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# EXECUTIVE SUMMARY

## Skills Training for Work in Chile

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Compared to OECD countries, Chile's population exhibits lower levels of skills. This deficiency in specialized labor hampers the productive sector's ability to acquire the necessary talent for enhancing productivity and competitiveness. Moreover, every year, tens of thousands of young individuals witness their future prospects curtailed, their opportunities limited, and their talents squandered. Additionally, hundreds of thousands of adults within the labor force find themselves trapped in a cycle of low productivity, meager wages, and limited employability, all while facing a heightened risk of skill obsolescence amid the perpetual onslaught of technological disruption. Consequently, a significant portion of Chileans possesses limited capacities to confront the challenges of the future.

One of the key factors contributing to this predicament is the prevailing bias of our educational system, which has tended to prioritize the scientific-humanist and university sectors over technical-professional education and continuous training. This imbalance has resulted in inadequate preparation, often disconnected from the demands of the productive sector. Particularly, technical-professional secondary education remains insufficiently recognized as a distinct form of learning that progresses from practical and concrete applications to conceptual understanding, diverging from traditional blackboard-based instruction. Experiences indicate that a significant portion of the population learns most effectively through hands-on practice.

Acknowledging these challenges, the President of the Republic has tasked the National Productivity Commission with analyzing Chile's Skills Training System for Work. The aim is to identify areas that require improvement and to provide recommendations for closing the gaps with the best-performing systems globally. The analysis focuses specifically on secondary and higher technical professional education, training, and the certification of competencies.

Considerable efforts have been made in Chile to address these challenges. The Ministry of Education has taken significant steps in reforming the vocational training system, including the establishment of the Advisory Council for Professional Technical Education and the development of a strategy for Professional Technical Training. Simultaneously, the National Training and

Employment Service has initiated a restructuring process that encompasses the creation of Labor Observatories. In addition, CORFO, through its Smart Specialization Strategic Programs, is actively bridging human capital gaps. ChileValora has also made notable progress in establishing a national system for evaluating and certifying skills, providing workers with access to recognition, regardless of how they acquired their skills. However, these efforts have only focused on specific components of the skills-training structure, lacking a comprehensive systemic vision and coordination mechanisms.

Significant amounts of public funds have been allocated, yet they have not yielded substantial impacts. Despite these endeavors, there is an urgent need to strengthen and reform professional technical education in Chile. The country requires a sufficient number of well-trained technicians who possess the necessary quality to meet present and future demands. Our youth deserve a high-quality technical education that nurtures their talent throughout their lives.

This report represents a culmination of previous studies and evaluations, yet it distinguishes itself by offering a groundbreaking systemic perspective on skills training in Chile. It presents a comprehensive vision and provides recommendations regarding the available training opportunities. It places the user of the system at the forefront, whether they be students, workers, or individuals seeking to understand the options available to acquire knowledge that will be relevant in the world of work.

This study owes its success to the invaluable contributions of numerous individuals, including consultants and key institutions within the vocational training sector. Their expertise and collaboration have played a crucial role in the development and completion of this study. We would like to extend our special appreciation to Fundación Chile and the Labor Markets Division of the Inter-American Development Bank for their substantial support and contributions.

## Background

In 1844, Manuel Montt, then Minister of "Justice, Worship and Public Instruction" of Chile, warned of the need to create a school of industrial trades in Santiago that taught carpentry,

blacksmithing, foundry, and mechanics. The country brought teachers from France, and on August 8, 1849, President Manuel Bulnes officially founded the School of Arts and Crafts in the Yungay neighborhood. By 1893, the Mining Schools of Copiapó, La Serena, Antofagasta and the Industrial Schools of Concepción, Temuco, and Valdivia already existed, actively contributing to the economic development of the provinces.

After the economic depression 1930, the State actively promoted the development of the national industry. The recently created CORFO encouraged the training of specialized technicians to meet the country's industrial sector requirements. During the Government of Carlos Ibáñez (1954), some changes sought a more tangible link between vocational training and formal education (equivalent to technical and scientific-humanist education). In successive decades, further reforms established a technical-professional secondary education with a curriculum differentiated from humanist education. It defined the specialties of their study plans and programs. Since then, the professional technical option went from 29% of the enrollment in 1981 to 36% in 1990 and 40% today. Jobs within the companies in the establishment's surroundings emphasize these adjustments to their demands and needs.

