed during the review visit expressed scepticism as to whether an initiative so long under preparation would reach completion (MEN, 2015a).

National qualifications frameworks encompass all education qualifications – or all TE qualifications, depending on the policy of the country concerned – in

an education system. They show what learners may be expected to know, understand and be able to do on the basis of a given qualification (learning outcomes) as well as how qualifications within a system articulate, that is how learners may move between qualifications in an education system. Many OECD member countries, including Denmark, Estonia, France, Germany, Ireland, Italy, the Netherlands and the United Kingdom, have frameworks and have found them useful for clarifying the place and value of vocational qualifications and facilitating learning progression. All 47 signatories to the Bologna Process (a series of agreements designed to ensure comparability in the standards and quality of higher education qualifications between countries in and around Europe) have adopted NQFs or committed themselves to doing so very soon. Adoption of the NQF should therefore help Colombia's internationalisation efforts by improving recognition of Colombian qualifications and facilitating the mobility of tertiary students and academic staff abroad.

The Colombian NQF is expected to contain clear descriptors of the standards, competencies and skills a person graduating from each level of the education and training system will have acquired. It can then be assumed that all qualifications obtained at a given level are comparable. A well-understood NQF should therefore enable TEIs to devise and dovetail their programmes, syllabuses and entry requirements so as to ensure that, for example, an engineering graduate from a technological institution has the exact portfolio of knowledge, skills and competencies they need to start a bachelor's programme in engineering at a university.

The NQF, combined with the government's planned credit accumulation and transfer system (SNACT), should also enable students who have done part of a programme at one institution to transfer, carrying with them credit for what they have already learnt, and complete the programme at another institution. If, as intended, the SNACT includes arrangements for the recognition of prior learning outside the education system, e.g. in the workplace, this should also open up access and re-entry opportunities for mature students, thus strengthening the lifelong learning system. Both the NQF and the SNACT would also support improvements at the upper secondary level, where the provision of vocational courses is fragmented and there are important gaps in standards, qualifications and credit recognition.

The adoption of the NQF and the SNACT is of course insufficient on its own to open up all the possible pathways just outlined. Its value will depend on the willingness and ability of Colombian TEIs to match existing programmes and qualifications with specified NQF levels. Any system for credit accumulation and transfer necessarily depends on all institutions having the capacity and commitment to evaluate skills and recognise credits, which is currently far from the case (CESU, 2014). Institutions should also

be ready to specify their entry requirements in terms of NQF level, and treat all applicants who have achieved that level equally. It is crucial, moreover, that the definition of qualifications involves and is understood by all actors – not only government and TEIs, but also employers. Several industry representatives interviewed by the review team expressed the concern that the NQF was being approached as a way of organising the supply of TE, with insufficient attention given to the needs of the economy and the demand for skills in the labour market.

If owned and adopted by all stakeholders, qualification and credit transfer systems can be helpful tools to support student progression within TE, and from education into employment. However, expectations of what they can achieve have sometimes been too high. They are not a panacea (OECD, 2014a; Allais et al., 2009). There is the risk that focusing on the structural reorganisation of the tertiary sector could distract from some of the important reforms that will be needed to improve the equity and quality of the system, discussed above. In particular, it is difficult to envisage how qualification and credit transfer systems could have the desired impact on the quality and relevance of TE without significant improvements in information and transparency across the sector.

The government has announced plans to create a TE information system but it is not clear what this will entail. The 2012 OECD and World Bank report highlighted several concerns with the quality of information that is publicly available in Colombia, and the implications of these for transparency and accountability within the sector. The review team considers that many of the issues identified remain unanswered. Information is divided between different databases which are not linked, or not easily linked. This makes it very difficult for students to get a full picture of what programmes are on offer, their admittance and completion rates, and their potential returns based on fees and expected salaries. Students would have to access three separate national databases, as well as the websites of individual institutions, if they want to make a well-informed choice about their course of study. Many of these databases contain valuable information but they are not easy to navigate, nor are they widely known and promoted among students. There are, moreover, important gaps in the quality and extent of information available. While SNIES collects information on all registered institutions and programmes, the degree of information available varies significantly. Reporting is voluntary and the MEN has limited means to ensure transparency on organisational and financial matters. The reforms introduced by Law 1140 of December 2014 are promising steps towards addressing these gaps, but it is too soon to assess their impact.

