



THE FUTURE OF VOCATIONAL TRAINING IN LATIN AMERICA AND THE CARIBBEAN

OVERVIEW AND
STRENGTHENING
GUIDELINES

ILO REGIONAL OFFICE FOR LATIN AMERICA
AND THE CARIBBEAN
INTER-AMERICAN CENTRE FOR
KNOWLEDGE DEVELOPMENT IN
VOCATIONAL TRAINING - CINTERFOR



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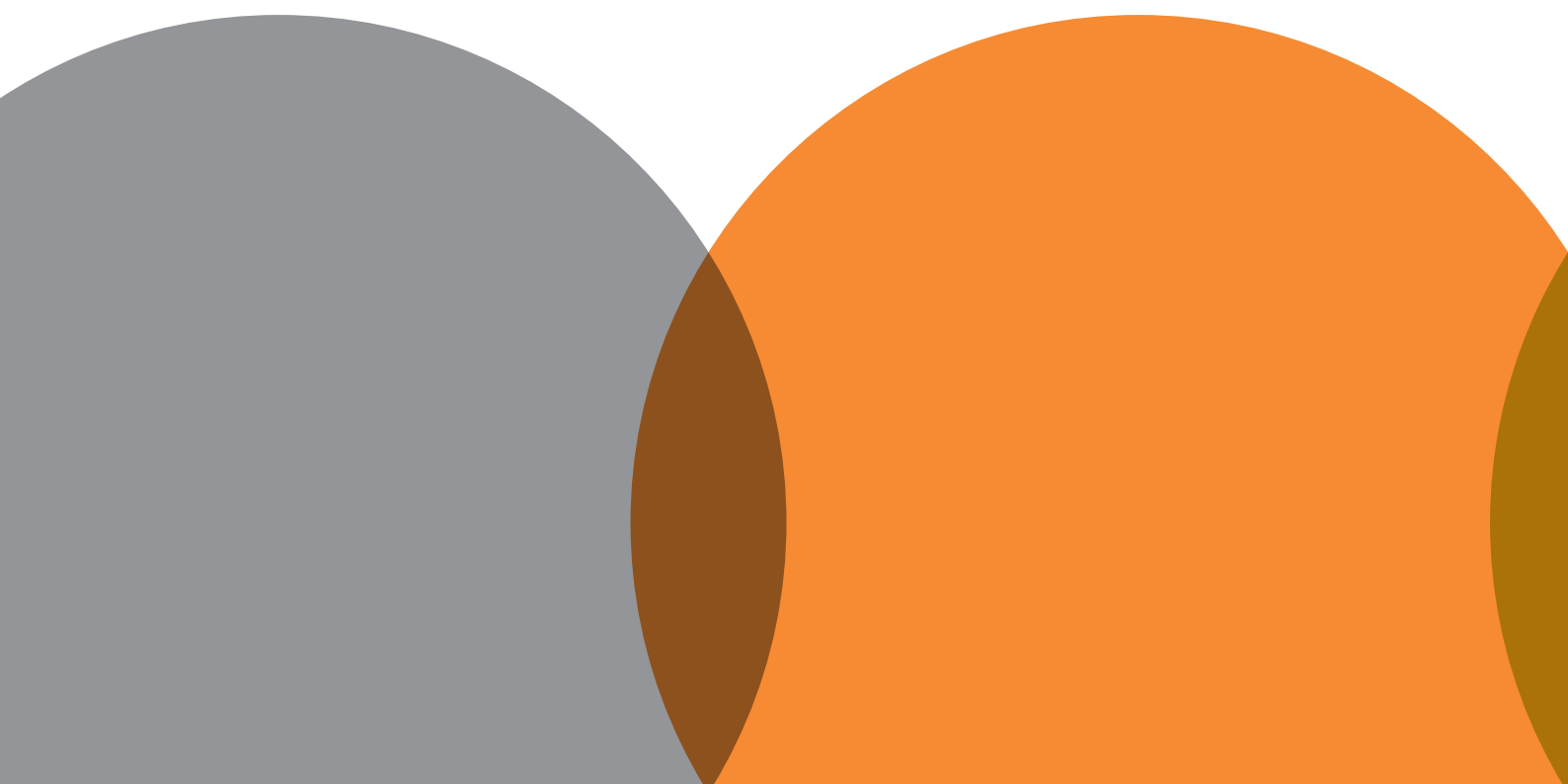




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2017



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First edition 2017

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The future of vocational training in Latin America and the Caribbean: overview and strengthening guidelines. Montevideo: ILO Regional Office for Latin America and the Caribbean/ILO/Cinterfor, 2017.

ISBN: 978-92-9088-283-1

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VOCATIONAL TRAINING/EMPLOYMENT/
ECONOMIC GROWTH/STATISTICS/FUTURE OF
LABOUR/ PRODUCTIVITY/LATIN AMERICA/
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Web site: www.oitcinterfor.org

CLARIFICATION

The terms vocational training, labour training, training for work are used interchangeably in the document.

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Foreword

The first vocational training institutions that were created in the region wisely mirrored factory environments, orderly classrooms and tidy workshops. Some of them inspired by the idea of rescuing youth from inactivity, taking into account their failure to succeed in school; other establishing with the laudable objective of providing a means of livelihood for the poorest who could not attend school and others, promoted as centers for labour training; soon saw the appearance in the mid-twentieth century of a new and innovative institutional arrangement for national vocational training.

In fact, with the creation of SENAI (1942) in Brazil, innovative educational technology was generated by building upon knowledge accumulated in apprenticeship technical schools from Germany, Austria and Switzerland. In a typically industrial environment, education was delivered using methods based on training and dexterity as was the four-step method, which began with “the instructor says and does”, followed by “the student says and the instructor does”, then by “the student says and does” and ended with “the student does and the instructor supervises”.

For the first time, methodologies were applied to develop different education that focused on building working capacities for a growing industry that demanded skilled workers. The success of vocational training institutions, which in the twentieth century expanded throughout the region, was largely due to the great relevance they bore to the demand from companies which faced a shortage of woodturners and mechanics, builders and construction workers, secretaries and assistant accountants and also rural workers, breeding auxiliaries, animal health and milking assistants, among other occupations.

The current accelerated process of transformation finds the region exposed to new factors of change and to an uncertain demand for totally new occupations; together with the unquestionable fact that for the first time in many years, we will witness over the span of a generation, the massive obsolescence of many of the traditional skills due to technological change, digitalization, automation and artificial intelligence.

Think for a moment, if you were to create a training centre today, how would you organize it? What

teaching methods would you use? What demands from companies would you aim to satisfy? Should we build “classrooms and workshops” at times when we also learn at work, at home or in the community? Should we purchase a fair number of didactic machines and equipment, now that simulators and virtual reality are becoming more accessible and applicable? What teachers would you require in order to face the challenge? How would you train them? Would teachers be responsible for traditional learning or instead for facilitating, challenging, providing feedback, motivating? How would you finance this worthy initiative?

In brief, there are many questions and although the text that follows does not intend to provide answers to these questions, it does wish to be a vehicle for promoting debate and convincing decision-makers to reinvent this amazing tool that is vocational training.

This document brings together two large spheres, one that comprises changes and new productive scenario with one that comprises the great training capacity and knowledge accumulated by Latin America and the Caribbean over the past 70 years, describing its achievements, gaps and challenges, through an institutional arrangement designed for skills development, all expressed in the concept of vocational training.

We are delighted to present this volume which contains a long-term and future look based on present realities about the world of training and its connections with the productive development and employment strategies in the region, at a time when the evolution of the education system promises to renew the way in which learning takes place and new technologies change the way in which work is carried out.

To add practical value to this Report, Section 4 of Part I includes 10 Guidelines for promoting and strengthening vocational training systems for work and for life in Latin America and the Caribbean. We hope that these guidelines serve as a checklist and guide to the collective effort put in by governments, employers and workers to bring the vocational training systems in the region to meet the twenty-first challenges.

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Acknowledgements

José Manuel Salazar-Xirinachs, ILO Regional Director for Latin America and the Caribbean, and Enrique Deibe, Director of the Inter-American Centre for Knowledge Development in Vocational Training (ILO/Cinterfor), would like to express their gratitude to all those who have made contributions with this Report.

First of all, the vocational training institutions that reported their results and figures, in the knowledge that in this vast heterogeneity the idea of moving towards common variables and indicators is being sown, providing for a robust collection of information on training in Latin America.

Many ILO colleagues in the region gave feedback and made suggestions on the text and on the country overviews. Among them are Alvaro Ramírez, Anne Posthuma, Enrique Gamero, Gerhard Reinecke and Ernesto Abdala. As a consultant, Jorge Cornick contributed with his experience in the approach to productive development.

The preparation of the document in ILO/Cinterfor was led by Fernando Vargas Zúñiga, with support and feedback from Fernando Casanova, Rodrigo Filgueira and Gonzalo Graña; in addition, particularly with regard to data processing Anaclara Matosas and Leticia Carzoglio were also involved.

Introduction

The labour market situation

The situation of the labour markets in Latin America and the Caribbean in 2017 can be summarized as follows: 25 million people unemployed; 135 million people working in informal jobs, 47% of the total workforce; 30% of the population below the poverty line; average youth unemployment rate of 18%, persisting gaps and discrimination in terms of gender and ethnicity.¹ Furthermore, the region remains one of the most unequal in the world. This is the situation, in spite of some significant advances that took place during the flourishing decade, between 2003 and 2013.

Although this situation is mostly due to the economic slowdown of the last 4-5 years, it essentially reflects long-standing structural problems: low levels of productivity² and productive diversification; significant human capital gaps (especially with regard to the quality and relevance of vocational education and training³); high proportion of employment concentrated in micro-enterprises and small enterprises with low productivity⁴; low innovation levels; and high levels of inequality and exclusion.

The new slowdown cycle has brought these latent problems to light, which to a certain extent had been neglected during the boom years, and refocused attention on the need to revitalize policies of productive development and investment in human talent, particularly because historical problems have coupled with the challenges of what some call the 4th Industrial Revolution or, more precisely, the various technological revolutions that characterize today's world, and that are bringing about great changes in business models, productive activities, in the requirements of competencies and skills of workers and in the labour markets⁵.

Vocational training and productive development policies

Human resources are an essential and central ingredient for the achievement of sustained, inclusive and sustainable economic growth with full and productive employment and decent work for all (Goal 8 of the SDG). Without human resources with up-to-date skills and lacking sound and effective institutional capacities to refresh skills, the transition to a high-productivity economy with productive employment and decent work for all is impossible. Without such skills and capacities it is also impossible to achieve the sustained, inclusive and sustainable growth of an economy in an era characterized by accelerated technological change, and the imperatives of making a transition towards an environmentally-friendly, low-carbon and energy-efficient pattern of growth.

A fundamental and key ingredient for influencing the pattern or “model” of growth towards one that is more sustained, inclusive and sustainable and with greater traction in the labour market, are the productive development policies (PDPs). The PDPs and the instruments thereto are the main tool for influencing the pattern of growth and employment in a developing economy. These policies, marginalized during the adjustment period after the 1980s, are the object of renewed interest, which is not surprising in the light of the weak economic performance of the region in terms of productive diversification and productivity.⁶

This is why the ILO Regional Office for Latin America and the Caribbean has defined the “Productive Development Policies for inclusive growth and more and better jobs” as the first of the three priority areas of work for the region.⁷ This priority is aligned with Goal 8 of the 2030 Agenda for Sustainable Development agreed in 2015 by the United Nations and with the Strategic Objective of Employment Promotion of the ILO's Decent Work Agenda.



In short, it is clear that without successful PDPs there will not be more and better jobs, and without human resources with relevant skills, there will not be successful PDPs.

In other words, vocational training is the critical intersection or articulation area between PDPs, labour policies and aspirations for decent work.

This report on the Future of vocational training in Latin America and the Caribbean, contains an overview of the advances, backwardness and gaps in vocational training in Latin America and the Caribbean, and explains several related statements including: (a) vocational training must be aligned “in real time” with PDPs and the needs of the productive sector; (b) to make this possible, it is necessary to strengthen public-private partnerships and tripartite participation, to explore new forms of this partnership, as well as innovations in the implementation of resources for training the workforce; (c) what is true for vocational training also applies to all human resource training processes, including formal education; (d) vocational training and academic education should not be treated as alternatives from which to choose, but as supplementary instruments with many paths for coming and going between education, vocational training and work during the working lives of the people. Most of the above will not be attained with traditional management and planning models. There is a need for public-private partnership mechanisms that incorporate workers and allow for quick adjustments and expeditious implementation of resources.

Although this report focuses on vocational training, it is crucial to point out that academic education must also be notably seen as training for work. It is not, of course, a matter of reducing education to training for work, but of ensuring that the perspective of work is ever present, and not only in technical colleges or in dual education schemes in which classroom learning is combined with apprenticeships under the supervision of qualified staff in companies.



It would be difficult to conceive a greater injustice to the new generations than making them go through 10, 11 or 12 years of academic education, only to discover, upon completion, that they do not have the necessary tools to get a good job and earn a decent living with that work. A crucial question about the future, then, is whether formal and informal educational and learning structures will evolve to meet the needs of people who wish to fulfil the expectations of the workplace of the future.

« ... academic education must also be notably seen as training for work. »



From reengineering to reinvention of institutions

The corollary of the interdependence between productive development policies and human resource training policies that have traditionally been separate policy areas is that they should gradually become integrated policy areas.

In a very practical and concrete sense, this vision requires coordination and alignment between the sphere of education and vocational training and its institutions and the sphere of productive development policies including its respective institutions and companies. Effective coordination and cooperation between institutions and companies is the key to achieve results in terms of growth, productivity and employment. The reinvention of institutions for the coordination and participation of all relevant actors is at the core. There is a need for institutions that promote social and productive inclusion and that are guided by “experimentalist” management principles to discover and identify problems in real time, and offer flexible and adaptable solutions.⁸

This is particularly important in the sphere of education and vocational training because it is facing one of the most profound changes in its history. Jobs in the twenty-first century require more complex skills and competencies (technical, digital, socio-emotional) and challenge educational and vocational training systems not only to keep up-to-date but to anticipate new requirements and offer lifelong learning. In the race between education and training and technology, technology is constantly challenging educational systems and vocational training to keep pace.

Unfortunately, although student enrolment has increased, international measurements reveal significant backwardness in Latin America and the Caribbean in the development of basic mathematics, reading and science skills⁹, and there are also important gaps in vocational training with a high proportion of companies stating that they are unable to find the skills they need. For example, in the region, only one out of every nine workers receives training (education or training) over a year, whilst in the OECD average countries these figures are above 50%.¹⁰

The ILO perspective

The contribution of human talent and skills to the growth of productivity, employment and the promotion of development was analysed and acknowledged by the ILO tripartite constituents in their discussion on “Skills for improved productivity, employment growth and development” at the 2008 International Labour Conference. Paragraphs 4 to 6 of the conclusions of the conference read as follows:

4. A low-skill, low-productivity, low-wage economy is unsustainable in the long term and is incompatible with poverty reduction. This is the vicious circle of inadequate education, poor training, low productivity and poor quality jobs and low wages that traps the working poor and excludes workers without relevant skills from participating in economic growth and social development in the context of globalization. This also negatively affects the competitiveness of enterprises and their capacity to contribute to economic and social development.

5. An international, national and regional development strategy based on improved quality and availability of education and training can engender, by contrast, a virtuous circle in which skills development fuels innovation, productivity increase and enterprise development, technological change, investment, diversification of the economy, and competitiveness that are needed to sustain and accelerate the creation of more and better jobs in the context of the Decent Work Agenda, and improve social cohesion.

6. Within this virtuous circle, skills development is an essential factor for achieving the objective of decent work both by increasing the productivity and sustainability of the enterprise and for improving working conditions and the employability of workers.¹¹



This Report *“The Future of vocational training in Latin America”* stems from this tripartite approach to the role of skills in productivity growth, employment and the promotion of development.

The aim of the report is to present a diagnostic survey of the situation, the gaps and challenges in the development of skills and competencies in the countries of the region; both in relation to a characterization of the supply and demands for vocational training and related gaps and mismatches, as well as institutional, financing and governance models of the vocational training systems. The report refers to vocational training as an educational activity that is geared towards the development of skills and competencies that can have an immediate application in the world of work; this term is also known in the region as vocational education, training for work, vocational training, occupational education and training.

Latin America has a long tradition in the planning and implementation of vocational training programmes carried out by specialized public institutions; and in many countries, private providers have already begun to offer their services, which have been growing over the past years. In addition, companies in many sectors create their own on-the-job training programmes and some actively participate in first-job facilitation or training processes with apprenticeship programmes.

However, employment demand has made clear the existence of significant qualitative and quantitative skills gaps. Many companies in the region are finding it difficult to fill vacancies and to locate staff with adequate technical and socio-emotional skills, which is proof of the serious mismatches between supply and demand, given the high levels of unemployment and underemployment, particularly among young people.¹²

Moreover, the question concerning the development needs of human resources cannot be limited to an evaluation of current or future supply and demand. Interaction between supply and demand is very dynamic; in this respect, an offer with a broad critical mass of talent can itself attract its own demand in the form of additional investments that come in search of those talents, leading to higher rates of investment and greater economic complexity. The question on the future of vocational training in the region must be viewed from a broad perspective as expressed in the paragraphs cited above regarding the Conclusions of the ILO on the impact skills can have on development. The development strategy is based on a virtuous

circle in which *“skills fuel innovation, productivity increase and enterprise development, technological change, investment, diversification of the economy, and competitiveness that are needed to sustain and accelerate the creation of more and better jobs”*.

Partly due to the processes of productive transformation, and partly due to the impacts of technological revolutions, the structure of the demand for skills is changing rapidly and this challenges the educational and vocational training systems to undertake reforms that improve retention and quality, as well as the relevance of the skills. Furthermore, the traditional model in which vocational training is carried out by specialized institutions, i.e. outside companies, faces the challenge of not only having to detect in real time the skills required by companies, but also of aligning supply with the country's trends and productive development policies. This points to the need to manage training with new strategies and public-private partnership, with flexible roles, in order to reach the speed and bear the relevance required by the development.

The report has been organized in the following way. The first part contains an overview of the current situation, the backwardness and the gaps of vocational training in the region. This diagnosis is based on the experience and knowledge gathered by ILO/Cinterfor, on the existing bibliography, as well as on a consultation carried out in 18 countries with ILO/Cinterfor member institutions in Latin America¹³. The last section of the first part contains a list of the main thrusts of reform that arise from the overview, with the aim of providing a better explanation of the relevant lines of work to tread the path towards vocational training transformation and strengthening. The second part of the report contains country overviews for each of the countries included in the study.

Part I Overview

1. Human talent as an end and means for development in Latin America and the Caribbean ●●●●

Human talent is a means to increase productivity and promote sustained, inclusive and sustainable growth. Nevertheless, beyond this utilitarian or instrumentalist view, from the standpoint of many schools of philosophical thinking the development of talent is also seen and must be seen as an end in itself. In Amartya Sen's capacity approach, for example, to enhance the capacities and knowledge of individuals is an end in itself, in so far as it promotes people's ability to lead the kind of life they find valuable and desire and as such has an intrinsic moral meaning of increasing individual freedom.¹⁴

Seen as a means for development, human resources are an essential and central ingredient for the achievement of sustained, inclusive and sustainable economic growth with full and productive employment and decent work for all (Goal 8 of the SDG).

Academic studies concerning the impact of education on productivity differentials suggest so. For example, according to Schoellman (2012) the differences across countries in quantity of education explain 10% of productivity differentials and when this is combined with an approach to the quality of education, the total contribution of education accounts for 20% of the productivity differentials.¹⁵ According to studies cited by the OECD, CAF, ECLAC (2016), the years of schooling account for 28% of the differences in GDP per capita between the Latin American and Caribbean countries and those of the OECD, and when the quality of human capital is added, 60% of these differentials are attributable to education.

Evidence on the impact of education on employability and the quality of employment is similarly clear. Education increases the chances of obtaining employment. Individuals with tertiary education are more likely to be hired than those with secondary education and the latter have more chances than those who have only completed primary education. In Latin America and the Caribbean, the employment rate for adults of working age who have completed tertiary education is seven percentage points higher than those who have completed secondary education.

Formal employment is also related to a higher educational level. The better trained young people are, the more likely they are to secure a formal job, and the less qualified they are, and the more likely they are to find informal employment.¹⁶

In Latin America and the Caribbean there is also a clear correlation between the size of the enterprise and the educational level and quality of employment. The proportion of workers with tertiary education increases with the size of the enterprise. In micro-enterprises it amounts to 15%, in small enterprises, 28%, in medium-sized enterprises, 37% and in large enterprises it reaches 50%. Furthermore, the proportion of workers who have only completed primary education is higher among the smaller enterprises and is very high among the self-employed.¹⁷ On the other hand, the educational level is highly correlated with informality, the higher (lower) the educational level, the lower (higher) the incidence of informal employment. In other words, education and training constitute a key element in the reduction of informality.¹⁸

The current technological revolution has sparked an extensive and renewed conversation on the role of skills and competencies in employment, in the labour markets, and in the present and future of work, and on the interactions between education, vocational training and technology.¹⁹ Four main themes stand out in this conversation: (1) the acceleration that the technological revolution brings about on the dynamics of job destruction and job creation; (2) the impact of the technological revolution on the demand for skills; (3) the emergence of a new productive paradigm, which in the case of manufacturing has been called Industry 4.0; and (4) the risk of greater inequality insofar as in the race between education and technology, technology takes the lead.



Technological progress has always involved a dynamic process of job creation and destruction. In addition, the concern about the adverse effects on employment of technological progress has a venerable history²⁰. For example, in 1930 John Maynard Keynes wrote “We are being afflicted with a new disease the name of which some readers may not have heard yet, but of which they will hear a great deal in the years to come – namely technological unemployment”²¹. The current rationale is that this time will be different, now the process is and will be greatly accelerated because this is not one technological revolution, but several ones happening simultaneously, and the speed of change is, if not exponential, as many argue, at least dizzying.

There are two views in this regard. The pessimistic view argues that in the face of rapid changes, productive systems and political institutions will get behind the speed of the changes and will be unable to adapt. Authors such as McAfee and Brynjolfson (2014) and Martin Ford (2015) hold this view. In a widely cited publication, Frey and Osborne (2015) estimate that 47% of occupations in the United States are at risk of disappearing in the next 10 to 15 years.

The optimistic view emphasizes that other technological revolutions in the past have destroyed jobs, but they have also created new ones and there is no reason to think that “this time will be different”. What we lack is sociological or “economic imagination” to anticipate the wonderful world of new possibilities that lies ahead. This debate falls into the sphere of futurology. Neither side can provide evidence “in advance” to support either position, and it is easy to devise scenarios of either Armageddon or technological fantasy.

A second group of impacts induced by technological revolutions, related to the previous one, but of particular relevance to the future of vocational training, concerns **accelerated transformation of occupations and skills requirements**: the demand for new, advanced skills is increasing, and the obsolescence of existing skills is accelerating. A new realm of literacy has emerged, with a divide between digital literates and illiterates. There is a debate about the extent to which new “intelligent machines” replace or rather supplement humans. This line of argument and analysis has been based on the distinction between routine tasks, on the assumption that these can be automated easily, and non-routine tasks, which are supposed to be difficult or impossible to automate, or between manual and cognitive labour, based on similar assumptions. Nevertheless, the advance of artificial intelligence, voice recognition

« A new realm of literacy has emerged, with a divide between digital literates and illiterates. »

and other technologies continues to offer a surprising ability or promise to produce “machines” that are able to carry out non-routine tasks, learn, and make forays into grey areas in the definition of “cognitive”. Optimists say this nonetheless will open a broad field in which intelligent machines can supplement and multiply human skills, they become “intelligent assistants” of humans, and create new jobs and occupations for humans. But even the optimists recognize that this scenario of complementarity is something that will not happen automatically, but only with a focused effort on public policies, new attitudes and mentalities in companies and individuals for lifelong learning, and new social compacts and institutions that promote the changes and investments required. The modernization and adaptation of the educational and vocational training systems are at the heart of these discussions.

A third fundamental theme is the fact that the convergence of the Internet of Things, artificial intelligence, robotics and 3D printing is creating a **new production paradigm called Industry 4.0**. The consequences for the future of production and employment are massive: increasingly there are “smart products” (telephones, buildings, wearables, cars) that will “talk” to the “mother ship” and have a permanent connection between information and control centres of the manufacturer or operator and the individual consumer. This is also allowing, in some lines of production, the manufacture of customized products in small batches, at the same price as mass production. Increasingly logistics is also becoming “smart”: from delivery of the product, to maintenance and from client service to post-sales service. Value chains are becoming more connected at the global level and operate under the concept of “just in time”. Intelligent factories are a more widespread reality: networked machines that “talk” among themselves and that combine the physical world of the transformation of materials with



the virtual world of just in time information, automation and digital control. All of this can raise productivity and increase flexibility for production and design. This also raises a compelling argument in favour of the identity of vocational training, when the world of work becomes a new Industry 4.0 world, digitalized, connected and more complex.

The convergence of technologies is also producing a trend towards “distributed manufacturing”, a new stage in the decentralization of production with the diminished importance of economies of scale in some lines of activity. And this will also impact traditional hierarchies in the organization of production and enterprise size, creating new opportunities for Small and Medium Sized Enterprises which can be smart, contributing to global productive chains, distributed in networks of distributed manufacturing, and competitive even if small. All of these are complex trends with multiple and multidimensional impacts in the world of work. But Industry 4.0 is not science fiction for the future; it is already happening and will increasingly penetrate deeply into the productive systems of the region.

The fourth theme related to technology and skills is the **risk of greater inequality**. Technology is one of the main drivers of polarization of employment and wages. Highly skilled and “connected” workers win, while the low-skilled and “disconnected” tend to lose. It is becoming increasingly difficult to find “medium-skilled high-paid” jobs. “High skills, high wages” is increasingly becoming the standard. Economists have described these impacts as “hollowing out of the middle”²² or as the “end of average”²³, because, particularly in developed countries, the proportion of middle-skilled occupations has shrunk whilst the proportion of high-skilled occupations has increased. That is the

essence of the so-called “skill-based technical change” effect. This dynamic has massive implications for social mobility and the sustainability of the middle classes. It also shows the paramount importance of education and vocational training, that is to say, investment in human capital, as a key asset in the knowledge economy era.

Latin America and the Caribbean is the region with the highest income inequality in the world. As measured by the Gini index, in the mid-2000s the region was 18% more unequal than the Sub-Saharan Africa, 36% more unequal than Eastern Asia and the Pacific and 65% more unequal than the high-income countries.²⁴ However, after rising in the 1990s, inequality in Latin America declined between 2000 and 2007. In general the main factors that influence inequality include: state capture by elites, labour market imperfections, inequality of opportunity (in particular, of access to good-quality education), the balance between State taxes and transfers, labour market segmentation; discrimination against women and ethnic groups. The quantity and quality of the education and vocational training supply, and its relation to demand (generally skill-based due to technological progress)²⁵, is one of the six main factors that affect inequality, either positively or negatively, depending on the specific characteristics of each factor.

For example, one of the most extensive studies on the reason why inequality declined in Latin America and the Caribbean in the first decade of the twenty-first century, concludes that whilst in the 1990s, the demand for skills dominated the supply, in the 2000s, due to the increase in enrolment rates, the supply of skills outweighed demand. That is, in the race between skill-based technical change and educational improvement or scaling, the latter took the lead in the 2000s²⁶.

However, this good news on the observations made until 2010 has not necessarily continued. The recent results of the PISA tests on educational quality as well as the results of the regional tests set by UNESCO are not good for the region. The quality of education to which low-income youth have access dramatically differs from that of upper-middle and upper income youth, and significantly reduces the opportunities of the former to enter tertiary education. There are still very high drop-out rates in secondary education, and large gaps in vocational training systems, with a very underdeveloped learning system²⁷. If the State wishes to continue equalizing opportunities through education and vocational training, these gaps and challenges must be vigorously tackled²⁸.

« It is becoming increasingly difficult to find “medium-skilled high-paid” jobs. »



Moreover, evidence from the region shows that the impact of public spending through transfers is still neutral or even regressive from a distribution point of view, whereas the tax systems tend to be regressive. Thus, fiscal redistribution is low, especially in comparison with redistribution through taxes and transfers in developed countries.

Finally, inequality in the region is also rooted in the highly heterogeneous pattern of productivity across sectors, economic activities and territories, which opens up the subject that inequality is reduced not only by a combination of tax policies, social transfers and better education and vocational training, but also by productive development policies, which play a key role in minimizing structural heterogeneity in productivity across sectors and territories.

All of the above suggests the need to focus on the importance of a Human Talent Development Agenda and the challenge for formal education and vocational training systems of increasing their coverage, and further improving their quality, pertinence and relevance.

« Without human resources with up-to-date skills and solid and effective capacities, the transition towards a knowledge and innovation-based economy is impossible. »

Without human resources with up-to-date skills and solid and effective capacities, the transition towards a knowledge and innovation-based economy is impossible. Without such skills and capacities it is also impossible to achieve the sustained, inclusive and sustainable growth of an economy in an era characterized by accelerated technological change, and the imperatives of making a transition towards an environmentally-friendly, low-carbon and energy-efficient pattern of growth.

Moreover, PDPs and the instruments thereto are the main tool for influencing the pattern of growth and employment in a developing economy. Without successful policies for productive development, there will not be more and better jobs, and without human resources with relevant skills such policies will not be feasible.

Therefore, vocational training can be seen as the critical intersection or articulation area between PDPs, labour policies and aspirations for decent work. Coordination between institutions and ministries responsible for these areas, the new public-private partnerships and dialogue between workers, enterprises and the public sector linking the core issues of human resources training and productive development policies have become historical imperatives that need to be addressed without delay.



2. Advances, lags and gaps in vocational training

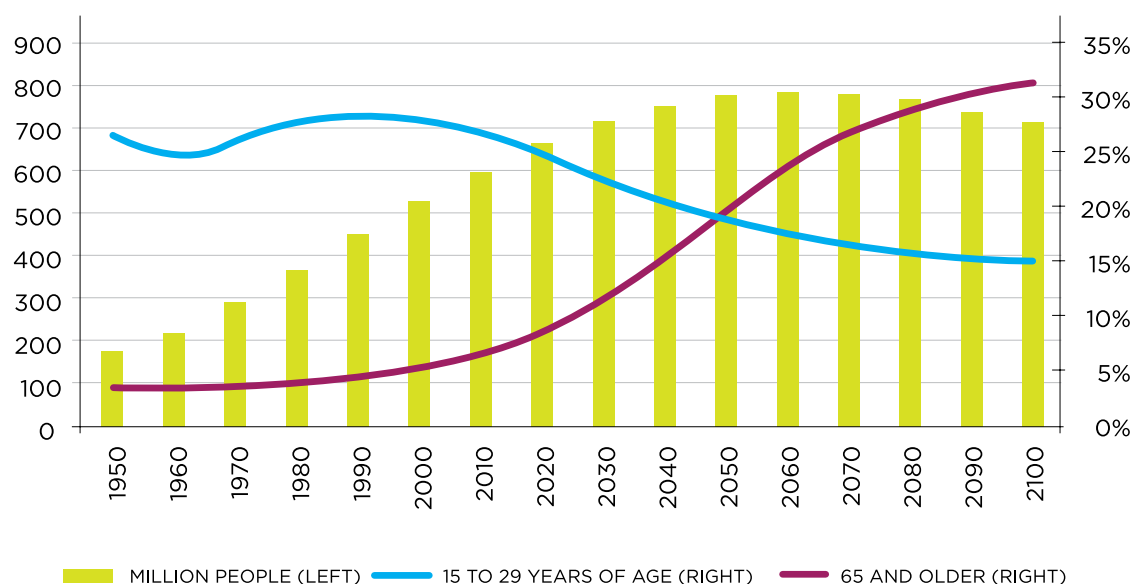
This section presents an overview of the state, gaps and challenges of qualification and skills development in the countries of the region. In order to narrow down the broad scope of the issue, this section is organized around six key areas or topics:

- Skills gaps and the occupational future of young people.
- Skills anticipation and uncertainty management.
- The role of enterprises as learning places.
- The coordination between formal education and vocational training.
- How training aligns with productive development and productivity policies, and
- The use of new educational technologies in vocational training.

2.1. Skills gaps and the occupational future of young people

Latin America and the Caribbean, unlike other regions of the world, is still a “young continent”. An estimated 27% of the population in the region is under the age of 30, which presents an opportunity to connect a new and well-prepared workforce to society and employment. But this demographic window also poses a challenge, because dropout, absenteeism and discouragement problems arise if no opportunities are provided to young people. On the other end of the population pyramid, the proportion of elderly people is increasing dramatically. It has grown from 5% in 1950 (5 million) to 6% in 2000 (30 million) and will be 19.5% in 2050 (151 million). For the same year, the youth population between 15 and 29 years of age, which today accounts for 28% of the total population, will have been reduced to 18.6% of the population of the region (144 million). These trends are shown in Figure 1.

FIGURE 1:
Share of the youth and elderly groups in the total population



Source: CELADE



At this point, the large proportion of young people poses one of the greatest challenges to development in the region, and educational and vocational training systems have a crucial role to play in the development of their abilities, skills and employability, as well as in the productive development, innovation and sustained, inclusive and sustainable growth.

Against this backdrop, the main challenges are:

1) Increasing the participation of young people in education and the labour market

As Table 1 shows, despite the vast array of policies and efforts, activity and inactivity trends have remained at almost the same levels for ten years. The level of educational attainment of the youth in Latin America has improved, but their transition to the labour market has shown a slow pace and, as a result, the percentage of youth not in education or employment has decreased very little²⁹.

TABLE 1:
Latin America and the Caribbean: Activity and inactivity rates of young people

Category	2005	2007	2009	2011	2015
Only in education	32.90%	33.60%	34.60%	34.50%	32.25% ³⁰
Only in employment	33.50%	33.50%	32.30%	32.80%	38.01% ³¹
In education and employment	12.50%	12.80%	12.70%	12.40%	14.60% ³²
Not in education or employment	21.10%	20.10%	20.40%	20.30%	19.39% ³³

Source: ILO Jobs portal. Trabajo decente y juventud en América Latina. Políticas para la acción. 2013

According to the data collected by the ILO, the urban unemployment rate of young people aged 15 to 24 years in Latin America and the Caribbean reached 18.3% in the first quarter of 2016³⁴. This rate is almost 30% higher than the global youth unemployment rate expected in 2017 (13.1%); two and a quarter times the overall unemployment rate for Latin America and the Caribbean (8.1%), and three times the overall global unemployment rate expected in 2017 (5.8%)³⁵.

In absolute numbers, it is estimated for 2017 that there will be around 9.3 million unemployed young people, that is, those who are actively seeking employment, but cannot find it. This is a large share of the approximately 108 million Latin American and Caribbean youth. As for the young people who are able to find employment, six out of ten have to take jobs in the informal economy, which generally involves poor working conditions, no protection or rights, as well as low wages and low productivity³⁶.

This is the group that has been affected the most by unemployment in the region, where the share of those who are not in education or participating in the labour market –due largely to the frustration and discouragement that result from the lack of opportunities, or because they have to assume family care responsibilities or unpaid work in the home– can be up to 20%.





2) Continuing to improve the quality and relevance of education.

The region as a whole has improved educational achievement indicators in the past two decades.

Enrolment in primary education currently reaches 95%, a level similar to the one in OECD countries (96%). In secondary education, the enrolment rate of young people is 73%, lower than the 91% OECD average, but higher than the 65% observed in the 1990s.

This piece of good news regarding coverage is also displayed in the education of the labour force. Between 1990 and 2010, the proportion of new workers (aged 20 to 24) who had completed secondary education went from 35% to 55%, and the average years of schooling of the labour force increased from 8.2 to 10.2 in the same period.³⁷ Nevertheless, there is a problem of continuity in secondary education; indeed, the completion rate in the region is 38%, whereas the OECD average is close to 80%. Dropout at this stage of the student life is explained by the lack of interest and motivation of part of the students³⁸. A large share of young people facing the labour market are insufficiently qualified to meet the demand for complex skills.

However, the increase in coverage has not brought good news in terms of quality. The number of years of education successfully completed does not seem to be a suitable indicator of good performance in the knowledge society. The results of the PISA 2015³⁹ assessment show that the performance of 15-year-old students in the region is below average and a long way from the top results. While on average across OECD countries, 13% of the assessed students did not attain Level 2 (considered the baseline level of performance) for the three competencies assessed, on average in Latin America, 37.2% performed below said level, i.e., one out of three students in the region did not attain baseline levels of proficiency in mathematics, science and reading.

Looking at mathematics skills, which was the focus of the PISA 2012 assessment, 63% of participating students did not reach Level 2, equivalent to the minimum fundamental mathematics skills. On average, only 23% of students in OECD countries performed at this low level, and in the Asia-Pacific region, only 9% of students did. By comparison, only 0.1% (one in a thousand) of students in Latin America reached Level 6 (the highest level of proficiency), whereas, for example, 30.8% (almost one in three) of students in Shanghai did⁴⁰.

Table 2 shows the differences for mathematics, reading comprehension and science measured by PISA. It should be noted that the widest gap is in mathematics, while the gaps in reading and science are smaller.

TABLE 2:
Percentage of students who do not reach the baseline level of proficiency (2) in PISA

Skill areas	LAC	OECD
Mathematics	63%	23%
Reading	45%	18%
Science	50%	23%

Source: Prepared by the authors on the basis of Rivas, A. (2015).





Comparative regional studies coordinated by UNESCO⁴¹ also show critical patterns in the quality of educational achievements.

Notwithstanding coverage improvements, the TERCE Report (2013) indicates that there are still quality problems affecting the results in mathematics, science and reading. In the case of the mathematics test of sixth grade, 83% of students at a regional level is in performance levels 1 and 2. The attainment levels at these levels are related to the ability to work with natural and decimal numbers and reading data in tables and figures. The main challenges are solving problems containing more than one variable, involving natural numbers, decimal numbers and fractions and the calculation of perimeter and area.

The results in the reading test in third grade show that 61% of students at a regional level are at performance levels 1 and 2, as is the case with science, where most of the students (79%) perform at the same levels.

The report identifies challenges in the development of scientific thought, that is, the ability to formulate questions, distinguish variables, select relevant information and use this knowledge to understand the environment. It also points to a better comparative performance of students in the reading area, versus mathematics and science. This is certainly a major challenge for the region, acknowledging that education efforts for the new in-demand skills focus on so-called STEM education (Science, Technology, Engineering and Mathematics).

Inequity in access and results by socio-economic background is high. The most recent figures provided by UNESCO⁴² show that, on average, only one out of five young people aged 20 to 24 in the poorest quintile complete secondary education; whereas four out of five in the richest quintile did. By area of residence, only 30% of young people in the lowest income quintile in rural areas completes secondary education entirely, compared to 83% of young people in the highest income quintile. This inequality is found, to varying extents, in all countries in the region.

PISA tests also show a linkage between results and socioeconomic status, since they tend to be better in countries with more developed economies, and vice versa. For example, only 2 % of the students who took the test in Nordic countries in 2012 were from the poorest sectors, compared to 29 % in the whole of Latin America⁴³. Besides, as Table 3 shows, results tend to be better for urban than for rural areas. From a gender perspective, women tend to have better results than men, except in Chile and Colombia.

TABLE 3:
Differences in performance between urban and rural areas, and by gender in PISA tests

Country	Gap in PISA test results between urban and rural areas	Gender gap in PISA test results
Argentina	11.8%	-2.8%
Brazil	6.0%	-0.8%
Chile	6.6%	0.6%
Colombia	9.3%	3.8%
Mexico	12.2%	-0.4%
Panama	20.1%	-2.6%
Peru	24.9%	0.0%
Uruguay	8.1%	-2.4%
Top PISA result (1)	5.2%	-1.8%

Source: IDB 2013. Is the Glass Half Empty or Half Full? (2009 and 2010 data)

In the same dimension, UNESCO has found evidence that the share of the young population who complete secondary education in rural areas is decreasing, especially due to the high repetition and dropout rates in school⁴⁴.



Improvements in the quality and relevance of education are linked to economic development. Several recent papers have documented the relationship between skills development and economic development, specifically, a positive relationship between the level of human capital and the long-term performance of GDP⁴⁵. The comparative deficit in years of schooling accounts for about 28 % of the difference in per capita GDP between Latin America and OECD countries, but, on the other hand, the performance in human capital skills accounts for 60 % of said lag (Hanushek and Woessmann, 2012b). The difference lies in the quality of schooling and the higher level of skills, which result in a better performance.

Clearly, the number of years of schooling by itself does not necessarily have an impact on economic development, which is more closely connected to the quality, relevance and performance of skills. Results such as the number of years completed or enrolment rates have grown in the region, but they only reflect the quantity of schooling, without necessarily having any direct effect on economic growth (Pritchett, 2006). Recent studies emphasize the component of educational quality and the development of skills as drivers for economic development.

One of the findings, for instance, was that a 25-point improvement in PISA test results (less than the improvement achieved by Poland during the 2000s) entails a cumulative gain of 115 trillion dollars during the life cycle of the generation born in 2010 for OECD economies, which is approximately 2.4 times the GDP of OECD countries (OECD, 2010)⁴⁶.

Estimates from the Development Bank of Latin America (CAF) show that an increase of one standard deviation in PISA scores could result in a GDP growth of up to two percentage points. The lag in growth in Latin America –whose wealth was increased 2.5 times, while the wealth of some Asian countries increased more than 9 times– is explained in great part by skill differences, measured by assessments of this kind. Moreover, according to the results analysed, cognitive skills and socioemotional skills could explain this relationship between skills and economic growth⁴⁷.

Education also promotes higher standards of well-being. Education has a positive effect on people's material conditions, their physical and mental health, their civic engagement and their capacity to participate in society (OECD, 2011). A quality

education improves a person's chances of finding a job, improves their employability and reduces their vulnerability to informal employment. But the region continues to show that performance in education and the distribution of educational results by socio-economic income, geographical location and gender remain less equal than in the OECD countries, which has an impact on the well-being of the population (OECD/ECLAC, 2014).

3) Continuing to improve vocational training systems

The skills gap is wide and remains constant. Despite the increase in the number of workers with higher educational levels, the connection between the qualifications obtained and those demanded is weak. The development of basic skills in education is below international averages in PISA tests and below the levels measured by regional UNESCO tests. There is a skills gap that results not only from the issues of quality and relevance of education, but also from the mismatch with the technical and socioemotional skills required in the labour market.

The skills gap is also evidenced in the difficulties employers have in filling vacancies. The table below outlines the different approaches taken by various institutions to measuring this gap. The IDB found employers value socioemotional skills –a series of behaviours, attitudes, personal traits and values, which include honesty, teamwork, punctuality and responsibility, among others (World Bank, 2016) – over specific and cognitive skills.

The extent to which more complex skills are used in the region is small, it is estimated that three out of four workers are in occupations that underutilize complex skills. One of the reasons for this is the size of the informal sector, which usually employs more operational and less complex skills⁴⁸. Enterprises use training as a strategy for tackling the gap; an option which is especially chosen by large enterprises and for young new workers. But clearly, in view of the foreseeable changes in the demand for skills, and taking into account the technological progress and the new forms of work organization, it is necessary to reformulate the kind of training used, for it to be geared at developing precisely the skills that offer the greatest opportunities for use in the new scenarios.



Employers in Latin America report greater difficulties in meeting the demand for skills than in other regions. In the formal sector, 36% of enterprises report that they struggle to fill their vacancies, compared with

22% in sub-Saharan Africa and in East Asia and Pacific, 17% in South Asia, 15% in the OECD and 14% in Eastern Europe and Central Asia⁴⁹. Table 4 outlines various measurements of skills gaps.

TABLE 4:
A single gap through different perspectives

Study	Tipo Type of gap		Measurement %
IDB ¹	Socioemotional Skills		22.9
	Knowledge		8.7
	Specific		4.4
World Bank	Inadequate training 2010		35.8
CAF 2016	Enterprises that see education as an obstacle:	LAC	34.0
		OECD	17.0
		All countries	22.0
Manpower Survey	Difficulty filling vacancies:	2013	39.0
		2014	48.0
		2015	42.0

Source: Prepared by the authors on the basis of the sources mentioned.

The role of education and training is crucial in the development of cognitive skills (operations with numbers, basic science and reading), as well as in the development of socioemotional skills (setting and achieving goals, managing emotions, teamwork), in fact, a greater supply of this type of skills is positively correlated with labour earnings⁵¹.

The low participation in education and poor labour-market integration of young people mean, from an economic growth perspective, that the human capital of countries is being inefficiently utilized; but it also affects citizenship-building and effective social integration. In many countries, high youth unemployment rates are associated with social integration problems and conflicts with the law. It is essential to carry out actions that boost the appeal of vocational training for young people and lead to an increase in their participation in vocational training programmes that are relevant to labour market demands.

Lack of systems in place to ensure the relevance and quality of vocational training. Most countries have not made headway into the development of a training system wherein the different components – identification of the demand, framing of the response,

programme implementation and evaluation of the outcomes and impacts– are carried out in a coordinated and systematic manner.

The widely varied training offer tends to create a “jungle” of qualifications without a governing system that validates the relevance and quality of training. As a result, there are greatly different degrees of quality and relevance, and this prevents employers from having reliable information for making decisions when recruiting workers, while also preventing workers from knowing which are quality and relevant training activities. Thus, the vocational training market fails to give clear signs, either to employers or workers, regarding the quality of its programmes and their actual skills.

Due to the coexistence of offers with heterogeneous levels of quality in a scenario in which young people seek access to training without complete information about existing programmes, there are information breakdowns and asymmetries in the offer which impede equitable access, and allow for the existence of multiple programmes of different levels of quality and dubious relevance.

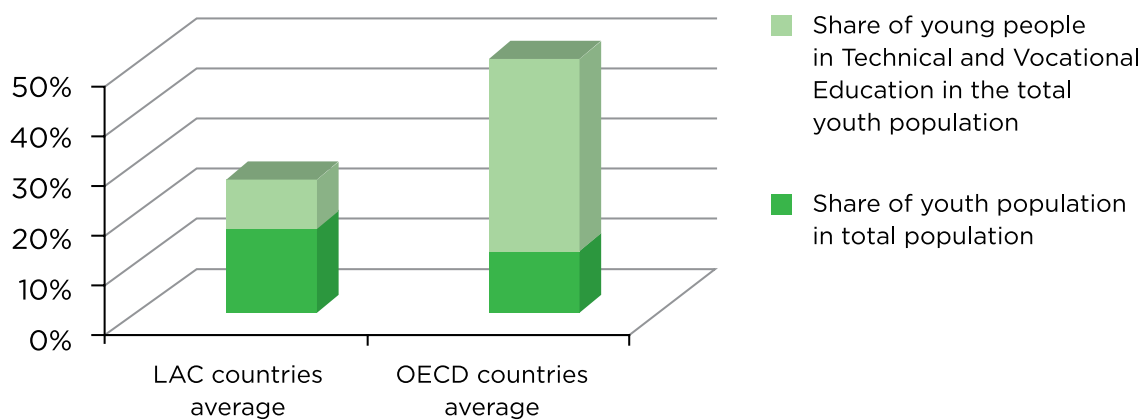


The share of young people in the region who choose technical education and vocational training is still low.

The percentage of young people attending Technical and Vocational Education (TVE) is, on average, 8.3% of this age group. Those who attend vocational training programmes account for 17.1% of the youth population. The combination of both formats amounts to a total of 25.5% of young people, which is low compared to OECD countries where the average reaches 40.6%.

The share of young people in the region is larger than in the set of OECD countries, nevertheless, the fewer young people in OECD countries typically have a proportionately higher participation in technical education (40.6%) than their Latin American and Caribbean peers (8.3%). It would be worth exploring whether the higher participation and, consequently, higher interest in STEM⁵² fields, is related to the higher performances in PISA tests and higher levels of productivity observed in those countries.

**FIGURE 2:
Young people in TVE in LAC and OECD countries**



Source: Prepared by the authors on the basis of data from the ILO/Cinterfor Survey, 2016 and on the Education Outlook. OECD indicators. 2015. The data about the population in TVE as a percentage of the youth population for OECD countries refers to the population aged 15 to 19, enrolled in vocational training programmes, in upper secondary education.



TABLE 5:
Participants in VT as a percentage of the young population in a sample of countries

Country/Institution	Total of young people aged 15-24 (1)	Vocational training participants (2)	VT participants as a % of the youth population
Argentina - INET - MTEySS	6,894,780	450,638	6.54%
Bolivia - INFOCAL	2,067,981	61,395	2.97%
Brazil - S System	34,133,651	6,482,449	18.99%
Chile - SENCE	2,736,506	880,315	32.17%
Colombia - SENA	8,223,253	4,069,644	49.49%
Costa Rica - INA	802,358	132,850	16.56%
Cuba - MTSS	1,423,274	119,486	8.40%
Ecuador - SETEC-SECAP	2,940,825	85,414	2.90%
El Salvador - INSAFORP	1,241,042	322,534	25.99%
Guatemala - NTECAP	3,447,554	351,292	10.19%
Honduras - INFOP	1,744,420	205,744	11.79%
Mexico - CONALEP - DGCFT	23,276,590	758,348	3.26%
Panama - INADEH	665,232	63,074	9.48%
Paraguay - SNPP	1,336,661	177,173	13.25%
Peru - SENATI	5,586,997	510,852	9.14%
Dominican R. - INFOTEP	1,922,713	694,388	36.12%
Uruguay - UTU - INEFOP	519,628	121,760	23.43%

Source: (1) UNESCO database, 2015 and 2016. (2) ILO/Cinterfor Survey, 2016. For Argentina, Brazil, Bolivia, Colombia, Costa Rica, El Salvador, Guatemala, Panama, Paraguay, Dominican Republic and Uruguay, the data is from 2016, data available from the other countries is from 2015.

There may be a bias in the number of participants reported by vocational training institutions due to the fact that, during a year, one person can participate in different programmes and be counted more than once.

S System: includes SENAC, SENAI, SENAR and SENAT.

Data about participants in vocational training in Colombia do not include participants in virtual vocational training.