Technical-professional secondary education is taught during the last two years of school (3rd and 4th secondary) in technical-professional or multi-purpose high schools or comprehensive adult education centers for young people and adults who wish to complete their formal education. Technical training centers (CFTs), professional institutes (IPs), and universities provide higher technical professional education. In 2016 there were 150 higher education institutions: 49 CFTs, 42 IPs, and 59 universities, that enrolled 1,178,437 students, 56% of them in universities, 32% in IPs, and 12% in CFTs. 46% of the students study in regular-quality institutions (between 2 and 4 years of accreditation), and 10% study in low-quality institutions (not accredited). Higher education offers are distributed mainly in technology, administration and trade, health, and education.

Thanks to various reforms dating from the 1990s (for example, compulsory secondary education in 2002), the attendance rate in secondary and higher education increased considerably. 33% of secondary education establishments (out of 2,874 as of 2016) provide professional technical

education and concentrate 39% of the enrollment. No privately-paid secondary education establishment offers the professional-technical education modality, denoting that most of the students in these establishments come from lower-income families. In higher education, 90% of the graduates of scientific-humanist education in 2007 continued higher studies until 2016, versus 63% of the graduates of the technical-professional high school modality. In addition, the professional technical high school student tends to be a working student who may not perceive secondary education as a terminal level but usually enters the higher education level later, after entering the labor market once graduating from high school.

Higher technical education is highly profitable. The upper median technical career raises income close to \$300,000 monthly, so its profitability is 25% annually,<sup>1</sup> proving that Chile is ready to guarantee that every young person enters the labor market with a higher technical degree or its equivalent. Raising the income of those at the bottom of the income pyramid reduces inequality and increases productivity.

Despite the expansion in educational coverage, the current structure only offers options for training or training-labor trajectories to some population groups. Seven out of 100 young people between 15 and 18 do not attend an educational establishment. The high dropout rates are problematic since young people who enter the labor market without their secondary education license see their professional trajectory severely affected and their formation cut short. Additionally, according to the National Education Council, half of those who enroll in universities and CFTs do not complete their study programs. In the case of IPs, this number rises to 60%. The options to access training programs within companies are minimal. Many of these young dropouts become part of the population group that neither studies nor works (NINIs), who do not have the skills to enter the labor market nor the knowledge to build training-labor trajectories. In 2015, 767,000 young people between 15 and 29 were in this category (with data from the CASEN survey)—18% of the cohort—that places Chile as the sixth country with the highest proportion of NINIs in the OECD.

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<sup>1</sup> Indeed, graduates from institutions accredited for a longer duration (and therefore of better quality) exhibit higher returns compared to graduates from non-accredited institutions or institutions accredited for a minimum number of years.

Those who complete the formal education cycle also face challenges. Judging by the skills of the educated population, the increase in coverage has yet to represent an increase in quality. The results of international assessments—such as the PISA test (2015)—show that 49% of high school students do not reach the minimum competencies in mathematics, and 35% are equally deficient in science. In 1998, Chile obtained the worst results among the 20 countries in the sample (OECD) in the International Adult Literacy Survey that measures reading and numeracy skills. Over 80% of the Chileans who answered the test did not have the minimum reading level to function in today's world, and more than half of those over 16 years of age were at the basic level, only able to understand simple texts. Recent evaluation instruments show equally discouraging results. According to the PIAAC test (2015) that measures the skills of adults in the labor force (15-64 years old), 53% of the Chilean labor force is functionally illiterate or barely functional (level 1 or less). The results are equally worrying in numerical skills and problem-solving in technological environments. Over 60% of adults can barely perform simple tasks such as counting, identifying graphic representations, and calculating change.

The PIAAC (2015) results also place Chile among the countries with the most significant mismatch in the OECD: a third of the workers are under-qualified or over-qualified concerning the educational level required for their job, and half work in an area other than their field of study. Regarding technological skills, a third could not take the evaluation due to deficiencies in using a computer, surfing the Internet, or because they decided to take the paper version. Hence, there is a high risk that current technological skills will become obsolescent in the short term, so programming and digital logic must be included in the minimum contents of the curricula starting from primary education and throughout the training cycle. The existing training structure falls short in anticipating future skill requirements, with 61% of workers in occupations at risk of automation and 24% in jobs highly susceptible to technological changes. To address this, it is imperative to evaluate and implement new training policies and instruments that align with the evolving needs of the productive world. Closing these gaps will be essential for ensuring a skilled workforce capable of thriving in the face of technological advancements.