An additional challenge in Colombia is how to integrate SENA and its tertiary programmes more closely into the future national tertiary system.

Unless T&T programmes offered by SENA are subject to the same quality assurance mechanisms and public information requirements as other T&T programmes offered by other TEIs, it will be difficult to guarantee standards to students or future employers. While SENA has played an important role in expanding the supply of T&T programmes, its lack of integration in the tertiary system makes student progression from SENA institutions to higher levels of study more difficult (CESU, 2014). It also undermines effective skills development planning, making it more difficult for policy makers at national and regional level to pool limited resources to address skills gaps. It will be important to move towards much closer integration of SENA within the governance and information systems of the TE sector in Colombia. It will also be important to clarify the relationship and pathways between the national tertiary system and the EWHD system, where SENA plays a prominent role.

Ensuring sustainable and effective funding

Colombia allocates a relatively large proportion of its public education budget to TE, and total spending on TE as a percentage of GDP is above the OECD average and most OECD countries. In this context it seems unlikely to expect a considerable increase in funding for TE in the immediate future. Greater public investment, in particular, would be difficult, and both undesirable, given the scale of the need in the early childhood and school sectors, and regressive, given the high private returns from TE and unequal participation. Therefore, the success of Colombia's efforts to transform TE will hinge in large part on the ability to allocate available resources more effectively and efficiently.

The main obstacle to effective resource allocation in Colombia remains the outdated, inequitable, and inefficient system for distributing national government resources to TEIs established in Law 30 of 1992. This has resulted in great disparities between the allocations to public universities and those to university, technological and professional technical institutions, as well as disparities within these groups. Some 48% of the total resources provided to public universities are allocated to just 3 universities, leaving 52% to be shared between the remaining 29, while only 19 out of the 30 T&T public institutions regularly receive public subsidies (CESU, 2014). Without accounting for the resources of SENA, in 2012 T&T institutions received just 22% of the subsidy per student received by the universities, a difference far larger than in any OECD country (MEN, 2015a).

There is broad consensus that the current funding mechanism is inadequate (CESU, 2014). Instead of being based on historic levels, funding allocations to individual institutions should reflect numbers of students enrolled, and changes in those numbers. Programmes at different levels

and in different disciplines have different unit costs; these too should be reflected in allocations. The government may also wish to consider special allocations to institutions which offer types and levels of study regarded as national priorities or economically important, or which provide opportunities in departments with little tertiary provision. This will be essential to reduce regional inequities, raise the quality of T&T programmes, and align the TE system better with national and regional development goals.

Funding systems can also be used to incentivise and reward performance. In the current system, only about 17% of the resources transferred to public institutions for operations and investment are allocated based on results (CESU, 2014). Some steps towards performance-based distribution have been taken recently through the CREE, which allocates resources on the basis of coverage and quality indicators and tied to improvement plans. These reforms are aimed at increasing investment in research, upgrading the qualification of staff and improving infrastructure. However, the CREE's resources are small compared to overall public funding. Moving towards a results-based approach, and using funding to incentivise improvement, would mean increasing the performance-related component of the national transfer system. Institutions could be rewarded for efficiency – achieving low dropout and repetition rates, and high completion rates within a reasonable time. Institutions could be even better rewarded if they achieve these while also admitting high numbers of students from disadvantaged backgrounds or underperforming schools and mobilising resources to support them; keeping tuition fees and unit costs low; showing good value added in the SABER PRO tests; ensuring high student satisfaction levels, good employment outcomes and high rates of return for their students; and achieving good quality ratings.