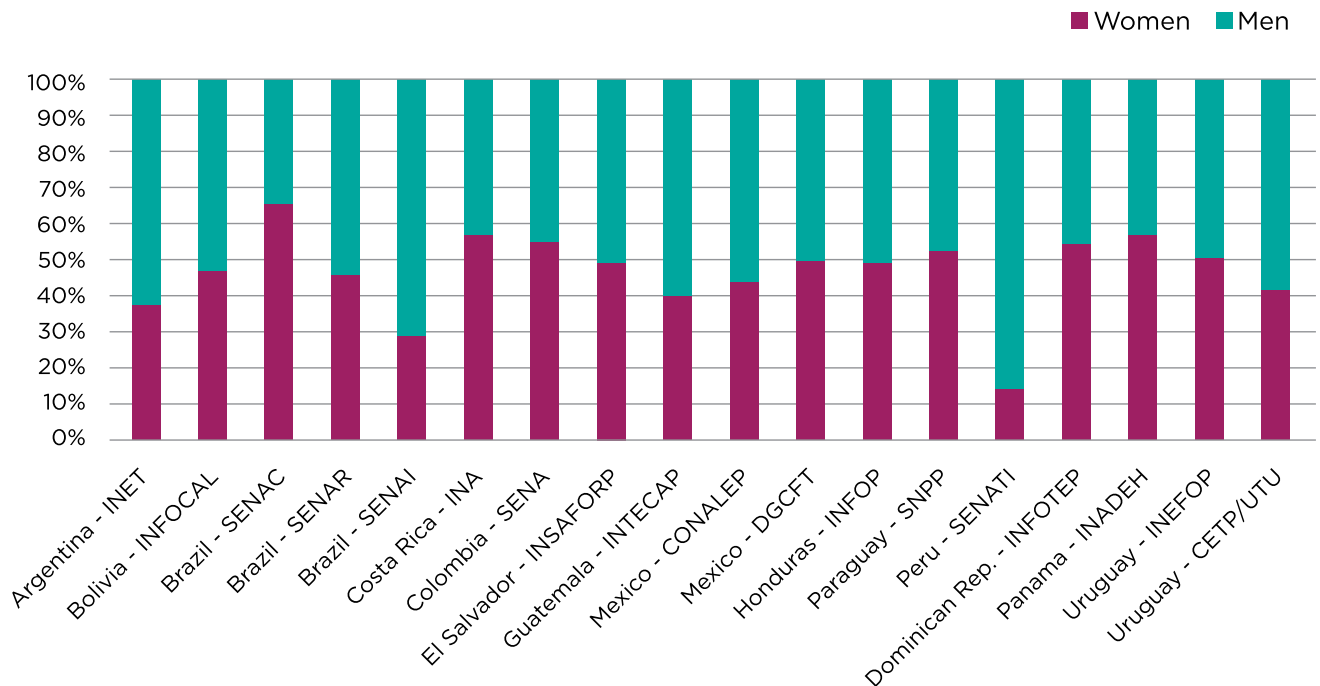
More than 15 million participants enrolled in the vocational training programmes of the 17 countries that provided data (precisely 15,487,356). Taking into account that according to available data, on average, the percentage of people under the age of 29 who participate in vocational training is approximately 65%, it can be estimated that about 10 million young people participated in vocational training activities in member institutions of ILO/Cinterfor in 2016.

The gender bias in vocational choices remains. It is important to note as a significant aspect of the participation of young people in Latin America and the Caribbean in vocational training that there still is a clear gender bias in vocational preferences. As shown in Figure 3, women participate more in vocational training institutions in the areas of commerce and

services (SENAC, Brazil) and less in those providing training in the industrial and rural areas (SENAI, SENATI and SENAR). In the institutions that cover all sectors, while there still is a bias, it is less pronounced. Aside from SENAC, in Colombia (SENA), Costa Rica (INA), Panama (INADEH), Paraguay (SNPP) and Dominican Republic (INFOTEP) women are more than 50% of participants.



FIGURE 3:
Participants in VT institutions by gender



Source: ILO/Cinterfor. 2016 Survey.

2.2. Skills anticipation and uncertainty management

It is necessary to make progress in the identification and anticipation of the new skills and competencies.

One way to have an impact on the size and reduction of skills gaps is to incorporate skills anticipation mechanisms that make it possible to modify vocational training programmes according to the changes arising in the business, technology and occupational settings. These methodologies make the identification of new socioemotional and technical skills that match occupational requirements in different sectors of the economy easier. However, in the face of the uncertainty about technological change and new occupational demands, in addition to the anticipation capacity, which implies that the future is, to a certain extent, predictable, it is necessary to think of the capacity to adapt and respond quickly to changes, and the abilities that make this possible. This makes real-time collaboration with the productive sector a necessity.

The skills employers value the most –socioemotional skills and higher-order cognitive skills– are for the most part developed at youth, therefore, it is essential

to analyse the changes in training strategies both in secondary school and in vocational training to encourage the development and acquisition of these skills⁵³. But it is also imperative to, beforehand, refine the methodologies used to anticipate such demands which, thus far, have mainly resulted from occasional surveys and studies.





The large amount of information and data generated and used in automated processes is demanding mathematical skills, operation on functions, calculus, algebra and physics. For example, nowadays a person responsible for the distribution of food in a delivery truck must be able to analyse information about the volume and availability of their inventory –which can be checked online–, plan distribution routes based on traffic information, and be in a position to give information about product characteristics to clients. Until a few years ago, their main role was to take orders and follow deliveries. Never before have Internet-connected devices collected so much information on so many subject matters as today. In areas such as precision agriculture, the key role of new jobs is to analyse data and numbers on variables such as humidity, rainfall, soil quality, areas, yields per area, among others, and those who make decisions based on this data need them to be processed and organized

in intelligible and convenient models. New jobs have been created in the field of information and data management and processing, for the administration of communities and social media, for which it is essential to have skills such as understanding trends, analysing patterns and a great amount of data on user preferences. Similarly, routine cognitive abilities such as reading a price on a label and entering it into a cash register in a supermarket are being replaced by code scanners, and the one consisting of receiving payment in cash and giving change is needed less and less as forms of electronic payment, and even self-service payment, become wide-spread.

The need to anticipate the demand in a scenario of fast and profound changes has been clearly supported by the ILO (2008) and also in the G20 Training Strategy (2010), as shown in Table 6.

TABLE 6:
Support for the anticipation of skills in the ILO and G20

ILC 2008 framework for skills for improved productivity, employment growth and development	G20 Training Strategy: A skilled workforce for strong, sustainable and balanced growth, 2010
Match supply to current demand for skills.	Broad-based good quality general education.
Help workers and enterprises adjust to change.	Matching training to the labour market.
Anticipate and deliver skills needed in the future.	Continuous learning to enable adjustment to change.
Sustain a dynamic development process.	Anticipating and preparing for the skills needs of the future.
Recommended areas of action	Building blocks for implementing national skills policies
Skills development at the workplace and along value chains.	Anticipating skills needs.
Skills development to help manage global drivers of change.	Participation of social partners. Sectoral approaches.
Early identification of current and future skills needs to feed into sectoral development strategies.	Labour market information and employment services. Training quality and relevance.
Link education, skills development, labour market entry and lifelong learning.	Gender equality. Broad access to training and skills utilization.
Skills development for social inclusion of target groups.	Financing training. Assessing policy performance.

Source: ILO. Follow-up on the implementation of the ILO-G20 Training Strategy. GB 313. March 2012.



Competencies and skills requirements in the jobs of the future, as well as the need to develop mechanisms to anticipate and forecast the new demands have played a prominent role in the debates and conversations which have been carried out in the national dialogues as part of the future of work Initiative launched by ILO Director-General⁵⁴.

Vocational training institutions should conduct more demand anticipation studies, and develop adaptation and cooperation capabilities in real time with the productive sector. Even though the use of methodologies for forecasting new skills by vocational training institutions is becoming more and more widespread, coverage is still in its early stages. In the past three years, the ILO, through Cinterfor, has developed a training programme (2012-2015) which has enabled training institutions from more than 16 countries in the region to develop capacities for carrying out demand foresight studies.

The number of ongoing studies keeps growing, but it amounts to no more than 25, with about 78 experts trained in the SENAI foresight model. These studies have made it possible to identify an increase in the level of more complex skills, either due to the use of ICTs in some sectors (tourism, building, dairy), or the incorporation of electronics based technologies and new forms of work organization⁵⁵. However, the supply offered by vocational training institutions is broad and varied and, in many instances, only one occupational sector was studied, out of a range which easily covers hundreds of occupational families.

There is plenty of room for working on demand anticipation. The sectors covered in the foresight studies conducted using the SENAI model are less than 10, which accounts for less than 2.5% of all sectors of activity included in the 4-digit classes of the International Standard Industrial Classification (ISIC), and a similar percentage of the universe of occupations in the International Standard Classification of Occupations (ISCO).

Other stakeholders carry out anticipation efforts, but they are neither coordinated nor significant yet. Aside from vocational training institutions, Ministries of Labour have adopted skills demand anticipation actions. The Ministry of Labour of Colombia, working in collaboration with the Public Employment Service, has created the Labour Market Observatory (ORMET). Likewise, the Ministries of Labour of Peru and Uruguay, as well as the National Training and Employment Service (SENCE) of Chile have mechanisms in place

for observing trends in the labour market. The ILO has supported several quantitative demand estimation studies in Peru and Colombia, among other countries.

There still is no integrated utilization of the information about the labour market obtained from labour intermediation services or private sources, such as employment exchanges or advertisement services in print or electronic publications. This refers to information instruments that can be updated and searched online, such as the O-Net Network in the United States, where job seekers can explore updated information about the profiles demanded, required skills, education requirements according to the demand, average wages offered, among others, making it easier to take focused and informed decisions, reducing information inequalities among users.

This would mean that the training supply could be updated more quickly and give new impetus to the planning of training programmes. It is necessary to move from a supply of programmes that depends on the availability of stable resources, such as infrastructure, training materials and trainers, to one that adopts new ways to connect with the demand and leverages partnerships for generating more appropriate responses. Follow-up mechanisms must be perfected in order to find out whether the training provided meets the demand or whether participants are able to find jobs related to their training afterwards.

One unresolved issue vocational training institutions should settle is whether it is economically and socially cost-effective and sustainable to maintain a supply of courses without a clear demand, or whether they could be better covered by other stakeholders which could provide them, at a lower cost and with better accessibility. Among the many occupations demanded to improve competitiveness and productivity, those in highly developed and relevant sectors might not be sufficiently met.





The anticipatory capacity of vocational training needs to be encouraged, because the question is no longer to address a demand that comes knocking on the door of an institution, the response model should be more proactive and follow the productive sector from when the demand itself is detected, and collaborate to develop a training response. It is key to define vocational training as a partner for generating competitiveness improvement and innovation solutions, something that has already been achieved in countries like Brazil, Colombia and some productive sectors in other nations.

BOX 1:
Building partnerships to anticipate and meet the demand

Some companies in the automotive industry started operations in Brazil, where, from the start, they partnered with SENAI to address their skills demands and agree on apprenticeship programmes. SENAC applies in Brazil a learning-by-doing method using its training enterprise which works in coordination with SEBRAE to facilitate learning in real trade and service processes. ChileValora provides support to sectors such as tourism, using a chain perspective to analyse its human development and skills certification demands. SENA, in Colombia, works with enterprises from different areas like microelectronics and wholesale distribution. In Peru, SENATI builds partnerships with the manufacturing industry to develop joint apprenticeship programmes. INSAFORP, in El Salvador, has established a partnership with the plastics industry to generate human resource training and development solutions. INFOTEP, in the Dominican Republic, implements training programmes for enterprises in the exporting sector and applies various methodologies for increasing productivity, such as the SCORE programme for the organic banana sector.

Source: ILO/Cinterfor

A more widespread use of mechanisms for the early detection of demands would not be effective unless it is combined with measures to improve flexibility, in order to implement fast and efficient responses. There are more than a few anecdotes from countries that have been forced to import technical workers for assembly, welding or industrial finishing tasks in some megaprojects which, even though they took years to implement, were not anticipated with enough time to respond.

2.3. The role of enterprises as learning places

As discussed in the first section, there is significant evidence to explain how most productivity growth differences among countries do not stem from formal education but rather from the productive knowledge and skills learned on the job (“know-how” or “learning by doing”). This has turned attention to the importance of training also taking place on the job and, more specifically, what the ILO currently calls: “quality apprenticeships”.

Vocational training in Latin America was built from initiatives from many enterprises and workers. Throughout its 70 or more years of history, it has been relevant for employment and development, however, in many cases it is necessary to re-examine and update the channels through which vocational training institutions, enterprises and workers interact. The way in which demands are identified and anticipated, the way in which new skills are developed, or problem-solving and teamwork skills are acquired, need real work spaces, to rely on the extraordinary advantage that enterprises provide as learning places.

From the adoption of the resolution on the promotion of sustainable enterprises (2007), followed by the resolution on skills for improved productivity, employment growth and development (2008), ILO’s constituents have had clear guidelines on the importance of the development of human resources as a driver of the sustainability of enterprises.

One of the pillars of the sustainability of enterprises is the development of human resources, consequently, arrangements for apprenticeships in the enterprise have been used in the region since the creation of vocational training institutions. Indeed, the names of public vocational training institutions of several countries in the region incorporated the word “apprenticeship”, not only as their main purpose but also because they were conceived as allies of enterprises to develop this form of alternance training. Examples of this are the National Apprenticeship Services, SENAI (1942), SENAC (1946), SENAR (1976) in Brazil; the National Apprenticeship Service (1957) in Colombia, the National Apprenticeship Institute (1965), INA, in Costa Rica, among others.



BOX 2: What is an apprenticeship?

An apprenticeship is a form of structured training that combines training in a centre or school, with on-the-job practice and training. Apprenticeship programmes are available mostly for basic and technical occupations. Quality apprenticeships are useful both for facilitating the transition into work of young people and for encouraging the participation of enterprises. (ILO, 2012)

Source: ILO/Cinterfor

Alternating training activities between a training centre and the enterprise, is still a highly regarded form of training in some vocational training institutions, such as SENATI in Peru, which maintains apprenticeship agreements with enterprises in various industries. Many others, such as SENAI and SENAC in Brazil, SENA in Colombia, CONALEP in Mexico, INFOTEP in the Dominican Republic or SENCE in Chile, have successful experiences localized in some demand niches for the implementation of apprenticeship schemes that are significant and relevant. Table 9 provides information by country.

Regulations, operation and coverage of apprenticeship programmes in Latin America are very heterogeneous and varies from country to country. This is neither good nor bad in itself. The idea of “alternance apprenticeship” (or dual training) exists in the regulations of at least 17 countries in the region, but the manner in which it is implemented, its coverage, use and the way it is updated pursuant to the changes in work organization must be studied more in depth considering its low incidence. New approaches and a much larger scale, in order to cover the conditions necessary for the development of skills through quality and relevant apprenticeship⁵⁶, are needed.

In the cases of SENA in Colombia, INA in Costa Rica, SENCE in Chile and INCES in Venezuela, they are defined by law as the promotion and regulatory agencies for on-the-job apprenticeship programmes in their countries. To SENA, for example, the legislation gives it attributes such as defining a list of occupations that will be the subject of apprenticeships, controlling that enterprises meet the apprentice quotas established by the law, preparing, in collaboration with enterprises, the apprenticeship programmes, their contents and duration, as well as enforcing penalties for noncompliance.

Some countries with legal regulations regarding on-the-job apprenticeships are listed below.

TABLE 7:
Legislation on “on-the-job apprenticeship” in some Latin American countries

Country	Regulation	Link
Argentina	Law No. 26.390 of 2008	http://www.trabajo.gba.gov.ar/documentos/legislacion/copreti/Ley_26390.pdf
Bolivia	General Labour Law. Supreme Decree of 24 May 1939.	http://www.ilo.org/dyn/natlex/docs/WEBTEXT/46218/65057/S92BOL01.htm
Brazil	Law No. 10.097 of 2000. Regulatory Decree No. 5.598 of 2005	https://www.planalto.gov.br/ccivil_03/leis/l10097.htm
Colombia	Law No. 789 of December 2002. Decree No. 933 of April 2003.	http://normograma.sena.edu.co/docs/ley_0789_2002.htm
Chile	Labour Code. Art. 78 et seq.	http://www.leychile.cl/Navegar?idNorma=207436&idVersion=2011-04-28
Costa Rica	Law No. 4.903 November 1971	http://www.ilo.org/dyn/travail/docs/891/Ley%20No.%204903.pdf
Ecuador	Labour Code. Art. 219 et seq.	http://www.justicia.gob.ec/wp-content/uploads/2015/05/CODIGO-DEL-TRABAJO.pdf
El Salvador	Labour Code. Art. 61 et seq.	http://www.asamblea.gob.sv/eparlamento/indice-legislativo/buscar-de-documentos-legislativos/codigo-de-trabajo/?searchterm=None
Guatemala	Labour Code. Decree No. 1.441 of 1961.	http://www.ilo.org/dyn/natlex/docs/WEBTEXT/29402/73185/S95GTM01.htm#t4
Honduras	Labour Code. Chapter IV The work of apprentices	http://www.ilo.org/dyn/eplex/docs/8/Labour
Panama	Decree-Law No. 4, of 7 January 1997	http://gacetas.procuraduria-admon.gob.pa/23201_1997.pdf
Paraguay	Law 4.951/13 of Labour Insertion of 2013. Chapter V, art. 55	http://www.ilo.org/dyn/natlex/docs/ELECTRONIC/95150/111923/F-910630018/PRY95150.pdf
Peru	Law No. 28.518 of May 2005. Supreme Decree No. 007-2005-TR	http://www.mintra.gob.pe/contenidos/archivos/prodclab/Ley28518.pdf
Dominican Republic	Resolution of the Ministry of Labour No. 20-95	http://www.infotep.gov.do/pdf_prog_form/reglamento31-2010.pdf
Uruguay	Law of Decent Employment for Youth No. 19.133	http://archivo.presidencia.gub.uy/sci/leyes/2013/09/mtss_566.pdf
	Law of Internships No. 17.230. Chapter IV	https://www.impo.com.uy/bases/leyes/17230-2000

Source: ILO/Cinterfor.



The proportion of participants in dual apprenticeship programmes in the region is significantly low in comparison with countries like Germany, where there are 39 apprentices per thousand employees, 44 in Switzerland, and 32 in Austria (ILO, 2012). Around 23.4% of young people aged 15 to 24 are apprentices in Switzerland, and in Austria about 12.8 percent are; in Germany, this share reaches 15.9%.

TABLE 8:
Ratio of apprentices to youth population in three European countries

País	Young people aged 15-24 (1)	Apprentices in VT 2015 (2)	Apprentices to total of young people	Apprentices per 1,000 employed workers
Alemania	8,420,528	1,337,004	15.9%	39
Suiza	344,532	80,500	23.4%	44
Austria	1,001,562	128,078	12.8%	32

Sources: (1) UNESCO database, 2015. (2) Dual Vocational Education and Training in Austria, Germany, Liechtenstein and Switzerland. Comparative Expert Study, 2016. www.bmwf.gv.at. The totals of apprentices in vocational training for Switzerland and Austria are from 2012.

According to what is shown in Table 9, apprenticeship programmes do not reach a significant proportion of vocational training actions; in most countries, not even a proportion of one apprentice per 1,000 people of active population is reached.⁵⁷

SENAI, SENAC, SENAR and SENAT in Brazil train around 412,000 apprentices which equals 5 every 1,000 employed workers. SENA, from Colombia, with 345,000 apprentices, reaches 17 every 1,000 employed workers, which accounts for the highest proportion observed in dual training programmes in the region⁵⁸. In the case of other institutions, an apprentice every 1,000 has been reached only by INSAFORP from El Salvador and INADEH from Panama.

In Brazil and in the majority of countries with matter-related regulations, this kind of training programmes are agreed through an apprenticeship contract. This contract is usually considered as a “special work contract” or as a separate chapter under the “apprenticeship contract” subheading in labour law. Quality apprenticeship is an area where there is still great room for innovation; for example SENAI, the Post public company and the Ministry of Labour and Employment of Brazil signed an agreement in 2015 to offer the first distance learning course to 567 youth in the states of Amazonas, Ceará, Goiás, Santa Catarina and Sao Paulo. Participants will have their labour connection and, during a year, will attend 400 distance hours and 400 agency-based hours in the Post offices of Brazil. Teaching materials were developed for the course.

In Colombia, the apprenticeship contract is a special form within Labour Law⁵⁹; there is no labour relationship between the apprentice and the enterprise, its duration is variable and it can include periods shorter than two years. Although apprentices have an insurance that covers for occupational risks and they are registered for social security in health; the apprentice is paid a maintenance support that is not considered a salary. Another feature is that it exists at all training levels, from basic, such as operators and assistants, to technical and technological, and even university levels. The regional experience of dual apprenticeship should be studied more in depth to gather lessons and challenges considering the advantages of quality apprenticeship in bridging skills gaps and in the education-work transition of youth in the region.



TABLE 9:
**Participants in vocational training and in apprenticeship programmes in ILO/
Cinterfor member institutions**

Country	Institution	VT participants	Number of apprentices	Apprentices every 1,000 employed workers
Argentina	INET	450,638	ND	ND
Bolivia	INFOCAL	61,395	1,706	<1
Brazil	SENAR	1,133,199	667	<1
Brazil	SENAT	736,272	18,420	<1
Brazil	SENAI	3,415,058	213,126	<1
Brazil	SENAC	1,197,920	180,675	2
Brazil (total)	S Systema	6,482,449	412,888	5
Chile	SENCE	880,315	1,283	<1
Colombia	SENA	4,069,644	345,206	17
Costa Rica	INA	132,850	289	<1
Cuba	MTSS	119,486	ND	<1
Ecuador	SETEC-SECAP	85,414	ND	<1
El Salvador	INSAFORP	322,534	1,908	1
Guatemala	INTECAP	351,292	975	<1
Honduras	INFOP	205,744	189	<1
Mexico	CONALEP	305,246	1,150	<1
Mexico	DGCFT	453,102	ND	
Panama	INADEH	63,074	2,124	1
Paraguay	SNPP	177,173	1,020	<1
Peru	SENATI	510,852	5,328	<1
Dominican R.	INFOTEP	694,388	433	<1
Uruguay	INEFOP	28,501	ND	<1
Uruguay	CETP/UTU	93,259	ND	<1
Totals		15,487,356	774,499	

<1: Less than 1 per 1,000.

Sources: ILO/Cinterfor Survey, 2016, data from 2015. For Argentina, Brazil, Bolivia, Colombia, Costa Rica, El Salvador, Guatemala, Panama, Paraguay, Dominican Republic and Uruguay, the data is from 2016, data available from the other countries is from 2015. Data for Mexico were obtained from the Ministry of Public Education. Data from INFOP's dual apprenticeship are from 2013. The virtual modalities were not included in the total of participants for Colombia.





¿Why would employers want to work side by side in favour of quality apprenticeships?

Among the causes leading to good practices in apprentice training is the acknowledgement by employers of the usefulness of this type of training in order to develop skills that can be used in the enterprise, the different options they may have for apprenticeships, the quality of the training offered by vocational training institutions, but perhaps above all, the importance that the employer sector puts on institutions by considering them partners in training and skills development. For example, in Brazil, the National Confederation of Industries has taken into account, in moving forward with the apprenticeship programme conducted by SENAI, the fact that in Germany, about 50% of secondary education students participate in apprenticeship programmes, while only 8% do so in Brazil. According to data provided by the Confederation, the productivity of an average apprentice in Germany is four times higher than that of an apprentice in Brazil.⁶⁰

Increasing the share of apprentices in relation to the youth population in LAC in order to get closer to the average of, for instance, Germany, will require training and preparing apprenticeship agreements for about 14 million new apprentices, along with the necessary efforts to coordinate and adapt enterprises' coaching and co-training structures. This entails creating an up-to-date public policy framework, new approximation approaches for enterprises and training centres, as well as the formulation of new and better partnership and coordination mechanisms.

One of the ways to make quality apprenticeships more appealing stems from how enterprises value their certifications. Apprenticeship programme completion certificates that are recognized and valued for employment access work as a mechanism for hiring the most competent and productive employees. Many enterprises in the region are increasingly seeking this kind of training because it brings the development of skills and competencies closer to real demands.

Initiatives aimed at strengthening quality apprenticeships (or dual training) programmes are still in the early stages in the region and can require a comprehensive view that will mobilize both employers and workers. Nevertheless, more and more efforts are being carried out to implement high-quality apprenticeship systems that go beyond the traditional options of internship or business practice, and propose a structure that has characteristics including skills development and supervision in the enterprise. The ILO at the global level, and ILO/Cinterfor, support several initiatives in different countries to promote the expansion and improvement of quality apprenticeship programmes. The knowledge generated on the issue underscores several characteristics that quality apprenticeships need:

- Be based on social dialogue, which is an essential factor
- Employers' leadership that ensures quality and relevance
- Have a sound legal framework
- Shared financing arrangements to ensure ownership and sustainability

The latter, which could be defined as a "return on quality apprenticeship" requires the support of vocational training institutions to generate the teaching and in-house training mechanisms that make this a quality and relevant training.



A conference on quality apprenticeships held by the G20 and OECD in 2014 found that the success of these programmes is connected to the value young people place on them, and how attractive they are to employers. A note prepared by the OECD (2012) presented several attributes shared by high-quality apprenticeships:

- They are not limited to specific age groups.
- Facilitate participation by disadvantaged youth.
- Include a strong training component.
- Provide training that is not too narrowly focused.
- Cover multiple sectors and occupations and encourage the participation of women.
- Involve an equitable sharing of their costs among employers, the public authorities and apprentices.
- Operate according to competence-based completion rather than time-based completion.
- Require good governance to prevent misuse as a form of cheap labour.
- Are jointly managed by the social partners and relevant institutions.
- Are certified and well-integrated with the formal schooling system⁶¹.



BOX 3:

The return on quality apprenticeships in Latin America and the Caribbean

In Mexico, CONALEP, along with other institutions, is promoting the Mexican Dual Training Model and intends to reach 10,000 participants by 2018. These initiatives cover the automotive industry and the tourism sector.

In Chile, the Society for the Development of Manufacturing Industries (SOFOFA) promotes dual apprenticeship programmes with technical and vocational secondary schools and the involvement of private enterprises, including the heavy machinery sector. Agreements have been recently made with the Ministry of Education and the Chilean-German Chamber of Commerce for the purpose of improving the quality of the participating schools.

German chambers of commerce are promoting the development of the dual form of apprenticeship in countries such as Argentina, Bolivia, Uruguay and Chile.

A dual apprenticeship programme, coordinated by SENA and several enterprises in the heavy machinery, telecommunications and automotive industries, was launched in Colombia.

Different legal options are being considered in Costa Rica for the promotion of quality apprenticeships with social partners in the search for quality operational mechanisms for these programmes.

INSAFORP, in El Salvador, conducts the enterprise-centre programme with support from the German Agency for International Cooperation (GIZ). Despite its small scale, it has trained more than 7,400 apprentices in the dual modality between 2007 and 2015 with up to 89 % of labour-market integration. Ways of expanding this experience are being studied.

In Brazil, SENAI launched in 2016 training courses following the German dual apprenticeship model. The duration will be up to three years alternating between the training school and the enterprise. Courses will initially be available in São Paulo and Rio Grande do Sul, in partnership with German tool manufacturing enterprises.

The Global Apprenticeship Network (GAN) has started forming national nodes in Argentina, Colombia and Mexico. It plans to continue in other countries in the region in coming months, with the active collaboration of large enterprises which provide dual apprenticeship schemes for their workers' training.

Source: ILO/Cinterfor



Apprenticeships provide benefits for both enterprises and participants. On the one hand, the return on the investments in training for enterprises is usually positive and, on the other hand, the skills and competencies developed by participants are highly recognized in the market.

Few impact assessments results on this form of training and the financial return it can provide for enterprises are known in the region. International studies have found evidence that apprentices are productive enough that enterprises can recover what they invest in apprenticeship programmes. Estimates of the investment and benefits of about 2,500 enterprises that participated in apprenticeship programmes were calculated in Switzerland. The enterprise's investment encompasses, among other things, the wages of apprentices, supervisors and mentors, administrative and material costs. The benefits were estimated based on the outcomes of the work of apprentices. Costs of the programme for enterprises were estimated at about 4,700 million Swiss francs and benefits at 5,200 million Swiss francs, resulting in a positive balance. About two thirds of the enterprises obtained net benefits from the programme, and negative balances were offset when apprentices were hired, thus saving recruitment costs (OECD, 2010).

The ability to organize high-quality apprenticeship programmes is a challenge for the Technical Education and Vocational Training in the region. The new apprenticeship experiences can be implemented both at the level of technical secondary education, as can be seen in the cases of Argentina (INET), Colombia (SENA-MEC) and Mexico (CONALEP), and in vocational training institutions. Aside from being a challenge in terms of relevance, it is also a challenge for social partners, employers and workers interested in improving productivity and maintaining quality standards in training. Apprenticeship numbers are still low for most vocational training institutions and there is plenty of room for improvement as interest and good practices grow.

It is necessary to revisit the design options of programmes and the balance between courses of medium and long durations, such as apprenticeships, in relation to training offerings which tend to favour a large number of so-called "short courses" that train or supplement the training of workers in half days.

Using the enterprise as a place for apprenticeship means generating arrangements to counteract this trend and creating a space for learning and developing the skills relevant to the new demands.

2.4. The coordination between formal education and vocational training

Vocational training emerged as a form of training for facilitating access to the labour market. The ILO Thesaurus defines it as: "Activities aiming at providing the skills, knowledge and attitudes required for employment in a particular occupation, or group of related occupations, in any field of economic activity."

Since the creation of national training institutions, it was conceived as a path for those who needed to enter the market, on the supply side, and for covering the needs of specific jobs, on the demand side. In this vein, training institutions were mostly created not under the Ministries of Education, but rather with a direct connection to Ministries of Labour. This has positioned training in many cases as a track that is parallel, if not remedial, to formal education; and in many cases, it is still seen as the option for those who drop out of education and need an income.

In many cases, national legislations do not consider vocational training as part of the formal education path. However, it is now acknowledged that both, formal education and vocational training, make lifelong significant contributions in the development of skills. Therefore, it is understood that education and training systems should be designed within the framework of a comprehensive perspective of the accumulation of skills by people.

Both formal education and vocational training develop skills and competences, which are highly valued in employment and increasingly demanded. A recent study conducted by the World Bank identified a set of cognitive and socioemotional skills that are correlated with positive differentials in wages and employment for those who possess them. Cognitive skills include mental abilities for understanding, reasoning and acquiring new knowledge. Among others, they include a basic knowledge of science, mathematics and reading usually gained in education, but also skills such as complex thinking, critical thinking and problem solving. Socioemotional skills include being focused on achieving goals, managing emotions, and working with others⁶².



In such a fast-changing scenario, training programmes should focus on the set of skills that are more complex – while also being broad and transferable– which facilitate employability and have a lower obsolescence risk. The data obtained in a study carried out by the World Bank in Bolivia, Colombia, El Salvador and Peru confirm a higher probability of obtaining better outcomes in the labour market and pursue tertiary-level studies for adults with better levels of socioemotional or cognitive skills, in comparison with those with the lowest levels of skills.

Based on this evidence, it is not productive for an education system to have the achievements and accumulation of skills fragmented and overlooked, by not acknowledging the skills developed through vocational training.

The concept of lifelong learning. A global education and training agreement is yet to be implemented in Latin America. Lifelong learning addresses the need for educational opportunities that are not restricted to certain stages where education is traditionally viewed as essential. The purpose of this idea was to indicate that opportunities should be available at any time, for people of any age and, even more, of any social background, gender or race. Education and apprenticeships as permanently available opportunities are one way to address the new requirements, such as the rapid generation of new knowledge, the fast pace of innovation, technological change and its practical consequences in the world of work.

BOX 4: Lifelong learning

The term “lifelong learning” encompasses all learning activities undertaken throughout life for the development of competencies and qualifications. Recommendation 195. (ILO, 2004)

Lifelong learning is conceived as “all learning activity undertaken throughout life which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social or professional reasons. (OECD, 2012)

Source: ILO, OECD

It is necessary to improve the attractiveness of vocational training and recognize it as part of lifelong learning. Elevating its status and improving social perception should be a priority of educational policies that promote training for employment. To this effect, there are experiences that incorporate training as part of secondary education and post-secondary education. The key to these efforts is to make training courses more than just one-off activities disconnected from the educational achievements of people.

Vocational training develops skills for employment and life. Since the mid-1990s, “competency-based training” has been gradually incorporated to provide new answers for the following questions: How is an occupational profile defined? How is a competency-based vocational training programme defined, and how is it carried out? How is prior learning recognized and certified? Virtually all vocational training institutions in Latin America and the Caribbean currently apply the job skills approach.

Teaching approaches have also been renewed in the pursuit of the development of skills. Such is the case of “project-based learning”, a model in which students plan, implement and assess projects that have real-world applications beyond the class room, instead of receiving short and isolated lessons. In this approach, activities are interdisciplinary and focus on students, they require the use of support technologies and connect learning to the real world.

The design and use of guiding projects or problematic situations for learning is being used in, among other institutions, SENAI in Brazil, SENA in Colombia, SENATI in Peru and the National Institute of Vocational Technical Education (INFOTEP) in the Dominican Republic.



BOX 5:

The role of World Skills (WS) in the global recognition of job skills

World Skills, whose vision is to be the global hub for skills excellence and development, holds a world competition of skills every two years for participants under 23 years of age on occupations from all sectors.

Gold, silver and bronze medals, and special mentions, make it easy to quickly and simply compare the achievements of international competitors. The most recent competition held in August 2015 in São Paulo, Brazil, was organized by SENAI. It hosted 1,189 competitors from 59 countries for 50 different abilities and skills. The event employed 1,144 evaluators and 800 volunteers, and received about 200,000 visitors. In 2017, it will be held in Abu Dhabi.

This competition showcases the importance of vocational training for the productivity of countries, aside from connecting great enterprises, it combines events where manual and highly complex skills are applied. WS is making progress toward the generation of occupational profiles, teaching materials and training expert evaluators in different technologies.

Several vocational training institutions have adhered to the principles and rules of this competition, and have had the quality of their participants compared regionally. World Skills Americas is held every two years, in 2014 it was hosted in Bogotá by SENA and in 2016 it is scheduled to take place in Chile.

Source: World Skills

But the advances in making lifelong learning a reality are varied and at different stages of development. Since the mid-1990s, most vocational training institutions have been progressively transforming their programmes towards approaches that promote the development of skills, not just technical skills but also those which are associated with team work, problem solving, critical thinking, among others. Currently all of the vocational training institutions with national coverage have moved their offering towards

the development of job skills and many have altered their teaching strategies to promote socioemotional skills. This approach has been increasingly adopted in the definition of syllabi and curricula in technical education. However, as mentioned before, there is still a need for the generation of coordination and connection mechanisms, for participants to be able to go through formal education and vocational training accumulating useful and relevant skills that are integrated in a single educational framework.

It is necessary to generate mechanisms for the recognition of skills acquired through training and have them accredited in formal education. Young people who turn to vocational training and enter the labour market usually have no options available to have the skills they have developed in training recognized. As a general rule, secondary education curricula do not recognize the know-how acquired through vocational training, which also happens in higher education, as shown in the following figure.

Obtaining a certificate for the skills developed is a great achievement for workers, but this recognition loses its power as an instrument for mobility because it is not recognized by the formal education. Education systems generally consider vocational training as nonformal education and such certifications are usually not accredited in the upward educational path of students.





BOX 6:

Some experiences of coordination between formal education and vocational training

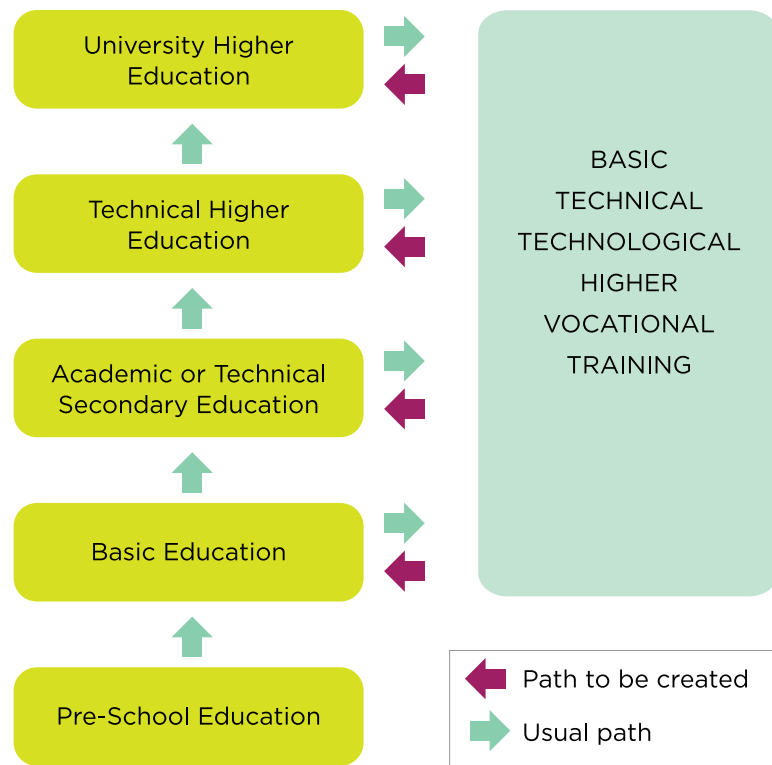
UOCRA Foundation, Argentina. The foundation implemented a vocational training project (2007) aimed at completing secondary education with pilot experiments in the City of Buenos Aires and Moron, in the Province of Buenos Aires. The work was carried out in training sessions and follow-up to the teachers of each subject. Students were also followed individually and as groups. A total of 500 people benefited from this experience.

Coordination between secondary education and vocational training in Colombia. It is a teaching and management project aimed at facilitating the recognition of the lessons learned in various educational scenarios. It facilitates the transition of students who have completed secondary education and vocational training to higher education, by promoting continuity in the educational system. The coordination is not a massive process, it is conducted through partnerships between secondary education institutions and other vocational training providers, such as SENA. The goal centers around boosting basic mathematics, language, natural sciences and civic skills, and also around the development of specific skills which will enable continuity from secondary education to higher education. More than 3,000 secondary education institutions and more than 550,000 students, 73 % from SENA, took part between 2009 and 2011. (MEC, Colombia, 2013)

Sources: UOCRA. SENA.

FIGURE 4:

The one-way path from education to vocational training



Source: ILO/Cinterfor

The usual path, which is a one-way path for now, is almost always created as an alternative to school in case of dropout. This is the case for those who are not able to stay in formal education because they need an income through employment, and turn to training programmes as a means for labour-market integration and getting an income. The path to be created is based on the accreditation and recognition of the knowledge acquired in vocational training for pursuing formal studies.



Under the approach of lifelong education, vocational training is a form of education and ability development which, as such, should be recognized and incorporated into the list of achievements of people. For such purposes, it is essential for governments to promote the necessary reforms. Training for employment must encourage the relationship between education and the labour market not only through better social integration. It is widely acknowledged that education fosters the training of people for their productive and social integration in the future.

BOX 7: Skills and qualifications

The term “skills” encompasses the knowledge, aptitudes and know-how which are mastered and applied in a specific context.

The term “qualifications” refers to the formal expression of a worker’s skills recognized at the international, national or sectoral level.

Source: Recommendation 195 concerning Human Resources Development: Education, Training and Lifelong Learning. ILO, 2004.

National Qualifications Frameworks (NQF) as a way of linking education and vocational training in Latin America. The traditional separation of the educational path and training could be addressed through the logic of lifelong learning, given that it assumes a continuity in the accumulation of knowledge, regardless of the manner and place. One person who completes a repair apprenticeship programme for agricultural machinery has obtained a qualification, in the same way that someone who has completed primary education or earned an industrial maintenance technician degree has.

A national framework, which provides a consistent structure for the various educational achievements recognized through qualifications and their corresponding levels, could solve traditional recognition or transition problems between formal education and vocational training. This open communication would require, however, agreements between those who provide and those who demand training that ensure the qualifications are relevant and credible, in a context of quality and transparency.

In fact, the countries in the region which have begun working toward the formulation of national frameworks consider certain aspects as antecedents to the decision:

- Recognizing everything that is learned throughout life, no matter where or how;
- The need to frequently update the knowledge and skills, and develop new skills;
- The cumulative value of knowledge and the need for a framework that values the skills developed;
- The creation of an open supply of opportunities for accessing knowledge and skills development.

National qualifications frameworks are tools for classifying educational achievements and skills according to clearly defined levels, which are defined in terms of results. The basic idea is that any activity that develops skills can be recognized in a certain level determined on the basis of the complexity of the skills developed. The higher the level in the framework, the more complex the skills, the stronger the intensity on basic knowledge, and more elements of autonomy and decision making. The table below presents an outline of a national qualifications framework.





TABLE 10:
An outline of a national qualifications framework

Level	Education	Examples of qualifications
8	Tertiary, Postgraduate	Doctorates
7		Postgraduate degrees, Master's degrees, Specialization degrees
6		University
5		Technologists-Technicians
4	Secondary	Supervisors and highly qualified workers
3	Technical secondary	Skilled vocational training
2	Vocational training	Semi-skilled vocational training
1	Basic	Basic vocational courses

Source: Adapted from Tuck (ILO, 2007)

The purpose is to classify educational achievements within a certain level and according to the quality and relevance criteria established in the national qualifications framework. By having a single pathway for advancement throughout life, the separation between formal education and vocational training is eliminated, and it is possible for the skills developed to have a single recognition and accreditation instrument from the level within the framework.

The coordination with formal education, for the purpose of facilitating the creation of pathways for continuing education or lifelong education is a goal in many countries. There are processes for the creation of national qualifications frameworks underway in Chile, Colombia, Costa Rica, Nicaragua, Panama and the Dominican Republic, among others⁶³. Training frameworks have been developed in Chile, for example, for sectors such as mining, or for the supply of education opportunities in institutions such as INACAP⁶⁴. English-speaking countries in the Caribbean share a five-level framework for the curricular design of training offers.

BOX 8: **Qualifications framework in Chile**

In 2015, the National Board of Education (CNED) of Chile decided to support the design of a national qualifications framework to facilitate the mobility of students within the educational system, promote lifelong learning, increase opportunities to access education and training for adults, develop a common language through a skills approach that will enable a dialogue between the productive and educational sectors, improve the employability of people through skills certification and the recognition of prior learning, including that which takes place on the job.

The framework gives the productive sector the signs it requires to determine its occupational needs and promotes the relevance of education and training, ensuring that qualifications meet the demands of individuals, and the social and productive environment.

Source: CNED. Boletín perspectivas en educación. Chile. January 2014.



Methodological approaches and the problems solved by a qualifications framework appear with varying intensity in the advances made in the region, which poses challenges for the different stakeholders that include⁶⁵:

- **A clear and explicit commitment from the higher authorities.** In the Dominican Republic and Costa Rica, decisions have been made at the presidency level through regulations, and even by introducing the need for a qualifications framework into the National Development Plan and public policies on employment.
- **Allocation of responsibilities for the management of the process.** Responsibility and leadership in the development of the framework must be explicitly allocated in order to facilitate the combination of work methodologies and manners. Work groups with clearly defined objectives, goals and activities were organized in Costa Rica and the Dominican Republic, where training institutions INA and INFOTEP, respectively, have provided technical support for the process.
- **Real advances and testing.** A pilot experiment strategy was chosen in order to facilitate and promote both the participation of all involved stakeholders, and to disseminate the tool and make accessing it easier. Chile has had varied strategies, which were initially related to the experience of ChileValora, and now incorporate other levels of qualifications from technical and higher education. Several sector pilot experiences were deployed in Colombia by the Ministry of Education with support from the UNDP and others by the SENA.
- **Leadership and teamwork.** A coordination and connection strategy is needed. Different methodological approaches and development options are better consolidated when the responsibility for the framework is distributed in a team, thus preventing a specific sector from taking ownership.
- **Financing and sustainability.** This should be clear as a result of teamwork, both for implementation and for the continuous updating of the framework. Both the ministries of labour and education, as well as training institutions, must implement and contribute to a system of information about qualifications that is durable, transparent and known by all involved parties.

The certification of prior learning also makes the education-work linkage easier. One option that has been explored less in the region for linking work and educational achievements is known as skills certification. This process is intended as a way to formally and publicly recognize the skills an individual has developed as a result of their experience, and not necessarily in an educational context.

Obtaining a skills certificate in an environment where there are high rates of informality in employment and where many have learned a trade through experience and over many years, is a form of recognition that is supported by workers, employers and governments. At the regional level, and aside from the certification services provided by many vocational training institutions, two public institutions have been created, in Mexico (CONOCER) and Chile (ChileValora), which are managed by tripartite boards and specialize in certifying the skills of individuals.

In other cases, vocational training institutions build partnerships with specific sectors or enterprises for the development of certification processes geared towards identifying skills gaps and generating training solutions. The Vocational Training Institute of El Salvador (INSAFORP), for instance, does this with the plastics manufacturing industry.

One of the consolidated experiences at the sectoral level worth mentioning is that of the UOCRA and the Building Industry Statistics and Records Institute (IERIC) in Argentina, wherein the certified skills are entered into the microchip of a portable card carried by construction workers that can be easily read by someone who requires their services. ILO/Cinterfor has organized a network of experiences and institutions that recognize and certify skills⁶⁶.

But certification can be an even more widespread practice and coordinated with vocational training and formal education, the numbers shown give an indication of the low percentage of certified workers in relation to those who are trained. It is necessary to develop a better coordination between these mechanisms and the mechanisms for the formal recognition of educational achievements.



TABLE 11:
Ratio of certified workers to VT participants in a sample of countries

Countries	Total of participants in programmes 2015	Certified individuals 2015	Certified/ participants
Argentina – MTEySS	122,795	7,778	6.33
Chile - ChileValora	880,315 ⁶⁷	63,844	7.25
Colombia - SENA	4,069,644	108,086	2.65
Guatemala - INTECAP	348,165	3,767	1.08
México - CONOCER	758,348 ⁶⁸	98,931	13.04

Source: Prepared by the authors on the basis of data from the ILO/Cinterfor Survey, 2016. Participants of virtual modalities were not included in the total of participants for Colombia.

2.5. How training aligns with productive development policies

Productive development policies aim at generating more prosperous economies by creating conditions for a better productive integration, as well as the incorporation of more complex knowledge into the production of more sophisticated goods and services with more added value. The activity in which skills are developed through educational processes known as vocational training contributes to the growth in productivity and productive development, by developing skills and abilities that are applied to work. The development of skills is a critical factor of competitiveness which can enable countries to improve their participation in global value chains through the development of new skills and knowledge in workers. The evolution of vocational training has gone hand in hand with different moments in the development of the region, and it is expected to continue doing so, for which several reforms should be carried out, and new work methods and partnerships should be adopted.

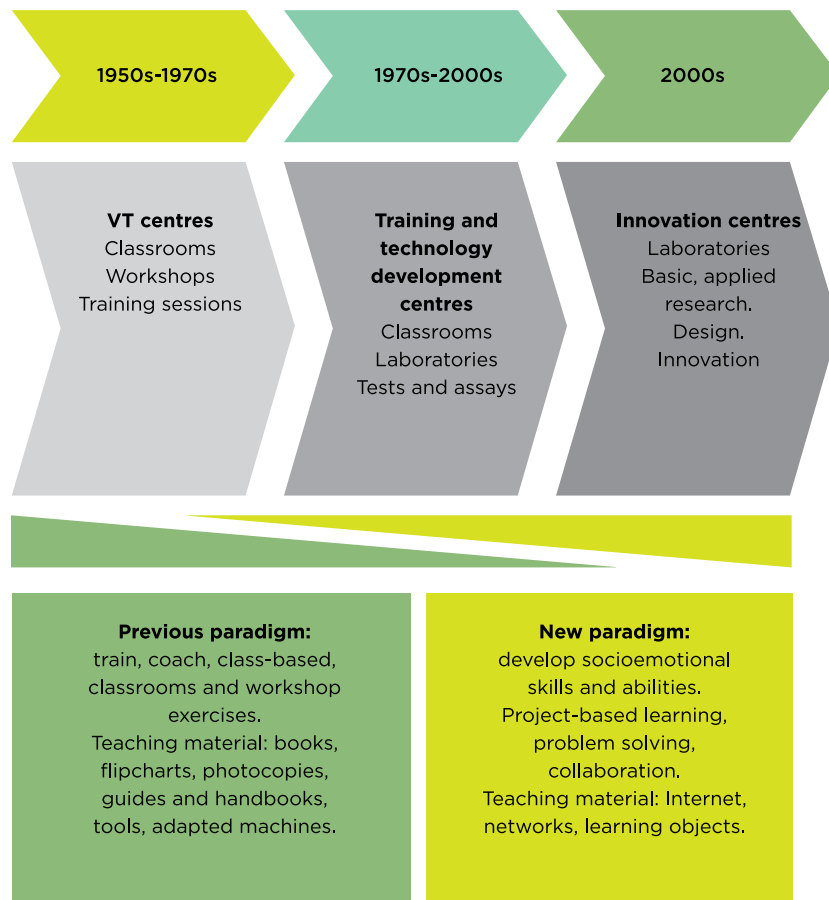
From training centres to technology development centres. The first vocational training centres were designed both as classrooms where theoretical knowledge could be discussed, and also as workshops with basic machinery and equipment for practising work tasks and operations. This model is still found in many centres throughout the region, and even though it has remained unchanged for the most part, it is challenged nowadays by the emergence of new educational technologies and new forms of teaching and learning.

The first instance of diversification in the traditional training centre model was first observed in the 1970s. By then, many vocational training institutions had created centres with advanced technologies, and capacities for researching and providing services to enterprises in certain sectors. These centres turned to research and technology development, providing laboratory services, tests and assays, and prototype development, among others.

These training and technology development centres benefited from the investment power of institutions such as SENAI in Brazil or SENA in Colombia. This way, they were able to acquire technology incorporated into equipment which, individually, few enterprises could afford. For example, the first spectrophotometers needed for analysing the quality of certain metallic materials were so expensive that individual enterprises could not purchase them, which had detrimental consequences for their chances of improving the quality of their products, or importing them. The device that measured the density of inks to determine whether they met the standards for selling books in certain markets was not cost-effective for a large publisher by itself. How then could technicians be trained, and gain the ability to understand and achieve the productive standards of global markets? How could workers be trained with quality standards as stringent as those in European or Japanese markets?