Likewise, labor informality persists in people who need more training due to their lower educational level. On the other hand, among salaried workers, half work for small and medium-

sized companies, which have few options to train them due to liquidity restrictions, management capacity, and the opportunity cost associated with their absence. The high prevalence of temporary contracts that limits access to training programs affects this situation even further.

Beyond formal education, the State offers various training alternatives. The national training system depends on the Ministry of Labor through SENCE, which aims to provide workers with the skills to solve problems, build knowledge, carry out practical activities, and apply knowledge in a constantly evolving labor market. Although the Ministry of Labor is responsible for the training policy, it does not have a specific unit in charge of designing, formulating, monitoring, and evaluating these employment policies. ChileValora, which is in charge of the Labor Skills Certification System, is also part of the Ministry of Labor. However, it needs to have the coordination capacity to manage this policy.

SENCE concentrates the most significant number of beneficiaries of training programs in the State, around 830,000, or 77% in 2016. The resources allocated for these purposes have multiplied in the last 30 years: MINEDUC has increased the total budget by six times, and SENCE nearly forty times. The Government spends more than 0.2% of GDP on training, primarily through the tax exemption mechanism.

The review of the programs shows that the training policy needs to be more cohesive and relevant due to the scarce connection between the training offer and the demands of the productive world. In addition, many training programs belong to other public services whose objective is to complement the policy of the respective service. These are not coordinated with each other or with other parts of the training structure, nor do they necessarily lead to certification of the skills acquired, nor are they inserted into educational-labor trajectories. Each service—and sometimes each program or the training provider—must raise information regarding the demand without much knowledge concerning the relevance of the content offered or that the skills delivered suit the labor trajectory training. Most of the programs reviewed are limited to classroom training with no practical components.

Many problems arise concerning on-work training, but two stand out. First, 2/3 of those trained benefit from the Tax Franchise (today the Impulsa Personas Program) of SENCE, whose training programs last less than 40 hours, with an average of 21 hours. The expected impact on salary or employability of a program of just 21 hours of training is negligible, and it is not surprising that the program evaluations are negative. The evidence shows that long-term courses are required to affect the desired variables (salary or employment), with at least 280 hours completed, unless well designed to cover a specific gap. Secondly, there are no set mechanisms to measure the learning, nor are results required in the certification of skills, higher wages, or employability. The programs only measure attendance, and 75% attendance of each trainee is enough to receive public financing. Benchmark countries show that the programs with the most significant impact prioritize labor intermediation; that is, they link workers and companies with a package of services that may include labor market information, labor counseling, recruitment services, etc.

Since 2014, the various agencies and ministries linked to the FTP field (MINEDUC, SENCE, CORFO, ChileValora) have worked coordinately to build a National Qualifications Framework to integrate formal TP education, training, and skills certification. The Executive Secretary of Professional Technical Education of the Ministry of Education is leading this initiative. However, although it is in the MINEDUC organizational chart, the Secretariat is outside the hierarchical ministerial line, which gives it little capacity to effectively articulate the different areas of the organization that intervene in the technical-professional training policy. It does not have the ability to absorb the workload, nor does it have specialized personnel in technical-professional training. Recently, MINEDUC called for the creation of a Technical-Professional Training Advisory Council, whose purpose is to propose a National Strategy for professional technical training between 2017 and 2020. This Council works with the Ministry of Labor and the Ministry of Economy with their respective services. It includes a few actors from the private sector and representatives of training institutions.

### **Recommendations**

The National Productivity Commission prepared this study to reform the professional technical education, strengthen the country's productive development and improve workers' conditions. The study presents a series of findings and recommendations derived from an exhaustive analysis



process that includes literature reviews, interviews and consultations with the most relevant actors in the field of technical education, quantitative analysis, and consultancies with national and international experts. The Council has unanimously approved the recommendations delivered.