These reforms will require considerable improvements in the transparency and accountability of tertiary institutions in Colombia (Salmi, 2013). Without accurate information on how tertiary institutions are spending their resources and performing, it is difficult to calculate per-student allocations and assess the appropriate level of public investment. Greater transparency will also help in reviewing the fee structure of TEIs, which has been found to be regressive and not always related to the quality or value of education provided (OECD/IBRD/The World Bank, 2013). With the current move towards greater demand-side financing through scholarship schemes such as *Ser Pilo Paga*, greater transparency of both public and private institutions will be crucial to establish reasonable per-student costs. Some institutions are seven times more costly than others; it is important to demonstrate they deliver value for public money. Recent effort to improve financial oversight, including the creation of the Superintendency for Education, are steps in the right direction, but further measures will be needed to ensure transparency and therefore effectiveness, in resource use.

Finally, an effective TE financing strategy will need to address the funding of SENA institutions and programmes. In 2013, the estimated expenditure of SENA on tertiary education was roughly equivalent to that of ICETEX and amounted to about 38% of the national transfer to all tertiary education institutions (MEN, 2015a). This generous funding enables SENA to provide tuition-free education, which makes its programmes highly popular and helps explain its dominant position in tertiary VET provision (with 58% of enrolment). There is no doubt the financial strength of SENA has expanded access to tertiary education for many disadvantaged and under-served communities. However, it has also prevented the creation of fair competition within the VET system and the lack of transparency around funding and performance makes it difficult to assess whether the concentration of resources in SENA is the most efficient and effective use of public investment. As Colombia moves to restructure its tertiary VET provision, it will be essential to review the significant disparities in funding between SENA and other T&T institutions and programmes.

Recommendations

Tertiary education reform is high on the national policy agenda in Colombia, with ambitious plans to reduce equity gaps and raise quality while at the same time fundamentally restructuring the system of tertiary provision. Success in reaching these goals will have important implications for the country's long-term growth and development. New policy initiatives, from the increase in funding for high-performing students from disadvantaged backgrounds to renewed efforts to strengthen quality assurance and facilitate student progression, are promising. They will have most impact if coupled with increased focus on improvement at the institutional level, in terms of better support to students, greater attention to teaching quality and stronger labour-market links.

Expanding access and improving equity

Recommendation 1.1: Ensure accessible information to support students' decisions

Helping students make the right choices about further education and the labour market is vital in a country where half the student cohort drops out and pathways between institutions and programmes are unclear. Further guidance could be provided to students on the programmes and institutions available, the application process, financing options and the potential labour-market outcomes. Consideration could be given to make student admission processes

centrally supervised and more transparent. Career guidance services need to be prioritised for disadvantaged students and at key transitional periods.

Recommendation 1.2: Target academic support on students at risk

Ensuring that upper secondary school graduates are ready to enter TE is of key importance to facilitate their successful entry, progression and graduation, in particular for the most disadvantaged ones. Addressing this challenge demands quality improvements across the school system, as recommended by previous chapters. However, there are measures that TEIs can and must take to support young people struggling because of poor school preparation. The experience of some TEIs in providing optional bridge courses and other arrangements, such as improved propaedeutic cycles to facilitate student progression, should be reviewed and adapted to the new tertiary system. To improve graduation rates, TEIs should also actively identify students who are at a high risk of dropping out, such as those who enter with low SABER 11 results and struggle to make progress, and provide them with a range of supports such as remedial classes or mentorship schemes.

Recommendation 1.3: Remove financial obstacles to enrolment for low-income students

Stronger financial support arrangements are key to ensuring equitable access for less advantaged students. Public funding to support access for low-income students, either through loans or scholarships, needs to be increased and targeted on those with the greatest financial need. Efforts to obtain student loan and scholarship funding from other sources, such as the CREE tax and from TEI's own resources, should be stepped up. The ICETEX loan conditions could be more flexible for students from very low-income families and more strict for those with less financial need. The impact on equity of the *Ser Pilo Paga* scholarships programme compared with other alternatives should be carefully evaluated. In particular, the distribution of costs between the MEN and the TEIs who receive the most talented students – and charge very high tuition fees – could be revisited. Finally, the MEN could incentivise TEIs to create an income-based tuition fee structure and provide additional financial assistance to make tertiary education affordable for the most disadvantaged students.