Figure 5:
Overview of the evolution of training centres toward support of productive development



Source: ILO/Cinterfor

What does Brazil's experience teach us? The reduction in industrial employment, the transformation of job contents, the new dimensions and relationships in the informal labour market had an impact on the options in SENAI's vocational training model. Consequently, there was a proposal for the creation of a new model of National Technology Centres (CENATEC), which was combined with the Model Vocational Education Centres (CEMEPS). (Caruso, 1998)

CENATEC were created as centres for the training of industrial technicians, but in their operation, they adopted practices such as technology outreach, consultancy for enterprises, dissemination of information about technology, quality certification, and experimental development of processes and products, geared towards the competitive area of the industrial sector. CEMEPS provided education for work, technical assistance and information about technology.

The link with education for work, the end goal of

CEMEPS, was achieved by connecting the results of the technical assistance, technology and technology information activities in order to enhance the teaching process.





Almost 20 years later, SENAI has continued evolving in linking vocational education and productivity by developing Technology Centres and Innovation Centres. Under this vision, the driver for growth are connections between knowledge, skills, lessons and capacities for innovation, which lie in workers, enterprises and, in general, the productive networks of the country.

BOX 9: **Upgrading from training centres to technology centres, a vision of productivity**

When the National Technology Centres were created, around the end of the 1960s, their teaching process included the key idea of having an advanced technology school. Later, the idea of having a more integrated operation (many of the enterprises' problems were not solved only with vocational education: a more comprehensive view was necessary, and this entailed performing diagnoses that covered other dimensions, such as the analysis of manufacturing processes and products, plant layout) started to gain traction. The technological information and applied research functions were consolidated in CENATEC in the 1990s. Even though plenty of experience was being accumulated throughout the 1980s on a new form of operation in SENAI's operational units (vocational training schools and centres), it was not until the 1990s that the structure called National Technology Centres (CENATEC) was created.

Source: Caruso.

SENAI is currently consolidating a network of 26 innovation institutes and 66 technology institutes, which is one more step forward in linking vocational training and industrial development policies, and is intended to revolutionize the innovation model in Brazil. The National Bank for Economic and Social Development of Brazil granted more than 617 million dollars in financing for the creation of the institutes, with the clear goal of strengthening the growth of productivity in the areas of national interest⁶⁹.

BOX 10: **Some of the SENAI innovation centres**

- Metal mechanics
- Polymer engineering
- Biomass
- Biosynthetics
- Green chemistry
- Virtual production systems
- Biotechnology
- Advanced materials and nano-compounds
- Production automation
- Laser innovation
- Structure technologies
- Mineral technologies
- Information and communication technologies
- Manufacturing systems

Source: SENAI

The transfer agreement entered into with the Fraunhofer Institute from Germany⁷⁰ will help in the deployment of innovation models in enterprises of all sizes in Brazil.

Germany is one of the most innovative countries. In 2012, it filed 34,590 patent applications, the third largest number after Japan, which filed 51,400 applications and the United States with 63,777. In Brazil, 587 patent applications were filed on that same year.

One of the areas in which both countries will work jointly is additive manufacturing, a cutting-edge technology that uses 3D printers for manufacturing objects in layers. A 3D printer can build, for example, pieces for industrial machinery made of plastic or light metals. This technology opens up the possibility for Brazil to develop products in partnership with the aircraft industry in order to reduce the weight of the structures in airplanes, for example, or the automotive sector to create more complex and economical pieces, thus boosting the competitiveness of national and German enterprises.



This project has a close connection with the industries of Brazil. Indeed, the Confederation of Industries starts with the assumption that innovation takes place in enterprises, and firmly relies on SENAI for the provision of human resources that will enable it to maintain and improve its productive and competitive structure. In this case, the public policy on innovation and development promotion made it possible for the national development promotion bank to provide the funding.

Box 11: Fraunhofer-SENAI: Transfer of know-how for innovation

In order to modernize and provide technical assistance for the industry, SENAI hired the Fraunhofer IPK Institute from Berlin, a centre specialized in intellectual capital, which transferred the institution's know-how into the planning and creation of innovation centres in Brazil.

The cost of this transfer of knowledge is about 1 million euro a year and is expected to last until 2019. According to the National Confederation of Industries (CNI), the SENAI innovation institutes created under this agreement have contracted 122 projects with enterprises for more than 44 million dollars.

Marcelo Prim, Technology and Innovation Manager of SENAI, believes investing in human capital is the starting point for structuring innovation, but it is still a challenge to leverage the knowledge produced by Brazilian universities to innovate in the national industry. He explained that the Fraunhofer Institute helped SENAI on this aspect, with the definition of human capital required in each institute. "They helped us to organize the 26 institutes, going through the strategic planning, execution and follow-up phases. They are training the team in practice".

Source: SENAI

How does SENA in Colombia participate and promote innovation and productive development?

The experience of SENA is inspired by SENAI, which has always been a close reference. The first two technology development centres were created in the 1970s and have a core of services that is similar to the one of SENAI.

The technological services include: technical assistance, advise, consulting, design, applied research, special manufacturing, agricultural machinery, and laboratory tests and assays. These services enabled decisions for the modernization of emerging industries, training in new specific skills and even promoted the training of technical specialists in other countries. SENA has about 18 technological centres for the agricultural and livestock sector, 28 for the industrial sector, 19 for construction and as many for the commerce and service sectors⁷¹.

There are two specific characteristics of the Colombian experience worth highlighting. One is the proximity there has been for at least three decades with the national science and technology system, through which SENA was able to enter into agreements with sectoral organizations and enterprises, in order to meet the demand for training and updating of workers in sectors which incorporate new technologies that were being introduced into the country, and for which SENA did not have adequate trainers or facilities. Besides, thanks to the Law of science and technology, it has been able, since the 1990s, to enter into technology cooperation agreements to promote innovation through the training of human resources.

SENA actively participated as a provider of specialized knowledge through agreements supported by the Sectoral Boards of Competitiveness

BOX 12: The Techno-park programme of SENA

It consists of a technological innovation programme which acts as an accelerator for the development of research and development projects realized as functional prototypes in four technology areas: electronics and telecommunications, virtual technologies, engineering and design, and biotechnology and nanotechnology, promoting technology-based ventures.

It is geared towards providing support for innovative, technology-based projects to generate products and services which will contribute to the economic growth and competitiveness of the country and region, leveraging on world-class sectors.

Source: <http://tecnoparque.sena.edu.co>



SENA has currently diversified its operations through innovation and, aside from technological services, it has implemented the Science, Technology and Innovation System (SENNOVA), which covers the different areas, programmes, and culture and innovation projects, among them the technology academies, technology parks, applied research, research in vocational training, enterprise innovation promotion programmes and technology expansionism⁷².

In SENAI and SENA, addressing the issues of productivity and competitiveness entails a certain diversification which begins with training services, and becomes more diverse and complex, including services for the development of abilities which contribute to escalating the productive structure, and the ability to produce more complex goods. The availability of more complex abilities enables economies to expand their productive space, leverage niches that are close in productive complexity and enter global value chains with activities of a higher added value.

Vocational training in the region must support innovation and the development of productive capacities. Although there has been a sort of “contagion” effect, it is happening at a slow pace. The creation of new training centres or the expansion of the operational activities of institutions is still based on the addition of classrooms and workshops which, increasingly, should be building innovative partnerships with production chains and productive sectors.

It is clearly not about repeating or copying the SENAI or SENA models, or others from other continents; but rather about learning from those experiences, and not losing sight of the fact that the relevance of training is not limited to the short-term employment rate of graduates, it also has to do with the ability that the human resource has for assuming more complex tasks, their familiarity with new technologies, and solving adaptation or innovation problems. Several countries are generating experiences connected to sectoral productivity and competitiveness arising from public-private partnerships, agreements with technology providers for transference both in the enterprises and in training, technology demonstration activities and the application of tools to improve productivity, as outlined in the table below.

Several vocational training institutions have started, still on a small-scale, to move forward in this path

that includes a proximity to the demands of industries or a production chain, and the involvement in issues of productivity and competitiveness that can be addressed with human talent and technological services.

BOX 13: Some experiences of vocational training supporting productive development

INTECAP created its Santa Lucia Cotzumalguapa Centre, right in the middle of an agro-industrial complex with sugar refineries and other agro-industrial activities. The centre provides training in industrial areas related to the repair of agricultural machinery, metal mechanics and electronics. The institution has a business services department for addressing specific demands related to productive sectors. It has high-technology laboratories for providing technological services in areas such as electrohydraulics, food quality control, microbiology, basic pneumatics and robotics, among others. All of this is yet to be consistently organized under a productive development policy.

INSAFORP in El Salvador has entered into agreements for the transference of training and technology in the plastics manufacturing industry. This agreement enabled the creation and equipment of the Centre of Excellence in Technologies of the Plastics Industry (CETIP), as well as the conduction of dual training programmes at the technical level, along with the use of state-of-the-art production technologies for the sector. This is an initial step which can indicate the expansion of this strategy to other key sectors in the economy of El Salvador.

In Peru, SENATI has partnered with suppliers of heavy machinery used in mining to ensure, aside from training, the transfer of technology through machinery and equipment, by permanently updating the trainers in SENATI and technical manuals, with internships in technological centres and through the participation of its experts. This type of transfer is certainly in the early stages of the concept of technology dissemination, which consists of doing the transfer through training for trainers and the dissemination of the knowledge related to the operation of the technologies in question, but it is a step forward in shaping future transfer and innovation actions.

INFOTEP, in the Dominican Republic, will begin applying the SCORE (Sustaining Competitive and Responsible Enterprises) methodology in several enterprises that grow organic bananas. SCORE is a training and technical assistance programme developed by the ILO to improve the working conditions and productivity in small and middle enterprises.

In Honduras, INFOP, in partnership with the Adviser Centre for the Development of Human Resources (CADERH), provides training and human resources certification solutions tailored to the African palm industry.

Source: ILO/Cinterfor



It is still necessary to do more in order to strengthen the connection between vocational training and productivity growth, not just with solutions such as Innovation Centres or specific competitiveness support programmes, but also by bringing these solutions closer to production transformation and diversification policies.

The learning processes through which productive capacities are accumulated are the foundations of

the development strategy, and of sustained, inclusive sustainable growth. Here lies the enormous importance of human talent and, specifically, vocational education and training policies, for the present and future of economic and social development in Latin America and the Caribbean, with more and better jobs, and also more social justice.

2.6. The use of new educational technologies in vocational training

A central characteristic of vocational training is the investment and knowledge that training institutions have always generated in the definition of occupational profiles, the design and development of curricula, training materials, technological innovation, training of trainers methodology and adaptation of learning spaces, among others. Indeed, training institutions in the region have the greatest bodies of applied knowledge on the development of skills for work. Even though there has not been an intense transformation in the manner of teaching and learning, there have been some advances in the use of ICTs for vocational training which are transforming traditional classroom-based modalities that resemble school, the fixed time for accessing it and learning within the established (fixed) time.

One of these changes is in the fast growth of distance training. Several institutions have taken advantage of ICTs to increase their offering of training⁷³. In Brazil, distance learning is a modality that is booming for SENAI, with annual variations of more than 200 % in some states.

In 2011, in São Paulo, more than 70,000 people enrolled in higher technical, further training and introductory courses. In Colombia, SENA aimed to train about 25 % of the participants expected in the different programmes through this type of training in 2013. SENATI, in Peru, launched in 2014 a platform for ICT-based training and business development services for small and middle enterprises in the apparel sector, within the framework of a project financed by the Multilateral Investment Fund (FOMIN). In 2015, INA reported 51,437 distance participants and INTECAP reported 89,893 participants in its distance programmes. Overall, public vocational training institutions reported that they trained more than 4 million participants in 2015 using this form of training⁷⁴.

Design technologies are making it possible for digital training simulators to develop rapidly and their use is spreading to all areas of production and services; some of them can even be used remotely through real-time Internet connections.

BOX 14:

Some distance training portals in vocational training institutions

CONOCER:	cvc.conocer.gob.mx
DuocUC:	duoc.eclass.cl/
INA:	www.inavirtual.ed.cr/
INATEC:	aula.inatec.edu.ni/
INTECAP:	fad.intecap.edu.gt/
INFOTEP:	www.infotepvirtual.com/
INFOP:	www.infop.hn/elearning/
INADEH:	www.inadehvirtual.edu.pa/
INSAFORP:	www.insaforpvirtual.org.sv/
SENA:	www.senavirtual.edu.co/
SENAI:	www.portaldaindustria.com.br/senai/canaais/educacao-distancia/
SENAC:	www.ead.senac.br/
SENAR:	http://ead.senar.org.br/
SENATI:	virtual.senati.edu.pe/
SNPP:	www.programacionsnpp.com/publico/index.php
UTU:	campusvirtual.edu.uy

Source: ILO/Cinterfor



A hotel management process or the calculation of the necessary volume for irrigating an agricultural area are processes that can be simulated in computer applications. Thus, they can be made available to many participants simultaneously, and they are monitored and guided remotely. Participants of some of SENAI's training sessions access, through the Internet, meetings with audio and video where they can use simulators to perform exercises of industrial processes, which are simultaneously observed and followed by all of their colleagues in a virtual learning environment.

All of this leads to a more flexible vocational training. This concept refers to time dimensions and also to the learning place. In traditional programmes, the dimension of time used to be fixed, with a beginning and ending established in the schedule, whereas now, the modular design and personalized strategies mean each participant can proceed at their own pace. On the other hand, it is increasingly accepted that the places for learning are many more than a classroom or workshop, and they now include the enterprise, the workplace, the home. Traditional training services, initially conceived as a single option for starting and finishing, allow for partial discontinuations and restarts, and some modalities have been created to incorporate and validate new offerings, following quality, relevance and equity criteria.

The modular design of training allows for participants to start, leave and restart, especially in cases in which they need to enter the labour market early. Distance training through the Internet has become another factor of flexibility in the access to skills development since it makes it easy to access, leave and restart programmes. Ubiquity is also a very relevant factor, because with distance learning contents can be accessed from any place at any time. Thus, several institutions have reinforced the generation of programmes using the idea of training "itineraries" or "routes" that are related to the manner in which the production process for goods and/or services takes place, and the various "occupations" which can be performed throughout a certain chain. SENAC, with its training itineraries, or ChileValora, with its training routes, are recent examples of this.

BOX 15: Some trends in the use of educational technologies for vocational training

- **Learning platforms:** Designed in Internet environments to facilitate mediation between the coach, the syllabi, materials and the students.
- **Games based learning:** Development of contents through playful activities that encourage achievements and attaining results.
- **Virtual learning environments:** Made up by different proposals of content, materials and interactions with objects to manipulate, experience and learn.
- **Learning ecosystems:** Broad virtual space which provides different means to access programmes and contents, simulators, discussion groups and learning objects which are physically located in different countries, but share a common structure.
- **Repositories and learning objects:** Databases that are organized and indexed, to facilitate the search and use of training materials and content units, or solving problems that are part of training programmes.

Source: ILO/Cinterfor

Some training centres of the National Apprenticeship Service (SENA) in Colombia or the National Apprenticeship Service for the Industrial Sector (SENAI) in Brazil keep their doors open at night or even 24-hours a day. The Technical Institute of Training and Productivity (INTECAP) of Guatemala offers some weekend programmes to favour access as well as other centres of the region which are increasingly making their timetables more flexible.

In several training sessions in SENAI, participants access practical exercises through interactive online environments and observe, with a trainer's guidance, how a certain exercise which is streamed live is done. Some examples of augmented reality, simulators and smartphone applications are already available at INA, SENA, SENAC and SENAI, and are being developed in other vocational training institutions in the region.



It is still early to tell how this will affect coverage, the reach to certain populations and the reality of issues that have not been discussed yet, such as the possibility of having a real assessment of skills in virtual environments. The following table shows the current amounts of students who have participated in distance training and

their proportion in relation to the total of graduates. More complete time series are needed in order to analyse this trend and its scope, but judging by the growth of online education, the expansion in the use of educational technologies via the Internet will be dizzying.

TABLE 12:
Participants in distance training in some vocational training institutions

Institution / Country	Total of participants	Distance participants	Ratio of distance/total participants
SENAC - Brazil	1,476,972	116,999	7.90%
SENAI-Brazil	3,415,058	1,226,761	35.90%
SENAR - Brazil	1,133,199	113,853	10.04%
SENA - Colombia	7,143,250	3,073,606	43%
INA - Costa Rica	132,850	44,050	33.15%
INSAFORP - El Salvador	285,741	439	0.20%
INTECAP - Guatemala	351,292	23,920	6.8%
INFOP - Honduras	205,744	32,684	15.90%
SNPP - Paraguay	145,058	15,523	10.70%
SENATI - Peru	510,852	37,503	7.30%
INFOTEP - Dominican Republic	649,800	15,925	2.50%
Totals	15,449,816	4,701,263	30.43%

Source: ILO/Cinterfor Survey, 2016. Data shown for SENAR, SENA, INA and INTECAP are from 2016. Other data are from 2015

3. Institutional, financial and governance models

Technical and vocational education and vocational training are the two most important sources of career development in the region. Institutions offer a wide variety of services and in most countries they can be characterized by five types:

- Public VTIs: in line with traditional VTIs, with own funding and administrative autonomy.
- Formal private VTIs: they are recognized⁷⁵ and usually work by supplementing the public VTI service provision.
- Informal private VTIs: a large number on offer, mostly unregulated and without quality assessment.
- Enterprise training offer: they include on-the-job training and the outsourcing of courses.
- Secondary technical education and higher technical education offer (of formal education that includes technical colleges and public and private technological schools).

The sources of statistical information on the wide choice of services offered are scarce, and although there is information on secondary and technical education, the duration cycle of a participant in secondary or technical education tends to be one year, while in vocational training it is possible to participate in more than one activity (module, course) during that year, which means that every completed course would be taken into account. A mechanism for comparing the aggregate figures between formal education and vocational training should be developed.



In total, there are almost 95 million young people between the ages of 15 and 24 in the 15 countries that reported and have over 15 million participants in vocational training (it should be made clear that there is a record for every course taken). Furthermore, the number of students in secondary and higher technical and vocational training amounts to just over 2.6 million⁷⁶.

Has VT outreach increased? Even though comparative figures are not available for all countries, a review that looks back at some institutions over the past ten years, shows a surge in the percentage of young people participating in vocational training. .

FIGURE 6:
Proportion of participants in vocational training to employed youth population in a group of LAC countries. 2005 and 2015



Source: SITEAL (Information System on Educational Trends in Latin America). ILO and UNESCO database. 2005 and 2015. 2016 ILO/Cinterfor Survey. Based on information from Argentina, Brazil, Chile, Colombia and Guatemala.

VT participants as a proportion of the employed youth population accounted for 13.3% in 2005 and increased to 23.5% in 2015. This rise was witnessed even though the employed youth population decreased as a proportion of the total of young people from 60% to 50% in those 10 years. In other words, fewer young people tapped the labour market and a significant part turned to vocational training.

Data on training from non-formal institutions and enterprises themselves, is not available neither in quantity nor in quality to be able to carry out a sound analysis; from here onwards reference will be made primarily to Vocational Training Institutions based on information gathered in the ILO/Cinterfor network.



3.1. Institutional features and scope for change in VT

In the mid-twentieth century, an innovative institutional design was created providing training and development of human resources required by an economic model which was undergoing a transition: from economies that until then were strongly based on the production of the rural sector, and extractive activities in general, to an industrialization model based on the substitution of imports. Thus, Brazil and Argentina in the 1940s marked the beginning of this movement with the establishment of SENAI (1942) and SENAC (1946) in the former, and the National Committee for Training and Vocational Guidance-CNAOP (1944) in the latter.

Since the late 1950s, institutions of this type have been established in almost every country: SENA (1957), National Institute of Educational Cooperation-INCE (1959); and from the following decade onwards these types of entities specializing in labour training were set up in most of the Central American, South American and Spanish-speaking and English-speaking Caribbean countries.

Vocational training adopted a series of common and innovative features with regard to the rest of the world. These features consisted of: i) organizing the provision of training around large national institutions or, in some cases, national and sector-based training institutions; ii) directive bodies with the participation of employees, workers and governments; iii) sources of funding based on a compulsory fee from enterprises in the form of a contribution on the payroll; and iv) it did not follow the design of the regular education systems and was intended to satisfy the immediate needs of the labour market.

The region has at least one institution of national scope in charge of Technical and Vocational Education and Training in each country. The following table lists public VTIs and their date of establishment.





TABLE 13:
National vocational training institutions and year of establishment

Country	Institution	Year of establishment
Argentina	INET	1944 CNAOP
		1959 CONET
		1995 INET
Bolivia	INFOCAL	1979 FOMO 1996 INFOCAL
Brazil	SENAC	1946
	SENAI	1942
	SENAR	1976
	SENAT	1993
Chile	INACAP	1966
	SENCE	1976
	DuocUC	1973
Colombia	SENA	1957
Costa Rica	INA	1965
Ecuador	SECAP	1966
	SETEC	2001 CNCFP 2011 SETEC
El Salvador	INSAFORP	1993
Guatemala	INTECAP	1972
Mexico	CONALEP	1978
	DGCFT	1978
Nicaragua	INATEC	1991
Panama	INADEH	1983 INAFORP 2001 INADEH
Paraguay	SNPP	1971
	SINAFOCAL	2000
Peru	SENCICO	1977
	SENATI	1961
Uruguay	INEFOP	2008
	CETP-UTU	1942 UTU
		1985 CETP
Dominican Rep.	INFOTEP	1980
Venezuela	INCES	1959 INCE
		2003 INCES

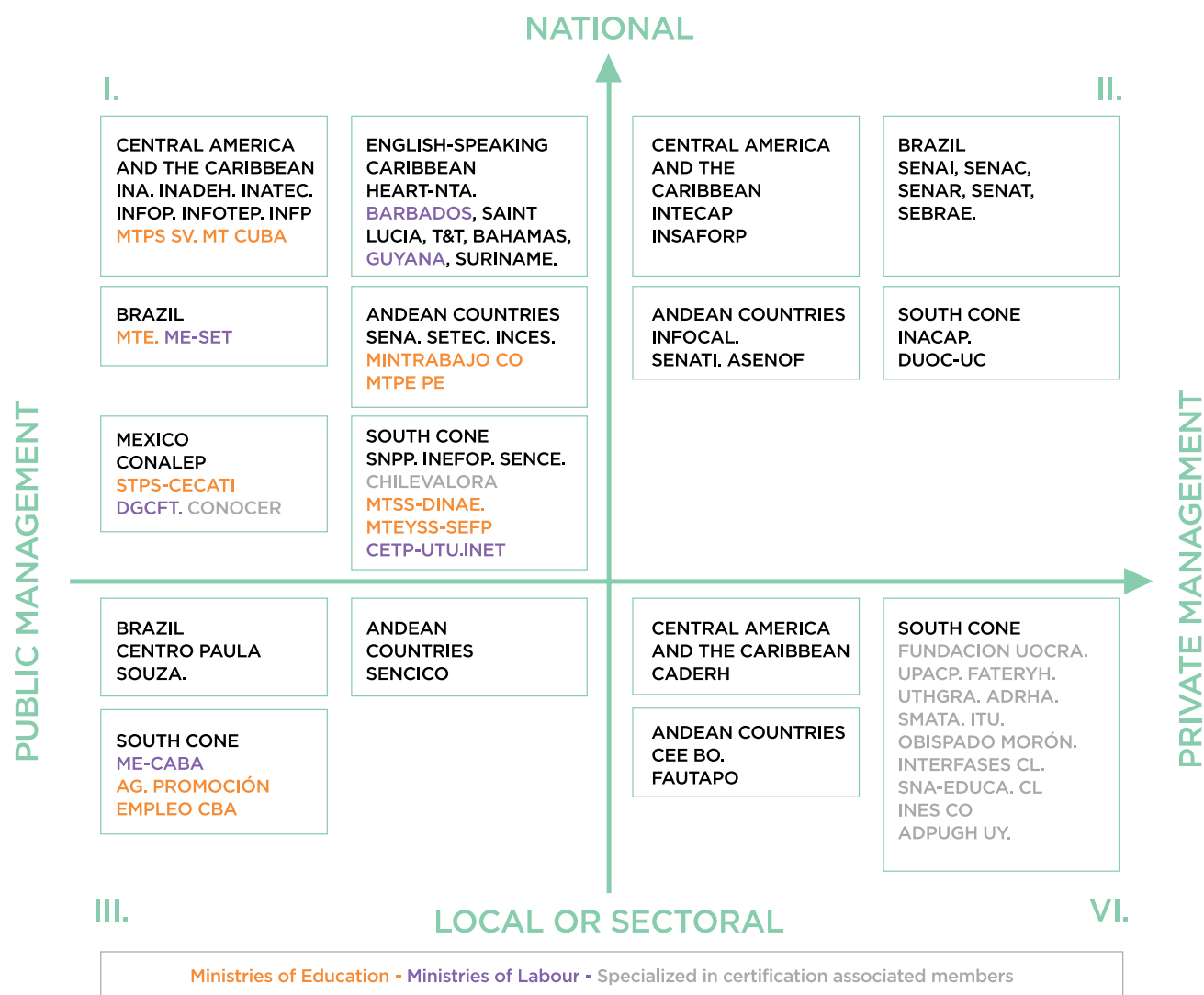
Source: Members of the ILO/Cinterfor network.



An analysis by type of management and scope of coverage illustrates the heterogeneity of institutional arrangements⁷⁷ and displays several types of VTIs than can be classified according to their management, public or private, and their scope, regional or sectoral. The figure below provides an example of this classification:

- I. Public sector institutions and national coverage.
- II. Private sector institutions and national coverage.
- III. Public sector institutions and local coverage.
- IV. Private sector institutions and local coverage.

FIGURE 7:
Diversity of vocational training in the region



Source: ILO/Cinterfor

The above figure contains the Ministries of Labour and technical and vocational training institutions that are members of ILO/Cinterfor and are involved in the development of policies or the implementation of training, or both.

Of the 66 ILO/Cinterfor member institutions, 39 belong to the public sector and 27 to the private sector. With regard to coverage, 47 are of national scope and 19 of local or sectoral scope.



Other characteristics of the current scenario, at institutional level, are:

- Varied participation of the Ministries of Labour, presiding over the Steering Committees of the national VTIs (E.g. SENA, INA, INTECAP, INSAFORP, INEFOP).
- The management of public Institutions is in some cases guided by Governing Boards with private sector leadership (Sistema S from Brazil, INSAFORP in El Salvador, INTECAP in Guatemala, SENATI in Peru).
- Specialization of training centres and programmes in view of certain sectors or chains of production enables greater response to their specific demands, facilitates the updating of training resources as well as the provision of technological services to enterprises, sectors and territories.
- In general, attention to demand under the productive chain approach has been increasingly accepted as a form of response. As an example, SENA in Colombia has organized networks of centres; one of which serves as lead and is an expert in cutting edge technology for the concerned sector; in addition it provides support to the other network centres with lesser comparative development in the same technological area. INSAFORP in El Salvador coordinates partnerships that focus on the production chain of plastic and explores other partnerships in new sectors; INTECAP in Guatemala has a training centre for meat technologies and is a leader in the use of IT for training, SENATI in Peru initiated training programmes in cross-cutting technology for environmental care, in Uruguay CETP/UTU caters for, inter alia, the dairy supply chain.

- There is a broad range of private training institutions; some are connected to education centres engaged in higher education such as INACAP and DuocUC in Chile; others are employer initiatives (Workers' Union of the Tourism, Hotel and Gastronomic of the Republic Argentina - UTHGRA, Human Resources Association of Argentina - ADRHA in Argentina, National Society of Agriculture SNA-Educa in Chile) or worker initiatives (Auto Workers' Union of Argentina - SMATA or the Construction Workers Union of the Republic of Argentina - UOCRA, in the Republic of Argentina).
- In Chile and Colombia, organizations that bring together private training providers and who represent homogeneous groups in the implementation of public employment and training policies (National Association for Vocational Training and Human Development - ASENOF in Colombia, Association of Technical Training Organizations - OTEC in Chile) have been established.

The management of vocational training viewed according to levels of implementation. A simplified view of the structure of vocational training reveals three major levels, one in which public VTIs usually have tripartite steering committees; a second sectoral level in which there are bodies that encourage dialogue and coordinate supply and demand, these will be analysed further on in another section, and a third operational level comprising training units and centres.

FIGURE 8:
Levels of management in VTIs in LAC



Source: ILO/Cinterfor



There are three major trends in the design and operation of training institutions:

- The institutions that cover all three levels are typically national public institutions such as INA in Costa Rica, SENA in Colombia, INADEH in Panama, INFOP in Honduras or INFOTEP in the Dominican Republic. Some of them in their statutes are conceived as “governing bodies of the training system”. In this group there are also institutions that are part of Sistema S from Brazil (SENAI, SENAR, SENAC, SENAT) which follow the established education and training public policy and provide training in their own centres.
- A group of institutions that only take part in the definition of policies, which are articulated at the sectoral level, but that carry out training actions through third party centres or institutions; such is the case of SENCE in Chile, INSAFORP in El Salvador, SETEC in Ecuador, SINAFOCAL in Paraguay, INEFOP in Uruguay. In some institutions training is provided by combining training activities carried out by their own centres and others by third party providers.
- The institutions that only carry out training and do so within the framework of the national policies formulated by the Ministry of Labour or by governing Institutions. These are, above all, the private VTIs of national scope or sectoral coverage.

It should be noted that the single service arrangement under which Training Institutions were organized and that prevailed until the 1970s, towards the mid-70s, led to the creation of an institutional model that only defines policies and does not carry out training directly, but outsources such service instead (the second group of the classification described above). This, for example, is the case of SENCE in Chile (1976), INSAFORP in El Salvador (1993), SETEC in Ecuador (2001-2011), SINAFOCAL in Paraguay (2001)⁷⁸ and INEFOP in Uruguay (2008). In fact, training institutions in these countries allocate funds for training among various training institutions through a bidding process. Training providers constitute a part of the market that is under-researched in the different countries; they have varying levels of quality and organizational design. The number of providers for SENCE in Chile exceeds 3,300, in El Salvador INSAFORP has 103, in Ecuador there are 1,132 and in Uruguay 174.

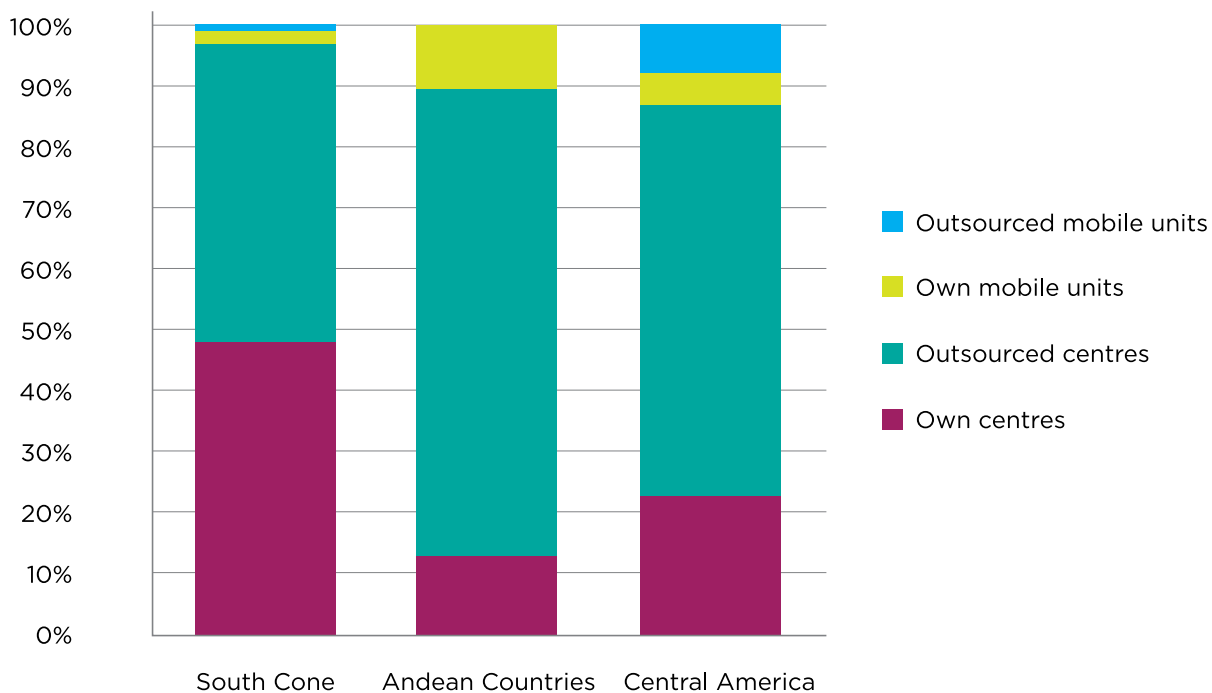
Currently, VTIs for the provision of their services use a variety of third-party training centres. Regardless of their institutional design of separation between management and implementation; the amount of training providers used by institutions in a complementary manner has multiplied. At present, national institutions, in different degrees, supplement training provided by their own centres with third-party training. Thus is the case of SENA in Colombia, who has reported having turned to 29 higher level education institutions (technical and technological) in order to expand its coverage, INFOTEP of the Dominican Republic reported having partnered up with 275 centres, and INADEH with 734.

In total, according to data collected by ILO/Cinterfor for 2015, about 10,925 vocational training centres and units were responsible for the provision of training in the region. Of these, 39% were their own centres, 55% were outsourced centres, 4% were own mobile units and 2% were outsourced units. In fact, training supported by collaborating centres or third-party training institutions, accounts for half of the provided capacity. The table below shows the proportions of outsourced training centres that render vocational training services with technical supervision and funding from national institutions.





FIGURE 9:
Own and outsourced training centres in LAC 2015



Source: ILO/Cinterfor Survey. 2016

In the 90s, various international organizations held a discussion on the model of national public institutions that in addition to defining vocational training public policies have their own centres; as opposed to an alternative model in which the public sector only defines the training policies whilst the implementation of training-based actions is allocated to private providers.

This debate is still ongoing, but it has been agreed that both models, the Institution that develops and implements the policies itself, through its own centres and the VTI that develops the policies and implements them through third-party centres, have their advantages and disadvantages. In strict terms, no model is better than the other per se. Cases such as Brazil in which the private sector is of high relevance and involvement and where SENAI graduates, for example, have a greater

labour market integration rate, reaching 75% (SENAI, 2015), match the results obtained by SENCE in Chile where for several year the way of improving the quality of the supply of a large and heterogeneous group of private providers has been under discussion⁷⁹.

The best option lies in the ability to offer a quality and relevant service irrespective of the model and is closely related to factors such as a demand-led approach and flexible decision-making for rapid adaptation to change.

The type of management together with the coverage and specialization bring about a series of strengths that can be used to maximize opportunities, counteract weaknesses and neutralize threats. The knowledge accumulated by ILO/Cinterfor makes it possible to present such an analysis in Figures 10 and 11.



FIGURE 10:
Strategic analysis of public training institutions

STRENGTHS

Funding.
Social dialogue.
Administrative autonomy.
Solid institutions.
In line with public policies .
Sustainability.
Knowledge developed.
Network of centres and resources.

OPPORTUNITIES

Skill gap.
Changing demands.
Productive transformation.
Recognized and valued VT.
Twenty-first century jobs.
New ICTs and VT.
Growth of demand.
Public-private partnerships.

WEAKNESSES

Trend towards stability.
Traditional training .
Public administration processes.
Renewal of human and physical resources.
Dependence on electoral cycles.

THREATS

New fiscal policies (payroll tax cut, substitute VT models).
Other competitors for funds.
New institutions.
New forms of training for work.

Source: ILO/Cinterfor

The existence of a public and institutionalized provision of vocational training has facilitated the mobilization of stable funds and the delivery of an enormous amount of knowledge, curricula, teacher training programmes, training centres and programmes, as well as a better response to the demands of the labour market. However, its flexibility and capacity for change to meet demands remains a challenge in many countries.

Regarding the participation of private providers in VT, its great advantage is its flexibility and response to demand; but this type of service provision entails the need to have coordination and quality assurance mechanisms in place.

In today's market there are options of high relevance and quality as well as others that offer training without coordination with demand and of low and uncertain quality. For example, in the case of Chile a report prepared in 2012 clearly showed these types of weaknesses⁸¹.

As for private training, the SWAT analysis is similar in some respects, for example, in its strengths, especially in relation to its capacity for change. The panorama of opportunities is also shared, but not the weaknesses and threats.



FIGURE 11:
Strategic analysis of Private Training Institutions

STRENGTHS

Greater response to specific demands.
Permeability to change and innovation.
Flexibility due to private management.
Low fixed costs for facilities and resources.

OPPORTUNITIES

Skill gap.
Changing demands.
Productive transformation.
Recognized and valued VT.
Twenty-first century jobs.
New ICTs and VT.
Growth of demand.
Public-private partnerships.

WEAKNESSES

Degree and extent of experience is often limited.
Requires to operate with own funding and gain market share.
Social dialogue is given low priority.
Heterogeneity in quality.
Low accumulation of knowledge.

THREATS

Funding is not always assured.
They must achieve a balance between quality and quantity to prevail.
A very tight regulation could limit its activity.

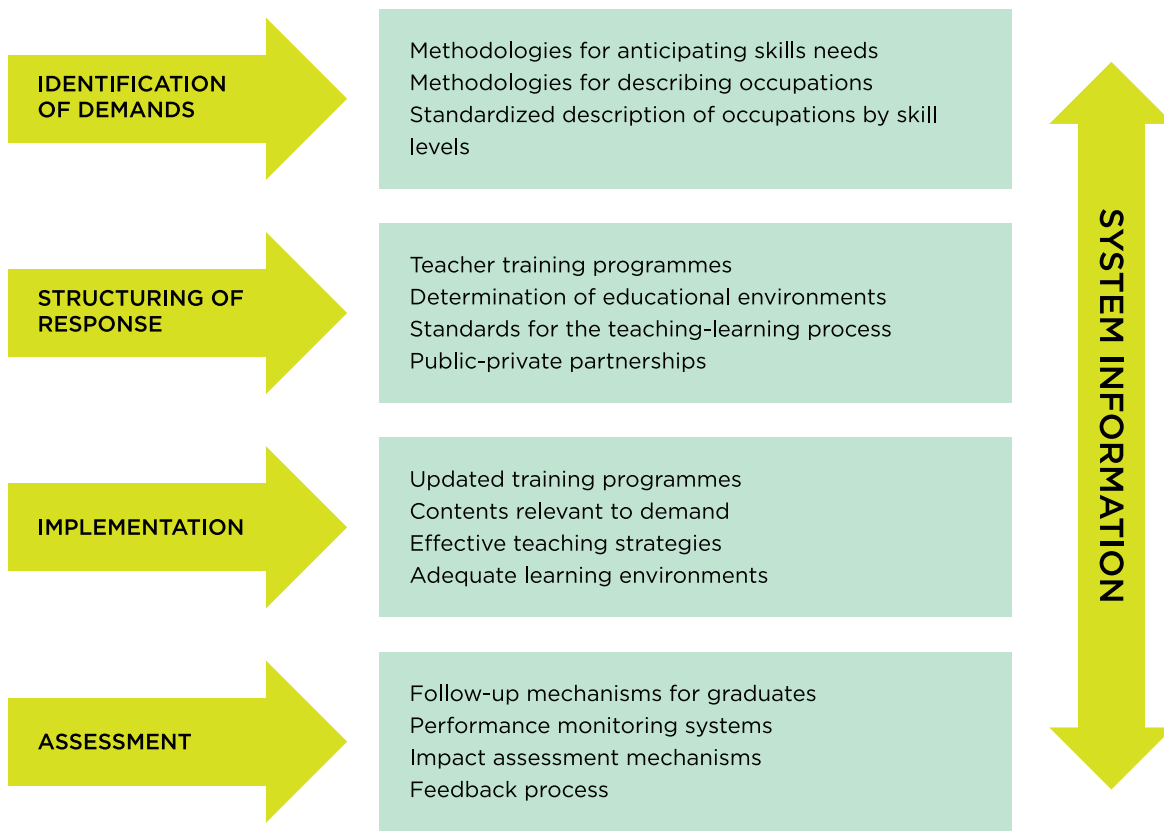
Source: ILO/Cinterfor

Institutional arrangements will continue to be mixed and varied, thus requiring work on quality assurance mechanisms. The greater variety of training options and the growing participation of private providers that already account for 55% of the Training Institutions are good news in terms of coverage, but to ensure the quality of training, control mechanisms need refining.

One way to visualize such mechanisms may be associating them with the stages of VT, namely identification of demands, structuring of response, implementation and assessment. The following figure outlines the main mechanisms.



FIGURE 12:
Mechanisms for assuring the quality of training



Source: ILO/Cinterfor

The increase in the participation of private training providers needs to be coordinated with productive development priorities and quality and relevance criteria. At a macro level these mechanisms encompass the definition and establishment of national qualifications frameworks that set content standards for the various levels in addition to an articulation of lifelong education regardless of how the skills have been acquired.

These frameworks must be supplemented with the definition of occupational standards by the national

qualifications authority in each country. As seen in section 2, this authority is often the national VTI or the Ministry of Labour. Standards and methodologies are widely used in training systems, for example in OECD countries.

A national authority on qualifications and skills must be recognized as such in the country and have the legal authority to establish quality mechanisms and enforce them.



3.2. Resources for skills development: between traditional and new

The emphasis placed on education in countries is reflected in the allocation of resources for its funding. It is the same for VT. In this section, resources for VT in the region are analysed by using the figures to hand. Although in the region there is no consolidated system of information in this regard, a first approximation has been made with figures provided by VTIs in an ILO/Cinterfor survey. In fact, this preliminary analysis can and should be complemented and further specified.

Information is available on three resources: Self-generated financing funds, available training units and centres and the number of teachers. The section introduces some studies and indicators in this regard.

What does VT financing consist of and how does it behave? A distinctive feature of public VTIs in LAC is that they have their own means of financing established by Law, such sources usually consist of a percentage laid down by reference to the total wages paid by private and in many cases by public enterprises. As can be seen in Table 14 this percentage varies from less than one percentage point to 2.0% of the monthly value of the payroll. This also implies that the financial burden of vocational training falls on formal business activities, since this financing method seeks to ensure levels of investment in training and development of human resources in proportion to

business activity. This financing system usually goes hand in hand with administrative autonomy and an own management structure.

The financing system of most public VTIs has been a means of ensuring a continuous flow of resources, which offers certain neutrality with regards to dependence on state budget. In addition, this type of financing follows economic fluctuations that affect the labour market, since the amounts contributed are determined by the level of the wages paid in the economy. The size of the informal sector and the new forms of atypical employment affect financing sourced from payroll contributions.

Hence, during the employment expansion process in the past decade, payroll-based income from VTIs also increased. The absence of historical data on funding levels does not allow for a further analysis, but income based on payroll contributions is expected to moderate during the current slowdown phase.

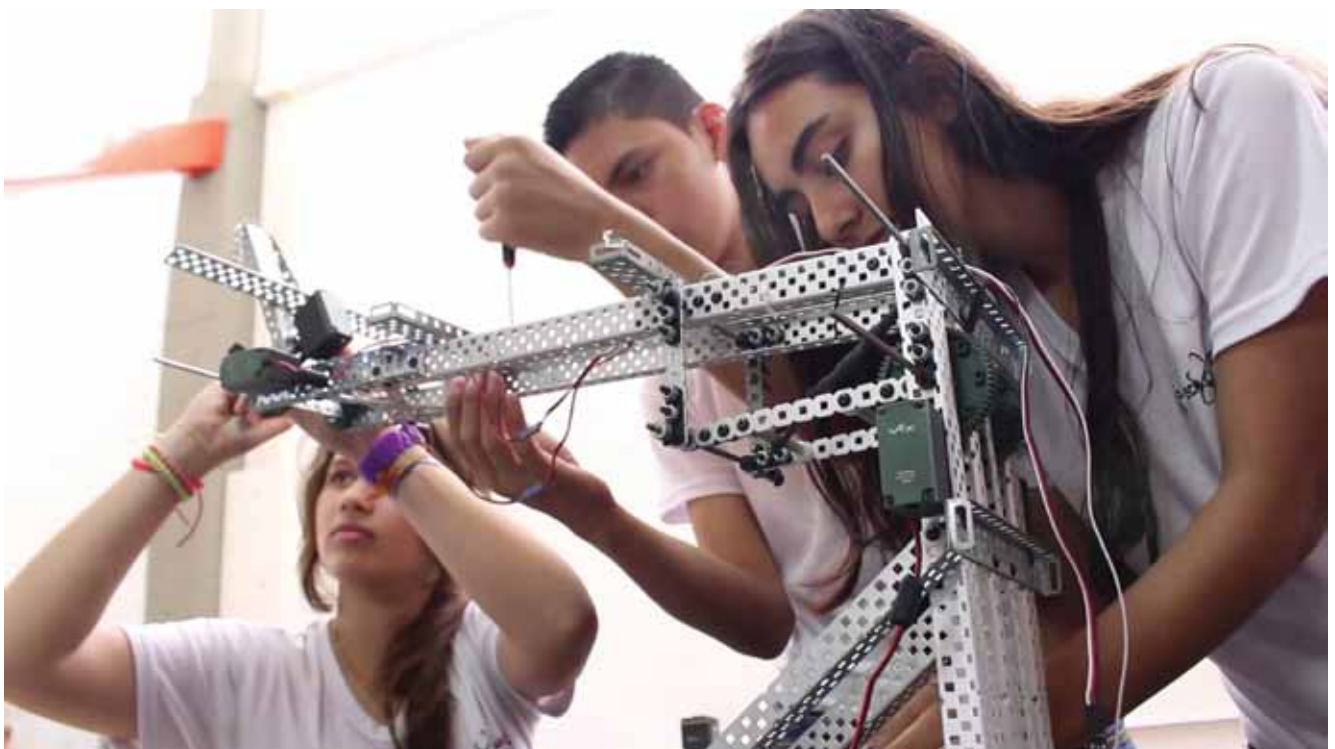




TABLE 14:
Financing sources of various VTIs in LAC

Country/VTI	VTI	Main source of financing
Argentina	INET	Amount not lower than 0.2% of current income projected in the consolidated annual budget for the National Public Sector.
Bolivia	INFOCAL	1% payroll tax. Voluntary payment by enterprises. Sale of services – Foundation's own revenue.
Brazil	SENAC	1% payroll tax levied on trading, services and tourism enterprises.
	SENAI	1% payroll tax levied on industry, transport, communications and fishing enterprises. 0.5% payroll tax levied on enterprises with more than 500 workers.
	SENAR	0.1% of commercial value of rural production. 2.5% payroll tax levied on enterprises engaged in the production of primary products of animal and plant origin.
	SENAT	1% mandatory payroll tax levied on land transport enterprises.
Chile	SENCE	State budget allocation.
Colombia	SENA	1.4 % of CREE Income Tax for Equity (8%) levied on enterprises. (established in 2013)
Costa Rica	INA	1.5% payroll tax levied on enterprises with 5 or more workers. 0.5% payroll tax levied on agricultural enterprises with 10 or more workers. 1.5% payroll tax levied on State agencies and enterprises.
Ecuador	SETEC	0.5% payroll tax levied on public and private enterprises. State budget allocation.
El Salvador	INSAFORP	1% payroll tax levied on enterprises with over 10 employees. Agricultural sector 0.25%.
Guatemala	INTECAP	1% payroll tax levied on public and private enterprises. State budget allocation.
Honduras	INFOP	1% payroll tax levied on enterprises with more than 5 workers. 0.5% payroll tax levied on all branches of government. 1% payroll tax levied on autonomous and semi-autonomous public agencies.
Mexico	CONALEP	National budget.
	DGCFT	National budget.
Nicaragua	INATEC	2% payroll tax levied on all employers in the country.
Panama	INADEH	14% of the Tax for Education made up of 1.5% payroll tax, paid by employers; 1.25% of the wages received by public and private employees; 2.75% of annual income of self-employed workers.
Paraguay	SINAFOCAL	1% payroll tax levied on private enterprises. State budget allocation. Includes SNPP financing.
Peru	SENATI	0.75% payroll tax for workers engaged in industrial manufacturing activities and installation, repair and maintenance duties; levied on private enterprises.
Dominican Rep.	INFOTEP	1% payroll tax levied on public and private enterprises. 0.5% of earnings and bonuses received by workers. State budget allocation.
Uruguay	INEFOP	0.125% payroll tax and 0.125% by enterprises. Supplemented by State budget allocation.
	CETP/UTU	State budget allocation.
Venezuela	INCES	2% payroll tax levied on enterprises with more than 5 workers. 0.5% of earnings paid to workers and employees annually. State budget, 20% of previous contributions.

Source: ILO/Cinterfor members.



What do the available figures tell us about investment in VT?

VT is an activity that requires high levels of investment. The equipping of workshops, provision of teaching materials

and educational technologies increases investment levels compared to classroom-based education. A summary of investment and resources in TVE and VT is presented in the following table:

TABLE 15:
Funding, means and results in some VTIs

Country/VTI	2015 Budget (USD)	Participants	Teachers or Training Instructors	Centres or operating units
Argentina - INET	170,620,830	327,843	71,185	3,152
Bolivia - INFOCAL	9,153,733	61,395	526	16
Brazil - SENAI	478,589,420	3,415,058	12,538	1,022
Brazil - SENAC	1,274,132,860	1,197,920	32,436	595
Brazil - SENAR	157,216,571	1,133,199	5,530	159
Chile - SENCE	378,567,859	880,315	ND	3,376
Costa Rica - INA	208,061,686	136,312	1,367	65
Colombia - SENA	980,984,195	4,069,644	25,073	227
El Salvador - INSAFORP	41,970,000	285,741	2,500	227
Guatemala - INTECAP	65,805,152	351,292	1,660	39
Honduras - INFOP	14,500,000	205,744	679	74
Mexico - CONALEP	77,044,717	305,246	ND	278
Mexico - DGCFT	149,360,673	453,102	3,808	251
Paraguay - SNPP	23,297,892	177,173	1,376	52
Peru - SENATI	103,000,000	510,852	3,723	140
Panama - INADEH	29,273,400	63,074	990	763
Dominican Rep. - INFOTEP	63,081,854	667,301	2,446	315
Uruguay - INEFOP	14,863,000	28,501	ND	174
Total	4,239,523,842	15,003,231	165,837	10,925

Source: 2016 ILO/Cinterfor Survey. It includes those institutions that reported on the 3 variables presented in the table. The virtual modalities were not included in the total of participants for SENA - Colombia.