Structural recommendations focus on systemic reforms to professional technical education, and functional proposals detail the necessary actions to strengthen four critical functions the future system must satisfy.

### **Structural recommendations**

The structural recommendations aim to establish an integrated training system with itineraries that will allow the accumulation and updating of relevant skills for the productive world throughout life to ensure employability and personal development.

Chile does not have a professional technical training system. The training environment is complex and lacks coordination and coherence. It is based on a fragmented structure and delivers a disjointed training offer incapable of generating the necessary skills, anticipating future ones, and offering articulated trajectories to users. There needs to be a strategic vision linked to the country's development to guide the various actors and manage to satisfy the needs and requirements of the productive sector.

A set of guiding principles is delivered, reconfiguring the universe of training options toward an integrated, coherent, and articulated system, built by strengthening and ordering the existing institutionality, designing levels with educational and work trajectories, recognition of learning at work, and skills certifications. Recommendations include:

#### **1. New institutional architecture**

A technical-professional training system requires a specific institutional architecture governed by MINEDUC through an autonomous Technical-Professional Training Council made up of representatives of the productive sector and experts in the technical-professional field, which would advise the Government. In addition, the Council would be responsible for preparing a National Qualifications Framework. It would set the guidelines that ensure coherence between the

actors in the system, including medium and higher technical professional training, training providers, and competency certifiers. The framework will make it possible to structure curricula, accredit programs and institutions, certify skills, and ensure relevance between the educational world and the world of work. The Undersecretariat for Professional Technical Training must also be created at MINEDUC, and the Quality Agency for Professional Technical Training (which will group the functions of the current Education Quality Agency and the National Accreditation Commission in the professional technical field).

Institutions must ensure the active involvement of the productive sector in defining content and training. In addition, they will develop prospective studies of demand and sectoral initiatives and will be key players in job training. In particular, actors from the productive sector developing the respective competency standards must occupy the National Qualifications Framework.

## **2. Continuous education pathways and the qualifications framework**

The integration of the system requires, in addition to the coordination and articulation between the actors, the integration between educational levels that allow individuals to build an evolutionary trajectory. Skills acquisition in formal training environments or the workplace is recognized throughout life and leads to certification levels. Currently, the delivery of titles in professional technical training is not determined by the achievement of competencies but by the sum of teaching hours (4 semesters or 1,600 hours). The current system generates artificial verticality based on teaching hours, placing degrees awarded by universities at the top.

Recognizing the knowledge and skills acquired through formal and informal learning necessitates the establishment of a regulatory framework that governs qualifications. This framework, known as the Qualifications Framework, is designed to encompass skills acquired through various pathways, including non-university higher-level training. By modifying the current credential structure, which includes titles and degrees, we can accommodate these alternative training paths. The Professional Technical Training Council, in collaboration with the productive sector, will define and update this framework. It will categorize programs based on their complexity and the skills they impart, thereby facilitating the creation of technical careers that can attain equivalent levels of recognition, potentially even comparable to a technical master's degree.

The framework will serve as the guiding principle for all professional technical education and will set the standard for all training-related agencies. To qualify for public funding, a course or program must align with the competencies defined within the framework and provide certification at the corresponding level.

### **3. Recommendations relevant to those in the workforce**

A significant reorientation is necessary for ongoing education and training programs targeting the workforce. Our research findings have highlighted several challenges with the current training options financed by the Government, particularly those administered through SENCE, which primarily benefit individuals in the labor force.

Firstly, one major issue is the extremely short duration of these programs, averaging just 21 hours per beneficiary. Such brief training periods fail to generate a meaningful impact or produce substantial learning outcomes. Consequently, there is a need to address this limitation and ensure that training initiatives provide sufficient time for participants to acquire and apply new skills effectively.

Secondly, there is a pressing need for a comprehensive structure that guides the training process and supports the construction of meaningful learning trajectories. A well-defined framework can contribute to the development of coherent and progressive training pathways that align with individuals' career goals and enhance their employability. By establishing a structured approach, we can ensure that training programs are not disjointed or ad hoc but instead contribute to a broader professional development framework.