Recommendation 1.4: Put regional equity at the forefront of reforms

Reducing the stark differences in access and performance across regions should be put at the centre of reform efforts. Lessons from the recent evaluation of CERES should be used to inform regional development efforts, as should the experience of other countries that have successfully redressed

imbalances. Funding will be a key factor, and measures to channel more resources to disadvantaged areas through reforms to the national transfer system and more, and more affordable, loans to rural students, will need to be matched by measures to enhance cost efficiency, such as through mergers and greater use of blended learning. Colombia should consider establishing regional co-ordinating councils to ensure local concerns are placed at the forefront of public policy. Such councils could also help to strengthen engagement between TEIs and employers, to tailor programmes to better meet regional economic needs and to mobilise additional funding.

Ensuring quality and relevance

Recommendation 2.1: Introduce a more stringent quality assurance system

The quality and relevance of TE could be improved if a single national agency handles all important aspects of quality assurance in TE and the registration of programmes and high-quality accreditation processes are combined. The standards required for registration of new programmes should be raised to ensure that all institutions offer an acceptable minimum quality to their students and the process of institutional accreditation should be adequately differentiated to reflect different institutional mandates. Quality assessments should give due weight to programmes' relevance and labour-market outcomes. Businesses and employers should be involved in developing these new consolidated quality assurance processes and standards. Employers, as well as students, should also be included on institutional assessment teams.

Recommendation 2.2: Create a culture of institutional and academic improvement

It is important that systems to rate and rank TEI performance are well designed and fair. The further development of the MIDE should ensure that the assessment criteria reflect different institutional mandates and take into account contextual information on student and institutional circumstances. Involving key stakeholders (TEIs, academics, students, employers) in the design of the MIDE and other information tools can help to ensure their validity and use. Raising standards will require mutually reinforcing policies at national and institutional level to strengthen key drivers of academic excellence. Improving teaching quality should receive high priority. Staff should have greater opportunities for professional development, including support to raise their qualifications to postgraduate levels, undertake pedagogical in-service courses, and participate in academic exchanges with high quality national and international institutions. Greater consideration

could also be given to the pedagogical skills of staff in their recruitment, appraisal and promotion. Quality is intrinsically related to student outcomes. Proactive efforts are needed to connect teaching and learning across all TEIs to the needs of the Colombian economy and labour market in order to ensure students graduate with skills that provide access to jobs.

Recommendation 2.3: Level up the quality of institutions in the VET pillar

An in-depth evaluation of institutions and programmes in the VET pillar should be carried out in order to design an effective long-term policy response to its perceived lack of quality and relevance. This review should also include SENA. In the immediate to medium term, there are steps Colombia can take to improve the quality of VET. First, standards for licensing and accrediting programmes and institutions should be revised to capture key quality components of VET, which differ from those for academic programmes. Second, institutions should be encouraged to ensure that trainers have up-to-date industry knowledge and experience and student greater access to work-based learning opportunities. To make this happen, regional governments could create bodies to foster synergies between the TEIs and employers, such as Antioquia's University-Firm-State Committee. Finally, Colombia should pursue measures to improve the assessment and certification of the skills acquired by VET students. Mechanisms should be put in place to ensure the adoption of the NQF (see Recommendation 3.1) by employers and TEIs. Colombia might also pursue changes to SABER PRO to improve the assessment of VET competencies, alongside core academic competencies. This should be done with the involvement of employers.

Strengthening governance and financing

Recommendation 3.1: Creating a more joined-up system

The proposal to restructure Colombia's TE system into two main pillars – a university pillar and a VET pillar – has the potential to create clearer and stronger pathways for skills acquisition, and should be pursued. However, it is important that structural reforms support, and do not become a bureaucratic distraction from, the primary task of improving the quality and relevance of learning. The process of creating the NQF should be accelerated, and adequate attention given in the design to implementation requirements. It should be the result of a broad consultation and provide a clear framework for students and employers about the degrees and qualifications available and what they mean in the labour market. In conjunction with the NQF, the development of a credit transfer system will be essential to remove the

existing obstacles in the recognition of prior learning and to enable students to progress through, and into and out of, the tertiary system. Systemic reform will also require stronger and more energetic governance at national and regional levels to connect TEIs with employers and forge a more integrated tertiary sector that meets Colombia's social and economic needs.