This table is for illustration purposes. The different training methods and modalities, as well as the average duration of courses and the forms of teacher recruitment, greatly affect the homogeneity and comparability of data, in fact they do not enable strong comparisons. However, they can give an idea of the considerable magnitude of vocational training in the region.

There is high dispersion and heterogeneity in the figures, therefore, no indicators can be estimated or elaborated comparisons be drawn; this information needs to be complemented and systematized since it clearly has a significant impact on picture of education and skills development in the region.

For the 15 countries and institutions represented in Table 15, investment in Technical Education and Vocational Training Institutions reaches USD 4.2 billion, and covers more than 15 million participants with 165 thousand instructors or teachers (without SENAI data from Brazil, CONALEP of Mexico and INEFOP of Uruguay) and with 10,925 operating units (own centres, outsourced centres and mobile units).



Just as institutional models, financing sources are becoming more diversified. VTIs' responsiveness with a relatively fixed value based on payroll contributions is being varied by some countries in the region. Many institutions have sought new sources of funding either to increase their focus on new programmes and participants or to generate greater financial stability. This is an area in which a detailed study would allow us to analyse how new focuses grow from new financing frameworks.

However, a good sign of change in VTIs can be observed in the leveraging modalities used to optimize fund usage and creativity in the search for new sources of funding for their activities. The key point here is the degree to which they stop using their fixed budget as the main source of action and raise new funds, especially in the form of new partnerships.

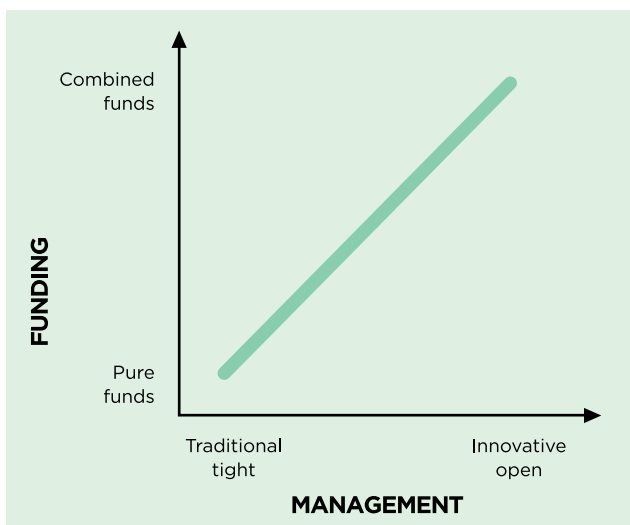
This idea is expressed in figure 13, a continuum in which 0 degree of leverage means spending all funds received without further or additional resource mobilization (pure funds). This 0 degree usually goes hand in hand with "traditional" and "tight" management, lacking partnerships and cooperation agreements.

BOX 16: Diversifying VT financing sources: Some examples:

- The SENAI Innovation Centres, besides being a new line of response for VT, manage a portfolio of projects of private companies in the order of USD 44 million.
- SENAC in Brazil provides consulting services in areas such as logistics, essential for trade competitiveness.
- The share of contributions in the overall budget of SENATI in Peru, is less than 25%; this VTI has expanded its portfolio of courses and has established new partnerships with the private sector.
- The SENA in Colombia used payments from fines imposed on enterprises that decided not to meet the apprentice quota in order to finance "Emprender" a seed capital fund.
- INTECAP in Guatemala has set the prices of some materials used in the gastronomic industry as a way not only of maintaining coverage but also of generating greater appreciation of VT from participants.

Source: ILO/Cinterfor

**FIGURE 13:
Management style vs. Funding sources**



Source: ILO/Cinterfor

There are several forms of supplementary funding which are increasingly being used in VTIs:

- Funds from development agencies (IDB, CAF, WB, EU) for programs targeting certain populations (youth, women, the unemployed, the rural economy).
- Cash funds from the national budget for the implementation of certain national priority programs. (The PRONATEC program in Brazil is a recent and emblematic example. So are the Youth programmes in Chile.)
- Contributions in cash or in kind negotiated nationally or with local stakeholders for the development of new programmes. This includes the granting of land by local governments for the construction of headquarters or the assignment of space for accommodating mobile units or funds for programmes of municipal interest.
- Partnerships with private providers of educational technology or instructional equipment, suppliers of machinery and commercial technology to become familiar with it in training facilities and centres or to provide areas for technology demonstrations to participants, workers and employers. In institutions such as SENA, "technology education sessions" are held.
- Charging participants for materials, uniforms or participation rights. This has been the subject of debate in several countries based on the idea that free training must be guaranteed by public funding.
- Other cost-sharing arrangements with companies or stakeholders interested in tailored responses. This is the case of science and technology agreements



in which SENA in Colombia contributes funds to develop high-specificity skills for a company or chain and that are not available in the local market.

- Funding also includes the perspective of investment of public funds, according to which, private and social positive returns should be obtained. In other words this refers to efficiency and effectiveness in the execution of funds. For companies that invest in training, a positive return should be an encouragement to stay actively involved both with regard to contributions paid to institutions and to learning mechanisms, for example.
- Public funds should admit of direction and adaptation, precisely to areas where bottlenecks and skills gaps are detected. However, tension can be noticed between the low degree of flexibility that budget forecasts prepared under rules of public finance tend to have and the high degree of change and new demands which are present in the labour market.

It is necessary to increase awareness of the efficiency of investments in VT.

The allocation of funds from a stable source such as payrolls is in line with the rate of employment in the economy. In times of declining employment the funds of public VTIs tend to suffer, and in times of growth as recently occurred, they follow the growth of the payroll. This requires sensible management in order to behave in a counter-cyclical manner, that means spending less when income is higher and in this way accumulate funds for when income is lower.

Nevertheless, VTI cash balances are often in the midst of budget cut or reallocation discussions, and legislative initiatives attempting to earmark such surpluses for other purposes abound. This tension leads to constant negotiation in a context in which training is relatively scarce and in high demand.

On the other hand, some new principles of public finance management insist on associating the allocation of funds to results, in order to generate incentives for permanent adaptation. Variable funds associated with commodities tend to be at the heart of the discussions about the financing of publicly funded training.

Since the 1980s and with greater emphasis since the early years of the 21st century, public finance management and accountability systems have promoted the implementation of results-based

management, as well as the principle of cash unity in national funds. Even though accountability systems have been improved in the region, it is still necessary to implement clear mechanisms for monitoring and analysing efficiency and impact of funds. To that end we can rely on the remarkable progress of computer systems in management and results. Many public VTIs regularly exercise accountability and publish their results annually; this should be a widespread and encouraged practice.

Impact assessments can complement information on the private and social return on public and private investment in work-based training, but it is not yet a systematic and widely disseminated practice ⁸².

In a number of countries, debates are held with regard to the continuity of publicly funds to support VTIs. In some cases, it is argued that the increase in costs for enterprises who have to add the percentage of VT contributions to other social security contributions act as a disincentive to the generation of formal employment.

With the exception of some country-specific surveys, data on the size of private investment in VT is not known. The availability of certain funds is an advantage when successful outcomes and positive returns are achieved, but a huge disadvantage in discussions about the scarcity of resources experienced by many countries in the region, especially in times of crisis.

The implementation of the budget with strict transparency regulations requires lengthy procurement processes that ultimately end in budgetary implementation which is lower than the intended target. When the accumulation of funds in the banks becomes publicly visible, it has happened that the Ministry of Public Finance notices those funds and takes hold of them to solve other problems in the national budget.

The different funding models that exist in the region show a growing number of VTIs which have introduced mechanisms for partnerships and greater third-party participation in the funding of new programmes, however, this is a modality that can and should be further developed. It would be necessary to instil into the region a new way of understanding and analysing investments in VT (and of course education) in light of the clear existence of talent gaps and the pressure of change mentioned above.



BOX 17: The principles of financing VT, a good reference by the OECD

1. **Systems to finance skills formation should be efficient**, providing the necessary resources to respond to the demand by individuals and employers.
2. **Skills development should be financed by a mix of sources**, reflecting the benefits to individuals, employers and society as a whole.
3. **Public spending should be allocated in ways that encourage the responsiveness** of educational providers to the preferences of learners and the needs of the economy.
4. **Financing incentives, including through taxes**, should underpin private investment in education and training, both from individual households and from employers.
5. **Financial instruments, such as loans, should be available** to ensure that up-front costs are not a barrier to accessing VT for disadvantaged students.
6. **Financing mechanisms should be designed with the whole system in mind**, so as to avoid distorting student choice, such as that between vocationally-oriented and general education at the post-secondary level.
7. **Financing systems should be simple and transparent.**

Source: OECD

Clearly, the choice of the best financing mechanism is the prerogative of each country, but efficiency and return on investment considerations need to be balanced with equity and access priorities.

The extent to which participants, employers, workers or other stakeholders contribute to investments in vocational training, compared to the traditional formula of public funding, is a topic of debate that needs to be underpinned by further research and analysis.

Partnerships with public and private institutions are not only a source of funding, but also of mutual learning, which is very useful for the development of joint implementation policies. Such partnerships present an opportunity to develop new ways of specific, innovative and sustainable response, including those directly involved in the demand for skills.

Finally, it is necessary to place the topic of investment in VT on the agenda of public authorities other than the Ministries of Labour and Education. Many Ministries of Finance, Industry, Tourism, Science and Technology, ICT, etc. require programmes to upgrade and develop skills and often these funds are not effectively articulated within the scope of possibilities for their implementation in existing VT systems and institutions.





3.3. Social dialogue in training: a space to strengthen and expand

Changes in the workplace together with technological innovation as well as the trend to require a higher level of training have created a demand for more specialized qualifications and techniques. Such changes have significant consequences for human resources management. Social dialogue facilitates anticipating and solving problems arising from changes in the organization, working conditions and job models.

Experiences in OECD countries show the importance of involving employers and trade unions in the development of vocational training policies and measures. This includes the institutional and political context and implies commitment to the training system⁸³.

As a consequence of democratization and the development of the civil society and several institutions, social dialogue is very much present in the region among employers, workers and a wide range of social partners related to vocational training. Furthermore, the allocation of responsibilities has been decentralized by transferring them to sectoral bipartite committees, local governments and civil society organizations, among others. Experience shows that social dialogue has largely contributed to the reduction of conflicts related to training and the better focusing of training programmes, in general, and for the most disadvantaged population groups.

Social dialogue together with the active participation of social actors have been crucial in the management of public VTIs, as well as in generating mechanisms to anticipate demands and to connect training centres with sectors and companies. Employers', workers' and governments' representatives are not only involved in the leadership of national Training Institutions; they also participate in the areas of design, management and monitoring of active labour market policies implemented by the Ministries of Labour, at the national, sub-national and sectoral levels; interesting experiences of bipartite management between workers and employers have been recorded; and dialogue mechanisms have been created for the identification and anticipation of demands.

Social dialogue processes at different levels of Vocational Training Systems in Latin America present several features:

- The presence of bipartite and tripartite dialogue mechanisms at strategic levels such as the management of vocational training institutions and the implementation of training. This is the case of the National Directing Councils who lead national institutions. This corresponds to the management level analysed in section 3.1.
- Social dialogue takes place in the certification of competencies within National Certification Systems such as CONOCER in Mexico and ChileValora. These social dialogue bodies for the certification of competencies have played an active role in the definition of concerted occupational standards and in their recognition processes.
- Organization of dialogue mechanisms at sector level, directly committed to the definition of training actions and their follow-up. This is demonstrated by the SENA sectoral working groups in Colombia, the SENAI sectoral technical committees in Brazil or the sectoral councils in Argentina which are described below in more detail.
- At the operational-level of training there are some examples of social dialogue experiences for the support, guidance and management of training centres. For example, the operation of the SENA advisory committees of centres which featured tripartite participation as well as the participation of actors related to the productive work of the Centre.

Social dialogue plays a very active role in OECD countries with higher levels of youth participation in VT. In Switzerland, by law, the cantons and the Confederation are assigned different tasks, and as a result so are social actors. The confederation is responsible for strategic planning and development, the cantons are in charge of implementation and supervision. The social actors define the provision of training in enterprises and the content of the courses. All actors are represented at a federal and cantonal level.



In Australia, Belgium (Flanders) and the United Kingdom, there are sectoral agencies for vocational training. There are 25 Sector Skills Councils (SSC) in the United Kingdom, which determine the skills and qualifications for their respective sector and this is the only way to be granted public funding. In Belgium (Flanders), the Government and sectors discuss issues such as collaboration between schools and businesses, and workplace training for apprentices, job seekers and workers. The sectors manage funds with contributions from employers and workers for the training of future workers and school-enterprise collaboration, among other purposes.

In general, the literature review of OECD countries shows that it is important to involve employers and trade unions in the development of policies and measures on VT, since it leads to a greater commitment to the system. Employers need to be represented in a way that reflects the different views and the participation of enterprises for the generation of general transferable skills, not only specific skills, needs to be balanced. With regard to trade unions, they often pursue good quality training with transferable skills, but they also want to protect wages against the downward pressure that could result from increased supply in specific trades (OECD, 2010). The Government's role focuses on balancing the interests of employers and unions⁸⁴.

An innovative social dialogue experience in Uruguay, concerns the management of human talent in sectors such as construction and pulp and paper. In this case the social actors' initiative proposed a method to jointly study the contents of occupational profiles in order to bring them up-to-date and provide mechanisms to review them on a regular basis and ensure that they contain the most recent information. This analysis is an input for the collective bargaining of wages and working conditions, but also for identifying the training needs of workers. Potential fields of application of these exercises also cover the identification of new demands in VT, the suitability of the training offered and the certification of skills; in short, the management of human talent and the provision of the necessary skills to anticipate changes.

Interaction between employers and workers has proved to be a good form of dialogue to define better responses with regard to human resource training, as well as to strengthen the respective organizations to participate and act more effectively in the development of human resources.

BOX 18:

Social dialogue to update VT demands

In Uruguay, employers and workers joined efforts with ILO/Cinterfor to update occupational profiles in the construction (2014) and paper and pulp (2015) industry. Bipartite committees have developed a joint consultation mechanism and have agreed on a methodology that allows the description, update of positions and their evaluation in the framework of an updated occupational structure. This intensive dialogue and consultation work has profound implications for the processes of training and development, skills certification and the negotiation of wages.

Source: ILO/Cinterfor

On the other hand, the need for mechanisms to assess demand has always been one of the challenges in ensuring relevance of work-based training; many training programmes have found in the exhaustion of demand signals, the main problems to endure and be effective.

When it is not based on the definition of the actors themselves, the identification of training needs tends to be oriented by outdated approaches to demand. Hence, the emphasis placed on the participation of employers and workers and the strengthening of both to actively participate in defining needs, monitoring, management and evaluation of training.



Social dialogue and the participation of employers and workers in learning systems. Employers' associations and trade unions play a key role in promoting learning systems in the enterprise. Dialogue mechanisms strengthen the role of enterprises to facilitate learning. Sound dialogue mechanisms are required to define the occupational content of learning and the rules to contribute to both the training and the purposes of the enterprise.

The exchange between employers 'and workers' representatives has facilitated the development of new partnerships for enterprise-based learning in the region. These include, for example, contents that are relevant to both the company and the apprentice, the type and scope of the certification and its recognition in the market. Obtaining information on the monitoring and evaluation of this modality can support unions in doing a better job in reaching a balance between the benefits and the costs of learning, as well as the verification of its quality.

The extra-regional comparison with countries such as Germany, Austria and Switzerland shows that the private sector is involved in the development of the learning system, the design of the legal framework, the curricula and evaluation; in the implementation itself, it provides the trainee post and pays related expenses. Although its participation is on a voluntary basis, they must be accredited to be eligible as a learning place⁸⁵.

Examples of enterprise-union participation experiences (bipartite) in the development of programmes, definition of policies, implementation of VT and certification are:

• Technical groups for anticipating training demands

The application of the methods for anticipating VT demands or "Foresight" that have been implemented in the last 4 years in the region has facilitated in the 22 sectors analysed the formation of technical teams consisting of employers, workers and other informants (universities, technology providers).

Although the representation in these groups is primarily technical, they have been organized as forums for dialogue on emerging technologies and their impacts on the contents of occupations and decisions on VT programs. For example, in Colombia, in a foresight exercise for the transport sector (2016), there were representatives of the government (Ministries of Transport, Mines and Energy, National Institute for Roads and Communications), employers (Colombian road transporters association) and the Single Confederation of Workers of Colombia (CUT), among others.

• Sectoral technical committees (CTS, in Spanish) in SENAI Brazil

SENAI is managed by Brazilian industrialists; the National Confederation of Industry is closely linked with this industry training service that began 71 years ago and is the largest training institution in the region and perhaps the world.

BOX 19: The Sectoral Technical Committee for Biofuels

As a result of the technological foresight study conducted by SENAI of the Biofuel production chain, it was established that a technical professional profile was required in that area in order to work on the development of new fuels based on ethanol, biodiesel and biogas. Driven by this demand, a Sectoral Technical Committee was created in the State of Mato Grosso since it is one of the largest producers of biofuels in Brazil and had a shortage of specialized labour to contribute to the sustainability and competitiveness of this industry. The Sectoral Technical Committee with the support of SENAI technicians and industry specialists and engineers validated and approved the professional profile for the training of the Biofuel Technician.

Source: SENAI Magazine. 2015

SENAI has a tripartite steering committee and has recently had to undergo changes to withstand the formidable pressure of a sector that demands human resources to sustain the growth of the economy under global competitive conditions.

For the past 12 years SENAI has deployed the Sectoral Technical Committees to facilitate the identification of training needs and develop the profiles for training in accordance with the demands.



These committees began in the state of Rio and the results encouraged their expansion throughout the country. They are conceived as technical consultative forums that facilitate the coordination of work and education. Composed of business specialists, representatives of employers' associations and trade unions, academia and public institutions in the area of education and work. They exchange information and knowledge that help draft skills profiles that provide input for the design of the training programs. In this way training is structured according to market trends and driven by demand.

- **SENA Sectoral Working Groups in Colombia**

Directed by a National Council in which, in addition to the Government, comprises business chambers and unions. SENA has been providing training since 1957 and runs an annual budget of more than USD 1.4 billion. Albeit a Tripartite Board of Directors sets a path in terms of policies, plans and programs; SENA has for over 15 years been running the "sectoral working groups".

SENA defines them as national forums for sectoral or cross-sectoral coordination, which contribute to the improvement of the qualification of human talent and the relevance of work-based training and competitiveness of the productive sectors.

They support the processes of standardization and certification of competencies, skill-based human talent development and skill-based management. There are 85 Sectoral Working Groups throughout the country each covering a different sector or occupational area⁸⁶.

The linking of these sectors to the definition of training actions and skills standards reflects their interest in enhancing relevance and has led, throughout these years, to increased awareness in the productive sectors with regard to the importance of training for national productivity and competitiveness.

- **Sectoral Councils promoted by the Ministry of Labour, Employment and Social Security (MTEySS), Argentina**

For more than three decades, MTEySS has been pursuing actions in the area of training and certification of skills for workers. Through its Employment and Training Secretary, various activities are carried out encompassing standardization, training, quality and certification. At present it has formed a network of lifelong learning institutions that acts with unified quality criteria, as well as with standardized skills profiles.

One of the tools used to promote relevance are the Sectoral Councils of Skills Certification and Vocational Training defined as an institutional forum through which the actors representing a sector of activity formulate and implement short and medium term strategies, with the assistance of the MTEySS. A consensus is sought among the different stakeholders to implement actions related to:

- The identification and selection of the institutions of lifelong learning of the sector, in order to strengthen them.
- Notifying workers on all matters related to certification and lifelong learning.
- The definition of the human resource development strategy of the sector for localizing actions.
- The linking of trained workers with enterprises in the sector.

- **ChileValora (www.chilevalora.cl)**

The National System for the Certification of Labour Competencies, ChileValora, is a clear example of participation and dialogue among social actors.

For the last five years, ChileValora has been working to increase the labour competencies of the people. For this purpose, it promotes the identification of profiles relevant to the demands of the labour market and the development of evaluation and certification processes articulated with the provision of work-based training.

There are already more than 56,000 workers who have participated and certified labour skills in the sectors of: Agriculture; Tourism; Logistics; Commerce; Building; Livestock; Viticulture; Bakery; Aquaculture; Gas and Electricity and Metal-mechanic.

But this is precisely a case in which the need for an agile and constructive dialogue makes it clear that the preparation of social actors for such dialogue is not a minor issue. Therefore, the idea of having mechanisms in place to promote, strengthen and standardize the skills of the actors, including workers, in order to understand and act in a framework that aims to develop skills is very welcome.



- **Council for Standardization and Certification of Labour Competences CONOCER (www.conocer.mx)**

In Mexico, CONOCER, is an organization run by a tripartite board of directors, whose objective is to plan, implement, promote and update the Standardized System of Labour Competency and Certification System for Labour Competency. The system articulated by CONOCER covers the phases of identification of competencies, standardization, training and certification. Currently CONOCER promotes a national system of competencies for people that contributes to economic competitiveness and educational development. The Council is made up of the Ministries of Public Education, Labour, Economy, Livestock, Tourism, Energy and Finance. In the employer sector, the Entrepreneurial Coordinating Council, Mexican Employers' Confederation, the Confederation of Industrial Chambers and the Confederation of National Chambers of Commerce, Services and Tourism are involved. On behalf of workers the Labour Congress, the Revolutionary Confederation of Workers and Peasants, the Mexican Worker's Confederation and the Confederation of Independent Trade Unions take part.

By 2016 there were 218 Sectoral Committees for Competency-based Management, which are key components of the system, composed of workers and employers, generally representing a branch of economic activity or occupational area, which with the technical support of CONOCER, perform the task of identifying the competencies and translating them into standards for their recognition in the system managed by CONOCER. In that very same year, there were 606 competency standards and 256 evaluation and/or certification institutions registered and accredited in the Council. Between 2015 and 2016, about 179 thousand people were certified.

- **Bipartite Training Committees (CBC, in Spanish) Chile**

They were created by law in 1997 as spaces for dialogue between enterprises; this law also established a National Council and Regional Councils. Bipartite Committees are mandatory for enterprises with over 15 workers and undertake the task of agreeing on and evaluating training programs for workers and providing advice to enterprises with regard to training. Its operation is linked to the tax exemption level to which the enterprise is entitled, according to the training regime in Chile, and which enables it to deduct up to an additional 20% of the amount originally chargeable to training. When submitting to SENCE the training program approved by the Bipartite Training Committee, the courses will have an

additional 20% coverage over the established hourly rate per participant.

A matter which has sparked debate in the trade union movement with regard to this law is that the participation of workers, both union members and non-union members, is established in accordance with a table by size and representativeness of the union⁸⁷.

By 2005, 52% of enterprises that used the tax exemption system for training had formed Bipartite Training Committees. An evaluation of the use of the Committees showed that 6% of workers who were trained in enterprises with established Committees did so through a plan agreed upon in said committee, this was linked to the little stimulus of the additional tax incentive of 20% for the creation of Concerted Training Plans. This trend was found again in a study conducted by SENCE in 2009.

Although social dialogue experiences on training are varied and follow different methods, the challenges to innovation in TVE and VET call for a strengthening of the actors so that they can support a more effective participation that is able to keep up with these trends and challenges.



4. Ten guidelines for promoting and strengthening vocational training systems for work and for life in Latin America and the Caribbean



Developing skills for work is an essential factor to achieve the goal of decent work, to increase productivity and sustainability of enterprises, and to improve working conditions and employability of workers. Particularly, at a time of great transformations in the world of work, production and knowledge.

Based on the ILO Regional Office and ILO/Cinterfor overview of vocational training strengths and weaknesses in the countries of the region and the good practices in and out of the region, as well as basic tripartite documents such as “Conclusions on skills for improved productivity, employment growth and development” (ILC, 2008), the ILO Regional Office and ILO/Cinterfor have developed a set of 10 fundamental guidelines, a decalogue, to promote training for work and for life.

To build up sound training for work and for life systems, vocational training policies must:

1. Promote the alignment of productive development policies with technological change.
2. Build upon social dialogue.
3. Ensure a regulatory framework that covers the core aspects of an integrated vocational training system.
4. Make sure sufficient, sustained and guaranteed-by-law funding is provided.
5. Promote lifelong learning and coordination between formal education and vocational training.
6. Foster quality apprenticeship.
7. Increase the quality and relevance of training by constantly improving institutions, developing knowledge and creating relevant information.
8. Use more effective teaching methodologies and approaches, based on evidence, and constantly improve them, considering experience and assessment.
9. Promote equal opportunities and social inclusion.
10. Coordinate with employment and vocational guidance services and with active labour market policies.

GUIDELINE 1.

PROMOTING THE ALIGNMENT OF PRODUCTIVE DEVELOPMENT POLICIES WITH TECHNOLOGICAL CHANGE

Training for work and for life must be adapted in real time to technological change and the ever-changing requirements of the productive sector. It must anticipate the demand of new skills resulting from technological change and productive diversification.

The 2030 Agenda for Sustainable Development Goal 8 is to “Promote inclusive and sustainable economic growth, employment and decent work for all”. Besides, Goal 9 is to “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. The patterns of growth, productive development and employment are closely related and also highly influenced by technological advance and its impact. Most of the toolkits that may exert an influence on the pattern of growth and create more and better jobs are in the field of Productive Development Policies (PDPs). A brighter future for work could not be built up without a better future for production.

Training for work and for life is at the intersection of employment and productive development policies: if workers have no relevant skills for the labour market, they will not access quality jobs; if workers are not skilled or able to constantly acquire new skills and throughout their lives, productive transformation, the incorporation of technologies, innovation and the increase of productivity will not be as fast and as successful as necessary.

In the countries with the best economic performance in productivity and employment, the efforts and the mechanisms to align their vocational education and training systems with their PDPs have been a fundamental aspect. The limited use of PDPs in Latin America and the Caribbean including sectoral, cluster and innovation policies to foster new growth drivers compared to the wide use of this kind of policies in the high-performing countries, is one of the factors that explains the poor performance of the region as regards productive diversification and productivity as well as employment.



Well-defined PDPs enable a consistent guidance framework not only for training systems and institutions but also for the youth and their families, in order to make well-informed decisions regarding studies, careers and specializations.

Key elements:

- 1) There are institutional public-private coordination mechanisms to determine and set up productive development, productivity and innovation policies.
- 2) These identify sectoral priorities to adjust the skills mismatch reflected in the organization of the vocational training system.
- 3) Vocational training receives funds from productivity or competitiveness budgets.
- 4) The operational centres or units of the vocational training system carry out activities to promote productive development (applied research, prototype upgrading, enterprise problem-solving, etc.)

GUIDELINE 2.

BUILDING UPON SOCIAL DIALOGUE

Social dialogue comprises all the information exchange, consultation, participation and bargaining processes among representatives from governments, employers and workers on issues that are of common interest. In terms of vocational training, social dialogue is fundamental for the attainment of several objectives. Firstly, matching the training offer with the needs of the productive sector; secondly, social partners' involvement, commitment and ownership of policies designed and executed with their participation; thirdly, guaranteeing the actual exercise of the right to training by all social groups; fourthly, complying with regulations related to labour contracts with training purposes; and finally, controlling the use of public resources allocated to human resources development.

Key elements:

- 1) The formulation, application and revision of vocational training policies, plans, programmes and initiatives is done based on social dialogue and the participation of employers' and workers' organizations.
- 2) Social partners take part in the management and decision-making bodies of national vocational training institutions and/or the national entities in charge of promoting lifelong learning and skills certification, as well as national, sub-national and sectoral institutions or committees.

- 3) Social partners are part of technical Committees or Commissions in charge of defining occupational profiles in VTIs.
- 4) They also take part in the formulation, application and revision of vocational training and labour market policies oriented to disadvantaged groups.
- 5) Vocational training and human resources development are collective bargaining objects at sectoral and entrepreneurial level.

GUIDELINE 3.

ENSURING A REGULATORY FRAMEWORK THAT COVERS THE CORE ASPECTS OF AN INTEGRATED VOCATIONAL TRAINING SYSTEM

The structure and operation of a national technical and vocational education and training system must have a regulatory framework that covers core aspects such as: distributing roles and skills among different government agencies of the system, defining incentives consistent with goals, defining the system's governance and decision-making mechanisms, determining the participation of social partners, setting up legal and regulatory frameworks to assess private training providers and enabling, through cooperation, dialogue, assessment and testing, the identification of problems and design of solutions.

Key elements:

- 1) There is a regulatory framework that clearly and systematically defines the roles and duties of the different government agencies involved in vocational training and human resources development.
- 2) It clearly defines the roles and duties of social partners in the formulation, application, revision and assessment of national vocational training and human resources development policies.
- 3) It is flexible enough to define incentives consistent with goals, and enable, through cooperation, dialogue, assessment and testing, the identification of problems and design of solutions.
- 4) The standards that regulate terms and conditions of apprenticeship contracts, and other training-oriented employment contracts which establish special regimes for certain categories of workers, can be easily accessed and understood by employers and workers.
- 5) There are accessible official channels to inform and advise any interested people regarding the terms and conditions of apprenticeship contracts and other training-oriented employment contracts.



GUIDELINE 4.

MAKING SURE SUFFICIENT, SUSTAINED AND GUARANTEED-BY-LAW FUNDING IS PROVIDED

Investing in education and training provides measurable returns in the improvement of employment and income and, therefore, in the well-being and quality of life of persons. At the same time, continuously improving technical and vocational education and training systems require sufficient, permanent, steady and sustainable funding sources to ensure the quality and accessibility of related policies and services

Key elements:

- 1) There are law-enacted, steady and sustainable financial sources.
- 2) Social partners are involved in funding through management bodies which make decisions and/or through their contribution to supply-based funding systems.
- 3) There are measures to bolster the growth of investments in vocational training.
- 4) Funding sources are varied, they are not only coming from the national budget, and they come both from the private and the public sector.
- 5) Strategic alliances are made with cooperation agencies that provide funds for new vocational training programmes.
- 6) The variation of funding over time goes hand in hand with the growth in the demand and needs to facilitate access, quality and relevance of training.

GUIDELINE 5.

PROMOTING LIFELONG LEARNING AND THE ARTICULATION BETWEEN FORMAL EDUCATION AND VOCATIONAL TRAINING

The ability of countries to attain the goal of lifelong learning requires mechanisms that enable continuously developing new skills as well as mechanisms to recognize skills and qualifications of people regardless of the place or way in which they were acquired. It also requires promoting and facilitating the transition between different vocational training and educational systems and mechanisms. This is fundamental to increase the options for the youth and ensure flexibility. Skills recognition, incentives to the progress of vocational training and education, as well as a smooth flow to the labour market are crucial to favour employability and try to reduce skills mismatch.

Key elements:

- 1) Human resources development and lifelong learning policies have been defined.
- 2) These policies are oriented to continuous improvement in terms of coverage and quality at all levels.
- 3) Improving the quality and coverage of basic and secondary education is part of the educational priorities.
- 4) There is a legal framework that facilitates the transition between the different levels of formal education and the recognition of skills acquired outside the educational context.
- 5) Vocational training is aimed at developing skills and specific results and not based on contents or subjects.
- 6) There are National Qualifications Frameworks (NQFs)
- 7) There are skills recognition and certification mechanisms that are coordinated with the NQFs.
- 8) Skills validation mechanisms based on educational results are available, for example: credit-based validation.
- 9) Validation processes of migrant workers' skills are applied.

GUIDELINE 6.

FOSTERING QUALITY APPRENTICESHIP

Quality apprenticeship can be defined as a unique form of vocational training which combines on-the-job-training and school-based learning, for the development of specifically-defined skills and work processes.

It is regulated by law and based on an oral or written employment contract, for a clearly defined duration, with a compensatory payment, and standard social protection coverage. There is formal assessment and a final certification of acquired skills and competencies.

This type of apprenticeship combines gaining professional experiences that are directly applicable at workplaces; and learning applied knowledge and skills that enable apprentices to understand the logic behind the job he is tasked with, cope with unpredictable situations, and acquire higher level and transferable skills. ILO's "quality apprenticeship" approach is based on four building blocks: social dialogue, clear definition of roles and responsibilities, legal framework and shared financing arrangement. A quality apprenticeship is a sophisticated learning mechanism based on mutual trust and collaboration among the stakeholders: apprentices, employers, workers, government agencies and TVET institutions.



Key elements:

- 1) There is a regulatory framework that promotes quality apprenticeship.
- 2) Partnerships and alliances among education, training and enterprises are entered into so that training systems can make use of the existing resources and technical knowledge from the industry.
- 3) Quality apprenticeship is related to the sectors that are a priority among the productive development policies.
- 4) Vocational training includes the apprenticeship modality as a significant offer, thus raising the enrolment of apprentices and their entry into working life.
- 5) There are shared financing modalities that support quality apprenticeship.
- 6) Enterprises, and particularly SMEs, offer apprenticeship opportunities in coordination with vocational training.
- 7) There are teacher training mechanisms to support apprenticeship both at vocational training institutions and at enterprises.

GUIDELINE 7.

INCREASING THE QUALITY AND RELEVANCE OF TRAINING BY CONSTANTLY IMPROVING INSTITUTIONS, DEVELOPING KNOWLEDGE AND CREATING RELEVANT INFORMATION

The task of public and private institutions that are involved in training for work and for life does not only imply implementing training actions but it also includes an ongoing creation and accumulation of knowledge and institutional skills.

Research and development of information systems are key for innovation, design, planning, implementing and assessing vocational training and human resources development policies. The capacity of government, training institutions and social partners to obtain and/or generate and analyse information enable informed decision-making to continuously improve institution management and training programmes. It is also fundamental to align the training offer with productive and inclusive development priorities in order to reduce skills gaps in the labour market, improve productivity of enterprises and broaden the opportunities of people to access productive and decent jobs.

Key elements:

- 1) There are mechanisms and institutions that encourage cooperation and networking among training institutions, research institutions and enterprises, thus

promoting a better use of capacity building for the expansion and diversification of training activities; the satisfaction of needs of individuals and companies; their adaptation to priorities within productive and socially inclusive development; and the reduction of skills mismatch.

- 2) Training policies and institutions set their objectives based on verification mechanisms based on quality information and in consultation with social partners.
- 3) There are quality standards available to suit public and private training providers as well as trainers. Opportunities and support are provided to reach them.
- 4) Quality management is covered by the public training system and its development is promoted in the private training market.
- 5) Training institutions define their mission according to the particular economic and social features of the communities and territories where they are located and increase the relevance of their training offer by combining it with other services offered by themselves or holding alliances with other institutions and the private sector, such as technological transfer, technical assistance or applied research.
- 6) There are suitable information systems to know about efficient operations, results, effects and impacts of training policies, institutions and programmes. The available information enables to build up efficiency and effectiveness indicators, to know the scale and diversity of offer of courses, coverage, investment, results and impacts.
- 7) There are mechanisms to assess the demand of skills from enterprises, the perception regarding the scale and quality of the existing training offer, the availability to take part in training arrangements and identify factors that may inhibit or hinder such participation.
- 8) There are mechanisms to determine the composition, features and dynamics of labour markets, particularly related to the offer and supply of skills and the potential skills mismatches and gaps to be addressed, both in terms of quality and quantity.
- 9) It is possible to anticipate the demand of skills by creating, adapting and developing methodologies of analysis of trends of change in the labour market, the economic sectors and occupational areas that are expanding or contracting, the skills demanded in emerging occupations, and the impact of technological change on the skills required by diverse occupational areas.



GUIDELINE 8.

USING MORE EFFECTIVE TEACHING METHODOLOGIES AND APPROACHES, BASED ON EVIDENCE, AND CONSTANTLY IMPROVING THEM, CONSIDERING EXPERIENCE AND ASSESSMENT

Abundant research on education and teaching design which is available internationally is not being applied to vocational training in the region. New constructive-based approaches which sustain such innovation trends place an emphasis on active and critical training processes where participants - learning subjects - build up their own knowledge and skills structure. Such development is understood simultaneously as individual and collective (dialogic), where collaboration and team work are both an educational tool and a skill to be developed. Education experts agree that applying these innovations generate deeper and more long-lasting learning.

Furthermore, the future scenario of work requires developing the so-called 21st Century Skills that include basic skills (science, maths, reading); critical thinking skills, creativity, communication skills, capacity to collaborate and work in teams; as well as socioemotional skills such as persistence, adaptability, curiosity, initiative and leadership.

The 21st Century Skills are key for the new realities of employability for lifelong learning and adaptation to the accelerated change observed in the organization of work.

The approaches mentioned are a suitable tool to develop these skills. This is valid particularly to train vulnerable populations because methods are student-oriented and focused on their context and prior knowledge, both formal and informal.

Key elements:

- 1) Learning environments (classrooms, labs, online platforms) are designed to work in groups, with tools at disposal to conduct research, build prototypes and develop products.
- 2) Teaching performance assessment praises the application of new training methods and technologies.
- 3) Skills profiles and training plans include the 21st Century Skills among their learning objectives.
- 4) The description of a target group for a plan or course includes qualitative information about socioeconomic environments and cognitive development.
- 5) The persons in charge of curricular design have specific skills related to the application of constructivist/

cognitive pedagogies. Curricular designs include contents and training methods which aim at developing significant knowledge. They cater for the integration of disciplines and training areas and take into account the particular features of the productive sector and the local environment to provide context.

- 6) They integrate the application of ICTs with contents related to the sector and the training area, and methodologies to manage and analyse processes, and to access through mobile devices and applications.
- 7) Teaching strategies include project-based learning or based on problems or phenomena.
- 8) There is lifelong learning in new pedagogies and methods for teachers and curricular designers. Teachers apply new training and facilitation methodologies based on their own initiatives or considering the curricular design.
- 9) Assessment of knowledge/skills is done by analysing products (evidence) developed by students.

GUIDELINE 9.

PROMOTING EQUAL OPPORTUNITIES AND SOCIAL INCLUSION

Everyone has the right to be educated and trained. Education and training are also a fundamental tool to promote a more inclusive and equal socioeconomic development. A national training and education system must guarantee lifelong learning opportunities for all people, and ensure the inclusion of the most vulnerable groups such as disabled people, the rural population, indigenous population, young people excluded from education and work, people deprived of freedom and low-income people.

Technical and vocational training policies must mainstream the gender perspective so that each of its training actions are relevant and of high quality, and promote equal opportunities among women and men in the access to lifelong learning.

Key elements:

- 1) Research conducted (before, during and after training as well as on the labour market) consider the particular situation of men and women, breaking down data according to sex, identifying the profile of participants and their special needs.
- 2) The system, as a whole and in an articulated way, offers varied training opportunities to address different target audiences: distance, face-to-face,



blended training, dual or on-the-job training, in different timetables with varied course hours, taking into account the place where they are carried out, etc.

- 3) There are inclusive training strategies and supplementary strategies (economic support, nurseries for children, etc.) that broaden the access, promote continuity and favour relevant and quality education of varied vulnerable groups.
- 4) The participation of men and women in non-traditional areas is promoted for each sex and in training actions of different nature.
- 5) There are lifelong learning mechanisms of human resources (administrative, managerial and teaching) in issues that cater for the needs of different populations and mainstream the gender perspective from all standpoints.
- 6) There is a gender policy at a national or institutional level that establishes the general guidelines. It also expresses the commitment with the elimination of barriers that hinder equal opportunities and results between women and men, and translates this commitment into a framework for action. It sets forth the need to use inclusive language in the regulations and other documents as well as in the names of profiles and invitations for which training will be tendered.
- 7) Budgets are planned and developed with a gender perspective which enables to allocate resources into such dimensions that must be catered for to guarantee equal opportunities and access to everyone.
- 8) Vocational guidance services and public employment services have several mechanisms and strategies to provide treatment of quality to different audiences.

GUIDELINE 10.

ARTICULATING TRAINING AND EMPLOYMENT SERVICES, VOCATIONAL GUIDANCE AND ACTIVE LABOUR MARKET POLICIES

Public employment services play (PES) a key role as they offer vocational guidance and counselling, materials about access to training and employment intermediation. PES help workers and employers in the transition to the labour market by offering employment intermediation services, information and access to specific programmes.

Furthermore, they help jobseekers to choose the most appropriate choices for employability by disseminating reliable information about the labour market, vocational guidance and counselling as well as a range of tools

and techniques to support them in their job search. Many services also manage unemployment insurance programmes and provide temporary financial support to workers.

The concept of “active labour market policies” that include employment, transfers for unemployment and training has not been as widespread in the region as in European countries. In the future, this concept should be further developed and there should be a stronger connection between training for work and for life policies and these elements from active labour market policies.

Apart from PES, private employment agencies are playing an increasing role in improving the operation of the labour market.

Key elements:

- 1) There are well-established PES with the necessary capacities to face employment challenges caused by unexpected recessions or times of fast economic growth.
- 2) There is a suitable articulation among PES and training institutions, public training policies and other offers available in the market that provides vocational guidance services and helping jobseekers to develop their occupational projects. This articulation facilitates the combination between job search assistance services with training in specific skills, thus promoting better and more long-lasting results, particularly in times of economic downturn.
- 3) PES have the capacity of combining job search services with other communication resources and mechanisms between the supply and demand such as internet-based job exchanges, particularly during economic growth and employment growth periods of time.
- 4) There is a close and effective collaboration framework among PES and private employment agencies, non-governmental organizations and public enterprises.
- 5) PES constantly assess their performance and relevance based on reliable information so as to be able to keep responding to the labour market conditions.



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- ² Pages, C. (2010). Crespi, G.; Fernández-Arias, E.; Stein, E. (2014).
- ³ OECD, CAF, ECLAC (2016).
- ⁴ ILO (2015a).
- ⁵ See for example: Brynjolfsson, E.; McAfee, A. (2014). Ford, M. (2015). Parker, G.; Van Alstyne, M.; Choudary, S.P. (2016).
- ⁶ Crespi et al (2014); D. Rodrik (2007); Reinert (2008); Salazar-Xirinachs, JM; I. Nübler; R. Kozul-Wright (2014).
- ⁷ ILO (2016a)
- ⁸ Cornick, J. (2017).
- ⁹ OECD, CAF, ECLAC (2014).
- ¹⁰ Alaimo, V.; Bosch, M.; Kaplan, D.; Pagés, C.; Ripani, L. (2015).
- ¹¹ The full text can be found in the report on: Skills for improved productivity, employment growth and development. ILO. 2008.
- ¹² See ECLAC (2015). Cunningham, W.; Acosta, P.; Muller, N. (2016). Manpower Group (2015). Mourshed, M.; Farrell, D.; Barton, D. McKinsey (2014).
- ¹³ This document was initially prepared with information from the countries of the Latin American region. However, the analysis contained in the first may be applicable to the English-speaking Caribbean countries.
- ¹⁴ Sen, A. (1999).
- ¹⁵ Schoellman, T. (2012).
- ¹⁶ OECD, CAF, ECLAC (2016).
- ¹⁷ ILO (2015a).
- ¹⁸ ILO (2014).
- ¹⁹ This and the following paragraphs are based on Salazar-Xirinachs (2017).
- ²⁰ Autor, D. (2014).
- ²¹ Keynes (1930).
- ²² Autor, D.; Dorn, D. (2013).
- ²³ Cowen, T. (2013).
- ²⁴ López-Calva, L.; Lustig, N. (eds) (2010).
- ²⁵ For further reading on skill-based technical change see David Autor; Frank Levy, and Richard J. Murnane (2003); Daron Acemoglu and David H. Autor (2011).
- ²⁶ López-Calva and Lustig (2010) op cit.
- ²⁷ OECD, CAF, ECLAC (2015).
- ²⁸ On the agenda for improving skills and human talent for productive development and productivity growth in the countries of the region see Salazar-Xirinachs (2014) "Six Ways Latin America can close its skills gap" - World Economic Forum - (<https://www.weforum.org/agenda/2015/05/6-ways-latin-america-can-close-its-skills-gap/>).
- ²⁹ de Hoyos, R.; Rogers, H.; Székely, M. (2016).
- ³⁰ Information about Uruguay, Argentina, Brazil, Mexico, Paraguay, Guatemala, Ecuador and El Salvador. Source: SITEAL (IIEP- UNESCO / OEI)
- ³¹ Data for 2014 for Uruguay, Argentina, Brazil, Mexico, Paraguay, Guatemala, Ecuador and El Salvador. Source: SITEAL (IIEP- UNESCO / OEI)
- ³² Information about Uruguay, Argentina, Brazil, Mexico, Paraguay, Guatemala, Ecuador and El Salvador. Source: SITEAL (IIEP- UNESCO / OEI)
- ³³ Information about Uruguay, Argentina, Brazil, Mexico, Paraguay, Guatemala, Ecuador, El Salvador, Bolivia, Chile, Colombia, Costa Rica, Honduras, Panama, Peru, Dominican Republic, Cuba, Venezuela and Nicaragua.
- ³⁴ ILO (2016b).
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- ³⁸ Bassi, M.; Busso, M.; Urzúa, S.; Vargas, J. (2015).
- ³⁹ The OECD Programme for International Student Assessment (PISA), aims to test the knowledge and skills acquired by students who are near the end of their compulsory education (15 years of age). Half a million 15-year-old students from 72 countries participated in the assessments of the 2016 PISA report, which were administered in 2015. This test is conducted every three years; in 2009, the emphasis was placed on reading, in 2012, on mathematics and in 2015, on science.
- ⁴⁰ Rivas, A. (2015).
- ⁴¹ Conducted by the Latin American Laboratory for Assessment of the Quality of Education (LLECE). Three versions of the Regional Comparative and Explanatory Study have been carried out. The first study, called PERCE, was conducted in 1997 and covered 13 countries. The second study (SERCE) was administered in 2006 and assessed learning achievements in mathematics, reading in third and sixth grade of primary school, and natural science in the sixth grade. The third study (TERCE) was administered in 2013 in 15 countries plus the State of Nuevo Leon in Mexico, and assessed the same areas and grades as SERCE with a sample of around 67,000 students. Data shown here refers to the UNESCO report. July 2015.
- ⁴² UNESCO. (2016).
- ⁴³ Rivas, A. (2015).
- ⁴⁴ According to UNESCO estimates, average gross enrolment rates for secondary education in the region are expected to reach 76.4 % in 2015, which is significantly far from the goal of universalizing this stage in schooling.
- ⁴⁵ CAF (2016).
- ⁴⁶ OECD, CAF and ECLAC (2016).
- ⁴⁷ CAF (2016)
- ⁴⁸ Idem
- ⁴⁹ OECD, CAF and ECLAC (2016).



Referencias al pie:

⁵⁰ IDB text, cited in OECD, CAF and ECLAC (2016).

⁵¹ Cunningham, W.; Acosta, P.; Muller, N. (2016).

⁵² As mentioned earlier, it refers to the areas of science, technology, engineering and mathematics.

⁵³ Cunningham, W.; Acosta, P.; Muller, N. (2016).

⁵⁴ See all relevant information at: The ILO Future of work centenary initiative. http://www.ilo.org/ilc/ILCSessions/104/reports/reports-to-the-conference/WCMS_369026/lang--en/index.htm

⁵⁵ The studies are available at: <http://www.oitcinterfor.org/livedrupal/estudiosprospectivos>

⁵⁶ The terms quality apprenticeship, dual apprenticeship and on-the-job apprenticeship to refer to this kind of alternance training, as defined in the legal frameworks detailed in Table 7, will be used indistinctly throughout this document.

⁵⁷ These data were taken from total employed population in 2015 according to the ILOSTAT database.

⁵⁸ In accordance with the Law of Colombia and Brazil, a minimum share of 1 apprentice every 20 workers is established, which provides a broad frame to promote quality apprenticeship in the region but also opens the debate between enforceability and concertation in this kind of agreements.

⁵⁹ See more information on legislation on apprenticeship in table 7. SENA offers information based on frequently asked questions at: http://www.sena.edu.co/es-co/trabajo/Documents/instructivo_2016.pdf

⁶⁰ Portaldaindustria.com.br

⁶¹ G20-OECD-EC Conference on Quality Apprenticeships. Background paper. OECD. 2014.

⁶² Cunningham, W.; Acosta, P.; Muller, N. (2016).

⁶³ For more information see: http://www.oitcinterfor.org/sites/default/files/file_publicacion/marco.pdf

⁶⁴ INACAP is an Integrated Higher Education System, which comprises the INACAP University of Technology of Chile, the INACAP Professional Institute and the INACAP Technical Training Centre, that share the same Mission and Institutional Values.

⁶⁵ Based on the International Seminar on national qualifications frameworks. INFOTEP Dominican Republic. June 2017.

⁶⁶ See: http://www.oitcinterfor.org/red_certificacion

⁶⁷ Participants from SENCE

⁶⁸ Participants from CONALEP and DGCFT

⁶⁹ For more information see: <http://www.portaldaindustria.com.br/senai/canal/inovacaoetecnologia/>

⁷⁰ Fraunhofer has 86 institutes around the world, 66 of which are in Germany. It has 20,000 employees, researchers and vocational education students. It currently manages around 2 trillion euro for research and development.

⁷¹ <http://mgiportal.sena.edu.co>

⁷² www.sena.edu.co

⁷³ Also known as e-learning, and in different modalities for using the Internet and learning platforms specifically developed for these purposes.

⁷⁴ ILO/Cinterfor Survey. 2016

⁷⁵ It refers to a recognition or accreditation mechanism by a regulatory authority, either the National VT Institution or the Ministry of Education. In some cases, such as Health care services or regulated occupations, some Ministries require accreditation.

⁷⁶ According to UNESCO 2015 database

⁷⁷ Reference will be made to the Vocational Training Institutions that develop skills and competencies which can be directly applied to the workplace that have been established for this purpose and are independently funded and self-administered, among other characteristics. For further details visit www.oitcinterfor.org

⁷⁸ SINAFOCAL was created as a National Training System and as such is part of the National Service of Vocational Promotion - SNPP and other public and private sector training institutes .

⁷⁹ See for example the final report of the review commission on the training and labour intermediation system. 2011. Known as "Informe Larrañaga" [Larrañaga Report].

⁸⁰ Strengths, Opportunities, Weaknesses, Threats.

⁸¹ See "Informe Larrañaga" Op. Cit

⁸² In 2013 OIT/Cinterfor developed a guide for impact evaluation, a database is available at <http://guia.oitcinterfor.org/como-evaluar>

⁸³ van Breugel, G. (2014).

⁸⁴ Idem.

⁸⁵ OECD. (2010).

⁸⁶ For further information visit: <http://www.sena.edu.co/es-co/Empresarios/Paginas/mesasSectoriales.aspx>

⁸⁷ Barreto, H. (2015).