Recommendation 3.2: Move towards a performance-based funding system

None of these desired changes will be possible without a funding system which aligns the improvement efforts of TE institutions with national goals. As recommended by the 2012 OECD-World Bank report, Law 30 of 1992, which determines how the bulk of resources transferred to TEIs is distributed, should be reformed at the earliest possible opportunity. The allocation of resources should be designed to encourage TEIs to achieve greater efficiency, equity, quality and relevance. To this end, a larger share of resources should be distributed on the basis of key performance indicators. The funding reform is of particular importance to the tertiary VET pillar to ensure that T&Ts receive adequate resources. The resources of the CREE, which are currently solely allocated to SENA, could be distributed more broadly among high-quality institutions providing VET at the post-secondary and tertiary level. Finally, greater transparency and accountability will be essential to make the most of the limited public resources available.

Notes

1. The ISCED 2011 classification levels relevant to tertiary education (TE) are levels 5-8. Level 5 (Short-cycle TE) and Level 6 (Bachelor's or equivalent) are defined above. Level 7 is Master's or equivalent: programmes designed to provide advanced academic and/or professional knowledge, skills and competencies leading to a second tertiary degree or equivalent qualification. Level 8 is Doctoral or equivalent: programmes designed primarily to lead to an advanced research qualification, usually concluding with the submission and defence of a substantive dissertation of publishable quality based on original research.
2. Level 6 in the ISCED 2011 classification: bachelor's or equivalent programmes providing intermediate academic and/or professional knowledge, skills and competencies leading to a first tertiary degree or equivalent qualification.
3. Level 5 in the ISCED 2011 classification: short first tertiary programmes that are typically practically-based, occupationally-specific and prepare for labour market entry. These programmes may also provide a pathway to other tertiary programmes.
4. Law 30 December, 28 1992 which organised the Higher Education public service.
5. The Income tax for equality (*Impuesto sobre la Renta para la Equidad*, CREE) is a national tax, which works similarly to an income tax on the profits and gains of the companies. It is meant to be a company's contribution for the benefit of their employees, employment generation and social investments.
6. The Selection System of Beneficiaries of Social Programmes (*Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales*, SISBEN) is a proxy means-based test tool used by the government to identify the most disadvantaged families (socio-economic levels 1-3 out of 6) so that they may access social programmes.
7. Reference year for Uruguay is 2010; Argentina, 2011; and Brazil and Chile, 2012.