⁸⁸ Evaluación en Profundidad del Programa Franquicia Tributaria para la Capacitación en Empresas. [In-Depth Evaluation of the Tax Exemption Program for Enterprise Training] SENCE. 2009

⁸⁹ The terms quality apprenticeship, dual apprenticeship and on-the-job apprenticeship to refer to this kind of alternance training, will be used indistinctly throughout this document.





Part II

Country overviews

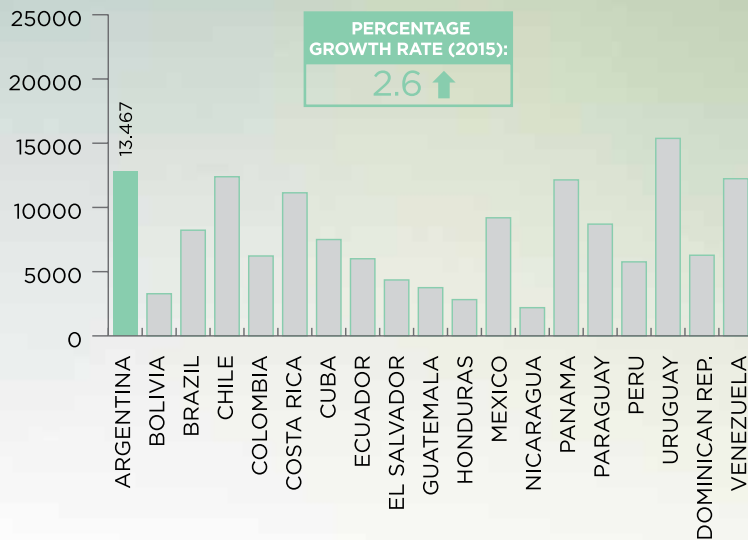
ARGENTINA



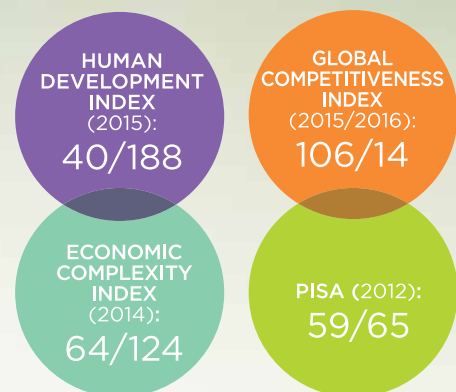
ARGENTINA

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
43.847

POVERTY
(2016):
32.2%

LABOUR INFORMALITY (2014):
46.7%



YOUTH:
61.6%

**YOUTH NEITHER
WORKING NOR
STUDYING**
(2015):

19.7%

**OLF - OUTSIDE
LABOUR FORCE**

**WAP - WORKING
AGE POPULATION**



**LF -
LABOUR FORCE (2016):**
61%

UNEMPLOYMENT (2016):
9.3%



YOUTH:
18.9%





"PROGRESAR" AND "MORE AND BETTER JOBS FOR YOUTH" ARE PROGRAMMES INCLUDED IN THE ACTIVE EMPLOYMENT POLICIES.

Average years of schooling (2015): **9.8**

Illiteracy rate (2015): **1.9%**

Percentage of population 20 years and older who have completed secondary education (2014): **24.29%**

Population with at least some secondary education (% of 25 years of age and older): **56.9%**



EDUCATION



TRAINING FOR WORK

Training for work **3227¹**

Public VET (2016): **2641¹**

Private VET (2016): **586**

Participants in VET (2015): **1.319.096**

Participants in VET (2015): **327.843¹**

VT Participants, male (2015): **137.600**

VT Participants, female (2015): **190.243**

Companies that find it difficult to fill vacancies (2015): **37%**

RECOGNIZED CERTIFICATION MECHANISMS AND RECOGNITION OF COMPETENCIES ARE DRIVEN BY THE MINISTRY.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The Ministry of Labour, Employment and Social Security (MTEySS, for its acronym in Spanish) takes an active part in establishing and implementing employment and training policies, as well as in supporting and strengthening the quality and development of standards and training curricula in VT institutions at the national level.
- The Ministry also promotes the Lifelong Learning Network, which reaches over 1000 training centres. To this end, it provides management strengthening services, which include the development of curricular plans and teaching materials in order to ensure the quality and sectoral relevance of educational content, as well as teacher training.
- Tripartite Sectoral Councils for Training, Job Skills Certification and Vocational Training have been established.
- The MTEySS is bolstering these Sectoral Councils, conceived as essential venues for social dialogue in the design, drafting and planning of sectoral policies in the field of Vocational Training. Approximately 40 Councils have been set up.
- There is a wide range of services in support of vulnerable segments, in particular, youth and women. The “Youth with more and better work” programme generates social and labour inclusion opportunities by means of actions so that young people can develop their professional profiles, complete their compulsory schooling, engage in training experience and/or practices in work environments, initiate an independent productive activity or obtain a job.
- The PROGRESAR programme for young people enables them to initiate or complete studies at any educational level, access work introduction activities or take vocational training courses. It is linked to a labour inclusion programme for unemployed workers.
- Recognized certification mechanisms and the recognition of competencies, such as certification for teleworkers, are driven by the Ministry. There are also programmes developed by trade unions in sectors such as construction, hospitality and automotive repair and maintenance.
- The MTEySS has supported anticipation of skills demand studies for training in such areas as the automotive industry. It has also developed a programme for the transfer of SENAI's prospective model.
- The credit mechanism for Vocational Training potentially encourages businesses to invest in the development of their workers. It contains a wide range of possibilities and further outcomes can yet be discovered.
- The Ministry's actions with regard to employment policy include popular economics and social organizations, as well as strategic focal points for people with disabilities, ethnic minorities and the prevention of child labour, among other issues. There is also a set of employment policies for rural workers.
- Business and trade union organizations run high quality training centres and institutions, which follow closely the demands of the labour market.
- The INET institute, from the Ministry of Education, is the largest provider of technical education and handles the Federal Registry of Technical and Vocational Education Institutions, the National Catalogue of Technical Education Degrees (middle and higher levels) and Certifications (of the different levels of vocational training), as well as the recognition process for qualifications and certifications.
- Argentina has taken the first steps in organizing a national network of companies which support the work-based training modality (GAN). This private initiative has been supplemented by public actions and their progress and capacity remains to be seen.
- Some training agents have connections with productivity and competitiveness policies. For example, the INTA institute, in the agricultural sector. Also, some of the training centres which are closely connected to provincial industrial associations in Rosario or Santa Fe.

GAPS AND NEEDS

- While there is a vast network of technical schools, few updated studies exist regarding their coverage and relevance. Similarly, it is necessary to implement mechanisms to strengthen the creation of bridges between education and vocational training.
- Post-secondary technical education attracts a lower proportion of students. It is not clearly perceived as being linked to a lifelong learning pathway and, therefore, a direct move towards university degrees is preferred.²
- Only 35% of high school leavers have completed technological courses, most of them in the Greater Buenos Aires area.
- There is a lack of means of coordination between vocational training and formal education. In general, VT certified occupations are not accredited in Technical Education.
- Vocational training is not standardized and there are no national accreditation mechanisms accepted by social stakeholders.²
- Discussions on tools such as qualifications frameworks and their impact on coordination and lifelong learning are still incipient and isolated.
- The engagement of social stakeholders either occurs only at the education leadership level, or focuses on sectoral training initiatives. There is a great deal of room for improvement as regards effectiveness with a nation-wide and coordinated vision which enables moving forward jointly towards issues such as the skills gap, the direction of development and the specialization of training centres, or the strengthening of training as part of a system for innovation and productivity growth.

III. General overview of VT

VT SUPPLY:

- The public offering of VTE is distributed among secondary level VTE institutions, higher level VTE and VT institutions. Most of the VTE and VT on offer is public.
- The Ministry of Education has institutionalized a national catalogue of VTE degrees and certifications and keeps a registry of institutions implementing VTE in order to ensure their suitability and provide quality support to their operations.
- There is also a national accreditation process for degrees and certifications in order to facilitate their recognition and validity throughout the country. In this case, the National Council of Education, Labour and Production (CONETyP), a tripartite agency, has been involved in establishing frames of reference for accreditation.
- The actions of the lifelong learning network promoted by the MTEySS focus on vocational training. The network is composed of about 1000 vocational training centres owned by trade unions and business associations, and answering to the provincial ministries of education and the Autonomous City of Buenos Aires.
- There is no autonomous national vocational training institution in Argentina, as there are in most of the countries in the region. The MTEySS leads the national lifelong learning system and plays an active role in identifying profiles and plans for strengthening the training provided, as well as the certification of competencies.
- As regards formal education, the INET has the widest supply of vocational training.

VT FINANCING:

- Financing derives mainly from the public funds for education assigned to INET (USD 170 million by 2015) and the funds allocated by the Ministry of Labour to lifelong learning and the certification of labour skills.
- The National Fund for Technical and Vocational Education invested over USD 400 million to various improvement projects between 2006 and 2014.¹
- The modality of financing through tax credit allows businesses to claim a tax deduction against duly substantiated expenditure on vocational training and the assessment and certification of competencies. In addition, and as an innovation, on levelling courses up to a higher level and on-the-job training practices. Between 2003 and 2014, some 1400 companies benefited from this scheme.³

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- With reference to administration and governance, CONETyP is a consultative and discussion venue composed of state, trade union and business organizations.
- There is also a Federal Education and Labour Commission composed of technical and political experts from the various jurisdictions, who agree on policies and strategies prior to the decision-making at the Federal Culture and Education Council.
- The sectoral lifelong learning and Labour Skills Certification Councils promoted by the MTEySS are institutional venues for dialogue devoted to designing and planning VT policies, conducting surveys of demand, aiding institutional strengthening and providing support for certification, among other duties.
- In some more specific cases, bipartite entities are set up for concrete action such as skills certification. An example is the coordination carried out between UOCRA and IERIC for registration and certification in construction.

SPECIFIC SOURCES CONSULTED

Data on “Training for Work” were taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - La educación técnico profesional en Cifras. INET. 2016.
- 2 - Un enfoque productivo para el trabajo decente: desarrollo industrial, entramado institucional y empleo de calidad en Argentina / Organización Internacional del Trabajo, Oficina de País de la OIT para Argentina. Ginebra: OIT, 2015
- 3 - Informe Argentina. Sistema Nacional de Cualificaciones Profesionales. EUROsociAL, 2014.

BOLIVIA

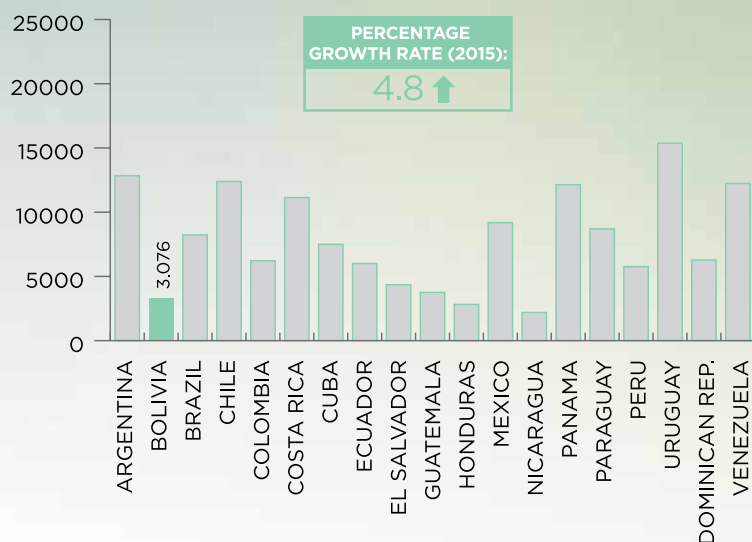


BOLIVIA



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



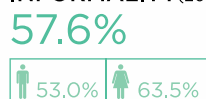
I. Basic dimensions of the labour market and VT



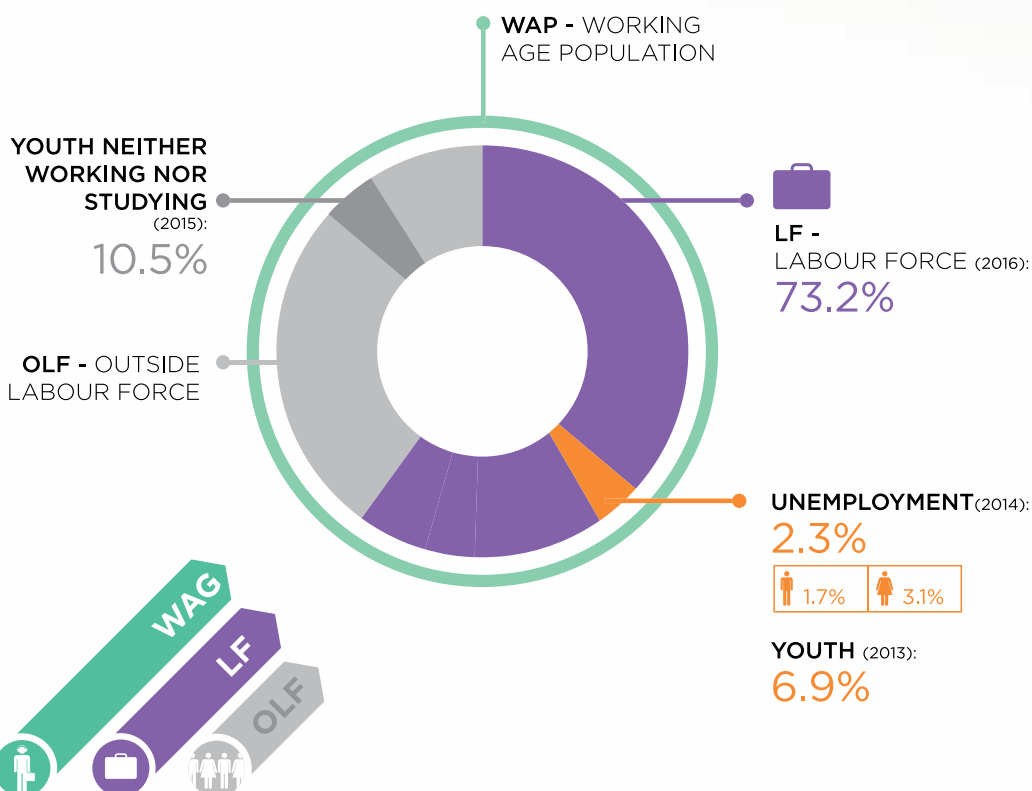
POPULATION
(IN MILLIONS, 2016):
10.888

POVERTY
(2016):
39.3%

LABOUR
INFORMALITY (2014):



YOUTH (2009):
87.4%





EDUCATION POLICIES HAVE
FOCUSED STRONGLY ON TECHNICAL
VOCATIONAL TRAINING.

Average years of
schooling (2014): **8.2**

Illiteracy rate (2015): **4.9%**

Population with at least
some secondary
education (% of 25 years
of age and older): **53.1%**

Percentage of population
20 years and older who
have completed
secondary education
(2013): **27.17%**



EDUCATION



TRAINING FOR WORK

VET Enrolment
(2007): **105.400**

VET Centres: **82¹**

Private VET Centres: **592¹**

National private
training institution: **INFOCAL**

INFOCAL-owned
centres: **15**

Total number of
instructors: **510**

INFOCAL VT
Participants (2016): **61.395**

Women: **27.665**

Men: **33.730**

Apprentices: **1.706**

DESPITE QUANTITATIVE PROGRESS IN
ACCESS AND SCHOOL RETENTION,
THERE IS NO EVIDENCE THAT
PRODUCTIVITY PERFORMANCE HAS
IMPROVED.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Bolivia has improved its schooling rates at the middle education level (74%), with a hike of 12 points in the period 2000-2011. In the region, Bolivia has one of the highest rates of investment in education in relation to its Gross Domestic Product (7.6%, according to the Ministry of Economy and Finance, 2017).
- Access to education has on the whole improved over the last 15 years; however, still only just over half of the population manage to complete secondary education and 24% of these do so at the expected age.
- Education policies have focused strongly on technical vocational training, which is part of the curriculum in all secondary schools.
- New technical vocational training modalities have been implemented, aiming at qualification and the recognition of skills acquired empirically.
- Identifying as a plurinational State has fostered increasingly open vision and practices with regard to access to education and training opportunities. In this sense, the indigenous population has a significant place in public employment policies.
- The Vice-Ministry of Micro and Small Enterprises (VMPE, in Spanish) of the Ministry for Productive Development and Plural Economy, together with the Plurinational Competencies System (SPCC), which answers to the Vice-Ministry of Alternative and Special Education (VEAE), carry out standardization processes and certification for the skills of producers who own productive units within the micro and small enterprise (SME) category.
- The Plurinational State of Bolivia, through its Avelino Sinani - Elizardo Pérez Education Act (2010), has reaffirmed the need for training to respond to the productive socio-economic potential of the various regions. This implies two major challenges for policy: access to training and the necessary coordination between training, regional productive vocations and employability.
- The Ministry of Labour, Employment and Social Welfare (MTEPS), through its Mi Primer Empleo Digno [My First Decent Job] programme, provides support so that young people with limited resources can gain access to mid-level technical training and job placement in companies. The programme is divided into three phases: 1. Classroom training; 2. Practice or traineeships in companies; 3. Job placement in companies.
- Interagency support (UNESCO-ILO-UNIDO) is in place in order to boost mid-level and specialized technical vocational training, with a view to supporting efforts made to achieve strong coordination between training, productive vocations and employability, and promote a public policy in TVET.

GAPS AND NEEDS

- Despite quantitative progress in access and school retention, there is no evidence that productivity performance has improved.
- The high proportion of informality and traditional productive practices reproduce the circles of low productivity, low wages and poor working conditions. The engagement of rural sectors is uneven and the highest vulnerabilities are related to youth and gender.
- For example, a World Bank survey estimated that 30% of women in rural areas are illiterate, in comparison to 10% of the men.
- There is no evidence of coordination between educational opportunities and training for work, although the new educational policy tends to strengthen the recognition and certification of work experience.
- INFOCAL, the main private training institution, requires support if it is to develop institutionally in order to keep up with demand.
- In order to maintain its financial viability, the institution has found it necessary to focus on short-term activities providing an immediate response to demand, to the detriment of training initiatives associated with innovative or expanding sectors.
- No training response has been observed with regard to the demands of the rural sector, where gender and ethnic gaps are wide. A World Bank survey has shown that women in rural areas bear a double burden; in addition to the hours they devote to paid work, they must dedicate nearly the same amount of time to domestic chores.²
- International co-operation projects have local and/or sectoral impacts and there is no scaling up of their outcomes.
- The significance of human factors in productivity and competitiveness fails to be considered in action to develop vocational training.

III. General overview of VT

VT SUPPLY:

- Public education encompasses 89% of the students enrolled in the system, while private education accounts for 11%.
- National Household Survey data for 2008 reveal that at least 5% of the population between 19 and 24 years of age enrolled in technical education.
- INFOCAL is the principal national training institution; it operates privately, but has the right to use public assets through a loan for use agreement.
- In 2015, INFOCAL reported around 83 thousand participants, 47% of them women. Of these, 61% declared an income of less than the national minimum wage (USD 238).
- Mid-level technical education is provided in technical schools, but there are no figures available regarding its impact.

VT FINANCING:

- Other than the public funds devoted to technical education in the sphere of the Ministry of Education, there are no further significant allocations.
- INFOCAL's budget for 2015 was USD 9.1 million. The amounts contributed by enterprises to INFOCAL are voluntary and have not increased in recent years.
- The private provision of technical education and vocational training is broad and focuses on the services sector. It is estimated that there are 592 private institutions, most of them with courses for the business sector (583).
- In comparison with other countries in the region there are more projects and more technical cooperation funds for training.³
- In the private sector, FAUTAPO offers technical cooperation, without creating any parallel provision and aiming at institutional strengthening.
- COSUDE played a key role with its PROCAP programme and currently, its strategy is to bolster the regulatory framework for labour skills certification.³

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- There are no clear signs of social stakeholder engagement in steering or identifying demand, or in providing follow-up for training results.
- Should opportunities arise in areas such as labour skills certification or generating a training system, there may be ample space for the incorporation of such actors.

SPECIFIC SOURCES CONSULTED

Data on “Training for Work” were taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Educación técnica y producción en Bolivia [Technical Education and Production in Bolivia]. PIEB, La Paz, 2011. <http://www.formaciontecnicabolivia.org/webdocs/publicaciones/2012/educaciontecnicaproductivaenboliviapieb.pdf>
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BRAZIL

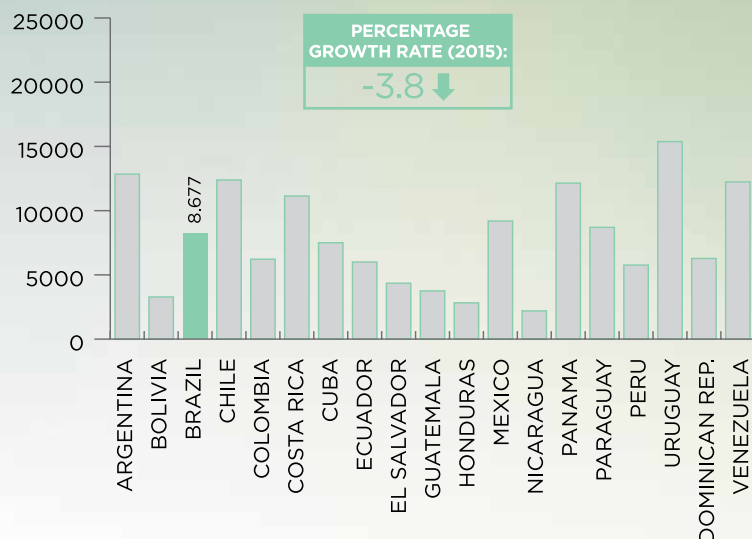


BRAZIL

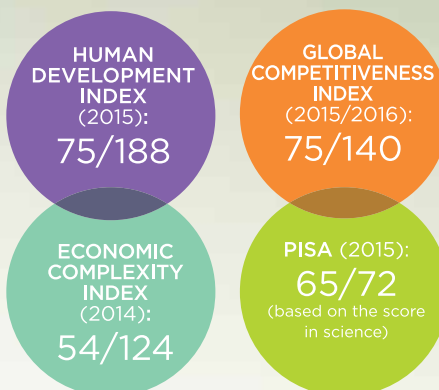


GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
209.567

POVERTY
(2014):
21.4%

LABOUR INFORMALITY (2014):
37.9%

35.4% 41%

YOUTH (2013):
40.5%

**YOUTH NEITHER
WORKING NOR
STUDYING**
(2016):

23.2%

**OLF - OUTSIDE
LABOUR FORCE**

**WAP - WORKING
AGE POPULATION**



**LF -
LABOUR FORCE (2016):**
67%

UNEMPLOYMENT (2016):
12.8%

14.6% 11.4%

YOUTH:
27.1%





THE MINISTRY OF EDUCATION HAS ATTACHED A GREAT DEAL OF IMPORTANCE TO TECHNICAL AND TECHNOLOGICAL TRAINING.

Average years of schooling (2014): **8.9**

Illiteracy rate (2015): **8.3%**

Percentage of population 20 years and older who have completed secondary education (2014): **25.6%**

Population with at least some secondary education (% of 25 years of age and older): **53.6%**

EDUCATION



TRAINING FOR WORK

Matrícula en ETP (2014): **1.780.000**

Matrícula PRONATEC (2015): **1.266.777**

Cantidad de participantes en FP SENAC (2016): **1.197.920**
 Mujeres: **767.910**
 Hombres: **430.010**
 Aprendices: **194.714**

Participantes FP SENAR (2016): **1.133.199**
 Mujeres: **499.274**
 Hombres: **633.925**
 Participantes FP Rural: **696.012**
 Aprendices: **1.249**

Participantes FP SENAI (2015): **3.415.058¹**
 Mujeres (2015): **1.011.510¹**
 Hombres (2015): **2.403.548¹**

Participantes FP SENAT (2015): **736.272²**

Porcentaje de empresas que presentan dificultad para llenar vacantes (2015): **61%**

THE "S" SYSTEM INSTITUTIONS HANDLE A WIDE-RANGING PORTFOLIO OFFERING EDUCATION AND SERVICES.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The Basic Guidelines on Education Act generates a broad framework for coordinating education and work and the recognition of competencies
- Productive and industrial development policies have opted to rely on the expertise of the “S” System (SENAI, SENAC, SENAR, SENAT, SEBRAE) in order to leverage innovation mechanisms based on institutes devoted to this end, and also focusing on the development of human talent.
- There is a widespread political will to improve access and coverage of technical and technological education through the federal network of vocational and technological education institutions. Between 2003 and 2016, there were plans to build 500 new schools, to reach a total of 644³.
- The identification of new courses to offer is based on economic and social development studies and public hearings convened by different stakeholders to provide support in making decisions about new programmes.³
- The private training institutions that make up the so-called “S” System maintain links with the demand for training and often innovate in their conception and focus on the growth and improvement of competitiveness. SENAI has a methodology in place to forecast demand, which is applied in the industrial sector.
- The Ministry of Education (MEC, in Portuguese) has attached a great deal of importance to technical and technological training. It promoted the national technical and technological education programme —PRONATEC— which rapidly increased the provision of training in the field.
- The MEC identifies professional profiles for technical and technological education. It has made use of participatory methodologies and has consolidated its ability to “read” demand with the participation of stakeholders. It developed a vocational training catalogue which is a benchmark for that level.
- In this regard, it also focused on the need to validate skills acquired at work and created the CERTIFIC programme, which facilitates the recognition of such competencies with a view to further study.
- SENAI has sought to advance in support of competitiveness and productivity through the establishment of 26 Innovation Institutes which seek to increase industrial competitiveness and productivity and 42 Technology Institutes which offer specialized technical services for the same purpose. To this end, it has received the support of the government and of development banking. This constitutes an example in Latin America of how to promote new industrial policies and transform production.
- In 2016, SENAR began building two Excellence Centres for vocational and technological training, thanks to an agreement with Banco Nacional de Desenvolvimento Econômico e Social (BNDES). In addition to formal mid-level technical education, these centres will offer graduate and post-graduate technological courses, both classroom-based and distance.
- The needs of vulnerable groups are addressed through either the free education provided by the “S” System, or specific programmes funded by the national budget.
- The WorldSkills Competition, the largest vocational training competition in the world, was held in Brazil for the first time. WorldSkills Sao Paulo 2015 was organized by SENAI, and sponsored by SESI, companies, enterprises and other agencies such as SENAC and the Federal Network. It had record attendance: 1,189 competitors from 59 countries competing in events in 50 vocational categories. Brazil led the competition (1st place), with 27 medals; 11 gold, 10 silver and 6 bronze in 27 categories.
- SENAI updates its national training learning paths annually (including courses in the 28 industrial areas of performance), in order to establish a common national basis to offer vocational training in all of its schools. SENAI offered 349 courses; 10 higher courses in technology, 4 technological specializations, 62 technical courses and 231 qualifications. In order to meet this challenge, SENAI launched its National Learning Path Management System. This platform enables a systemic and consistent view of the stock of learning paths, which improves management and the quality of information by providing a unified basis.
- SENAC and SENAI implement innovative solutions in the distance courses they provide, making it possible to increase the number of enrolments in vocational training courses, in order to cater to the growing demands of Brazilian industry. SENAC also includes distance postgraduate courses.

GAPS AND NEEDS

- While the coverage of middle and technical education has grown in recent years, there have been issues in relation to quality and in the handling of basic skills. This is also evident in the results of the PISA tests.
- The skills gap continues to be a significant challenge which industry repeatedly points to as an issue affecting competitiveness.
- The slowdown of the economy has affected funding which PRONATEC should have received, leading to reduced actions throughout the country.
- CERTIFIC's coverage and effects do not yet have a significant impact on training practices and they somehow coexist with private certification initiatives, such as SENAI's, or those of industry associations such as ABRAMAN.
- In the context of an economic slowdown, it is necessary to maintain progress momentum, such as the consolidation of SENAI's innovation centres as well productive development policies.
- Brazil has not actually initiated discussions on the possible implementation of qualifications frameworks or a national training system. About ten years ago, the Ministry of Labour updated the profiles and levels of its Occupations Classification and the MEC has its own national catalogue of technical training.
- There is clearly a need to improve the quality of education; although the Basic Guidelines on Education Act contains a number of provisions on standardization and accreditation, there are no means of coordination between education and training for work.

III. General overview of VT

VT SUPPLY:

- The Secretariat for Middle and Technological Education (SETEC), which includes the Technological and Vocational Education Directorate (DEPT), is responsible for coordinating, supervising and strengthening technical vocational education, which is offered by: The Federal Network, State Networks, the "S" System and private institutes.
- By 2015, there were 644 schools in the federal vocational education network; 38 of them were federal institutes.
- In addition to this network and the "S" System, there are private, unregistered institutes which provide training. There are no known statistics on these.
- Some of the trade unions developed training devices, particularly during the 1990s and 2000, when the Ministry of Labour provided public funding in order to boost the supply of lifelong learning in the states.
- Such is the size of the business sector in Brazil that there are also private initiatives with their own corporate universities and social responsibility actions that affect the supply of training for work.

VT FINANCING:

- The "S" System institutions handle a wide-ranging portfolio offering education and services and have even diversified their sources of funding through partnerships and new services and activities.
- In recent years, the "S" System's provision of free training has increased. There is still pressure on the cost-free nature of apprenticeship courses and quotas for this kind of training alternatives have increased.
- The "S" System is funded through a percentage calculation based on payrolls. SENAI (1%), SENAC (1%), SEBRAE (0.3%), SENAT (1%). SENAR's percentage (2.5%) is on the sale of agricultural products.
- A study conducted in 2000 estimated that some 35 thousand schools and centres offered vocational training, with an annual expenditure of approximately USD 13 billions. These Technical Education and Training funds represent about 2% of GDP and 40% of the total expenditure on education.⁴
- According to the World Bank, public expenditure per student enrolled in secondary education is 22% of per capita GDP. Greater than Argentina's (19%), Mexico's (16%) and Colombia's (15%).

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- The management of the “S” System is in the hands of confederated business organizations in each sector (Industrial Confederation for SENAI, Trade for SENAC, Agriculture for SENAR, for example)
- A coordinated view on the part of social stakeholders on the significance, scope, management and development of vocational training would be very desirable.
- The engagement of the trade union movement in the management of the “S” System still has a long way to go.
- SENAR works with trade unions and rural producers who participate in the planning and dissemination of training actions benefiting them.
- In a recent initiative, large private companies have organized services associated with training in basic skills, linked to their corporate social responsibility actions. Examples of this are the Institutes Group, Foundations and Enterprises (GIFE) and Businesspeople for Human Development (EDH).

SPECIFIC SOURCES CONSULTED

Data on “Training for Work” were taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

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2 - 2015 Annual Report on Activities. SEST/SENAT, Brazil

3 - Rede Federal de Educação Profissional, Científica e Tecnológica. <http://redefederal.mec.gov.br/>

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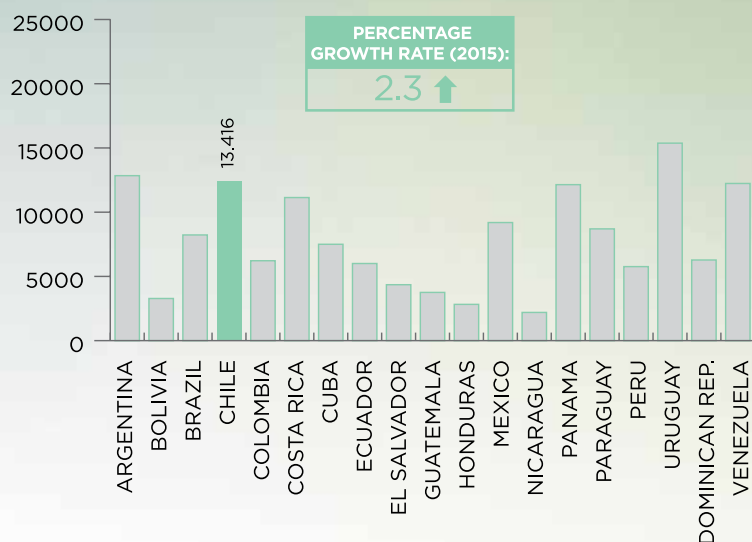


ETHIC

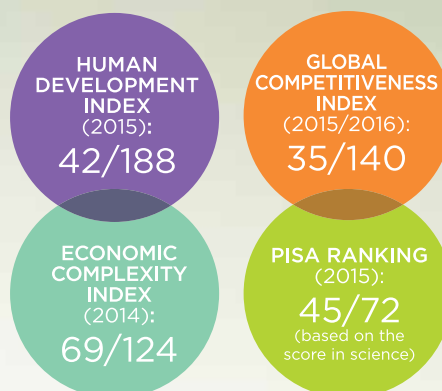
CHILE

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):

18.131

POVERTY
(2013):

14.40%

LABOUR INFORMALITY (2014):

29.2%



YOUTH NEITHER WORKING NOR STUDYING (2014):

15.5%

OLF - OUTSIDE LABOUR FORCE

WAP - WORKING AGE POPULATION



LF - LABOUR FORCE (2016):
59.03%

UNEMPLOYMENT (2016):
7%



YOUTH:
16%





SENCE AND CHILEVALORA WORK JOINTLY ON THE DESIGN OF TRAINING PLANS LINKED TO OCCUPATIONAL PROFILES.

Average years of schooling (año): **9.8**

Illiteracy rate (2015): **3.4%**

Percentage of population 20 years and older who have completed secondary education (2013): **29.91%**

Population with at least some secondary education (% of 25 years of age and older): **74.8%**

EDUCATION



TRAINING FOR WORK

Matrícula EMTP (2013): **354.000¹**

Matrícula ESTP (2013): **280.000¹**

Matrícula ETP (2013): **634.000**

Centros EMTP (2013): **1.602¹**

Centros ESTP (2013): **178¹**

SENCE VT Participants (2015): **784,540²**

SENCE "Más Capaz" Programme (2016): **96.925³**

SENCE "Franquicia tributaria" Programme (2016): **1.144.941³**

Apprentices (2016): **1.283³**

STRENGTHENING DIALOGUE IMPLIES PROVIDING INCREASED TRAINING FOR STAKEHOLDERS.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Chile has formed a National Productivity Commission, a consultative, independent and autonomous body whose purpose is to “increase productivity in order to improve the life and well-being of the people”. Among the outputs it has been entrusted with is the drafting of an “Action Plan for the Development of Skills in Chile”.
- Strategic development programmes have been designed, with 37 regional, meso-regional and national public-private cooperation panels, which will coordinate a number of stakeholders and work towards closing production gaps and designing roadmaps. The development of human capital is a key factor in this process.
- In August 2016, an Advisory Council for Technical and Vocational Training was established, which seeks to propose guidance for public policy in the area of technical and vocational training and will attempt to improve productivity, competitiveness and innovation in a public-private partnership collaboration scheme.
- In addition to having a curriculum framework for secondary VET, the Ministry of Education is working on a qualifications framework and on mechanisms to strengthen lifelong education, such as projects to coordinate mid- and higher level VET with each other and with the world of production.
- Currently, “Más Capaz” [More Capable] is a flagship programme which targets women (18 to 64 years of age), youth (18 to 29) and persons with disabilities.
- SENCE provides support for most of the training activities, which are demand-driven and use tax incentives in order to engage businesses. SENCE does not carry out its training in its own centres, but by means of agreements with third parties, which makes it highly flexible and allows it to play a significant role in quality assurance.
- ChileValora, a public and tripartite-led institution, was established in 2008. Its purpose is to recognize and certify the labour competencies of workers and it has been positioning itself successfully among enterprises and workers. Its capacity to coordinate with SENCE and the Ministry of Education has great potential.
- ChileValora’s contributions to closing the country’s human capital gaps include its social dialogue model, which builds trust between stakeholders and which could become a good model to use in handling other public policies.
- SENCE and ChileValora work jointly on the design of training plans linked to occupational profiles accredited in the Labour Competency Catalogue administered by ChileValora. This enables users to gain access to training which is in line with the current demands of the country’s various production sectors.
- In 2014, ChileValora and SENCE, with the technical support of ILO/Cinterfor and the IDB, proposed a qualifications framework for training and labour certification. This is a significant input for the creation of a national vocational training framework, which is being considered by the Ministry of Education.

GAPS AND NEEDS

- The quantity and quality of VET and vocational training need to improve. Despite efforts in recent years, a number of measures regarding quality, efficiency and equity need to be taken in order to make real improvements in this area of education.
- As regards quality, there are no standardized tests to measure achievement based on the curriculum framework, and no tracking and monitoring system with which to analyse relevance on the basis of subsequent work performance.
- Dropout rates are higher in the lower quintiles and it has been observed that the choice of VET specialization is linked to socio-economic profiles as well as cultural and social aspects.⁴
- While preference for mid-level VET has increased in recent years (reaching 29% for Higher Technical Levels and 20% for Professions without an academic degree, which add up to nearly 50%), it still fails to meet the country’s need for trained technicians (estimated at 600,000, according to Sofofa data, 2013).
- In 2015, the courses provided were strongly concentrated in only a few training centres; two Technical Training Centres (TTC) received 63% of enrolments. This information arises from an analysis by type of institution. Should the analysis be made by type of programme, there are 4 institutions that provide 56% of tuition at the Higher Technical Level, which is delivered by TTCs and vocational training institutes.

- Public debate is installed in Chilean society regarding the equity of the education system, on the basis of free access, which has prevailed in recent years and also touches upon vocational and technical education.
- At present, the vocational training administered by SENCE still lacks mechanisms for recognition and standardization with VET.
- ChileValora and SENCE coordinate many of their activities. SENCE is on track to building further capacity to act in determining curricula and training programmes and respond to demand.
- The “Franquicia tributaria” mechanism has not yet managed to strengthen its effectiveness and impact and it has failed to achieve its goal of developing an open, equitable and truly demand-driven market. The capacity of this exemption to act as an incentive is reduced in the case of smaller enterprises and groups of informal workers or very small enterprises.
- Many of the courses offered do not achieve high levels of complexity due to the fact that provision of this type is restricted to a few of the private institutions.
- The training providers market is segmented and heterogeneous. Invitations to tender as a selection mechanism have not proved to be effective as a form of improving quality in the medium term.
- Mechanisms are needed for the purpose of forecasting training demand, in coordination with a clear response from training providers.
- Export industries in Chile, such as mining, tourism or wine and fruit could be coordinated better under a national public policy response for training, and, probably, using mechanisms other than exemptions.
- In this regard, the design of policies and strategies in support of innovation and diversification in these production areas could undergo improved coordination with action involving training and capacity building. The work of the National Productivity Commission shows promise in this respect.

III. General overview of VT

VT SUPPLY:

- Mid-level VET follows a curriculum framework with 36 professional specializations in 15 production sectors. Increased relevance has been reported in centres which are more closely linked to a productive activity sector, which makes it easier to implement practical on-the-job training, for example.⁵
- Higher VET enjoys educational autonomy and, therefore, can determine its own profiles. Many of the training centres at that level are associated with universities.
- There are 54 Technical Training Centres, but 3 of them account for 66% of enrolment.
- VET receives 38% of enrolments in higher education, an indicator in which Chile exceeds indicators for Latin America (19.4%).
- With “Franquicia tributaria” programme, in 2016 SENCE accounted for over 1.1 million participants in job training programmes.
- National Agricultural Society (SNA, in Spanish) Centres cater to the rural sector, and within the SNA Educa [SNA Educates] network they administer 20 establishments; 19 of them in the technical-vocational category and one in the humanistic-scientific modality. These establishments educate a population of close to 10,000 students, 50% of whom are residents, mostly from rural areas.
- Other private training initiatives stand out in terms of quality and coverage, such as INACAP, with some 120 thousand participants in training in 2014, and DuocUC, with 85,783 enrolments in 2015 in technical and vocational training.
- INACAP has developed a qualifications framework for its own use, as did the mining industry for its production chain. Coordination in these areas would be desirable.

VT FINANCING:

- The “Franquicia tributaria” programme is a principal source of funding for public policy on training. It enables contributing enterprises to deduct expenditure related to training and/or labour skills evaluation and certification for an amount of up to 1% of annual taxable wages.
- Companies can administer the “franquicia tributaria” (tax exemption) directly or they can do it through an Intermediate Technical Agency for Training (OTIC), which acts as an intermediary agency with SENCE. Training can be carried out directly by the company, or by hiring the services of a SENCE-accredited Technical Training Agency (OTEC). In both cases, SENCE must pre-approve the courses to be delivered.
- In 2014, investment in training through the tax exemption exceeded USD 241 million.
- Private investment in formal education is high and the debate on funding for education is a key topic in the current context. In some cases it has been found that higher tariffs do not necessarily represent higher returns for graduates.

- Financing funds include specific demand-driven programmes focusing on vulnerable populations and financed by the national budget.
- In some industries such as mining, fruit for export and winemaking, the private sector invests in capacity building, frequently on its own account and at other times, in coordination with prestigious think tanks such as Fundación Chile. It would be desirable for the public sector to support and build capabilities in order to replicate these cases for the benefit of other sectors with growth potential.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- There is a need to strengthen opportunities for social dialogue on training, both reinforcing and reproducing the role played by ChileValora and in the rest of the vocational training system.
- ChileValora has achieved notable progress in forming over 50 tripartite social dialogue panels in 21 sectors and 47 sub-sectors of the economy, in order to address the labour skills system which has afforded it full legitimacy and is generating contributions to the training system for work in general.
- Mechanisms used to identify training demands and to provide support and follow-up could increase the engagement of employers and workers in order to boost their relevance.
- Strengthening dialogue implies providing increased training for stakeholders so that they can improve their understanding of their roles and in order to debunk previously-held ideas on issues such as the role of trade unions, productivity and competitiveness and national capacity-building as a shared priority.

SPECIFIC SOURCES CONSULTED

Data on “Training for Work” are taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Educación técnico profesional en Chile [Technical and Vocational Education in Chile]. IDB 2015
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COLOMBIA

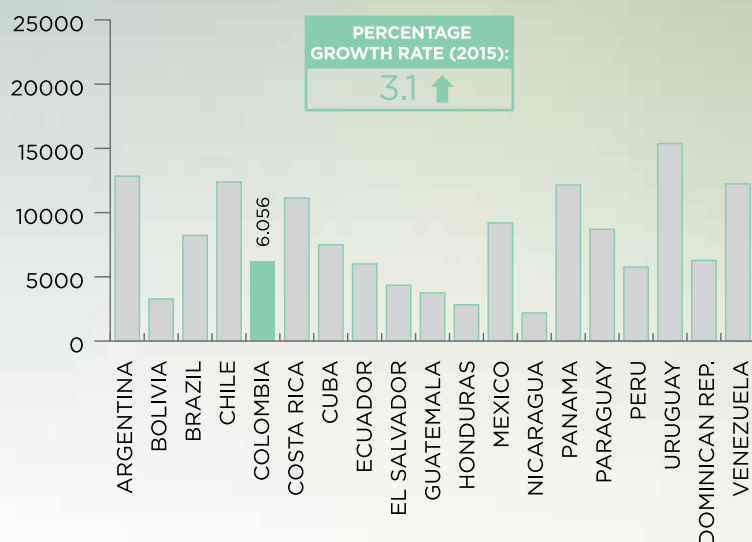


COLOMBIA

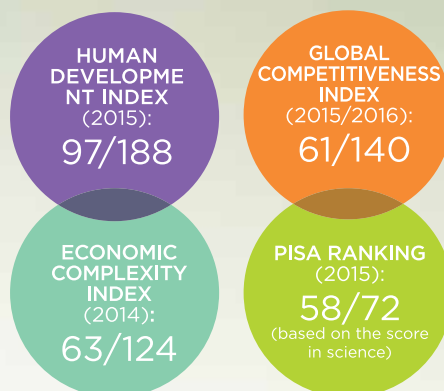


GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
48.654

POVERTY
(2015):
27.8%

LABOUR INFORMALITY
(2015):
55.5%



YOUTH:
64.29%

**YOUTH NEITHER
WORKING NOR
STUDYING**
(2015):

21.3%

**OLF - OUTSIDE
LABOUR FORCE**

**WAP - WORKING
AGE POPULATION**



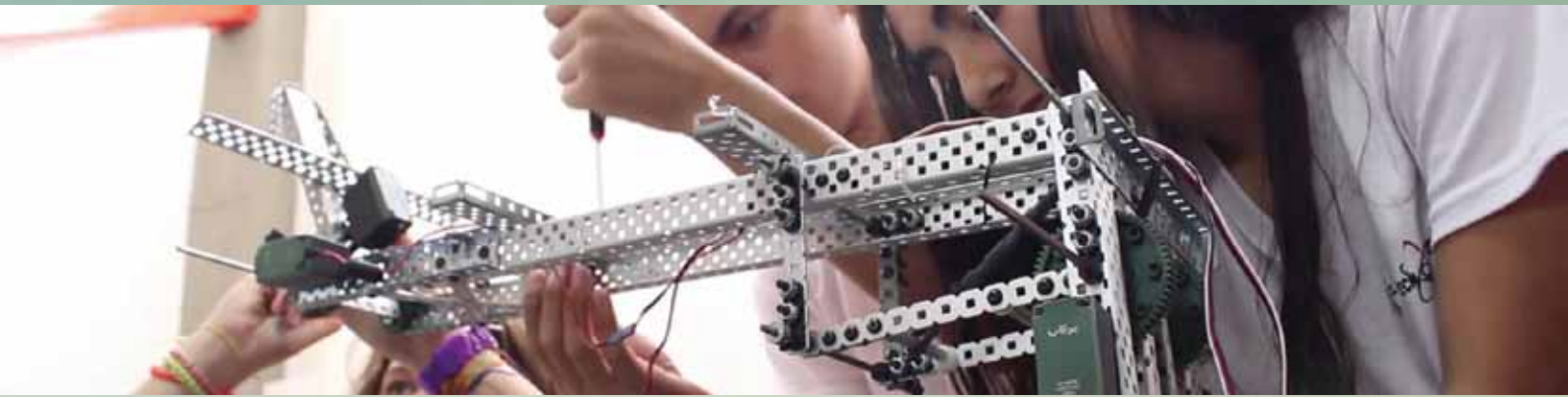
**LF -
LABOUR FORCE** (2016):
68.6%

UNEMPLOYMENT (2016):
9.6%



YOUTH (2015):
16.6%





SENA USES A MECHANISM TO CONSULT WITH THE PRODUCTION SECTOR THROUGH "SECTORAL PANELS".

Average years of schooling (2014): **7.34**

Illiteracy rate (2015): **5,8%**

Percentage of population 20 years and older who have completed secondary education (2010): **21.57%**

Population with at least some secondary education (% of 25 years of age and older): **56.34%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2013): **687.893¹**

Training for work centres: **4.146²**

VET Centres (2013): **85¹**

SENA-owned centres: **117**

SENA mobile units: **110**

SENA VT Participants (2016): **7.143.250**

Women: **3.964.846**

Men: **3.175.404**

Apprentices: **345.206**

Percentage of companies which find it difficult to fill vacancies (2015): **47%**

THE MINISTRY OF LABOUR IS SETTING UP A LABOUR MARKET OBSERVATORY (ORMET) AND IS WORKING ACTIVELY ON TRAINING POLICIES AND COMPETENCY RECOGNITION.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Colombia has a clear policy on the development of human resources. The Council for Economic and Social Policy, or CONPES, in Spanish, has designed a Strategy for Human Resources Management,³ which includes the design and implementation of a National Qualifications Framework, a labour skills model for the production sector, the promotion of relevance in training human talent according to the competencies approach and the creation of a National System for Labour Skills Certification.
- There is a great deal of activity in relation to defining policies and vocational training actions, both by the Ministry of Labour and by SENA, with the participation of employers and workers.
- The Ministry of Education is promoting the establishment of a National Tertiary Education System (SNET), with a view to organizing a new plan for the educational structure, ensure and promote quality in third-stage education, and bring together in one system agencies, strategies and instruments which have so far been working separately. The qualifications framework is part of this initiative.
- The qualifications framework is being designed. The Ministry of Education, together with the UNDP and SENA, has put in place pilot applications in eleven sectors for the development of qualifications that feed the framework. Inter-agency coordination efforts are carried out.
- Employers, workers and the government have a highly favourable perception of SENA. Its positive image is one of the best in public administration and its role in settings such as production development, access to training and employment and its contribution to the peace process are widely recognized.
- SENA uses a mechanism to consult with the production sector through “sectoral panels”, which identify profiles and carry out follow-up of outcomes.
- There is an opportunity for coordination between public and private providers. Private training providers have been grouped in ASENOF and actively seek means of coordination.
- The Ministry of Labour is setting up a Labour Market Observatory (ORMET), which uses statistics provided by job brokerage offices and is working actively on training policies and competency recognition.
- SENA, the Ministry of Education and the Ministry of Labour have developed exercises used to forecast demand. National or sectoral analyses of manpower gaps are conducted.
- SENA has worked extensively on developing distance education with the use of ICTs and offers one of the widest ranges of distance education in the region.
- Training is not isolated from policies on science and technology and productivity.
- There are public-private partnerships to expand training coverage, the recognition of programmes and the response to new sectors.²
- Training programmes for the informal sector are led by the public sector through SENA. Youth receives special attention through targeted programmes.
- There are SENA-based programmes to foster the creation of enterprises, such as the Emprender programme, as well as to encourage innovation.

GAPS AND NEEDS

- The gap in education persists. Expected school retention for the poorest segments is 6 years, while for the more affluent it is 12 years. Enrolment in third-stage education is only 9% for the first, compared to 53% for the latter.⁴
- Great efforts are needed in order to connect schools and third-stage training institutions with local employers, and to ensure that teaching and the curriculum address the skills and competencies required for employment and growth.⁴
- There are currently about 288 tertiary education institutions and only 13% specialize in vocational training programmes.
- Of the total number of students who attend secondary education (grades 10 and 11) only 24% choose technical or vocational training programmes.⁴ The rest choose “academic” courses.
- There are no common standards governing the training offered by SENA and MEN (the National Ministry of Education), or by private vocational training providers. Work is being carried out at present on a coordination mechanism through a National Framework.
- The quality of private training is uneven. SENA exercises some control through the recognition of programmes, but this is still in the early stages.

- Coordination between the Ministry of Labour and SENA in relation to tools such as employment services, occupational classification and the certification process is still under construction.
- In 2015, 47% of employers said they found it difficult to fill vacancies.
- Higher education is required for 80% of the vacancies that are difficult to fill (technical, technological or university).⁵
- Intensive training in technology and complex skills is mostly offered by SENA and a few other tertiary education institutions.
- Legislation which modified SENA's funding may have discouraged its participation in the financing of training programmes for technological innovation.

III. General overview of VT

VT SUPPLY:

- In third-stage education, only 13% of the total number of institutions offers vocational training programmes; a total of 3,514 institutions, in addition to SENA.
- SENA is a national public institution answering to the Ministry of Labour and provides 70% of third-stage technical and technological training.
- The MEN has estimated that there are 1.1 million students in grades 10 and 11 of secondary education. Only one in four chooses the training for work modality during that period.
- There are no means of coordination or recognition of qualifications yet in secondary education, covering public and private providers and formal education levels.
- SENA reports that it catered to 7.1 million students in its various courses, both face-to-face and distance. This includes participation in short courses. Currently, 57% of the participants are women.
- The private supply of training is varied and heterogeneous; quite a few private training institutions are members of ASENOF.
- There are some 3,500 training for work institutions, in which just over 400 thousand students enrolled in 2015.⁴

VT FINANCING:

- As from the promulgation of Decrees 850 and 939 in 2013, most public funding focuses on SENA, which thus receives 1.4 percentage points of the Income Tax for Equity (CREE) on the profits of companies (8%). In recent months it has been announced that the government proposes to review these decrees.
- SENA enters into partnerships with regional and local governments in order to add resources which can help expand its coverage.
- SENA does not charge for tuition or participation costs. The free training it provides is based on criteria of equality and access. This no-cost policy enables it to reach poor communities and vulnerable populations.
- The technical and technological education provided by MEN is usually free for participants, who occasionally share the cost of training materials.
- Private training is financed mainly by payments made by participants in their programmes.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- SENA's Tripartite Board of Directors opens its doors to the participation of social stakeholders. In addition, linking mechanisms have been implemented through "sectoral panels", which affect training and outcome evaluation.
- In 2010, CONPES established a strategy for human talent development and set up an inter-agency commission to this end, basically made up of several ministries and SENA. The engagement of social stakeholders in this strategy would be desirable.
- Private actors are grouped in ASENOF and they have been gaining in significance, but there are still no clear mechanisms for coordination and/or quality assurance promoted by the public sector.
- Public-private partnerships have been used repeatedly by SENA as a good way to expand its coverage and relevance.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” are taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Reviews of National Policies for Education: Education in Colombia. OECD 2016
- 2 - National Ministry of Education [MEN]. OECD -Colombia education and skills accession policy review: Country background report. 2015.
- 3 - CONPES Paper 3674. 2010. Lineamientos de política para el fortalecimiento del Sistema de formación de capital humano [Policy guidelines to strengthen the human capital training system].
- 4 - Sistema de Información de Educación para el Trabajo y el Desarrollo Humano [Information System for Education for Work and Human Development]. SIET. Ministry of Education 2015
- 5 - Encuesta capital humano ANDI [Human Capital Survey]. 2016

COSTA RICA

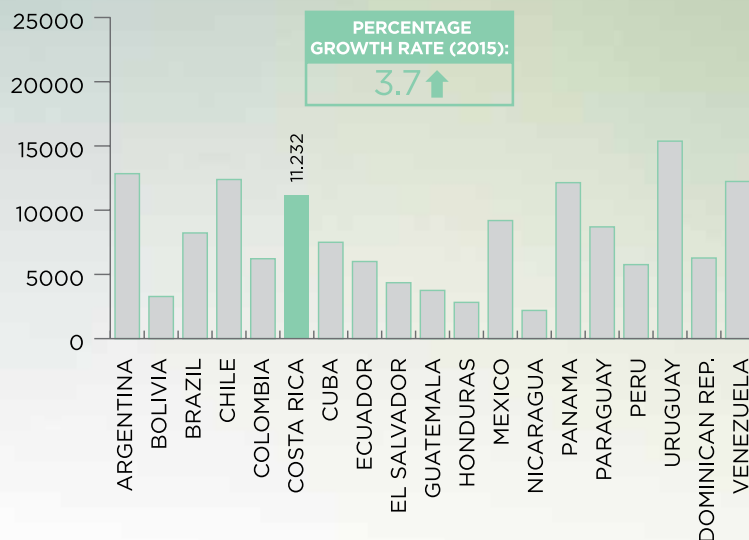


COSTA RICA

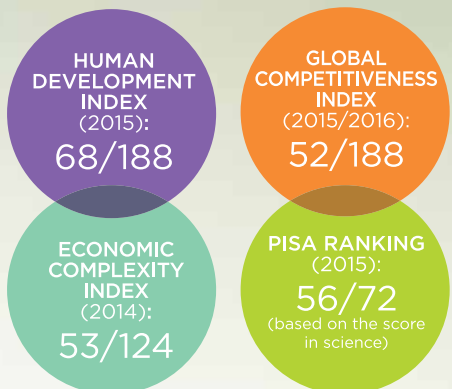


GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
4.857

POVERTY
(2015):
18.6%

LABOUR
INFORMALITY (2015):
43.2%



YOUTH (2013):
35.8%

YOUTH NEITHER
WORKING NOR
STUDYING
(2016):

20.7%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):
61.6%

UNEMPLOYMENT (2016):
9.5%



YOUTH:
22.8%





COSTA RICA HAS DESIGNED A NATIONAL STRATEGY WHICH GIVES PRIORITY TO TRAINING FOR YOUNG PEOPLE AND WOMEN.

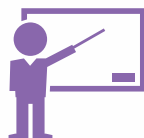
Average years of schooling (2014): **8.4**

Illiteracy rate (2015): **2.4%**

Percentage of population 20 years and older who have completed secondary education (2012): **13.65%**

Population with at least some secondary education (% of 25 years of age and older): **50.6%**

EDUCATION



TRAINING FOR WORK

VET Enrolment (2014): **98.000¹**

VET Centres: **81¹**

Public training institution: **INA**

INA-owned centres: **60**

Total number of instructors: **1.367**

VT Participants (2016): **132.850**

Women: **73.348**

Men: **58.502**

Apprentices: **289**

Percentage of companies which find it difficult to fill vacancies (2015): **46%**

INA AND SOME LEADING SECTORS IN AREAS AS ENVIRONMENT AND CONSTRUCTION TECHNOLOGY HAVE DEvised PROSPECTIVE STUDIES IN ORDER TO ANTICIPATE TRAINING DEMAND.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Vocational training and technical education, the two main sources for training for work, are widely recognized as key factors in economic development and social cohesion. Investment in education as a percentage of GDP is high (6%), exceeded only by some of the Nordic countries and New Zealand. Educational achievements should be more in line with this fiscal effort.
- Costa Rica has designed a National Production and Employment Strategy, which gives priority to training for young people and women, especially those who have not been able to accumulate sufficient human capital to achieve quality inclusion in the labour market.²
- The strategy strives to foster the effective engagement of companies and the development of on-the-job apprenticeships. This must be offset against the fact that job informality is very high and mainly affects women.
- The government has met the challenge of joining the OECD, which implies improving its human talent development strategy. Among other issues, this includes improving educational achievements and developing mechanisms such as the National Qualifications Framework and the development of an apprenticeship programme.
- An inter-agency commission was set up for the Implementation and Monitoring of the National Qualifications Framework for education and technical and vocational training, answering to the Ministry of Public Education (MEP, in Spanish).
- A technical team was formed with representatives from the ministries of education and labour, the National Council of Rectors, the Union of Chambers and Associations of the Private Business Sector, the Private Universities' Rectors Unit and the INA. This team has already developed a framework proposal.
- In 2016, INA's distance training courses were attended by more than 44 thousand students. This is a growing area with good expectations for the modernization of training.
- In some of INA's programmes and those of the Technical and Vocational Schools (CTP), it is possible to opt for a 320-hour in-company internship as part of the training, but this is not included within the concept of quality learning.
- INA and some of the leading sectors in the areas of the environment and construction technology have devised prospective studies in order to anticipate training demand. This has led to a significant volume of knowledge on demand anticipation, which the INA has used in order to collaborate with other training institutions in the region.

GAPS AND NEEDS

- In terms of retention and achievement, only 40% of the active population completes secondary education. Segmentation is perceived and there is a positive correlation between educational achievement and socio-economic status. According to the OECD,³ despite high investment in education, results are poor.
- The technical and vocational education provided by the Ministry of Education covers three areas (commercial and services, industrial and agricultural) and does not appear to have strong links with industrial development or the priority sectors, nor with vocational training offered by other providers.
- Vocational training could be included in production development policies much more visibly and effectively. The INA could play a more active role in debates on human talent and production development. This is an area which needs to be addressed.
- There is a proposal for legislation to reactivate the coverage and participation of companies in apprenticeship training programmes, but there are a number of issues to be resolved before this leads to a quality apprenticeship programme.
- The qualifications gap is reflected in access to jobs: 63% of unemployed people have no qualifications. About 50% of the business sector indicates that vacancies requiring mid-level technical skills are the most difficult to fill.⁴
- Mechanisms could be mainstreamed with a view to conducting regular surveys of business requirements; those which exist at present appear to be inadequate for this purpose.⁵
- There are INA-sponsored certification processes which facilitate the recognition of prior learning, finding jobs and access to training, but they could be applied more widely.

- Production development policy could focus on increasing Costa Rica's participation in value chains by providing training in more complex skills, which would lead to inclusion in higher value-added processes.⁵
- Synchronization which provides for the application of the lifelong education concept can be strengthened. Training provided by the Ministry of Education, INA and private institutes lacks a joint guiding framework and bases to ensure nationwide quality. The national qualifications framework has not yet been implemented and coordination initiatives are fragmented.³
- INA's accreditation service is a good way to start bringing together private providers within a quality framework which is not yet visible.
- The country's context in relation to innovation and export diversification could be better coordinated, with VT response in terms of Innovation or Technological Development Centres.

III. General overview of VT

VT SUPPLY:

- The MEP provides 56 technical programmes. They are delivered by the 135 technical and vocational schools, in the following areas: 8 in agriculture, 24 in industry and 25 in business.
- Enrolment in the CTPs has doubled since 2003; however, it does not exceed 20% of the total number of students in secondary school.
- In 2014, the INA, with 54 training centres, offered 246 programmes in a number of different sectors, such as: industry, agriculture, and trade and services, with the following qualifications: qualified personnel, technical personnel and specialized technical personnel.³
- Close to 28% of the INA's programmes include supervised training practice, and 2% include dual training. An on-the-job component could be added to most of the INA's programmes.
- INA has an advisory unit for gender equality and equity, which develops institutional policy on these issues. In 2016, 55% of the participants were women.
- No information was available on the number, diversity and quality of the private supply of training.

VT FINANCING:

- The two main sources of public funding are the MEP and the INA's funds.
- The INA is funded by a tax of 1.5% on the payroll and 0.5% in the agricultural sector.
- Investment in education in Costa Rica is equivalent to 7.36% of GDP and in Latin America, exceeds per capita investment in Brazil and Chile. At the secondary school level, investment per student reaches approximately USD 3,600.⁶

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- The INA's Board of Directors is tripartite and actively participates in institutional management. It would be desirable to design a strategic mid- and long term vision of development in order to include issues such as the engagement of INA in lifelong learning and in economic and social development within the framework of a productive transformation in Costa Rica.
- There are several means of consultation and participation in the country, but no aggregate or systematic results which could then be effectively included in strategic planning for the future of vocational training.⁴
- INA's Centres could systematically implement organized mechanisms to conduct surveys among employers and workers regarding their immediate sphere of action.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” are taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Evolución de los indicadores de la Educación Técnica Profesional en Costa Rica en el periodo 2000-2014 [Evolution of Technical and Vocational Education Indicators in Costa Rica, 2000-2014]. MEP, Costa Rica, 2015. http://www.mep.go.cr/indicadores_edu/BOLETINES/ET_15.pdf
- 2 - Estrategia Nacional de Producción y Empleo [National Production and Employment Strategy]. Costa Rica 2015
- 3 - Revisión OCDE sobre la educación en Costa Rica [OECD Review of Education in Costa Rica]. 2015
- 4 - <http://presidencia.go.cr/>
- 5 - CONARE, 2011
- 6 - Estudios socioeconómicos [Socio-Economic Studies]. Costa Rica OECD. 2016

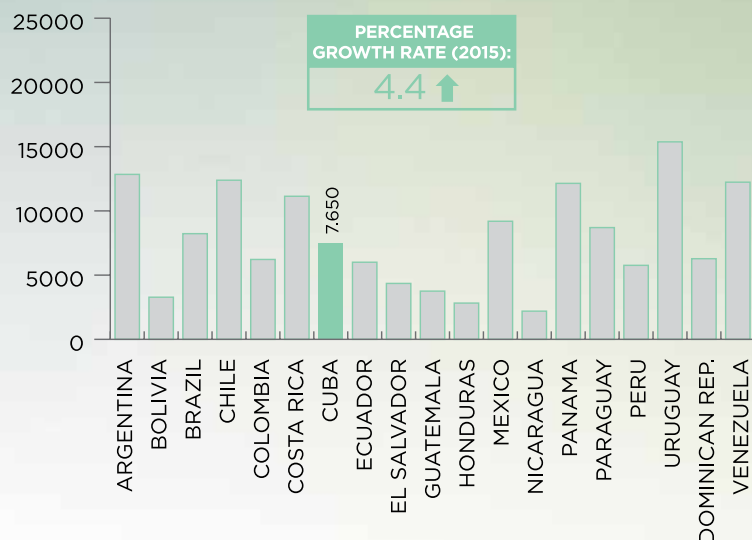
CUBA



CUBA

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

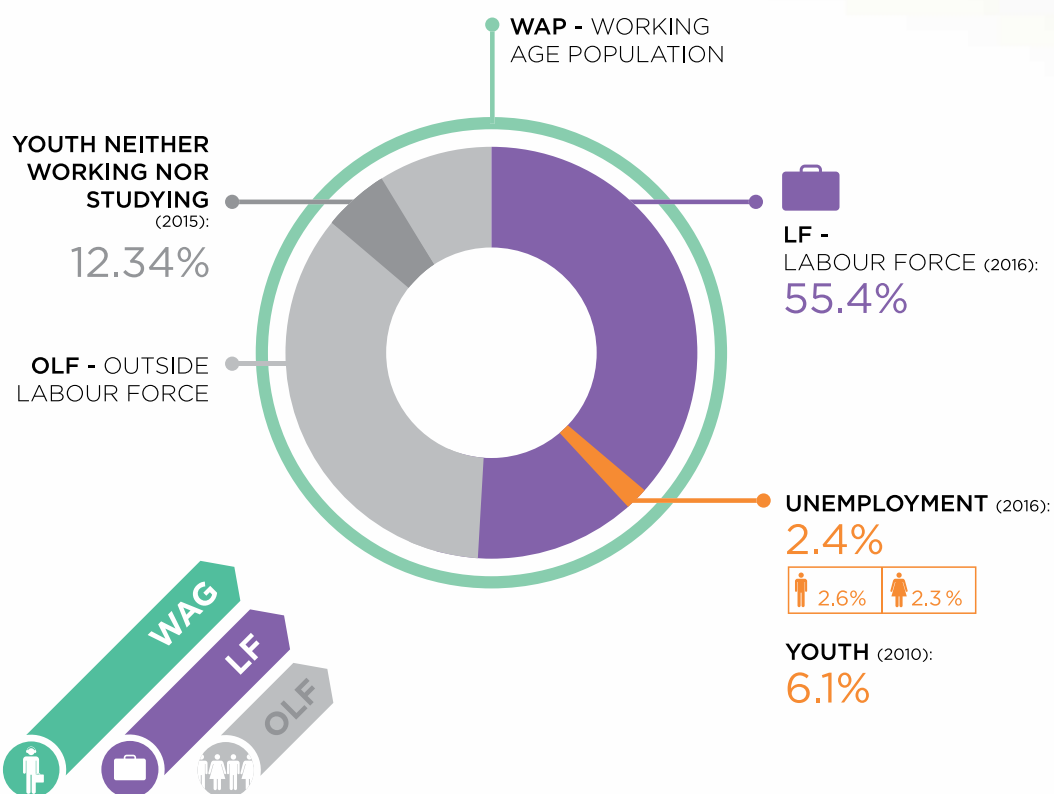
HUMAN
DEVELOPMENT
INDEX (2015):
67/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
79/124

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
11.392





CUBA'S NATIONAL EDUCATION SYSTEM IS CONCEIVED AS A COORDINATED SET OF EDUCATIONAL LEVELS AND TYPES OF EDUCATION.

Average years of schooling (2015): **11.5**

Illiteracy rate (2015): **0.3%**

Population with at least some secondary education (% of 25 years of age and older): **76.5%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2016): **197.581¹**

Women (2016): **76.071¹**

Men (2016): **121.510¹**

Secondary Technical VT (2016): **119.486¹**

VET Schools (2016): **432¹**

MINED Schools (2016): **374¹**

THE POPULATION HAS THE RIGHT TO RECEIVE THE SERVICES PROVIDED BY THE VARIOUS INSTITUTIONS FREE OF CHARGE.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Cuba's National Education System is conceived as a coordinated set of educational levels and types of education. Primary education comprises preschool and primary education. The secondary level includes basic secondary education, pre-university education and vocational and technical education. The tertiary level contains higher education.
- The population has the right to receive the services provided by the various institutions free of charge.
- The purpose of vocational and technical education is for students to acquire the skills, practical knowledge and understanding necessary for employment in a specific occupation or trade. It prepares the mid-level qualified workforce or skilled workers that the country requires by means of courses delivered at polytechnic centres.
- Students graduate in a wide range of specializations delivered in courses between two to four years long, according to whether enrolment was after the 9th or the 12th grade.
- In addition to gaining access to the labour market, mid-level technicians can also enter higher education and enrol in degree courses relating to their specialization.
- The informal sector, vulnerable groups and youth receive targeted attention.

III. General overview of VT

VT SUPPLY:

- The Ministry of Labor and Social Security prepares, proposes and the plans for vocational training and job placement, vocational and university technical education.
- In addition to its vocational and technical education, in Cuba, training for work processes are overseen by the Ministry of Labour and Social Security, which regulates vocational training for workers.
- Training is defined as a permanent and planned process, conceived as an investment in development carried out by business enterprises with the purpose of helping their workers acquire and improve their workplace competency, so that they are able to respond to the constantly changing demands of the production process or for the provision of the services of which they are a part.
- Training supposes an idea of apprenticeship as a process which brings about outcomes leading to changing attitudes and behaviours. To this end, education faces new demands, which arise from the development of the enterprises where individuals work, subject to constant changes. This means training workers for change and addressing it as a process of transformation in their attitudes, habits and skills, in order to cope with the work activity for which they are preparing.
- Training is a type of teaching based on problem solving, which must prepare individuals to face new and diverse situations and search for increasingly creative solutions.
- Training should aim to develop labour competency, defined as a set of competencies, skills, theoretical knowledge and attitudes that are applied by the worker in the performance of his or her occupation or position, in accordance with the principle of proven suitability and the technical, productive and service-related requirements, as well as requirements related to quality, which workers must comply with in the proper performance of their functions.

SPECIFIC SOURCES CONSULTED:

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Anuario Estadístico de Cuba 2016 [Cuban Statistics Yearbook, 2016]. Information from the following column was used (2015/2016). . <http://www.one.cu/aec2015/18%20Educacion.pdf>

ECUADOR

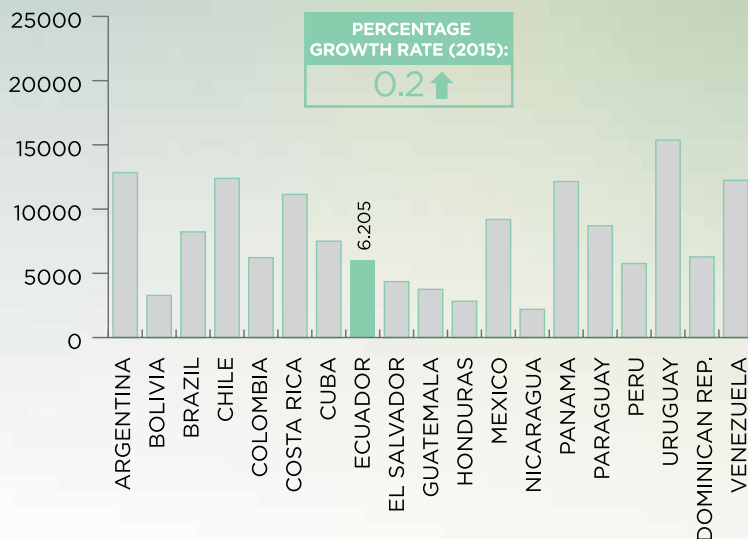


ECUADOR



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):

16.385

POVERTY
(2014):

29.8%

LABOUR
INFORMALITY (2015):

31.1%

30.4% 32%

YOUTH (2013):

63.4%

YOUTH NEITHER
WORKING NOR
STUDYING
(2016):

18.4%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):

69.59%

UNEMPLOYMENT (2016):

5.4%

4.2% 7%

YOUTH:

10.5%





SETEC USES A NUMBER OF METHODOLOGIES IN AREAS SUCH AS THE DEVELOPMENT OF COMPETENCY PROFILES, TRAINING PROGRAMMES AND CERTIFICATION PROCEDURES.

Average years of schooling (2014): **7.6**

Illiteracy rate (2015): **5.5%**

Percentage of population 20 years and older who have completed secondary education (2013): **21.23%**

Population with at least some secondary education (% of 25 years of age and older): **39.8%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2014): **1.877.666**

Training institutions: **SETEC/SECAP**

SETEC Participants: **5.946¹**

Participants certified: **21.697²**

SECAP Participants (2016): **57.771³**

Women: **28.849**

Men: **28.922**

IN 2016, THE STRUCTURE OF VT IN THE COUNTRY WAS REFORMED; WITH THE CREATION OF THE TECHNICAL SECRETARIAT FOR THE NATIONAL QUALIFICATIONS SYSTEM AND VOCATIONAL TRAINING.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Ecuador's GDP experienced an average growth of 4.3% between 2006 and 2014, driven by high oil prices and external financing flows. During that period, poverty dropped from 37.6% to 22.5%.
- The country now faces the huge challenge of maintaining these achievements despite the fall in oil prices and the revaluation of the dollar. In recent years (2014-2016), urban unemployment increased from 4.5% to 6.5% and urban underemployment increased from 11.7% to 18.8%.
- In terms of knowledge development, the scores obtained by Ecuadorian students improved greatly from the TERCE (2006) test to the TERCE (2013) test, both in fourth and seventh grades.
- SETEC is the Technical Secretariat for the National Qualifications System and Vocational Training (SNCCP, in Spanish). The system's governing body is formed by the Ministry of Labour, the Ministry Coordinating Knowledge and Human Talent (MCCTH) and the Ministry of Production, Employment and Competitiveness.
- The SETEC programme provides for work in key areas such as the forecasting of demand, competency-based training, certification, teacher training, inclusion in productivity and innovation policies.¹
- The synchronization of SETEC and MCCTH opens up a new vision of human development for the effective modernization of vocational training.
- The SNCCP provides for the functions of standardization, training, quality assurance and evaluation. One of its key tools is the National Qualifications Catalogue.
- One of SETEC's functions is organizing the registry of vocational training providers and recognizing assessment bodies. It is also responsible for generating methodological guidelines for the standardization of competencies and for the development of training programmes.
- SETEC uses a number of methodologies in areas such as the development of competency profiles, training programmes and certification procedures.
- The Ecuadorian Vocational Training Service (SECAP) is the national training institution, which, since the reform, answers to the System and implements actions involving vocational training and competency certification.
- The Ministry of Education provides vocational training and language teaching, by means of Occupational Training Centres. Courses include vocational improvement, extracurricular activities and learning or improving the native or a foreign language.

GAPS AND NEEDS

- The achievements in education recorded during the ten-year period from 2004 to 2014 need to be kept up, despite circumstances in which financial resources have dwindled.
- Coordination needs to occur between education and vocational training policies, with instruments which facilitate mobility and the recognition of different educational achievements. Means of accreditation between formal education and vocational training do not exist.
- Developments such as the national qualifications catalogue must continue to be underpinned in order to reduce the diversity of the training provision in relation to quality levels.
- In this sense, there should be a registry of institutions offering training for work.
- There is no aggregate statistical information available on the results, effects and impact of training.
- It is essential to set in motion a mechanism for the anticipation of demand, with the participation of social stakeholders. The MCCTH is moving forward in the design of a prospective agenda for 2035.
- Catering to vulnerable populations such as youth and unemployed women, as well as ethnic minorities, implies more clearly defined inclusion in the training provision and qualifications catalogue.

III. General overview of VT

VT SUPPLY:

- A first reform of vocational training took place in 2001 and as a result, the National Vocational Training Council was established, with a Technical Secretariat. This reform also included SECAP, the public training institution, and its funding was assigned to the National Council.
- In 2011, a Technical Secretariat for Vocational Education and Training (SETEC) was established, and reformed in 2016 with the creation of the Technical Secretariat for the National Qualifications System and Vocational Training, which kept the name SETEC, answering to the Ministry Coordinating Knowledge and Human Talent (MCCTH).
- The MCCTH is working with the governing bodies for education and vocational training (Ministry of Education, SENESCYT, SETEC and SECAP) in the development of a Vocational Qualifications Catalogue (CCP), as a tool to organize vocational qualifications, which will become the focal point for a future National Qualifications System.
- The training for work supply originates mainly in technical secondary education and, in the public sector, in SECAP and SETEC.
- Technical secondary education is part of the Unified General Baccalaureate and includes technical training carried out on the basis of competencies in 36 occupational areas.
- Third stage or post-secondary technical and vocational training is provided in Higher Technical Institutes.
- The adjustment and updating of the Qualifications Catalogue, and its links with formal education levels are matters which are still pending.
- SETEC has posed a strategic vision which promises to organize the supply of training for work through a registry of training providers and certifying bodies.
- SECAP is now a public training operator which must certify the training it provides before SETEC, meeting the required quality standards.

VT FINANCING:

- In addition to the general budget funds invested in technical secondary education by the Ministry of Education, in 2015 SETEC's funds amounted to USD 1,832,839.
- The EuroSociAL Employment project has been working with co-operation funds on the updating of the national qualifications catalogue and, in general terms, towards the construction of a National Vocational Qualifications System.
- SENPLADES, the National Planning Secretariat, has approved a pre-investment project for the purpose of further developing methodological tools for the construction of the qualifications catalogue and its associated training.
- There is no information available on the magnitude and/or scope of private investment by companies and/or individuals in training.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- The tripartite sectoral commissions which are part of the National Wages Council have taken part in the identification of competency profiles. The development of 571 profiles for 22 sectors was reported by 31 December 2016.³
- The agreement on the organization and operation of the National Wages Council is dated 20 October 2015. Among the duties of the sectoral commissions is the revision of each sector's occupational profiles.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

1 - SETEC Information, April 2016.

2 - SETEC Statistical Report, December 2017.

3 - SECAP Information. Statistical Newsletter 2015. www.secap.gob.ec

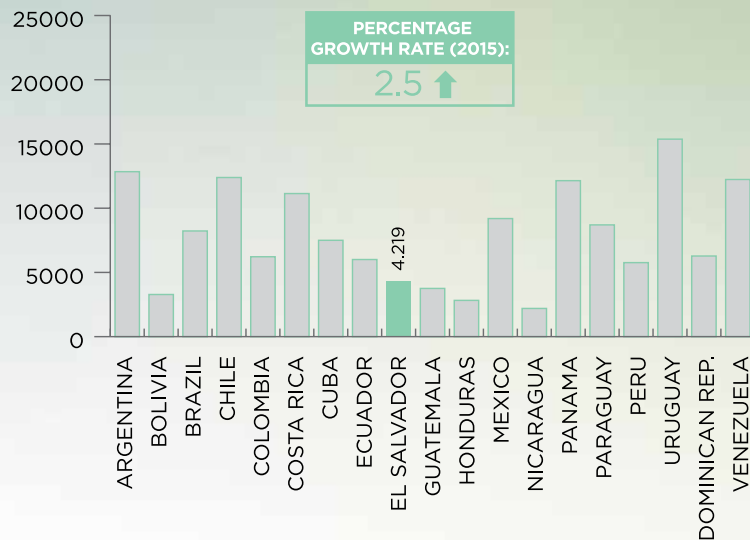
EL SALVADOR



EL SALVADOR

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

HUMAN
DEVELOPMENT
INDEX
(2015):
116/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
95/140

ECONOMIC
COMPLEXITY
INDEX
(2014):
52/124

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
6.146

POVERTY
(2014):
31.8%

LABOUR
INFORMALITY (2014):
53.9%

46.6% 61.3%

YOUTH (2013):
73.4%

YOUTH NEITHER
WORKING NOR
STUDYING
(2015):
29.9%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):
62.29%

UNEMPLOYMENT (2015):
7%

8.4% 5%

YOUTH (2015):
12.4%





INSAFORP IS THE LARGEST PUBLIC PROVIDER OF TRAINING.

Average years of schooling (2014): **6.6**

Illiteracy rate (2015): **12.4%**

Percentage of population 20 years and older who have completed secondary education (2014): **16.9%**

Population with at least some secondary education (% of 25 years of age and older): **39.8%**



EDUCATION



TRAINING FOR WORK

Public training institutions: **INSAFORP**

INSAFORP-own centres: **1**

INSAFORP-contracted centres: **103**

Contracted mobile units: **123**

Number of instructors: **2.500**

INSAFORP Participants (2016): **322.534**

Women: **154.932**

Men: **167.602**

Apprentices: **4.353**

COMPANIES AND WORKERS CAN UNDERTAKE NEW DIALOGUE EXPERIENCES IN AREAS SUCH AS THE PRODUCTION CHAINS AND THE RURAL ECONOMY.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The National Education Council has launched a plan called El Salvador Educado [An Educated El Salvador], which includes key goals in the coverage, relevance and quality of education.
- Investment in education, as projected in this plan, as a percentage of GDP, is 3.4%, whereas in Latin American and the Caribbean, the average public expenditure in education in relation to GDP amounts to 5.2%.
- In some business and government sectors, as well as in INSAFORP, analysis has been initiated of the impact of vocational training on productivity. It would be desirable for this debate to take root and give rise to significant changes.
- The Ministry of Education (MINED, in Spanish) is moving forward in the establishment of a National Technical and Vocational Education System. It has received international co-operation funds (from the FOMILENIO Project) in order to trigger reform in the design and constitution of this system.
- As a way to promote the business culture, MINED has implemented the ILO's Know About Business (KAB) programme in the third cycle of basic education and secondary school in ten schools.
- Progress is being made in actions such as linking the MINED to the Agribusiness Technological Park, which is defined as a pole for knowledge building and research. Similar links are being set up with projects such as one involving a Centre for Applied Research in Aquaculture or the Rural Enterprises in Agribusiness Programme.¹
- INSAFORP is the largest public provider of training and is funded by means of a percentage (1%) of the payroll. It offers free training to new workers and workers already in the labour market. It is part of the National Employment System, which provides a framework for the Ministry of Labour's national employment policy.
- INSAFORP has begun work on strengthening its relationship with the production sector. There is already an experience in this area involving the Empresa Centro programme in the plastic industry, which may lead the way to new partnerships.
- INSAFORP provides technical support to training institutions in order to improve the quality of their teachers. It has also developed methodologies to produce occupational profiles, curriculum designs and training assessment.
- Some of the private providers of training for work and the social inclusion originating in the Church (Polígono Industrial Don Bosco) and other sectors have significant lessons learned, particularly as regards addressing vulnerable groups.

GAPS AND NEEDS

- The human talent gap is not merely qualitative in terms of educational achievement and relevance. Youth inactivity and the dimension of the conflicts with the law that young people face as a result of the gangs known as "maras" have broad social implications.
- Average schooling is 6.6 years and illiteracy is higher in rural areas than in cities. In keeping with this, school attendance rates are lower in the rural sector.
- School attendance in secondary education is 47.1% in urban areas and drops to 27.1% in rural areas. In 2015, 10.3% of adolescents were out of the educational system.¹
- The size of the informal economy (close to 65% of the working population) is effectively giving rise to low productivity, low income and poor working conditions.²
- In fact, 29.9% of young people between 16 and 29 years of age are not part of the workforce. Within this age group, 46% report being exclusively dedicated to work.
- In the over-20 population, only 26% have completed secondary education. A UNESCO report places the illiteracy rate of persons over the age of 20 at 15.5%.³
- While the MINED does carry out activities in the field of science and technology, many of them linked to international co-operation, they should be synchronized effectively within the framework of a national vision of productive development.
- The Ministry of Labour's employment public policies need strengthening and synergy should be generated with training and occupational guidance action.
- There is a need for clear coordination between education and vocational training. INSAFORP's certificates, which are considered "non-formal education" are not recognized in formal education.
- Progress could be made in the design of a general outline which would enable a philosophy of education to be installed throughout a person's life; in this sense it is necessary to advance in the establishment of a National Qualifications Framework.

- The scope of competency certification processes is limited; this is not a general practice nor is it well-positioned in the labour market.
- INSAFORP has taken part in producing a foresight study; however, this tool should be extended over several sectors and used as a decision-making factor.
- A move should be made to overcome tensions and different opinions regarding the establishment of new institutional arrangements and the government of the Training System. Such issues erode the focus on closing the human capital gap.

III. General overview of VT

VT SUPPLY:

- Technical education offers 18 specializations at the intermediate level and 12 in the Synchronized Model for Technical and Technological Education at a higher level (MEGATEC). The update of the curriculum is less than 5 years old and the production sector was consulted when it was designed.⁴
- No data were found on the number of students in secondary education.
- INSAFORP trained 4,088 students in 2016 through the Empresa Centro work-study programme, 120,482 persons in vulnerable conditions and 202,052 on-the-job workers. INSAFORP also delivered English courses to 22,506 students, trained 51,138 in SMEs and 11,500 in management courses.
- In 2016, 48% of participants in INSAFORP's VT programmes were women.

VT FINANCING:

- Funding is essentially public and is taken from the national budget, as well as from amounts allocated to technical secondary education and higher technical education.
- There are no funding sources provided for by law, or contributions, other than INSAFORP's funding of 1% on the payroll.
- The flow of funds from international co-operation is a significant source for training and the modernization of training systems.
- The FOMILENIO II Project contains a human capital component to boost the quality of education and technical vocational training, with financing of USD 100.2 million over five years. Its goal is to improve the quality of education and bring it into line with the skills required in the labour market to increase the productivity of labour in El Salvador.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- INSAFORP's Board of Directors is tripartite in its structure and composed of three government representatives, four employer representatives and three representatives of the labour sector.
- Social dialogue on vocational training is a good practice that can serve as a base for scaling up at other local and sectoral levels.
- Companies and workers can undertake new dialogue experiences in areas such as the production chains which El Salvador is developing, including most particularly, agribusiness and the rural economy.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Plan: El Salvador Educado. Por el derecho a una educación de calidad [An Educated El Salvador. The right to quality education]. CONED. 2016
- 2 - Household Survey, 2013
- 3 - Annual Report 2014-2015. Ministry of Education. MINED. 2016 14
- 4 - MINED Report on adult learning. 2008. In: www.unesco.org
- 5 - Situación de la FP en Centroamérica y República Dominicana [The Situation of VT in Central America and the Dominican Republic]. 1998-2013. ILO. 2014.

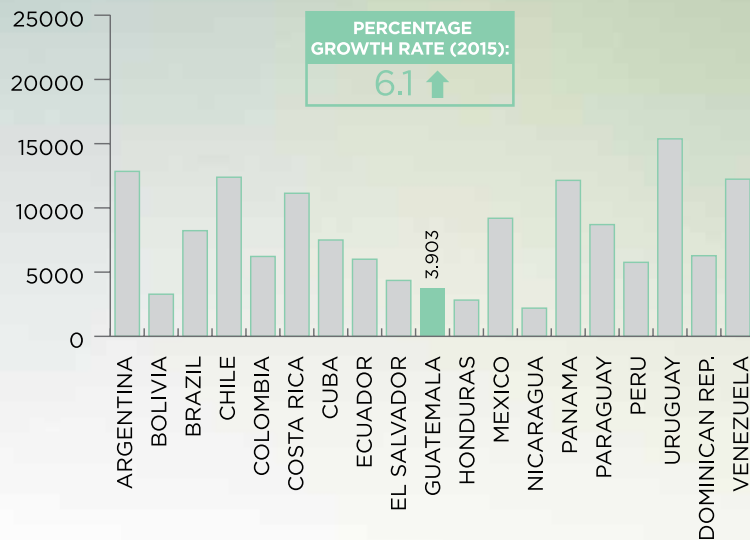
GUATEMALA



GUATEMALA

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

HUMAN
DEVELOPMENT
INDEX
(2015):
128/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
78/140

ECONOMIC
COMPLEXITY
INDEX
(2014):
70/124

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):

16.672

POVERTY
(2014):

59.3%

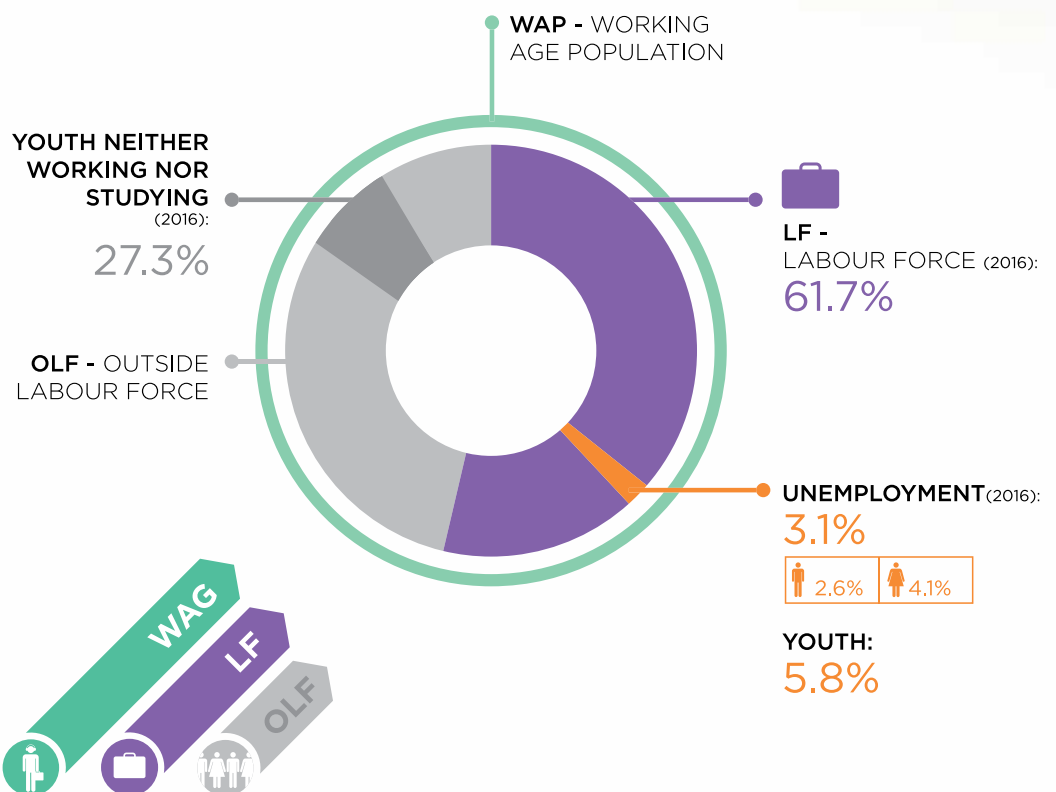
LABOUR
INFORMALITY (2016):

63.8%

66.2% 59.3%

YOUTH (2013):

81.1%





IT IS ESSENTIAL TO INVEST IN HUMAN CAPITAL FROM THE MOMENT OF CONCEPTION AND DURING THE EARLIEST YEARS OF LIFE.

Average years of schooling (2014): **5.6**

Illiteracy rate (2015): **20.9%**

Percentage of population 20 years and older who have completed secondary education (2013): **18.4%**

Population with at least some secondary education (% of 25 years of age and older): **10.9%**

EDUCATION



TRAINING FOR WORK

Public training institution: **INTECAP**

INTECAP-owned centres **27**

Contracted centres: **6**

Own mobile units: **5**

Number of instructors: **1.774**

INTECAP Participants (2016): **351.292**

Women: **141.098**

Men: **210.194**

Apprentices: **975**

Percentage of companies which find it difficult to fill vacancies (2015): **44%**

INTECAP IS THE LEADING INSTITUTION IN THE FIELD OF TRAINING, IT HAS DEVELOPED A QUALITY DISTANCE EDUCATION PLAN IN PARTNERSHIP WITH THE PRIVATE SECTOR.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The Guatemalan economy, like that of the whole region, grew moderately during the period 2001-2015, and recorded a 3.3% accumulated variation of GDP.
- Education indicators in general also improved moderately, except for some, such as the net coverage of primary education, which, after reaching 99.3% in 2009, fell steadily until it settled at 80.7% in 2015. For its part, coverage of the basic cycle (first-stage secondary education) rose from 40.5% to 46.2% in the same period and, similarly, the diversified cycle (second-stage secondary education, offering a number of occupational choices) grew from 21.3% to 24.2%.¹
- Although income distribution remained stagnant, encouraging signs of improvement were observed in certain indicators, such as life expectancy at birth and infant mortality during the first five years.
- The country's productivity matrix has focused on primary goods, to which issues relating to the environment, health and sustainability are increasingly adding value. Examples of this are found in craft products, coffee, sugar and honey.
- The National Employment Policy, "Generating safe, decent and quality jobs, 2012-2021", is an attempt to improve, among other aspects, worker employability and productivity, on a par with the improvement of production efficiency, quality and innovation.²
- The Ministry of Labour has proposed a series of lines and strategies to improve training and access to quality jobs. Low schooling, insufficient training covering only 10% of workers, healthcare coverage and social security are issues which, it is recognized, need to be addressed.
- The focal points for a National Competitiveness Agenda have been established, and include a healthy, educated, trained and inclusive society, complemented by a human capital strategy, which is essential for development.
- INTECAP is the leading institution in the field of training. It has made progress in training for industry, tourism and the food sector. In addition, it has developed a quality distance education plan in partnership with the private sector; offered training opportunities to agribusiness poles such as the sugar industry, and ventured into technological development centres related to the meat industry, information and communication technology, and others.
- There are organization poles in the private sector, such as chambers of industry, trade and services, export, banking and insurance, agriculture, and construction, which carry out activities and make proposals for development. These can provide a good way to underpin policies on productivity, competitiveness and sustained human development.

GAPS AND NEEDS

- For the country to achieve sustainable development, it is essential to invest in human capital from the moment of conception and during the earliest years of life. In 2014, the infant mortality rate before the first birthday was 19 per 1000. In addition, 68% of the population is under 30 years of age.
- Three out of four jobs are informal, and young people are the most heavily affected.
- The production profile in Guatemala has in the manufacturing industry a good prop which contributes significantly to GDP; however, most of the population is primarily employed in agriculture and trade, amounting to 38% of the national sectoral activity.
- Its human development index is the lowest in the Latin American region. The challenge posed by ethnic inclusion is high – 40% of the population is indigenous and only 13% of that group speaks Spanish.
- The poor quality of education and educational results restricts the growth of productivity. Only 18.9% of the population aged between 19 to 22 has finished high school.
- Educational attainment is fragmentary. The rural population and people in low socio-economic groups endure the highest out-of-school rates. Whereas 93% of adolescents in the upper stratum enrol in secondary education, only 38% of those living in rural areas do likewise. Of these, half of the upper stratum students finish their studies, compared to only 9% of rural inhabitants who do.
- Results of Guatemalan students' TERCE tests were ranked below the regional average in the areas of Reading, Mathematics and Science. In the case of Writing, they scored above the regional average.
- According to the Ministry of Education (MINEDUC, in Spanish), 91.5% of final year graduates did not perform satisfactorily on standardized mathematics tests, while 74% also performed poorly in reading tests. A trap is therefore in place that hinders passage through and completion of secondary education, and it is rooted in the social disadvantages of origin and place of residence.

- About 10% of workers report having received some form of training in the workplace. This arises from the limitations posed by the population's low educational level, as well as by the lack of incentives to companies to invest in training, which restricts the application of good management practices aimed at raising levels of organizational productivity.
- All of this is reflected in low work productivity resulting in an extensive informal sector and in activities involving basic manual labour. The Ministry of Labour estimates that the contribution of the labour factor to the growth of productivity is 12%, while the contribution of physical capital is 47%.
- The country's poor educational attainments are linked to precarious working conditions and low-level jobs which are often informal (7 out of 10 persons working in 2015). This is a burden which affects the possibility of establishing enterprises in sectors which demand more complex skills.
- The education system focuses on the coverage of basic and secondary education, but there is little attempt at coordination or life-long training.
- INTECAP's provision of training is not recognized by formal education, except at the technical education level, which is not the most accessible, owing to the low educational attainment which is usually available.
- Making use of scale and innovation in the supply of training, INTECAP has approached social groups in rural production chains in order to meet their training needs with its mobile training provision.

III. General overview of VT

VT SUPPLY:

- In 2015, there were 819,340 students enrolled in basic secondary education and 401,312 at the diversified stage.¹
- For 2016, INTECAP reports: 351,292 students, of whom close to 24,000 were trained through distance education with the use of ICTs.
- There are other, private initiatives whose figures are unknown, but their levels of coverage are low.

VT FINANCING:

- Education receives a percentage equivalent to 3.1% of GDP (2015) for secondary education, which contains a basic and a diversified cycle. Of the total resources invested in education in 2015, 8% was spent on the basic cycle and 4% on the diversified cycle.³
- INTECAP is funded by a 1% payroll tax, an employers' contribution which reached just over USD 50 million in 2015.
- International co-operation has played a key role in funding for infrastructure and the development of programmes, particularly in technology transfer. A paradigmatic case is the linkage established with South Korean co-operation, through KOICA, which together with INTECAP has set up an ICT Centre, one of the best in the region as a benchmark for distance training and cutting-edge computer and digital technologies.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- INTECAP's Board of Directors has twelve members. Three from the public sector, six representing employers and three from trade union organizations. This is virtually the only instance of tripartite social dialogue on training and technical capacity-building.
- In accordance with INTECAP's Organic Law, it operates nationally as a "harmonious vehicle between the private and the public sector, fostering closer working relations and co-operation between the two sectors, as well as promoting and encouraging an increase in productivity in all of its aspects and at all levels and addressing the development of human resources".
- When new programmes are produced, INTECAP usually organizes consultation mechanisms and technical conversations with employers and workers, actions which have made it possible to update technical standards for work, training content, contextualized work profiles, the training provision available and standardization and work assessment tools.
- The entrepreneurial sector, workers and the population as a whole recognize INTECAP as the institution which, in essence, is the best reference point for technical training in the country.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Perfil educativo Guatemala [Guatemala’s Educational Profile]. SITEAL. 2014.
- 2 - National Employment Policy. Generación de empleo seguro, decente y de calidad 2012-2021 [Generating safe, decent and quality jobs, 2012-2021]. Ministry of Labour. 2015.
- 3 - Ministry of Education. www.estadistica/mineduc.gob.gt

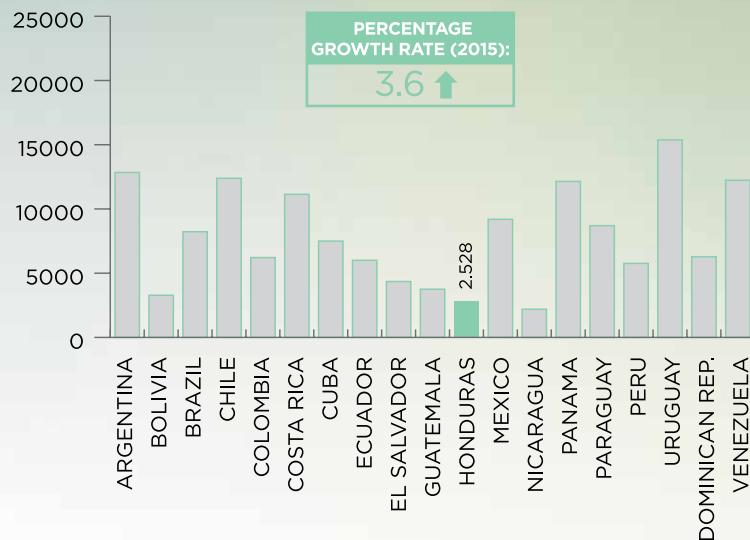
HONDURAS



HONDURAS

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



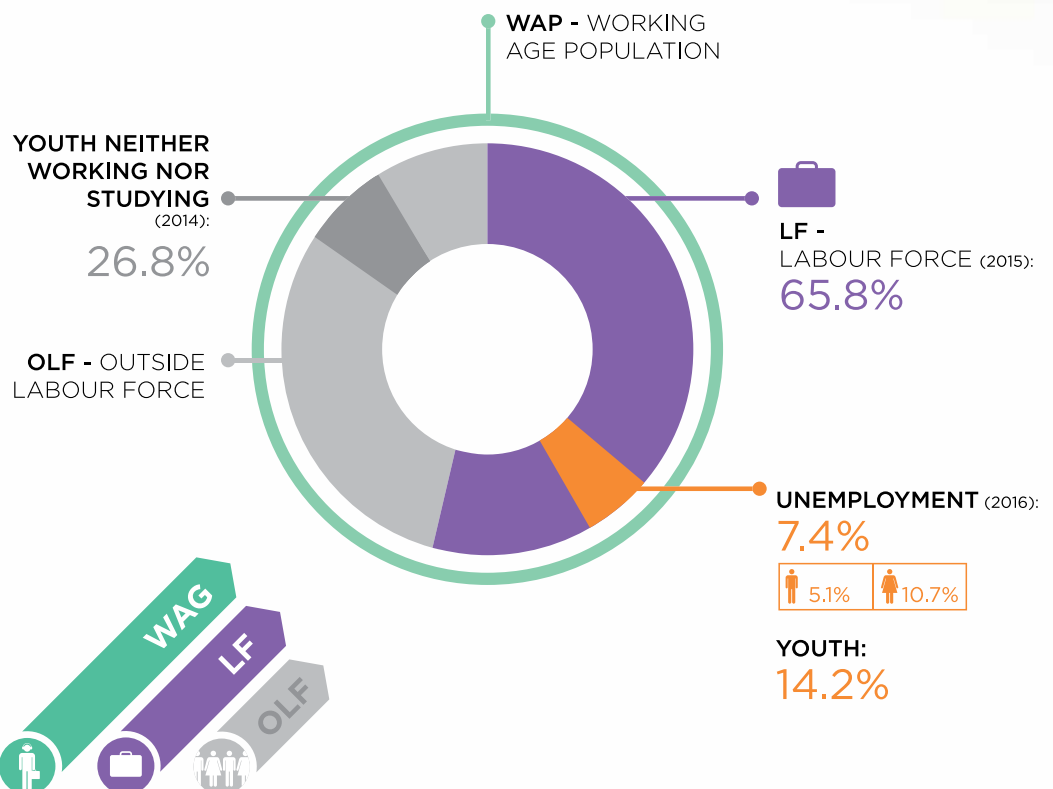
POPULATION
(IN MILLIONS, 2016):
8.189

POVERTY
(2016):
62.8%

LABOUR INFORMALITY (2014):
50.8%



YOUTH (2013):
78.4%





THE PLAN BROUGHT OUT BY THE EDUCATION SECRETARIAT (2014-2018) PROVIDES FOR INFRASTRUCTURE CONSTRUCTION AND IMPROVEMENTS TO TECHNICAL AND VOCATIONAL EDUCATION AND VOCATIONAL TRAINING.