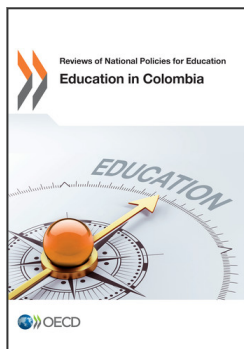
References

- Allais, S. et al. (2009), “Learning from the first qualifications frameworks”, *Employment Working Paper*, No. 45, International Labour Office, Geneva www.ilo.org/employment/Whatwedo/Publications/working-papers/WCM_041902/lang--en/index.htm.
- Altbach, P.G. and J. Salmi (eds.) (2011), *The Road to Academic Excellence: The Making of World-Class Research Universities*, The International Bank for Reconstruction and Development and The World Bank, Washington, DC.
- Arango, L.E. and G. Bonilla (2015), “Human capital agglomeration and social returns to education in Colombia”, *Borradores de Economía*, No. 883, Banco de la República, www.banrep.gov.co/sites/default/files/publicaciones/archivos/be_883.pdf.
- Brunner, J. (2013), “The rationale for higher education investment in Ibero-America,” *OECD Development Centre Working Papers*, No. 319, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k40d671718x-en>.
- Castaño, H. L. (2012), “El mercado laboral Colombiana: Tendencias a largo plazo”, in *El Mercado del Trabajo en Colombia: Hechos, Tendencias y Instituciones*, Banco de la República, www.banrep.gov.co/docum/Lectura_finanzas/pdf/lbr_merc_trab_1.pdf.
- CEDLAS/World Bank (2015) “Education”, *Socio-Economic Database for Latin America and the Caribbean*, Centro de Estudios Distributivos, Laborales y Sociales, Universidad Nacional de La Plata and the World Bank, <http://sedlac.econo.unlp.edu.ar/eng/statistics-detalle.php?idE=37>.
- CESU (2014), *Acuerdo por lo Superior 2034: Propuesta de Política Pública para la Excelencia de la Educación Superior en Colombia en el Escenario de la Paz*, Consejo Nacional de Educación Superior (National Council of Higher Education), www.dialogoeducacionsuperior.edu.co/1750/articles-319917_recurso_1.pdf.

- CNA (2015), *Boletín Estadístico*, March 2015, Consejo Nacional de Acreditación (National Accreditation Council), www.cna.gov.co/1741/articles-322100/Boletin_marzo_2015.pdf.
- DANE (2015), “Pobreza y desigualdad”, *Pobreza y Condiciones de Vida*, Departamento Administrativo Nacional de Estadística (National Department of Statistics), www.dane.gov.co/index.php/estadisticas-sociales/pobreza.
- De Boer, H. F., J. Enders and U. Schimank (2008), “Comparing higher education governance systems in four European countries”, in N.C. Soguel and P. Jaccard (eds.), *Governance and Performance of Education Systems*, Springer, pp. 35-54.
- DNP (2015), *Bases Plan Nacional de Desarrollo 2015-2018*, Departamento Nacional de Planeación (National Planning Department), Bogotá.
- DNP (2014), *Evaluación Institucional y de Resultados del Programa Centros Regionales de Educación Superior (CERES)*, Departamento Nacional de Planeación (National Planning Department).
- Gornitzka, Å, and B. Stensaker (2014), “The dynamics of European regulatory regimes in higher education—Challenged prerogatives and evolutionary change”, *Policy and Society* Vol. 33/3, pp. 177-188.
- Hazelkorn, E. (2009), “The impact of global rankings on higher education research and the production of knowledge,” *UNESCO Forum on Higher Education, Research and Knowledge Occasional Paper*, No. 16, United Nations Educational, Scientific and Cultural Organization.
- ICETEX (n.d.), “Quiénes somos”, Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior (Colombian Institute for Student Loans and Study Abroad) website, www.icetex.gov.co/DnnPro5/Default.aspx?tabid=1111.
- ICFES (2015), “Information on the SABER PRO exams”, Instituto Colombiano para la Evaluación de la Educación (Colombian Institute for the Evaluation of Education) website, www.icfes.gov.co/index.php/instituciones-educativas/saber-pro/informacion-de-la-prueba-saber-pro#.
- ICFES (2014), “SABER PRO results 2014”, Instituto Colombiano para la Evaluación de la Educación (Colombian Institute for the Evaluation of Education) website, www.icfes.gov.co/resultados/saber-pro/resultados-individuales/resultados-agregados-saber-pro-2014.
- IDB (2015), “Returns to higher education in Chile and Colombia”, *IDB Working Paper Series*, No. 587, Inter-American Development Bank, http://publications.iadb.org/bitstream/handle/11319/6858/Returns_to_Higher_Education_in_Chile_and_Colombia.pdf?sequence=2.