Average years of schooling (2015): **5.5**

Illiteracy rate (2015): **11.6%**

Percentage of population 20 years and older who have completed secondary education (2011): **10.70%**

Population with at least some secondary education (% of 25 years of age and older): **29.6%**



EDUCATION



TRAINING FOR WORK

Vocational training institution: **INFOP**

INFOP-owned centres: **25**

INFOP-contracted centres: **16**

Own mobile units: **10**

Contracted mobile units: **23**

Total number of instructors: **679**

INFOP VT Participants (2015): **205.744**

Women: **101.918**

Men: **103.826**

Apprentices: **189**

Percentage of companies which find it difficult to fill vacancies (2014): **28%**

THE LABOUR AND SOCIAL SECURITY SECRETARIAT HAS DEVELOPED A LABOUR MARKET OBSERVATORY AND AN ELECTRONIC MEDIATION SERVICE TO AID IN THE SEARCH FOR WORK.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Honduras, like other countries in the region, experienced marked increases in GDP during the ten-year period, 2000-2010.
- The current government has been very active in attempting to attract foreign investment and improve the quality of education and training. Policies designed on the basis of this conception shall be key to bolstering human capital development in the country.
- The population of Honduras is young; 48.1% are less than 20 years of age. Over the ten years mentioned above, child mortality rates and mortality rates during the first five years of life were reduced.
- Education coverage increased and reached a net rate of 91% in primary education and 46% in secondary schools.
- The plan brought out by the Education Secretariat (2014-2018) provides for infrastructure construction and improvements to technical and vocational education and vocational training.¹
- The public VT institution is INFOP (established in 1972), with a background and accumulated experience which can be harnessed to design new policies or leverage plans and innovations in catering to workers and building capacity.
- In recent years, INFOP and employers (COHEP) have entered into partnerships in order to develop new plans in response to demand. CADERH has been an effective ally in the provision of new answers and maintains close links with companies with a view to identifying requirements.
- CADERH has applied a methodology to forecast training demand and works jointly with INFOP in order to expand to new sectors.
- INFOP and COSUDE developed the Projoven [Pro-Youth] programme in support of people's workshops, as well as the INFOP en mi barrio [INFOP in my neighbourhood] programme to foster local enterprises for young people. These experiences can serve as the basis for extracting lessons learned for the design and continuity of programmes of this type.
- The Labour and Social Security Secretariat has developed a labour market observatory and an electronic mediation service to aid in the search for work. If their coordination and synchronization with localities, training for work and rural production chains are improved, these initiatives have a high potential.
- The country's development plan includes a social development area which focuses on improving education indicators. INFOP's role in this regard could be expanded to include the indispensable basic skills needed for lifelong education.

GAPS AND NEEDS

- In 2013, the percentage of the population aged between 15 and 24 who neither studied nor worked was 26.8%; the highest rate in Latin America. In absolute terms, almost half a million young people, of whom four out of five were women.²
- The illiteracy rate of the population aged 15 or over reached 11.6% in 2015; 7.5% in cities and 21.5% in rural areas.
- Dropping out of school is one of the most significant harbingers of youth inactivity. By 2013, close to 50% of young people had dropped out of school.
- Performance levels in the TERCE tests for students in sixth year showed lower scores than the regional average for Reading, Mathematics, Science and Writing.
- High inactivity and school dropout rates in a predominantly young population is reflected in poor indicators in areas such as citizen security and youth in conflict with the law.
- A wide range of policies are needed, with coordinated State action, in order to combat early school leaving and other causes of youth inactivity, such as teen pregnancy.
- Low levels of education and poor quality jobs are most acute in rural areas, where the bulk of employment is informal and involves manual work in agriculture, livestock farming and basic maintenance and repair services.
- Job informality reached nearly 2 out of 3 jobs in 2014, mainly affecting women.
- Production diversification is low and agricultural production is predominant, in contrast with the provision of training for work, which focuses on typically urban activities related to services and industry.
- There is no institutional coordination between education, vocational training and active employment policies. Signs of institutional weakness should be overcome in these areas, and institutions and human resources should be strengthened if significant reforms are to be undertaken.³
- While debate on the importance of human capital is present in public policy, clear reform mechanisms need to be applied to the training system in order to coordinate limited resources effectively.

III. General overview of VT

VT SUPPLY:

- While 33% of young people between 20 and 22 years of age complete secondary education, only 14% of young people between 20 and 21 enrol in higher education.²
- INFOP is the public institution which governs vocational training, as stipulated by law. It has its own centres and also operates in partnership with other institutions. In 2015, INFOP reported having trained 205,744 participants, 49% of whom were women.
- CADERH and CENET are two of the private providers available, with extensive linkages with the private sector and international co-operation.
- These two institutions run the METAS programme, which has benefited some 57,000 vulnerable youth since 2010, with about 41 educational centres.
- A partnership between CADERH, COHEP and INFOP has led to a certification programme: *Hondureños para el mundo* ["Hondurans for the World"]. Competency standards based on international standards have been developed and adopted by INFOP, and are highly relevant for companies.
- CADERH also administers a number of Technical and Vocational Training Centres and offers consultancy services on human resources management to enterprises.³
- Privately run training has been preferred by international co-operation and handles the vast majority of co-operation projects.

VT FINANCING:

- Investment in education reaches 7.6% of GDP, one of the highest in Latin America. However, quality and educational attainment indicators are lagging behind the rest of the region and the world.
- INFOP is funded by contributions estimated on the basis of the wages paid by employers (1%), State-owned enterprises (0.25%) and voluntary contributions from trade unions and cooperatives.
- International co-operation plays a significant role in the funding of training for work programmes and in the inclusion of vulnerable youth. USAID, IDB, AECID, GIZ and the EU, among others, conduct targeted projects and maintain active lines of cooperation.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- INFOP's Board of Directors is composed of four State representatives, two from private enterprise and two worker representatives.
- In practice, the government exerts the leadership of INFOP. The President of the Republic appoints the director. General oversight.
- Similarly, the institution's weaknesses have been noted in a number of analyses. It is necessary to train trade union leaders so that their role in vocational training can improve. In this regard, fruitful dialogue could be set up as a complement to public initiatives and private enterprise.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Education Secretariat. Plan Estratégico Institucional [Strategic Institutional Plan]. 2014-2018.
- 2 - http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2016/01/19/090224b0840c3c5d/1_0/Rendered/PDF/Ninis0en0Honduras.pdf
- 3 - Formación Profesional en América Central, Panamá y República Dominicana [Training in Central America, Panama and Dominican Republic]. ILO. 2014

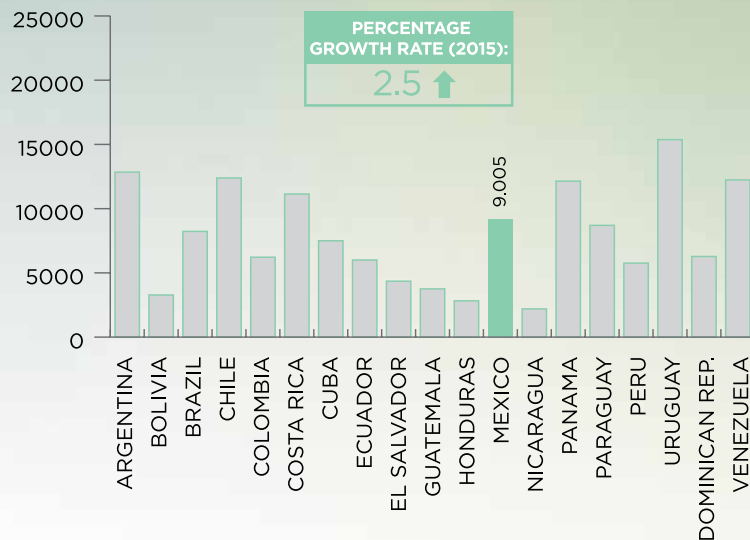
MEXICO



MEXICO

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



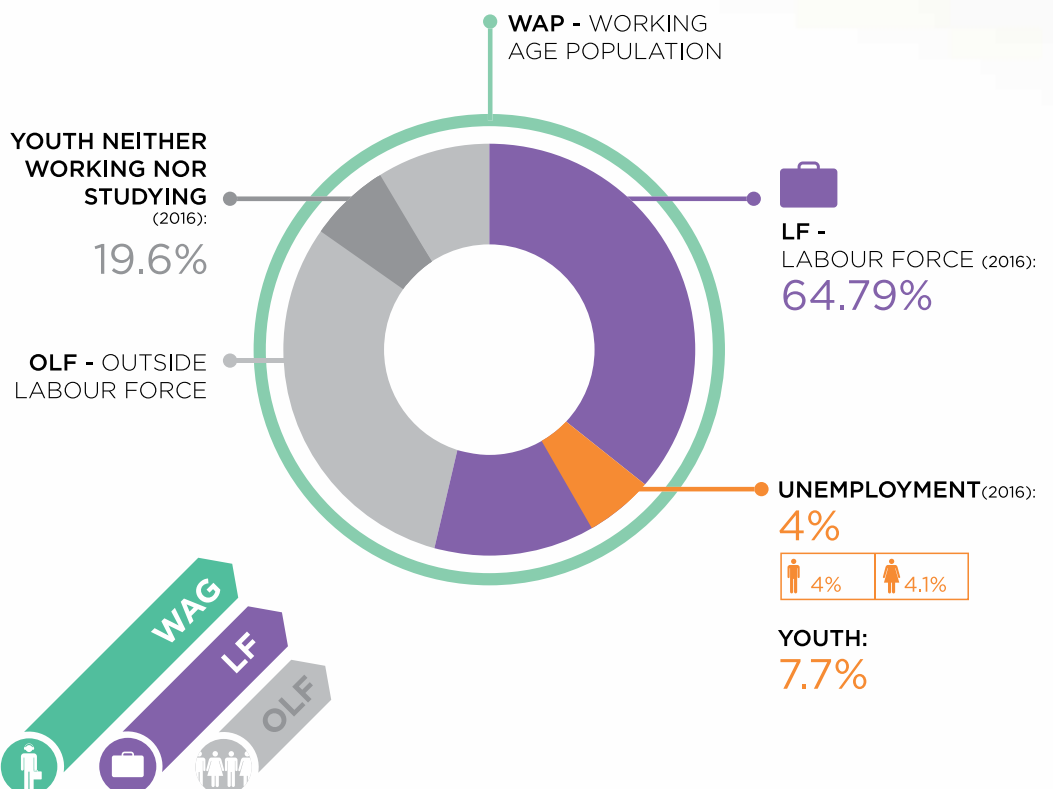
POPULATION
(IN MILLIONS, 2016):
128.632

POVERTY
(2014):
41.2%

LABOUR INFORMALITY (2013):
53.7%



YOUTH (2014):
32%





THE GOVERNMENT HAS ENACTED AN EDUCATIONAL REFORM AIMED AT IMPROVING QUALITY AND RESTORING TIES BETWEEN TEACHERS, STUDENTS, FAMILIES AND SOCIETY.

Average years of schooling (2014): **9.0**

Illiteracy rate (2015): **5.5%**

Percentage of population 20 years and older who have completed secondary education (2014): **62%**

Population with at least some secondary education (% of 25 years of age and older): **60.7%**

EDUCATION



TRAINING FOR WORK

VET Enrolment (2014-2015): **1.751.936¹**

VET Schools (2014-2015): **5.899¹**

CONALEP-owned centres: **308**

CONALEP-contracted centres: **8**

CONALEP participants: **305.246**

Women: **133.960**

Men: **171.286**

DGCFT-owned centres: **200**

Own mobile units: **51**

Total number of instructors: **3808**

DGCFT Participants: **453.102**

Women: **225.755**

Men: **227.347**

Percentage of companies which find it difficult to fill vacancies (2015): **43%**

TRAINING PROVIDED BY DIFFERENT PUBLIC AND PRIVATE BODIES IS HIGHLY DIVERSE, GENERATING A CHALLENGE OF SYNCHRONIZATION AND COORDINATION.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The Government of Mexico has enacted an educational reform aimed at improving quality and restoring ties between teachers, students, families and society.
- Productivity is viewed as a key aspect in the country's growth and development strategy. Being part of the OECD has facilitated acquiring a globalized view of its strengths and weaknesses.
- Moving towards lifelong education is also on the political agenda related to education and work; linkage of strategies and decisions carried out for this purpose is important.
- The 2007 reform of secondary education (RIEMS) established a single, countrywide curriculum for this stage of education and opened opportunities for working closely with the productive sector.
- Technical secondary education has increased its coverage and has drawn closer to the productive sector in order to identify joint programmes and mechanisms for on-the-job (dual) learning, as well as learning paths designed collaboratively with local companies.
- Work is also being done to provide entrepreneurial skills through partnerships between public (INADEM) and private sectors, such as the Entrepreneurship Project competition: the "SANTANDER-CONALEP Prize".
- VTE provision is wide, in terms of institutions available. In addition to CONALEP, the SEP's Training for Work Centres and the STPS's programmes provide training with varying degrees of labour market inclusion.²
- Training of active workers has been led by the Ministry of Labour with targeted programmes such as BECATE and PAC/PAP (formerly, CIMO).
- Training for vulnerable youth out of the workforce is addressed through a SEP programme known as Capacita T ["Train T", which in Spanish reads as "Train Yourself"], with a target of 100,000 young people by 2015.³
- The Mexican labour market observatory is a tool which is widely used by students and workers in search of a job and employment counselling.
- In relation to skills certification, CONOCER has opened up a number of windows of opportunity for stakeholder participation, establishing close links to demand and competency standardization, thus benefiting quality. It has coordinated with the STPS's Productivity Support Programme in order to leverage its goals and strengthen its actions.
- Public-private partnerships for training have proven to be successful; among them, the Dual Training Mexican Model, which helps strengthen employability and job placement for graduates.
- In the automotive industry, a new partnership has been established between CONALEP and Japan (through the Japan International Cooperation Agency, JICA), with a technical vocational career path called the "Automobile Industry", which started operations in August 2016 and enables the provision of education in keeping with the specific needs of priority productive sectors.
- Several training initiatives have emerged in the tourist industry, with productivity improvement and skills certification in the Mayan Riviera.

GAPS AND NEEDS

- While there is government consensus on the need to increase productivity and close the skills gap, measures need to be taken in order to consolidate the training system and synchronize joint responses with social stakeholders.
- There is also a need for sectoral approaches in public policies on competency development. Improved coordination between public and private actors is required.
- There are some highly critical issues which affect the governance of the education system and the ability of the State to induce reform together with the protagonists is at a crucial stage.
- The mismatch between workers' skills and those required by the labour market affects job placement² and 43% of Mexican employers report having difficulty in recruiting candidates who meet vacancy profiles.
- In addition, 55% of students (aged 15) do not reach the minimum mathematics skills required and 41% do not reach the minimum in reading comprehension.
- The challenges facing skills development are great: 56.6% of students fail to attain level 2, the minimum level of competence in PISA mathematics tests (2015). This is less the half the OECD average (22.9%). Level 2 represents the competencies needed to participate fully in modern economies.
- The active population's education and preparation indicators must improve. The average number of years in formal schooling of the labour supply equal 9 years, while in the OECD countries, they equal 11.9. On average, 62% of students finish secondary education; in the OECD the percentage is 82%.⁴

- Mexico is one of the most highly diversified productive economies in the region. However, only one third of workers report having trained during their working life.
- Youth's preference for technical secondary education is lower (39%), although close to the OECD average (43%). On average, 1 out of 6 young people aged between 25 and 34 has not completed secondary education.⁵
- Mexico has been able to reduce, although slightly, the rate of youth who are not employed, or studying, or in vocational training. In 2015 this rate was 22.1%, which is lower than it was in 2007, but higher than the OECD's average of 15%.
- Coordination is not yet in place between a national system for competency certification and the plan for lifelong education. CONOCER must improve integration between its response and policies on productivity and closing human talent gaps, as well as implementing a mass communications strategy to enable employers to learn about the advantages of having certified staff. The use of its standards in production-related activities only reaches 35%.
- Including youth in employment requires a vision that can synchronize training for work with the productive development agenda, in order to generate relevance. Another essential factor is providing support to vulnerable populations so that they can gain access to quality jobs.

III. General overview of VT

VT SUPPLY:

- Of the 4,813,165 students studying at some level of higher secondary education (2015), CONALEP served over 305,246 of them, which represents about 6.3%.
- During the period 2014-2015, the SEP estimates that 1.75 million people were trained for work in public training centres.
- Higher technical education received 170,556 students (2014-2015).
- Enrolment of the indigenous population in higher secondary education was 487,107 in 2014, of whom 7,374 were enrolled in CONALEP, and the average by 2016 did not vary significantly.
- Efforts made by the SEP to increase on-the-job training are promising. Some 77 campuses have entered into agreements with 254 companies to conduct dual training, covering 1334 people (August 2015).³
- CONOCER issued 98,931 labour competency certificates in 2014; over the cycle covering 2014-2015, it estimates that it will reach 200,000.
- Training provided by different public and private bodies is highly diverse, which generates a challenge as regards synchronization and coordination throughout the country.

VT FINANCING:

- Funding is mainly the responsibility of the national budget. There are no parafiscal taxes on payrolls.
- With regard to the financing of training for active workers, 68% was borne by employers, 11.6% was funded by one of the government programmes, and 14.8% by the workers themselves¹
- There are several grant programmes to facilitate students' access to education. Among them, there is one targeting social inclusion (PROSPERA) and one for higher secondary education (PROBEMS), which covered 1.95 million grants (2014-2015). Training for work grants (Capacita T) amounted to 5,335, while the Dual and the entrepreneurs' programmes reached 1,857 participants.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- CONOCER is a quintessentially tripartite body, with a Board of Directors composed of three members representing enterprises, three for the workers and six for government.
- In addition, there are social dialogue experiences in relation to certification in the Competency-Based Management Committees, where companies and trade unions, as well as other actors, agree on labour competency standards used in training, evaluation and competency certification.
- There are targeted social dialogue experiences to deal with training within sectors, such as the automotive and tourism industries. These experiences constitute significant steps, since they act as examples for other sectors.
- Setting up dialogue opportunities with teachers in order to implement the education reform was a necessary tool employed by the government with representatives of teachers' trade unions, mainly from basic education.

SPECIFIC SOURCES CONSULTED:

- 1 - Interactive system for educational statistics queries. <http://www.planeacion.sep.gob.mx/principalescifras/>
- 2 - Toward a National Framework of Lifelong Learning in Mexico. IDB 2014
- 3 - Public Education Secretariat, Progress Report. SEP. 2015.
- 4 - Mexico. Country Notes. Education at a Glance 2013: OECD Indicators.
- 5 - Mexico. Society at a Glance 2016, OECD.

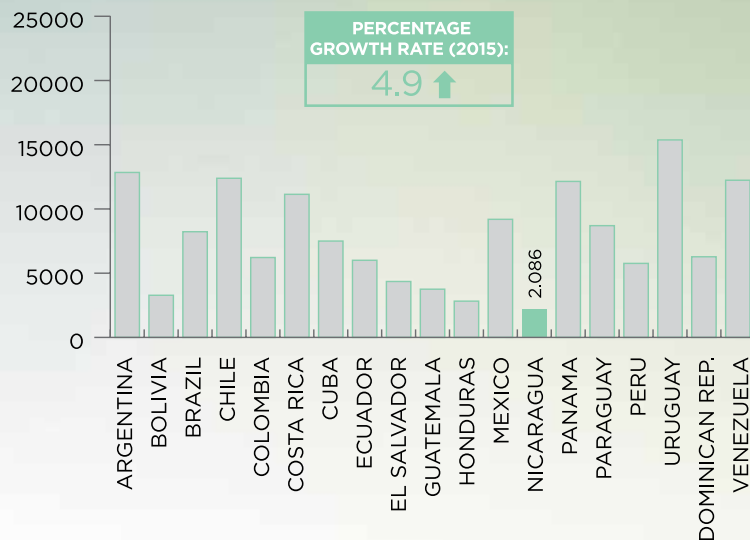
NICARAGUA



NICARAGUA

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

HUMAN
DEVELOPE
NT INDEX
(2015):
125/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
108/140

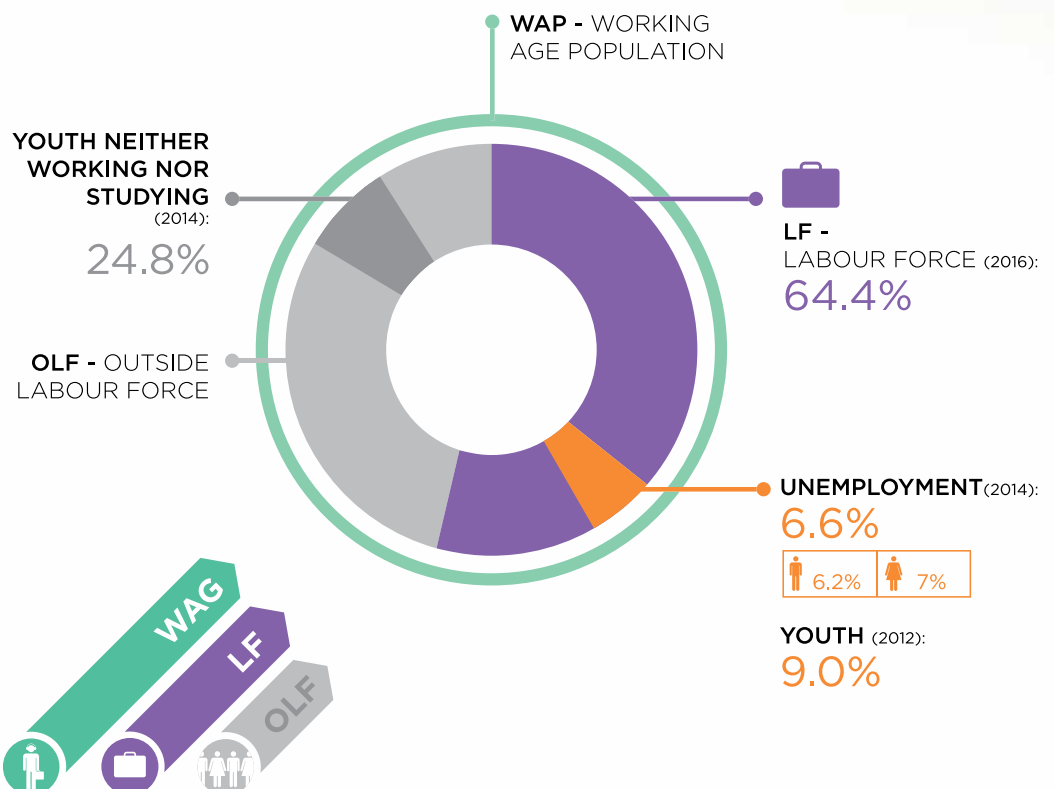
ECONOMIC
COMPLEXITY
INDEX
(2014):
96/124

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
6.150

POVERTY
(2014):
29.6%





THE TECHNICAL EDUCATION AND VOCATIONAL TRAINING SUBSYSTEM IS UNDER THE RESPONSIBILITY OF THE NATIONAL TECHNOLOGICAL INSTITUTE (INATEC).

Average years of schooling (2014): **6**

Illiteracy rate (2015): **4.9%**

Percentage of population 20 years and older who have completed secondary education (2009): **10.58%**

Population with at least some secondary education (% of 25 years of age and older): **38.9%**



EDUCATION



TRAINING FOR WORK

VET Participants (2014): **30.793**

INATEC Centres: **60¹**

Total number of instructors: **869¹**

INATEC Participants (2011): **338.614¹**

Women (2010): **199.782¹**

Men (2010): **138.832¹**

COMPANIES WHICH CONTRIBUTE 2% CAN APPLY TO INATEC FOR FUNDING FOR TRAINING OF SPECIFIC INTEREST TO THE COMPANY.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Nicaragua has made great strides in primary and secondary education coverage. However, in 2012, its enrolment rates were still the lowest in the region. Access to secondary education increased by 25 percentage points and reached 56% for the relevant age group.
- Progress continues. In 2015, the net primary school enrolment rate was 93% and 67% for secondary education.
- The Technical Education and Vocational Training subsystem is under the responsibility of the National Technological Institute (INATEC, in Spanish), which offers a wide range of technical education and training for work programmes. One of its functions is to promote scientific, technological and socio-economic research and development applied to technical education and training.²
- INATEC's technological centres cover the agricultural sector (12 centres), the hotel industry (2 centres), business (9 centres), languages (1 centre), industry (15 centres) and forestry (1 centre). It is the only institution in Central America which provides wide coverage to the rural sector.
- Companies which contribute 2% can apply to INATEC for funding for training of specific interest to the company, financed by this tax. Although there are no statistics or reports on the matter, this can lead to a high degree of flexibility in responding to demand.
- INATEC is taking part in an exercise to forecast training demand in agriculture. This could be scaled up to cover other sectors and production chains.
- Work is beginning on the development of a qualifications framework, with the support of international co-operation (Lux Development).
- The Ministry of Education has recently promoted the use of ICT for training in recognized education centres; there are no figures available on the progress of this modality.
- INATEC takes part in the implementation of a number of social programmes. For example: the Hambre Cero programme [Zero Hunger] (Food Production Programme, PPA, in Spanish), answering to the Ministry of Agriculture and Forestry (MAGFOR), which seeks to eradicate hunger, chronic malnutrition and poverty. It also runs programmes targeting women, demobilized persons, people with disabilities, youth and people deprived of liberty in the informal economy.

GAPS AND NEEDS

- A 2012 IDB report assigned Nicaragua the challenge of including more school-age children in the education system.³
- There are significant issues in relation to quality and educational attainment. Primary school students' performance on the TERCE tests was below the regional average for reading, mathematics and natural science.
- Access, coverage and the quality of education constitute a huge challenge. One of the issues is that 65% of youth aged between 18 and 19 left the formal education system either during the primary level or immediately after completing it.⁴
- Three out of four workers are engaged in informal jobs, a figure which mostly affects women.
- Only 9% of persons aged 24 are in school, nearly all of these at the higher level. Of that age group, 12% never enrolled in the formal education system and 30% never completed primary education.²
- Illiteracy affects one in five people over the age of 15.
- Only one in three students aged between 19 and 22 have completed secondary education; this is one of the lowest rates in the region. Early school leaving is highest at this stage of education.
- The extent of informal employment, close to 40%, underlines the need for measures to improve knowledge and capacity-building in order to foster improved added value practices.
- In 2014, 24.8% of the 1.2 million youth aged between 15 and 24 neither studied nor worked.³
- The provision of technical education and VT is centrally directed by INATEC and although there are strong signs of its relevance, such as the services it provides to the agricultural sector, there is no information available for an analysis of action in other sectors.

III. General overview of VT

VT SUPPLY:

- INATEC delivers technical education in secondary school and training for work courses. It also conducts certification and accredits other training centres, both public and private.
- INATEC has 60 centres; of these, 13 are in the capital, Managua, and 10 in Chinandega.
- In 2015, 59% of the participants were women.
- The National Employment and Decent Work Plan for Youth in Nicaragua (2012-2016) sets targets for on-the-job training for young people in businesses and to have an impact on the strengthening and growth of existing youth MSMEs.⁴
- The provision of technical education and VT is centrally directed by INATEC and INTECNA, a national technological institute with a central branch, and although there are strong signs of their relevance, such as the services they provide to the agricultural sector, there is no information available for an analysis of action in other sectors.

VT FINANCING:

- INATEC is funded by a percentage of 2% calculated on the basis of the value of wages paid by all employers except the army and the police.
- International technical co-operation plays a key role in providing fresh resources and new programmes (OAS, AECID, Lux Development, Swiss Contact and the European Union, among others).
- The European Union runs the TECNICA project to strengthen the capacity of the technical education and vocational training system in designing and setting up means of planning, monitoring, evaluating and steering the training provided, as well as handling statistics and indicators and evaluating learning in educational programmes.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- The INATEC's Board of Directors is composed of four members for the public sector: the Minister of Labour in the chair, the Minister of Education, the Minister of Finance and the Minister for the Economy and Development. In addition, two members for the private sector and two for the workers.
- Social dialogue on VT is conducted at INATEC; other educational decisions are made by the respective public sector authorities.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Formación Profesional en Centroamérica y República Dominicana [Vocational training in Central America and the Dominican Republic]. 1998-2013. ILO. 2014.
- 2 - Ley Orgánica del Instituto Nacional Tecnológico [Organic Law of the National Technological Institute]. INATEC. 1994
- 3 - Educación en Nicaragua. Retos y Oportunidades [Education in Nicaragua. Challenges and Opportunities]. IDB 2012.
- 4 - Perfil educativo Nicaragua [Nicaragua's Educational Profile]. SITEAL. 2008.

PANAMA

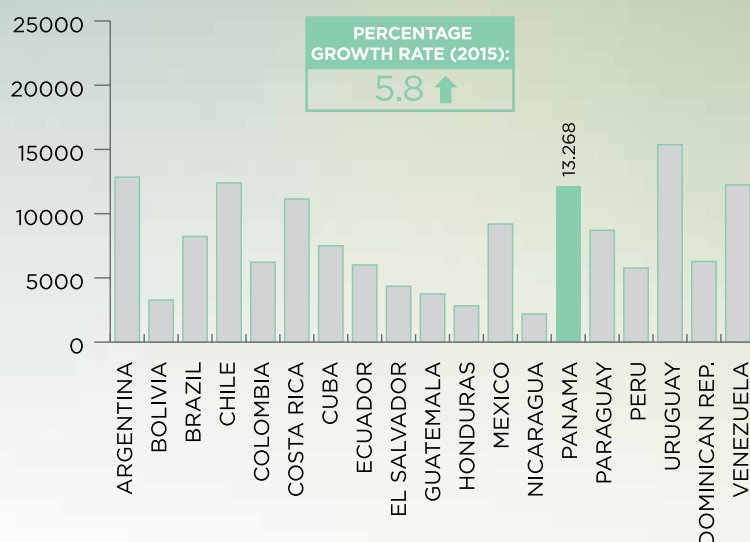


PANAMA



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
3.990

POVERTY
(2014):
23%

LABOUR
INFORMALITY (2013):
40.4%

40.1% 40.8%

YOUTH (2015):
47.0%

YOUTH NEITHER
WORKING NOR
STUDYING
(2014):

32.6%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):
65.4%

UNEMPLOYMENT (2016):
5.6%

4.7% 6.7%

YOUTH:
11.6%





THE HIGH COMMISSION FOR
EMPLOYMENT PUBLIC POLICY
PRESENTED A REPORT HIGHLIGHTING
GAPS AND NEEDS WITH A VIEW TO
IMPROVING TRAINING AND EMPLOYMENT.

Average years of
schooling (2015): **9.3**

Illiteracy rate (2015): **5.5%**

Percentage of
population 20 years and
older who have
completed secondary
education (2011): **20.14%**

Population with at least
some secondary
education (% of 25 years
of age and older): **52%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2013): **29.889¹**

Vocational Training Institute: **INADEH**

INADEH-owned centres: **22**

Contracted centres: **734**

Owned mobile units: **7**

Total number of instructors: **990**

INADEH Participants (2016): **67.606**

Women: **37.574**

Men: **30.032**

Apprentices (2015): **2.124**

Percentage of companies
which find it difficult to fill
vacancies: **58%**

THE GOVERNMENT ATTACHES
IMPORTANCE TO THE SKILLS GAP ISSUE
AND HAS DECIDED TO REJOIN THE
GROUP OF COUNTRIES WHICH SET THE
PISA TESTS.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Panama has been experiencing high growth rates (8% in the last ten years) which have led to significant developments in infrastructure and communications. It has been able to employ 96% of the EAP, or workforce, and reduce poverty to 23%.
- Panamanian students' performance on the TERCE tests was below the regional average for reading, mathematics and science. In writing their performance was equal to the average.
- Panama took part in the PISA 2009 tests and placed 62nd out of the 65 countries in mathematics, reading and science. The country plans to participate in the PISA 2018 tests and with that in view is engaging in preparing schools and students throughout the country. The PISA 2018 pilot test will take place in July and August 2017.
- The New Employment Opportunities for Youth (NEO) programme in Panama seeks to improve the quality of human capital and the employability of one million vulnerable youth over ten years. It aims to improve coordination between the productive sector and training.
- The government formed a High Commission for Employment Public Policy (2014), which presented a report highlighting gaps and needs with a view to improving training and employment.
- The High Commission's report reaffirmed the link between training and productive development and how the skills gap counteracts the possibility of sectoral growth and decent work. The Commission has recommended the creation of a National System for Labour Competencies.
- The Ministry of Education is developing a new range of technical education including Higher Institutes of Technology (ITS, in Spanish). The first ITSs are under construction. There is great potential in their inclusion in education and the way in which their curricula and programmes are structured.
- The government attaches importance to the skills gap issue and has decided to rejoin the group of countries which set the PISA tests.
- The Commission's report and the government's activities in relation to education open up pathways along which to develop lifelong learning mechanisms, such as competency certification and qualifications frameworks.
- International co-operation is supporting the development of a national training system which will synchronize the various roles and functions for the benefit of lifelong learning.
- IDB studies contracted by the government have forecast demand in the logistics sector. Studies will be necessary in other areas such as infrastructure, communications, tourism, ports and the financial sector.

GAPS AND NEEDS

- Discussions on the importance of human capital have taken place, but there is no evidence yet of any specific applications or reforms. There is no national structure to provide leadership and generate ground rules for human development and training.
- While 100,000 people in all graduate from the formal education system and from technical vocational training every year, 58% of Panamanian businesspeople find it difficult to fill their vacancies.
- Educational attainment and the quality of education must improve. Deficiencies as regards basic skills are severe. In cognitive tests set among young people aged between 15 and 24 (UNDP), 87% scored below 6 (on a scale of 1 to 10 points).
- The extent of informal work affects two out of three jobs, mostly female.
- Training programmes are not entirely relevant to demand, which results in widening their distance to productive sectors. The National Competencies Commission has worked sporadically, kept a low profile and received little support. There are no means of identifying the skills demanded by the labour market.¹
- Processes to follow up and assess impact on graduates need to be developed and put into practice. Vocational guidance programmes should also be devised.
- Worker migration may be distorting the gap regarding the supply of professional workers as well as for low-skilled occupations, bearing in mind the positive wage differences as compared to the region.
- Coordination between the State and enterprises, in relation to education-work and vocational training public policies is weak.
- There are no clear opportunities for synchronization between vocational training and education with a view to setting up a lifelong career. The lack of a national vision of education negatively distorts young people's assessment of technical education and vocational training.

- The coverage provided by job-seeking and occupational guidance services is limited.
- There are no studies or systematic procedures to forecast training demand, nor are companies included in these activities.
- Quality assurance devices are not entirely identified or assigned to clearly defined roles; this process does not operate effectively and should be improved.²
- The competency certification system lacks consolidation; it only functions intermittently and is not well disseminated. The National Competencies Commission (CONACOM) has met again, but has not yet achieved its former dynamics.
- The dual on-the-job apprenticeship modality promoted by INADEH is not operating adequately, which prevents broadening the engagement of production sectors in training.
- Public investment in education and training is insufficient. No impact assessments are carried out.
- The training supply available maintains a conventional profile, limited to INADEH's infrastructure and capacity, as well as those of implementing bodies, but with little prospect of being brought into line with sectoral and productive development.
- For example, although the harshest conditions of poverty and informality occur in rural settings, there are no training or basic or technical skills development programmes, in keeping with the extent of the issues affecting the countryside.

III. General overview of VT

VT SUPPLY:

- Technical secondary education under the Ministry of Education (MEDUCA) has 92 technical institutes and is building six technical and vocational institutes.
- In 2012, 12,444 students graduated from vocational and technical secondary education.³
- INADEH delivers vocational training mainly through short courses (100 to 300 hours).⁴
- In 2016, it reported that 67,606 students attended, of whom 56% were women.
- There is a National Labour Competencies Commission (CONACOM), which was originally conceived as a governing body, but it has operated only sporadically and not gained a position among stakeholders. Attempts are being made to reactivate it.
- Higher Institutes of Technology are seen as a great opportunity, but they need to be implemented without delay.

VT FINANCING:

- Public funds provided by MEDUCA, which have been declining as a percentage of GDP (1999: 4.84% 2011: 3.29%)
- Funds allocated to INADEH by the Education Insurance, a tax applied to employers (1.5%), dependent workers (1.25%) and self-employed workers (2.75%).
- Special budget funds have been allocated for the construction of six Higher Institutes of Technology.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- Employer, worker and government representatives make up the tripartite leadership of INADEH. However, updates need to be applied to improve VT relevance, quality and coverage.
- As an opportunity for discussion, CONACOM has great potential, but it has not shown evidence of sustainability in exercising its role with any regularity.
- INADEH's certification processes activated social dialogue through sectoral surveys conducted among employers and workers. This can also be a relevant tool, but there is a lack of momentum and support for these activities.
- The impact of political leverage on management impairs the effectiveness of social dialogue.
- In the past, the Labour Foundation (related to workers) had the task of developing competency standards. However, updates and dissemination have not been undertaken at an extensive scale.
- In some sectors, social stakeholders take up proposals to move forward regarding certification with enthusiasm; in others, these proposals are viewed with scepticism.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Mercados de trabajo y seguridad social en Panamá [Labour Markets and Social Security in Panama]. Baptista, D.; Flores, L. BID. 2014.
- 2 - National Statistics and Census Institute, Panama. <https://www.contraloria.gob.pa/inec/archivos/P6851511-30.pdf>
- 3 - Aumentar el empleo, la productividad y la inclusión social [Increasing jobs, productivity and social inclusion]. Report of the High Commission for Employment Public Policy. Panama. 2014.
- 4 - Situación de la FP en Centroamérica y República Dominicana [The Situation of VT in Central America and the Dominican Republic]. 1998-2013. ILO. 2014.

PARAGUAY

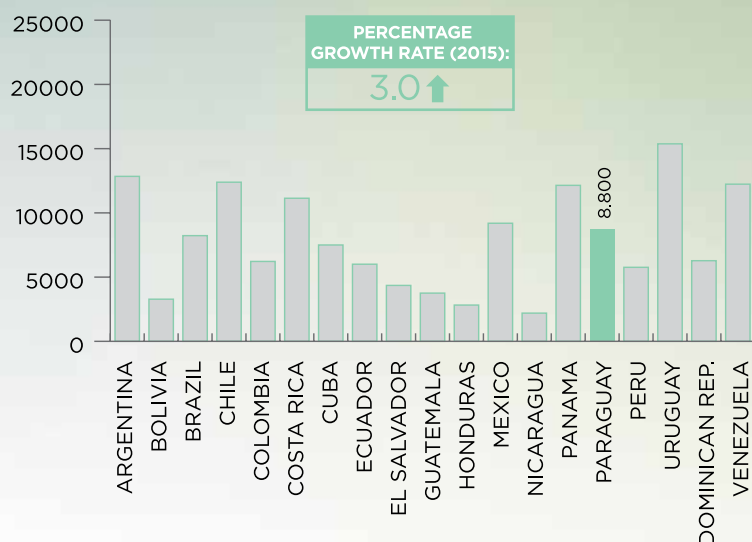


PARAGUAY



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
6.725

POVERTY
(2015):
22.24%

LABOUR
INFORMALITY (2013):
63.8%



YOUTH (2013):
82.4%

YOUTH NEITHER
WORKING NOR
STUDYING
(2015):
12.7%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):
71.6%

UNEMPLOYMENT (2016):
8.3%



YOUTH (2015):
12.3%





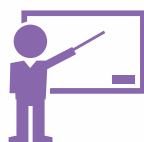
THE COUNTRY'S PRODUCTIVE PROFILE IS CLEARLY AGRICULTURAL, WITH 23% OF GDP IN 2013, AND 86% OF TOTAL EXPORTS COMPRISING FOOD AND AGRICULTURAL PRODUCTS.

Average years of schooling (2014): **7.7**

Illiteracy rate (2015): **4.5%**

Percentage of population 20 years and older who have completed secondary education (2014): **21.33%**

Population with at least some secondary education (% of 25 years of age and older): **38.8%**



EDUCATION



TRAINING FOR WORK

Participantes EFTP (2012): **100.993¹**

Participantes total FP: **185.173**

Centros propios SNPP: **51**

Centros contratados: **7**

Unidades móviles propias: **10**

Total de instructores: **1.105**

Participantes SNPP (2016): **177.173**

Participantes mujeres: **95.623**

Participantes hombres: **81.550**

Aprendices: **1.020**

THE MINISTRY OF LABOUR AND MINISTRY OF EDUCATION HAVE FORMED WORK TEAMS IN ORDER TO MOVE FORWARD ON THE JOINT IDENTIFICATION OF VOCATIONAL QUALIFICATIONS.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- The economy has grown in recent years (2003-2013), with an average GDP growth rate of 4.9% and a reduction of poverty from 44% to 22%. The flow of investment and urban growth are demanding new job skills. However, extreme poverty is entrenched in the rural sector and support programmes are needed for sustainable rural development.
- The demographic dividend has a positive impact on economic performance. It is a predominantly young country, where 56.3% of the population is under 30 years old and adults over the age of 65 make up 7.4% of the total.
- The country's productive profile is clearly agricultural, with 23% of GDP in 2013, and 86% of total exports comprising food and agricultural products. Paraguay has considerable energy reserves, extensive agricultural borders and abundant natural resources.⁴
- The establishment of the Ministry of Labour, Employment and Social Security (MTESS, in Spanish), which is responsible for SINAFOCAL and SNPP, may facilitate the effective implementation of active employment policies in the area of training for work and enhance the one-stop scheme, Sistema articulado de intermediación y formación profesional ["Coordinated Intermediation and Vocational Training System"].
- The Ministry of Labour and Ministry of Education have formed work teams in order to move forward on the joint identification of vocational qualifications to be viewed as a national system. The final output is a qualifications catalogue which by 2015 contained 23 occupational profiles and 16 related training modules.
- Methodologies have been shared for the compilation of profiles and the development of training modules and evaluation.
- An Act for the creation of SINAFOCAL was recently regulated, assigning responsibilities relating to the approval of basic, intermediate and advanced technical training, as well as in the certification of labour competency through SNPP and Education and Job Training Institutes (FCL).
- A Registry of Education and Job Training Institutes (REIFOCAL) was established as a means of ensuring the quality of the training provided.
- SINAFOCAL and SNPP have shown their willingness to enter into partnerships with businesses which engage in the training of workers, in order to meet the demands of some of the production chains (for example, the meat industry, the graphic industry sector).

GAPS AND NEEDS

- In 2010, only one of three young people aged between 15 to 29 had finished secondary school and only 5% had completed some form of tertiary education.¹
- Indigenous communities (some 115,000 people from 20 ethnic groups²) are the most severely affected by poverty and the lack of access to basic goods. They constitute the most vulnerable social group.
- Results of the national standardized test set by the National System for the Evaluation of the Educational Process (2010) indicate that barely 1 of 4 third-grade students has reached the required level of competency in mathematics and communication. Performance in communication is even lower among students who attend rural schools.¹
- In UNESCO's TERCE tests, students scored below the regional average in all assessed areas (reading, mathematics, natural science and writing).
- The absence of a common regulatory and curriculum framework which could synchronize education and vocational training has been identified as one of the educational gaps.
- In 2000, a National Vocational Training System (SINAFOCAL) was formed, which since then shares funding with SNPP, the national training institution, which was, in turn, reformed. It would be advisable to obtain information regarding evidence of the impact on quality and access to training that this reform may have led to.
- The need to synchronize curricula and training methodologies also implies avoiding the duplication of efforts and having two separate institutions serving the population. This could be facilitated by both institutions, SINAFOCAL and SNPP, being answerable to the MTESS.
- While the qualifications catalogue was being produced, sectoral panels were consulted in a social dialogue process which should be strengthened in areas such as the anticipation of demand or in consulting stakeholders in different localities or in production chains.
- Activities related to training could be more clearly linked to policies for productive diversification, technological development, competitiveness and productivity.
- The high prevalence and growth of the rural sector in the Paraguayan economy is not reflected in the structure of the courses offered by the training system.
- Similarly, services for indigenous peoples, training in rural areas and training for productive development are lacking in explicit vocational training programmes.

III. General overview of VT

VT SUPPLY:

- The Ministry of Education's technical education provision is categorized into formal and non-formal systems. The formal plan includes vocational training, which begins upon completion of 6 years of basic education and at 16 years of age, and is delivered in Vocational Centres. In secondary education, the Technical High Schools cover 26 training specializations in the industrial, agricultural and services sectors. Close to 60,000 students are enrolled in the 600 technical secondary institutes. There is also a higher level of technical, non-university education.
- As a body answering to the MTESS, SINAFOCAL coordinates, controls and finances training for work, hiring private agencies to act as course providers.³
- The SNPP is responsible for delivering modular courses that target different sectors of the economy, throughout the country.³ It has 42 Training Centres and Regional Headquarters and 10 mobile units.
- The Ministry of Agriculture and Livestock is responsible for the formal and non-formal TVET programmes in the agricultural sector.
- Other non-formal vocational training programmes are offered by various bodies such as the Ministry of Public Health and Social Welfare, the National Forestry Institute, the Paraguayan Crafts Institute, the Centre for the Support of Enterprises, the National Electricity Administration, the Paraguayan Chamber of Construction, or the Paraguayan Centre for Productivity and Quality.

VT FINANCING:

- Funds to finance training come from a 1% worker-employer contribution which is deposited with the Social Welfare Institute, according to a general description provided by sources in the country. In 2000, contributions to SNPP were reduced to 0.7% in order to finance SINAFOCAL (0.3%).
- The country has international co-operation programmes from the European Union, which have made it possible to improve infrastructure for education, acquire equipment, install learning resources centres and classroom libraries, and train teachers, especially indigenous people, as well as young people and adults.⁴
- Some agencies, such as JICA, have taken part in providing training centres and KOICA has recently signed an agreement with SINAFOCAL to finance the provision of equipment.
- SNPP charges fees for some of its courses, in some of the modalities.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- SINAFOCAL's Board of Directors is a tripartite governing body and is composed of nine members: the Executive Branch, the Council of Governors, the Paraguayan Intermunicipal Cooperation Organization, the Paraguayan Industry and Trade Federation, the Paraguayan Industrial Union, the Paraguayan Rural Association, and three members from trade unions.
- A tripartite and inter-agency discussion panel on vocational training has been set up and is designing policy guidelines on training for work.
- Nevertheless, local or sectoral participation of social stakeholders is not well established and centralism prevails.
- There is a need to generate programmes to underpin the capacity of stakeholders to take part in the design, follow-up and evaluation of training.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - TVET Database. Paraguay. UNESCO-UNEVOC. 2013
- 2 - Third National Census of Indigenous Population, Preliminary Data, Paraguay (2012).
- 3 - Estudio sobre la oferta de Educación Técnico- Profesional en el Paraguay [Study on the Provision of Technical and Vocational Education in Paraguay] - 2010. IDIE Mercosur Collection. OEI, 2011.
- 4 - Partnership Strategy with Paraguay 2015-2018. World Bank Group. 2014.

PERU



PERU



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



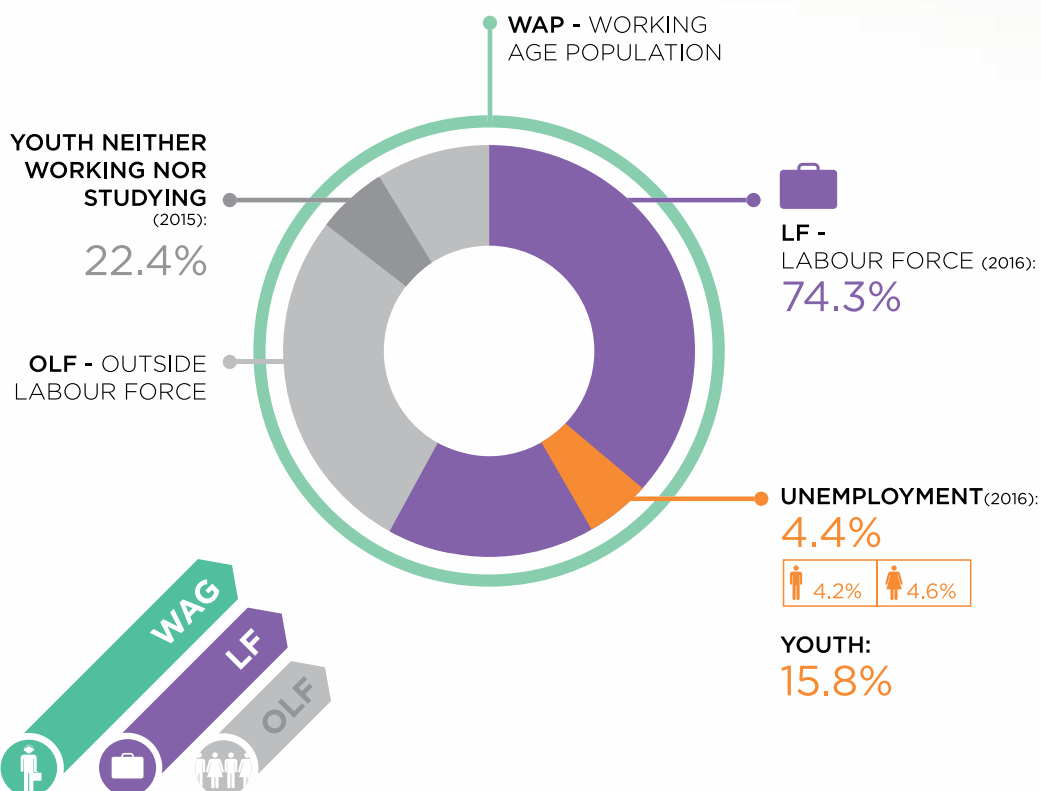
POPULATION
(IN MILLIONS, 2016):
31.774

POVERTY
(2014):
22.7%

LABOUR INFORMALITY (2013):
64.1%

58.7% 70.3%

YOUTH (2013):
82.4%





VOCATIONAL TRAINING HAS GAINED RELEVANCE AS A FOCAL POINT IN THE RELATIONSHIP WITH EMPLOYMENT AND PRODUCTIVITY GROWTH.