- Melo, L.A., J.E. Ramos, and P.O. Hernández (2014), “La educación superior en Colombia: Situación actual y análisis de eficiencia,” *Borradores de Economía*, No. 808, Banco de la República.
- MEN (n.d.a) (2015), “SNIES: Sistema Nacional de Información de la Educación Superior”, Ministerio de Educación Nacional (Ministry of National Education) website, www.mineduccion.gov.co/sistemasdeinformacion/1735/w3-propertyname-2672.html.
- MEN (n.d.b) SPADIES (Sistema para la Prevención de la Deserción de la Educación Superior) website, <http://spadies.mineduccion.gov.co> (accessed on 20 July 2015).
- MEN (2015a), “OECD-Colombia education and skills accession policy review: Country background report”, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.
- MEN (2015b), *Bases para la Construcción de los Lineamientos de Política Pública del Sistema Nacional de Educación Terciaria (SNET)*, Viceministerio de Educación Superior, Dirección de Fomento de la Educación Superior, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.
- MEN (2014), “Tasa de deserción acumulada por cohorte según semestre”, *SPADIES (Sistema para la Prevención de la Deserción de la Educación Superior)*, Ministerio de Educación Nacional (Ministry of National Education), www.mineduccion.gov.co/sistemasdeinformacion/1735/articles-254702_archivo_pdf_estadisticas_2013.pdf.
- National Congress (2014), “Ley 1740 de 23 Diciembre 2014” [Law 1740, 23 December 2014], National Congress of Colombia, <http://wp.presidencia.gov.co/sitios/normativa/leyes/Documents/LEY%201740%20DEL%2023%20DE%20DICIEMBRE%20DE%202014.pdf>.
- National Congress (1992), “Ley 30 de Diciembre 28 de 1992” [Law 30, 28 December 1992], National Congress of Colombia, www.cna.gov.co/1741/articles-186370_ley_3092.pdf.
- OLE (n.d.), “Estadística de interés”, Observatorio Laboral Para la Educación website, www.graduadoscolombia.edu.co.
- OECD (2015a), *Education at a Glance Interim Report: Update of Employment and Educational Attainment Indicators*, OECD Publishing, Paris, www.oecd.org/edu/EAG-Interim-report.pdf.
- OECD (2015b), *OECD Skills Outlook 2015: Youth, Skills and Employability*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264234178-en>.

- OECD (2015c), *E-learning in Higher Education in Latin America*, Development Centre Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264209992-en>.
- OECD (2014a), *Skills Beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264214682-en>.
- OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.
- OECD (2012), *Higher Education in Regional and City Development: Antioquia, Colombia 2012*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264179028-en>.
- OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1 and Volume 2*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264046535-en>.
- OECD/IBRD/The World Bank (2013), *Reviews of National Policies for Education: Tertiary Education in Colombia 2012*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264180697-en>.
- Quacquarelli Symonds (2015), “QS University Rankings: Latin America 2015”, QS Top Universities, www.topuniversities.com/university-rankings/latam-university-rankings/2015.
- Salmi, J. (2013), *La Urgencia de Ir Adelante: Perspectivas desde la Experiencia Internacional para la Transformación de la Educación Superior en Colombia*, Ministerio de Educación Nacional (Ministry of National Education), Bogotá.
- Taylor, J.S. et al. (eds.) (2008), *Non-University Higher Education in Europe*, Springer Science + Business Media B.V.
- UNESCO (2012), *International Standard Classification of Education – ISCED 2011*, United Nations Educational, Scientific and Cultural Organization, Paris.
- UNESCO-UIS (2015), “Browse by theme: Education”, Data Centre, UNESCO Institute for Statistics, www.uis.unesco.org/DataCentre/Pages/BrowseEducation.aspx.
- Van Vught, Frans and D.F. Westerheijden (2010), “Multidimensional ranking: A new transparency tool for higher education and research”, *Higher Education Management and Policy*, No. 16, Vol. 22/3, pp.1-26.
- Wissenschaftsrat (2010), *Recommendations on the Differentiation of Higher Education Institutions*, Wissenschaftsrat, www.wissenschaftsrat.de/download/archiv/10387-10_engl.pdf.



From:
Education in Colombia

Access the complete publication at:
<https://doi.org/10.1787/9789264250604-en>

Please cite this chapter as:

OECD (2016), "Tertiary education in Colombia", in *Education in Colombia*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264250604-8-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.