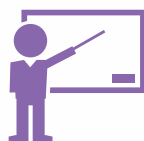
Average years of schooling (2015): **9**

Illiteracy rate (2015): **5.6%**

Percentage of population 20 years and older who have completed secondary education (2012): **25.68%**

Population with at least some secondary education (% of 25 years of age and older): **61.1%**

EDUCATION



TRAINING FOR WORK

Public VT Institutions: **(CENFOTUR, SENCICO)**

Private VT Institutions: **SENATI**

Public Technical-Productive Institutes: **769**

Private Technical-Productive Institutes: **1.034**

Technological Education Centres (2014): **742**

VET Participants (2015): **643.1421**

VT Participants SENATI (2015): **510.852**

Women: **13.8%**

Men: **86.2%**

Apprentices: **5.328**

SENATI-owned centres: **52**

Contracted centres: **38**

Owned mobile units: **50**

Total number of instructors: **3.723**

Percentage of companies which find it difficult to fill vacancies (2015): **68%**

SENATI HAS PROMOTED DIVERSIFICATION AND PROGRESS IN TRAINING BY INTRODUCING DISTANCE TRAINING, TRAINING FOR MSMEs AND TRAINING IN ENVIRONMENTAL TECHNOLOGIES.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Between 2000 and 2015, Peru's average rate of growth was 5.1%, above the average for Latin America and the Caribbean, which was 3.1%.
- In recent years, indicators for access to education and coverage have improved. The net enrolment rate in secondary education reached 78% in 2014. Investment in education has increased; as a percentage of GDP, it rose from 2.9% in 2010, to 3.6% in 2015.
- Peru's scores on the TERCE tests show improvements in all areas. While students in 2006 achieved results which were below the average for the region, in 2013 they exceeded the average in all of the tests.
- Vocational training has been positioned as a focal point for policy debate and definition, as well as in its relationship with the growth of employment and productivity.
- The Ministry of Labour and Job Promotion (MTPE, in Spanish) deploys employment and training public policies and has developed a system for competency certification.
- The Ministry of Education is an active agent in the provision of training and has produced an occupational profile catalogue for technical education.
- Industrial employers take an active part and make their enterprises available as places of learning. In 2015 the number of apprentices exceeded 3,500.
- A number of prospective studies have been carried out, both by SENATI and by the Ministry of Labour, with the support of the ILO.
- SENATI has promoted diversification and progress in training by introducing distance training, training for MSMEs and training in environmental technologies.
- An agreement has been signed between the Ministry of Education and the Ministry of Labour for the establishment of the Ponte en Carrera ["Get on Track"] Observatory (<http://www.ponteencarrera.pe/>).
- The MTPE has an employment policy structured around the following focal points: environment, employment, employability, entrepreneurship, equity, space.
- Recent changes in the field of education have been incorporated into the legislation by means of a new education act (Law N° 30220). It includes the reorganization of the National Quality of Education Evaluation System (SINEACE, established by Law N° 28740).

GAPS AND NEEDS

- The level of job informality is still high and affects close to 80% of workers.
- There is a relevance gap affecting the skills of Peruvian workers. Low educational performance could be one of the causes. Close to 30% of formally established enterprises fail to find workers with the skills they need for their activities, and according to the Manpower survey, 68% of the companies report finding it difficult to fill vacancies.
- There is no coordination between the Ministry of Education's provision, its occupational classification mechanisms, the Ministry of Labour's policies and services, and the vocational training provided by private training institutions. The extent, quality and efficiency of the training offered by private providers are unknown.
- Sectoral institutions (SENATI, SENCICO, CENFOTUR) do not synchronize the training they provide methodically; this includes levels and methodologies involving design, training and/or certification.
- There is no single and comprehensive system for the certification of labour competency in Peru, although sectoral experiences do exist, as well as several bodies that promote and develop processes for the validation of skills acquired by individuals in informal learning.² Progress could be made regarding joint initiatives such as the qualifications framework. There is no active discussion on the matter.
- The rural sector and the informal sector have no specific or targeted mechanisms for training for work, beyond those available in technical schools.
- Better use could be made of the information provided by the Ministry of Labour's employment services and statistical devices, in order to derive cohesive information on trends in the labour market.
- The education system is characterized by its low quality. Only about half the young people with relevant studies (12% of the total) stated that they had studied at a quality training centre.³
- With the exception of SENATI, training for work providers do not consult with the production sector efficiently.³ Curricula could be updated with the use of consultation mechanisms.
- No clear commitment to synchronizing the training available with the demands of the production sector can be detected.
- The structure of the training available tends to follow a traditional pattern; specialized technological development centres could be developed. No training experiences can be pointed to which display high added value for the development of key sectors such as mining or agriculture and fisheries for the export trade.

III. General overview of VT

VT SUPPLY:

- The Ministry of Education is the largest provider of technical and vocational education. It has devised a catalogue of degrees and certifications with 120 headings, produced with the cooperation of enterprises in 1996.
- By 2015, the Ministry of Labour and Job Promotion had developed a catalogue containing 31 occupational profiles.
- Non-university higher education is provided at different institutes and at different levels: Secondary Education Institutes (IES), Higher Institutes of Technology (IST), SENATI and Higher Pedagogical Institutes (ISP).
- The number of students attending sectoral services is distributed as follows: SENATI 510,852 (2015), SENCICO 84,993⁴ (planned for 2016), CENFOTUR 858 (2015)⁵.
- Female participation in the industrial training courses offered by SENATI is 14%.
- There are no mechanisms for aggregation or coordination of the training delivered by different sources. This is evidence of the fragmentation and heterogeneity of the system.
- The training provision is not positioned within the framework of a coordination mechanism leading to transparent information on qualifications for employers and participants.

VT FINANCING:

- In addition to the Ministry of Education's public funding, there are sources of financing from INICTEL, SENCICO and CENFOTUR. In 2013, the budget for these institutions was USD\$ 166.5 million.
- According to the financial information provided by SENATI, in 2015 the contributions made by companies in the industrial sector (0.75% of the payroll) accounted for approximately 25% of the institution's revenue. The difference was covered by its own income, generated by its vocational training activities.
- In 2013, the funds allocated by the MTPE to the programmes Jóvenes a la Obra ["Youth at Work"] and Vamos Perú ["Go Peru"] amounted to USD 16.2 million.
- The FONDOEMPLEO initiative is a partnership of companies which contributes highly relevant additional funds with the engagement of companies that support innovative forms of training. Of the total public management funds devoted to training, FONDOEMPLEO provided 28.6% in 2013.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- Among the various social dialogue devices existing in Peru, in particular, the National Council for Labour and Job Promotion, there are no venues or functions specifically related to vocational training activities.
- In view of the poor extent of worker participation, there is ample space to generate social dialogue devices for vocational training.
- In these circumstances, it is necessary to reinforce effective social dialogue and strengthen stakeholders so that they can take part in training.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” emerge from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Statistics on the Quality of Education. Peru <http://escale.minedu.gob.pe/>
- 2 - Sistema nacional de formación profesional y capacitación laboral del Perú [National vocational training and training for work system in Peru]. Gamero, J. ECLAC. 2015.
- 3 - Hacia un sistema de formación continua de la fuerza laboral en el Perú [Towards a life-long-learning system in Peru]. IDB-ILO. Chacaltana, Díaz, Rosas-Shady. 2015.
- 4 - Annual Operational Programme. SENCICO. 2016
- 5 - Institutional Report 2015. CENFOTUR

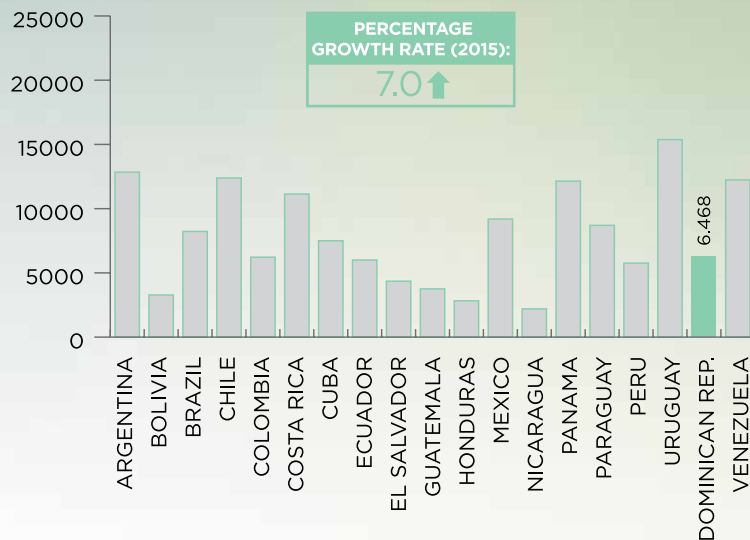
DOMINICAN REP.



DOMINICAN REP.

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS



I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
10.648

POVERTY
(2014):
37.2%

LABOUR INFORMALITY (2015):
54.4%

57.4% 49.2%

YOUTH (2013):
63.3%

**YOUTH NEITHER
WORKING NOR
STUDYING**
(2015):
21.1%

**OLF - OUTSIDE
LABOUR FORCE**

**WAP - WORKING
AGE POPULATION**



**LF -
LABOUR FORCE** (2016):
65.3%

UNEMPLOYMENT (2016):
5.7%

3.7% 8.9%

YOUTH (2015):
10.8%





THE NATIONAL PACT ON EDUCATION IS DRIVING A COORDINATED VISION OF EDUCATION AND VOCATIONAL TRAINING.

Average years of schooling (2014): **7.6**

Illiteracy rate (2015): **7.75%**

Percentage of population 20 years and older who have completed secondary education (2013): **15.39%**

Population with at least some secondary education (% of 25 years of age and older): **54.4%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2015): **45.650¹**

Vocational Training Institute: **INFOTEP**

INFOTEP-owned centres: **5**

Contracted centres: **307**

Mobile units owned: **35**

Total number of instructors: **2.570**

VT Participants (2016): **694.388**

Women: **379.089**

Men: **315.299**

Apprentices: **433**

INFOTEP HAS PARTICIPATED VERY DYNAMICALLY IN PROGRAMMES TO IMPROVE THE PRODUCTIVITY AND COMPETITIVENESS OF COMPANIES.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Over the ten years from 2000 to 2010, the Dominican Republic witnessed its GDP grow by 46%, but it is still facing the challenge of improving the distribution of wealth and access to education.
- The Ministry of Education, through its Technical and Vocational Education Directorate, and in the context of the National Pact on Education signed in 2014,² is driving a coordinated vision of education and vocational training, which includes, inter alia, the adoption of a national qualifications framework.
- The Pact underpins the relevance of education at all of its levels, engaging to conduct foresight studies with inter-ministerial and INFOTEP participation.
- The 2016-2020 government programme has raised the challenge of achieving improvements in education, as well as establishing a National Qualifications Framework.
- In this regard, the President has convened a tripartite National Qualifications Commission, which will design the framework at all levels, merging education and vocational training.³ The Commission has a technical committee and an operating support unit at its disposal, which has led to solid and coordinated progress in the implementation of the framework.
- Likewise, the country has committed to developing a comprehensive system providing technical education and vocational training which, among other things, can facilitate the transfer between different levels of education, as well as a system of quality indicators for this level of education.
- The scope of these commitments even covers adjustments to the training provided by technical and vocational education and training for work institutions, in order to better meet the demands of priority sectors and the demands identified by foresight studies.
- On-the-job training in the form of internships is provided for in the pact and could give rise to agreements to extend dual apprenticeships and on-the-job practices. INFOTEP is taking an active part in this kind of initiative, with the support of the ILO and Cinterfor.
- INFOTEP has participated very dynamically in programmes to improve the productivity and competitiveness of companies. By applying the SIMAPRO methodology, it has supported companies in the tourist industry and in free trade zones: clothing, auto parts, leather goods, electronics, plastics, communication centres, metalworking, installations and instrumentation and agribusiness. This learning could become stronger and more systematic and sustainable.
- INFOTEP has taken part in the Juventud y empleo ["Youth and Employment"] programme to train for and get a first job and has a range of vocational accreditations targeting people who are entering the world of work for the first time.
- INFOTEP also takes part in the Progresando con Solidaridad ["Progress with Solidarity"] programme, which aims to empower families in extreme poverty through human training and social promotion activities.

GAPS AND NEEDS

- Public expenditure on education as a percentage of GDP is one of the lowest in the region, at only 2.4% (2013). In 2015, raising it to 4% of GDP was approved.
- Only 1 in 5 people over the age of 20 have completed secondary education (2010). The literacy rate dropped from 14% in 2012, to 7.75% in 2015.¹
- Youth (15-29) is under represented in the rate of employment, in view of the weight of this age group in the workforce.
- Informal employment affects close to 55% of the employed population (2010).
- The proportion of young people outside the workforce was 21.1% in 2015, of whom 65% live in urban areas and 66% are women. Half of this group has reached secondary education.
- Results of the PISA 2015 tests have underlined challenges related to quality and access.
- Only 0.2% of the students tested in mathematics and 1.4% of those tested in science reached a level of performance regarded as "ideal" in the TERCE tests (2006).
- Of the 15 countries of Latin America and the Caribbean tested in the Third Regional Comparative and Explanatory Study (TERCE, 2015), the Dominican Republic obtained the lowest scores in reading, mathematics and science at 3rd and 6th grades.
- There may be a mismatch between the economy's demands and educational preferences. Some 3,000 students enrolled in basic post-primary education, over 40% of them in "Cosmetology", a stream with no educational continuity.

- Technical high school, which is part of secondary education, has 33 specializations. Over 50% of students enrol in two of them (Computing and Accounting).¹ There are no qualifications available in sectors such as renewable energy, the environment and green jobs.
- While productivity has grown in the last 50 years, growth has been restricted to sectors such as telecommunications, some of the manufacturing industries and financial services, but it is in other sectors that the bulk of employment has been generated.
- The current government is clearly committed to improving education, integrating the different levels and offering alternatives within a qualifications framework. However, issues related to access should be addressed for the population in the informal sector and those living in rural areas.
- It is key to also include the Ministry of Labour in the coordination perspective, in terms of its potential to establish active employment and training policies.

III. General overview of VT

VT SUPPLY:

- Technical secondary education comprises the following cycles: basic, basic technical and technical high school. In addition to the universities, higher education includes Technical Institutes of Higher Studies and Specialized Institutes of Higher Studies.
- In 2012-2013, less than 600,000 students enrolled in secondary education, and only 8% of these opted for technical vocational education.¹
- Enrolment in the Technical Institutes of Higher Studies is 0.4% of overall higher education enrolment, while 2.2% of students (2012) enrolled in the Specialized Institutes, in courses coordinated with CONESCyT.
- The governing body for vocational training is INFOTEP. It conducts dual training programmes, complementation and technical teacher training, and provides diploma courses and technical assistance to companies.
- INFOTEP has reported that 694,388 students enrolled in 2016, over 20,000 of these in the distance learning format, over the Internet. Nearly 55% of its participants are women.
- Close to 30% of its activities are conducted in its centres and mobile units. The remaining 70% take place at the system's operational centres, which are composed of accredited bodies.
- The IDB has supported a number of programmes targeting vulnerable youth, with some 47,000 persons attending the Programa Juventud y Empleo ["Youth and Employment Programme"] of the Ministry of Labour (2011). This was expanded as from 2016, with a view to catering to some 24,000 additional young people.
- INFOTEP implemented a project to improve infrastructure, with the support of Taiwan, a programme to train vulnerable groups with the OAS and a refrigerant gases recovery programme with the UNDP.
- There are other private actors providing quite extensive training, in part, owing to the influence of INFOTEP, which hires about 307 centres for the implementation of its programmes (2015).

VT FINANCING:

- Financing for technical secondary education amounts to 30% of investment per student, considering the total investment in education.
- INFOTEP funding is obtained from contributions of 1% of the wages paid by companies, and 0.5% of the yearly earnings that workers receive from their employers. An allocation from the national budget is also planned.⁴
- International co-operation is fairly active in the country: IDB, AECID, USAID and others.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- INFOTEP is governed by a tripartite Board of Directors, composed of representatives of the government, business and labour sectors, and it is administered by a general directorate.⁴
- Advisory committees have also been set up to guide INFOTEP's training provision according to economic sectors (agricultural, industrial, trade and hospitality and tourism). There are also technical committees working on identifying and updating the competencies and content of training programmes, and evaluating committees which perform final assessments for graduate certification.
- The creation of the National Qualifications Commission has sent a favourable message in favour of social dialogue. It is formed by representatives of the ministries of Labour, Education, Science and Technology, Economy, Planning and Development, as well as INFOTEP. For the business sector, CONEP, Acción Empresarial por la Educación [Business Action for Education], Iniciativa Empresarial por la Educación Técnica [Business Initiative for Technical Education] and the Inicia Foundation. Representing the workers, the National Trade Union Unity Confederation, the Confederation of Dominican Workers and the Autonomous Class-Based Trade Union Confederation.

SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” are taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Report 2015. Ministry of Education. Dominican Republic, 2015.
- 2 - National Pact for Educational Reform in the Dominican Republic. 2014-2030.
- 3 - National Qualifications Framework for the Dominican Republic. MINERD, 2015.
- 4 - Situación de la FP en Centroamérica y República Dominicana [The Situation of VT in Central America and the Dominican Republic]. 1998-2013. ILO. 2014.

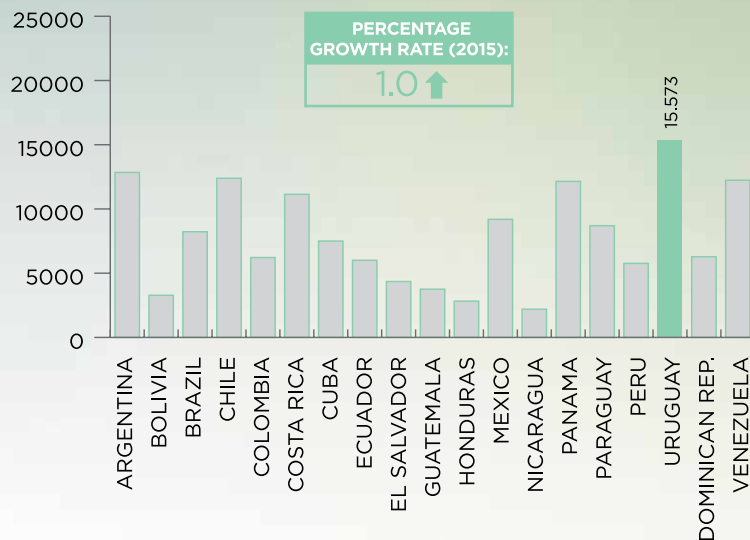
URUGUAY



URUGUAY

GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

HUMAN
DEVELOPMENT
INDEX
(2015):
52/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
73/140

ECONOMIC
COMPLEXITY
INDEX
(2014):
51/124

PISA RANKING
(2015):
48/72
(based on the score
in science)

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
3.444

POVERTY
(2014):
9.7%

LABOUR
INFORMALITY (2013):
33.1%



YOUTH (2013):
33.3%

YOUTH NEITHER
WORKING NOR
STUDYING
(2015):
18.7%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2016):
65.4%

UNEMPLOYMENT (2016):
8%



YOUTH (2015):
22.5%





THE MINISTRY OF LABOUR AND
MINISTRY OF EDUCATION HAVE FORMED
WORK TEAMS IN ORDER TO MOVE
FORWARD ON THE JOINT
IDENTIFICATION OF VOCATIONAL
QUALIFICATIONS.

Average years
of schooling (2014): **8.5**

Illiteracy rate (2015): **1.6%**

Percentage of population 20
years and older who have
completed secondary
education (2014): **10.40%**

Population with at least
some secondary education
(% of 25 years of age and
older): **52.5%**

EDUCATION



TRAINING FOR WORK

VET Enrolment
(2015): **93.022**

Public training
institutions: **INEFOP/
UTU**

Training for work
centres: **319**

INEFOP VT Participants
(2015): **28.501**

Women: **14.479**

Men: **14.022**

Contracted centres: **174**

UTU Participants (2016): **96.259**

Women: **38.506**

Men: **54.753**

VT Participants: **5.249**

UTU-Owned centres: **146**

THERE ARE SEVERAL ONGOING INEFOP
PROGRAMMES TO STRENGTHEN
TRAINING AND EMPLOYMENT FOR
VULNERABLE GROUPS SUCH AS
UNEMPLOYED YOUTH AND WOMEN.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- Uruguay is one of the countries in the region with the highest levels of educational attainment. Free education has facilitated access to primary education to virtually 100% of the population in that age group. This system is being extended to care in early childhood, as well as expanding to technical secondary education and higher technological and university education.
- The quality of education is among the highest in the region. Of the fifteen countries that set the TERCE tests (UNESCO, 2013), Uruguay ranked fourth in reading and mathematics in 3rd grade and third in the 6th grade.
- The coverage of institutions such as the Vocational and Technical Education Council (CETP-UTU, in Spanish), the University of the Republic (UDELAR) and more recently, the Technological University (UTEC) has expanded to reach more cities in the interior of the country, in many cases with rural training in mind.
- Between 1961 and 2014, per capita GDP at constant prices grew by about 1.8% per annum, which is still a challenge when compared to the average for OECD countries with similar levels of income (2.2%).¹
- Poverty and extreme poverty have declined significantly. Between 2007 and 2010, the population who could not gain access to a basic basket of food and services was reduced almost by half.²
- The Ministry of Labour, together with the Ministry of Education, CETP-UTU, UDELAR, and employers' and workers' representatives are working together, with the support of ILO/Cinterfor, on the design of a National Vocational Training System.
- The recently created Technological University (UTEC) aims to build more complex skills and complement them with vocational training and technical education delivered by the National Employment and Vocational Training Institute (INEFOP) and the Vocational and Technical Education Council/University of Labour of Uruguay (CETP-UTU).
- The Programme in Support of Global Export Services led by Uruguay XXI promotes the country as a strategic destination for the location of shared service centres and emphasizes the improvement in the quality of the sector's human resources. In this regard, the role played and the momentum provided by the National Innovation Agency (ANI) are key.
- The Ministry of Labour and Social Security (MTSS) has proposed fostering the consolidation of a "Culture of Work for Development", with a view to ensuring the sustainability of economic and social development and including education and the skills, competencies and training available to citizens.
- The MTSS's National Employment Directorate (DINAE) designs policies and gathers knowledge and experience on developing skills for the workforce.
- The MTSS and INEFOP, together with the ILO, are supporting a project to update descriptions and criteria for assessing job profiles, training and competency certification.
- Social stakeholders, employers and workers are actively involved in the project and engage in various consultative events in order to move towards an outcome.
- There are several ongoing INEFOP programmes to strengthen training and employment for vulnerable groups such as unemployed youth and women. The training and retraining of active workers is a priority. First job programmes and the application of the Youth Employment Act can lead to solutions with good implementation and participation mechanisms.
- A National System for Productive Transformation and Competitiveness has been established, with a view to promoting productive and innovative economic development. This system includes, among others, INEFOP and the Technological Laboratory of Uruguay, and will work towards an action plan which will incorporate the development of human resources.
- The system has Advisory Councils for Productive Transformation and Competitiveness as vehicles for coordination and consultation. They can specialize in a specific area and their purpose is to enhance effectiveness in achieving goals through social participation.

GAPS AND NEEDS

- The population pyramid in Uruguay is significantly weighted towards older adults when considering the total population. People over the age of 60 constitute 18.7% of the total population and 24% are young people between 15 and 29. The youth to adults (30 to 59 years of age) ratio is 57 per 100, while in the rest of the region, in 2000 there were 97 young people per 100 adults. This figure is projected to decline to 56 per 100 by 2020.³
- Uruguay needs to strengthen its human capital and the skills of its young population; to this end, it should improve its technical education and training for work systems. More than half of 15-year-old students fail to attain a basic level of competency in mathematics, and only just over 1% reach the highest levels. These scores had remained at the same level in 2003, 2006 and 2009, but dropped in 2012.⁴

- The country's secondary education coverage rates are high, but challenges continue in relation to early leaving, repetition and the disparity of results depending on family income.
- In 2010, only 25% of young people (15-17) in the lowest income quintile completed the basic cycle of secondary education, while 85% of those in the highest quintile completed the cycle.
- Better advantage of the potential benefits of technical education should be taken; enrolment at this stage of education has been increasing since 2000, but initiatives such as UTEC and coordination with the demands of the production sector must be consolidated.
- Debate on educational reform needs to reach concrete solutions, among which are the strengthening of a training for work system to enable delivery of a range of relevant skills for the world of work.
- The training system lacks a framework for the recognition of different types of training, including the training delivered by UTU and the training offered by INEFOP and other providers.
- At the same time, links between training systems and productive development policies should be bolstered by designing training programmes and strategies to synchronize schools with their productive and social environment.
- One company in three (36%) states that the level of education of the workforce is a significant limitation to its activities, compared to 15% in OECD countries.
- In order to improve its competitiveness, the country has invested in industrial parks and infrastructure projects, but there is a persisting challenge regarding transport and internal connectivity to facilitate incorporation in global production chains.¹

III. General overview of VT

VT ON OFFER:

- In addition to the Ministry of Education (MEC), whose function is basically to design policy, the operational burden and specific guidance lie with various autonomous councils which are part of the National Public Education Administration (ANEP).
- Vocational and Technical Education (VTE) is run by the Vocational and Technical Education Council, known as CETP-UTU (for University of Labour).
- In 2014, CETP-UTU delivered courses in 282 education centres throughout the country, some of them belonging to departmental municipalities. There are 60 in Montevideo (21%) and 222 in the rest of the country; 145 of these centres belong to UTU.
- Over the long term, VTE enrolment has grown steadily, and in 2015 it reached 64% more enrolments than in 2000 (59,716 in 2000 and 93,022 in 2015).⁵ Enrolments in third-stage, non-university VTE in UTU rose from just over 200 in 2000, to 9,489 in 2014.
- This growth is observed in all of the educational formats offered, with the exception of the Vocational Training (VT) category, which is conceived to provide links to jobs and has no educational continuity. In 2000, 6 out of 10 UTU students enrolled in vocational training, a figure which dropped to only 1 out of 10 in 2014.
- Through the DINAE, the MTSS establishes active policies, among them, those relating to training and capacity-building for work.
- INEFOP, established in 2008, is run by a tripartite Board of Directors and implements training for work and worker qualification programmes. Its courses are short and in 2015, were attended by 28,501 students.
- INEFOP delivers its programmes through 174 public and private providers, to which end it invites tenders and awards contracts for the courses to be taught.

VT FINANCING:

- Funding for education has remained at about 4.6% of GDP over the last three years. For a clearer idea of the relative weight of investment in VTE, expenditure per CETP student in 2014 was 21% greater than expenditure for secondary education, as calculated by the Ministry of Education,³ and reached just over USD 2600.
- In 2015, INEFOP's budget amounted to USD 14.8 million, which means an investment per student of USD 521 in the short, basic courses it delivers.
- The Technological University is gaining ground and expanding its coverage and programmes quickly. The amount invested by UTEC in 2014 is close to USD 400,000, if compared to the total number of 173 students in 2014, and 2015 shows an updated per capita expenditure of USD 2312. For the current year, UTEC has announced that its enrolment has exceeded 1000 students. Much of UTEC's initial investment went on infrastructure and building refurbishment.

ENGAGEMENT OF SOCIAL STAKEHOLDERS

- Uruguay has a long tradition of employer, worker and government involvement in social dialogue on vocational training.
- There are Wage Councils set up to engage in collective bargaining; opportunities for bipartite dialogue which, with the support of the Ministry of Labour, move forward in issues which, while mainly addressing remuneration and working conditions, are also beginning to include subjects relating to training and capacity-building, updating job profiles and competency certification.
- Recently, collective bargaining has been considering the updating of occupational descriptions in order to include changes regarding technology and work organization.
- With its initiative relating to a culture of work and development, the MTSS has promoted meetings with social stakeholders in order to advance in mainstreaming the concept and the basic lines that could lead to its realization in labour relations.
- INEFOP, the agency specializing in training for work, has a tripartite Board of Directors.
- INEFOP is currently funding a project with the technical support of ILO/Cinterfor, with a view to developing tools and transferring capacity to different stakeholders, thus updating occupational content in the different sectors of collective bargaining.
- The project also includes the strengthening of dialogue in order to move forward on a proposal for a national vocational training system, as well as for mechanisms for training and recognizing labour competencies acquired over the course of workers' experience at work.
- The project's Coordination Committee is also tripartite and is, therefore, an opportunity for dialogue applied to specific outputs in the development of skills and competencies within the framework of a culture of work.
- The creation of Advisory Councils for Productive Transformation and Competitiveness as tripartite vehicles for coordination and consultation provided a good opportunity to extend social dialogue.

SPECIFIC SOURCES CONSULTED:

Data on "Training for Work" are taken from the "Relevamiento diagnóstico sobre la formación profesional en la región" [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

- 1 - Multi-dimensional review of Uruguay. OECD. 2016.15
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VENEZUELA

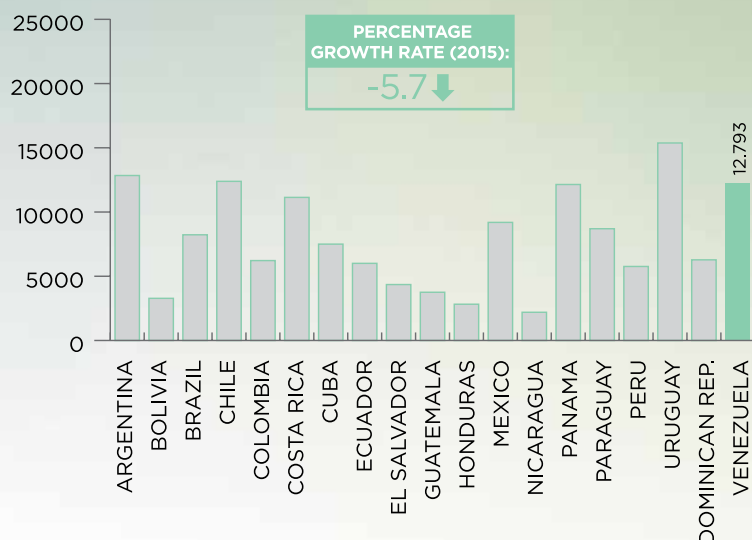


VENEZUELA



GDP

PER CAPITA
GDP
(US\$ 2015)



POSITIONS IN GLOBAL RANKINGS

HUMAN
DEVELOPMENT
INDEX
(2015):
67/188

GLOBAL
COMPETITIVENESS
INDEX
(2015/2016):
79/124

I. Basic dimensions of the labour market and VT



POPULATION
(IN MILLIONS, 2016):
31.519

POVERTY
(2015):
33.1%

LABOUR
INFORMALITY (2013):
49.4%

52.9% 43.9%

YOUTH NEITHER
WORKING NOR
STUDYING
(2014):
18.9%

OLF - OUTSIDE
LABOUR FORCE

WAP - WORKING
AGE POPULATION



LF -
LABOUR FORCE (2015):
63.9%

UNEMPLOYMENT (2015):
6.8%

6.3% 7.7%

YOUTH:
14.6%





PUBLIC VOCATIONAL TRAINING IS RESPONSIBILITY OF TECHNICAL SECONDARY EDUCATION, ADMINISTERED BY THE MINISTRY OF EDUCATION AND, IN ADDITION, OF THE INCES.

Average years of schooling (2015): **8.9**

Illiteracy rate (2015): **4.6%**

Percentage of population 20 years and older who have completed secondary education (2011): **21.14%**

Population with at least some secondary education (% of 25 years of age and older): **53.7%**



EDUCATION



TRAINING FOR WORK

VET Enrolment (2014): **1.041.260¹**

VT Participants (2014): **no information supplied**

Public: **INCES**

BY LAW, INCES MUST KEEP A RECORD OF PUBLIC AND PRIVATE INSTITUTIONS THAT DELIVER TRAINING.

II. Progress, lags and gaps in education and vocational training

DEVELOPMENTS WHICH ACCELERATE SOLUTIONS AND ANSWERS

- According to UNESCO, the net primary school enrolment rate reached 93% in 2013. In 2015, secondary education reported that 1,041,260 young people had enrolled in the “Bolivarian High Schools”, designed as a bridge between school and university.
- Investment in education rose from 3.15% of GDP in 1990 to 7% in 2012. A national educational quality system is under construction and there is no recent information available on quality assessment.
- Public vocational training in Venezuela is the responsibility of technical secondary education, administered by the Ministry of Education and, in addition, of the National Socialist Education Institute (INCES, in Spanish).
- INCES emerged as such after a number of restructuring efforts carried out in the first decade of the 21st century (2008), which link it closely to the national development plan. It was reformed again in November 2014.
- INCES is coordinated by the Ministry of Popular Power with the purpose of engaging in a process of social labour and it seeks to develop vocational training within the socialist Bolivarian productive development vision.
- Addressing the education and training of vulnerable groups has focused on “missions” such as: Robinson, Vuelvan Caras and Che Guevara, which include high impact strategies and countrywide coverage.
- This year, INCES has announced the incorporation of up to 60 thousand apprentices as part of the Chamba Juvenil [“Youth Work”] plan.

GAPS AND NEEDS

- Venezuela took part in UNESCO’s first regional comparative study (1997). Average scores in mathematics, science and language for fourth-grade students showed highly variable performance levels, without reaching the regional average.
- There is ample room for improvement in coordination between the vocational training offered by the INCES and formal education.
- Mechanisms could be applied to anticipate demand based on the needs of the productive sector or through social dialogue processes.
- Coordination between INCES and development public policy should be strong, according to the law, but there is no information available with which to analyse progress.

III. General overview of VT

VT SUPPLY:

- In addition to a general, five-year stream, secondary education includes a six-year technical option. Students who complete this latter stream obtain a qualification as a technical practitioner.
- INCES delivers apprenticeship training. The law sets a quota of between three and five percent of the number of workers, for businesses employing more than 15 people. No figures have been found regarding the number of apprentices in training.
- There are no statistics available in relation to vocational training on the public websites of the Ministry of Education or INCES.

VT FINANCING:

- Based on the national budget's public sources. There are no public data to be found showing amounts.
- INCES is financed by a percentage of the payroll tax, to be paid by public and private enterprises (2%), and their workers (0.5%), on their annual profits, bonuses or end-of-year bonuses. Only companies employing 5 employees and over must pay this contribution.
- Enterprises conducting training programmes for their workers can deduct the value of such programmes from the amount of their contributions, according to the procedures determined by law.

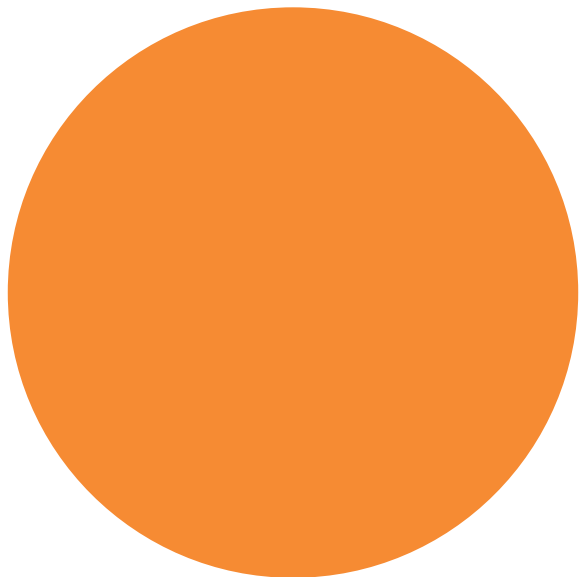
SPECIFIC SOURCES CONSULTED:

Data on “Training for Work” are taken from the “Relevamiento diagnóstico sobre la formación profesional en la región” [Diagnostic survey of vocational training in the region], carried out by ILO/Cinterfor in 2016 among its member institutions.

Sources for data on GDP and the labour market are listed at the end of the document in the section on Sources Consulted.

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Average years of schooling: average number of years of schooling of the economically active population aged 15 and over. Source of data: ECLAC Database. In the case of Mexico: ENOE. Average 2015.

Companies which find it difficult to fill vacancies: percentage. Data taken from: Talent Shortage Survey 2015. ManpowerGroup. <https://www.manpower.com.pe/mpintranet/publicaciones/3166-9795432090759.pdf>

Economic Complexity Index: based on an elaborate mathematical processing of information on international trade, this index determines the amount of productive knowledge accumulated by an economy on the basis of two main variables: diversity and ubiquity. Data taken from: <http://atlas.cid.harvard.edu/rankings/>

Educational attainment in secondary education: relates to the percentage of the population between 18 and 20 years of age who complete secondary education. Data taken from: <http://www.iadb.org/research/sociometrobid/charts.cfm?lang=en&indicator=2>

Global Competitiveness Index: a comparative evaluation of twelve pillars of competitiveness that determine the long-term productivity of economies, and serves as a monitoring and priority identification tool for governments, the private sector and civil society. Data taken from: World Economic Forum <http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/>

Human Development Index: a synthetic indicator of average achievements in the fundamental dimensions of human development: having a long and healthy life, acquiring knowledge and enjoying a decent standard of living. Data taken from: Overview. Human Development Report 2015, UNDP. http://hdr.undp.org/sites/default/files/hdr15_standalone_overview_en.pdf

Illiteracy rate: refers to the relative size of the illiterate population. Calculation: population aged 15 and over who cannot read or write, divided by the population aged 15 and over, multiplied by 100. Data taken from the UNESCO database: <http://uis.unesco.org/>

Individuals 20 years and older who have completed secondary education: refers to the ratio between persons aged 20 and older who completed secondary education and did not attend higher or university education, nor are enrolled at that level, and the total population in that age group, multiplied by one hundred. Data taken from the Information System on Educational Trends in Latin America (SITEAL) http://www.siteal.iipe.unesco.org/base_de_datos/consulta
In the case of Mexico: ENOE, INEGI-STPS Average 2015.

Labour force - LF: includes all individuals older than 15, who are eligible to be included in the category of employed individuals or unemployed persons as a percentage of the total population aged 15 and older. Data taken from ILOSTAT: <http://www.ilo.org/ilostat/>

Non-agricultural informality or informal employment rate: calculated as the number of workers in the informal economy as a percentage of the total number of employed persons. Data taken from the ILO database: ILOstat <http://www.ilo.org/ilostat/>
For Bolivia, Brazil, Chile, El Salvador, Honduras, Paraguay and Venezuela, data taken from the ECLAC statistics database. http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp For Mexico, data taken from: www.inegi.org.mx

Outside labour force - OLF: includes all individuals older than 15 who are neither employed nor unemployed (i.e. they are neither working nor seeking work) during the reference period. These persons are not in the labour force.

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Population with at least some secondary education (% of 25 years of age and older): data taken from the country profiles in the database in <http://hdr.undp.org/es/countries>



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Population: data taken from the UNESCO database: <http://data.uis.unesco.org/>

Poverty: data gathered represents the poverty incidence rate based on the national poverty threshold (% of the population). The national poverty rate is the percentage of individuals living below the national poverty threshold. Country estimates are based on population-weighted subgroup estimates derived from household surveys. Source: <http://www.bancomundial.org/es/country> Paraguay: Main poverty and income distribution outcomes: Statistics, Survey and Census Directorate-General. Paraguay, 2015. www.dgeec.gov.py/Publicaciones/Biblioteca/eph2015/Boletin%20de%20pobreza%202015.pdf
Mexico and Dominican Republic: data taken from the ECLAC database.

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ACRONYMS

AECID	Spanish Agency for International Development Cooperation
EP	Employed population
EU	European Union
GAN	Global Apprenticeship Network
Higher-VTE	Higher Vocational and Technical Education
ICT	Information and Communication Technology
IDB	Inter-American Development Bank
ILO	International Labour Organization
Mid-VTE	Secondary Vocational and Technical Education
MSME	Micro, Small & Medium Enterprises
OAS	Organization of American States
OECD	Organization for Economic Co-operation and Development (Headquarters: France)
PISA	Programme for International Student Assessment)
SDG	Sustainable Development Goals
SERCE	Second Regional Comparative and Explanatory Study (tests)
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
VT	Vocational Training
VET	Vocational Education and Training
VTI	Vocational Training Institute
WB	World Bank



ARGENTINA

CONETyP	National Council for Education, Labour and Production
IERIC	Statistics and Registration Institute for the Construction Industry
INET	National Institute for Technological Education
INTA	National Institute for Agricultural Technology
MTEySS	Ministry of Labour, Employment and Social Security
PROGRESAR	Support Programme for Students in Argentina
UOCRA	Construction Workers Union of the Republic of Argentina

BRAZIL

ABRAMAN	Brazilian Maintenance and Asset Management Association
EDH	Entrepreneurs for Human Development
GIFE	Institutes, Foundations and Enterprises Group
MEC	Ministry of Education
PRONATEC	National Programme for Access to Technical Education and Employment
SEBRAE	Brazilian Service of Support for Micro and Small Enterprises
SEMTEC	Secondary and Technological Training Secretariat
SENAC	National Commercial Learning Service
SENAI	National Industrial Learning Service
SENAR	National Rural Learning Service
SENAT	National Transportation Learning Service
SESI	Social Services for Industry
SESC	Social Services for Trade

CHILE

ChileValora	Commission National Skills Certification System
INACAP	National Vocational Training Institute
SENCE	National Training and Employment Service

COLOMBIA

ASENOF	National Association of Education for Work and Human Development Agencies
CREE	National Taxes and Customs Authority
MEN	National Ministry of Education.
SENA	National Learning Service

COSTA RICA

CTP	Public Transport Council
INA	National Training Institute,
MEP	Ministry of Public Education

CUBA

MINED	Ministry of Education
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ECUADOR

CCP	Catalogue of Professional Qualifications
MCCTH	Ministry of Knowledge and Human Talent Coordination
SENPLADES	National Planning Secretariat
SECAP	Ecuadorian Vocational Training Service
SENESCYT	Ministry of Education, Secretariat for Higher Education, Science, Technology and Innovation
SETEC	Technical Secretariat for the National Qualifications System and Vocational Training
SNCCP	National Qualifications System and Vocational Training Tecnología e Innovación
SETEC	Secretaría Técnica del Sistema Nacional de Cualificaciones y Capacitación Profesional
SNCCP	Sistema Nacional de Cualificaciones y Capacitación Profesional



EL SALVADOR

INSAFORP	Salvadoran Vocational Training Institute
MEGATEC	Progressive Educational Model for Technical and Technological Learning
MINED	Ministry of Education

GUATEMALA

FUNDESA	Foundation for Development
INTECAP	Technical Institute for Training and Productivity
MINEDUC	Ministry of Education

HONDURAS

CADERH	Advisory Centre for Human Resources Development
CENET	National Employment Training Centre
COHEP	Honduran Private Enterprise Council
GIZ	International Development Cooperation (Germany)
INFOP	National Institute of Vocational Training
METAS	Improving education to work, learn and better oneself (Project)
PROJOVEN	Vocational training for youth at risk of exclusion (Programme)

MEXICO

BECATE	Grant programme for training for work
CONALEP	National College of Technical Vocational Education
CONOCER	National Council for Standardization and Certification of Labour Competencies
DGCFT	Directorate-General for Training for Work Centres
INADEM	National Entrepreneurs Institute
PAC	Continuation of the Comprehensive Quality and Upgrade Programme (CIMO) established in 1988 in support of training for workers of small and medium enterprises
PROBEMS	Grants programme for higher secondary education
PROSPERA	Programme for the human development of the population in extreme poverty, providing support for education, health, nutrition and income
RIEMS	Comprehensive Reform of Higher Secondary Education
SEP	Public Education Secretariat
STPS	Labour and Social Security Secretariat

NICARAGUA

INATEC	National Technological Institute
INTECNA	National Institute of Technology
MAGFOR	Ministry of Agriculture and Forestry
PPA	Food Production Programme

PANAMA

CONACOM	National Labour Competencies Commission
INADEH	National Vocational Training Institute for Human Development
MEDUCA	Ministry of Education

PARAGUAY

FCL	National System for Capacity-Building and Training for Work
JICA	Japan International Cooperation Agency
KOICA	Korean International Cooperation Agency in Paraguay
MTSS	Ministry of Labour, Employment and Social Security
REIFOCA	Registry of Capacity-Building and Training for Work Institutes
SINAFOCAL	National System for Capacity-Building and Training for Work
SNPP	National Service of Vocational Promotion



PERU

CENFOTUR	Tourism Training Centre
FONDOEMPLEO	National Fund for Job Training and Employment Promotion
INICTEL	National Institute for Research and Training in Telecommunications
MYPIMES	Micro, Small and Medium Enterprises
MTPE	Ministry of Labour and Employment Promotion
SENATI	National Industrial Training Service
SENCICO	National Training Service for the Construction Industry

DOMINICAN REPUBLIC

CONEP	National Council of Private Enterprise
INFOTEP	National Institute of Technical Vocational Training

URUGUAY

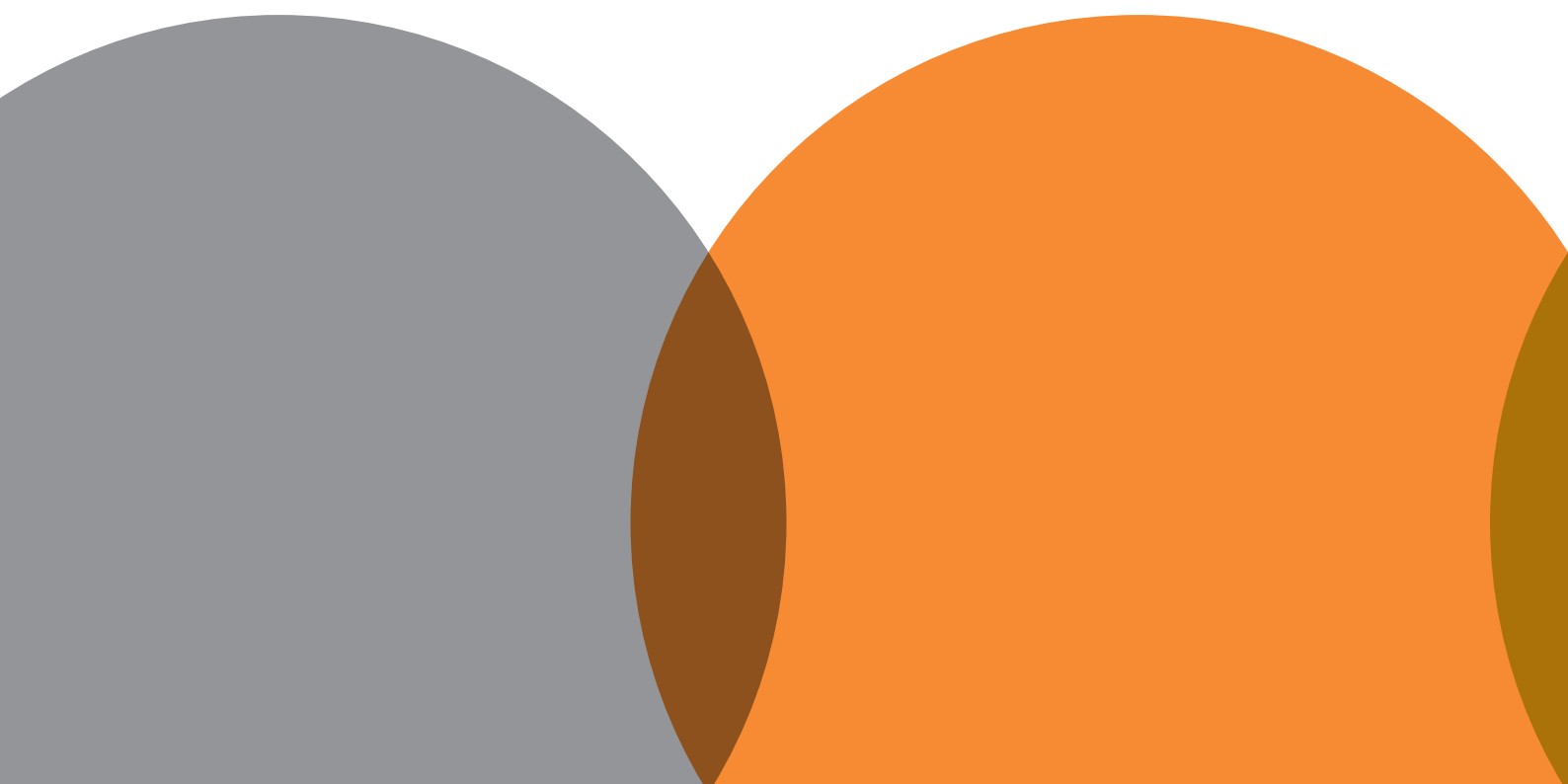
CETP/UTU	Vocational Technical Education Board – Uruguay's Polytechnic Schools
DINAE	National Employment Bureau
INEFOP	National Institute for Employment and Vocational Training
MTSS	Ministry of Labour and Social Security

VENEZUELA

INCES	National Socialist Training and Education Institute
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Este documento se terminó de imprimir en el departamento
de Publicaciones de OIT/Cinterfor en Montevideo, julio de 2017.
Hecho el depósito legal número 372.070

ILO REGIONAL OFFICE FOR LATIN AMERICA AND THE CARIBBEAN
INTER-AMERICAN CENTRE FOR KNOWLEDGE DEVELOPMENT IN
VOCATIONAL TRAINING - CINTERFOR





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**THE FUTURE
OF VOCATIONAL TRAINING
IN LATIN AMERICA AND THE
CARIBBEAN:**
OVERVIEW AND
STRENGTHENING GUIDELINES



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