Moreover, it is crucial to evaluate the effectiveness of these courses and programs. Currently, the success of these initiatives is measured primarily by attendance rates, with a reported average of 75%. However, attendance alone does not provide a comprehensive picture of the impact or effectiveness of the training. It is essential to introduce robust evaluation mechanisms that assess learning outcomes and other variables relevant to public policy objectives. This will enable us to

determine the true effectiveness and value of these training initiatives and make informed decisions regarding their funding and improvement.

We recommend transferring the training and continuing education resources (including those of the Tax Excess) to a Special Training Fund for Productivity administered by the new Technical Training Undersecretariat. All public agencies linked to training will obtain resources from this fund, which will be used exclusively to finance training programs that generate certification and qualifications associated with the National Qualifications Framework. The fund will prioritize long-term programs (250-500 hours) capable of delivering a minimum level of skills in a trade or occupation to people without qualifications, chronically unemployed, or needing job conversion. It will also finance skills development in expanding fields but need more supply. Likewise, open functional and digital literacy courses will be offered to all the unemployed (collecting unemployment insurance). In addition, we recommend strengthening the employment promotion role of SENCE, including the labor intermediation system and its instruments.

The skills certification should be incorporated as one of the Unemployment Insurance benefits to certify the skills of the frictional unemployed. It is essential to promote the accreditation of skills acquired in work environments and developed in their work experience and to encourage their systematic use and adoption by the productive sector. This includes raising the certifying agents and taking advantage of economies of scale, allowing higher technical-professional education institutions with the best level of accreditation to certify workers in their specialties, as well as designing competency certification programs for high school graduates.

#### **4. Recommendations for those not yet entering the workforce**

Higher technical education offers a return of around 25%.<sup>2</sup> Therefore, the country is ripe to guarantee higher technical education (CFT or equivalent) to all young people who graduate from high school. It would not only have a positive social impact by raising the lowest wages (reduces

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<sup>2</sup> If higher technical education expands massively, it is reasonable to assume that profitability will not persist at such a high level. However, even if it "only" increases monthly income by \$150,000 (instead of the current \$300,000), the profitability would still be around 13% per year.

inequality), but it would also positively influence the economy's productivity. In other words, this is a good policy for growth and equity.

Given that, a significant number of those at the professional technical higher education study and work, we recommend making the provision and financing of technical programs in CFTs/IPs more flexible to reduce desertion and make studies compatible with family life and work. The State will finance, for example, the gratuity of these for four full-time semesters (daytime) or eight part-time semesters (afternoon).

Considering the low social profitability of pursuing university programs for a significant percentage of the population (those not in the top 30% of PSU), the results of this study propose to reverse the current financial biases that favor university education. For this, free university tuition can be conditioned not only to the vulnerability circumstances (and attending an accredited university) but also: 1) having passed one year of CFT/IP, 2) having obtained 525 points or more in the PSU, or 3) be located in the top 20% of the ranking of grades of the professional technical high school.

Lastly, it is imperative to improve the quality of pre-basic, primary, and secondary education to guarantee a solid training offer to all Chileans, regardless of their social or economic origin.

### Functional recommendations

Our comparative analysis of international best practices has identified four key functions that are crucial for establishing an outstanding vocational technical training system. These functional recommendations aim to make progress in the following areas:

#### **1. Attention to the needs of the productive sector**

The employability of graduates and the workforce's productivity should be coincidental and mutually dependent objectives. Achieving this requires permanent interaction with the productive sector to define the needs and competencies at each framework level. However, our findings show that Chile still needs an institutional mechanism that enables the systematic and binding integration of the productive sector's needs with the training offer. The MINEDUC defines the contents and

curricula for secondary education and each educational center for higher education. The technical vocational training policy generally does not consider the productive sector. Although there have been advisory bodies in which the productive sector has participated (the most recent is the Advisory Council for Technical Vocational Training), none has the representation of industries and a variety of companies and are advisory only.

Additionally, structured learning in the workplace as a training mechanism is incipient. It is necessary to provide incentives to companies for the provision of apprenticeship programs and labor practices for students and teachers and to establish an institutional framework of the labor market intelligence system to define current and future needs, integrate education, and work information, respecting the guidelines of the future Vocational Technical Training Council.

## **2. Competency-focused curricula**

According to the OECD: "Higher technical education in Chile does not include pathways that allow students who have completed their technical courses to continue their studies and enroll in higher-level courses that accept and accredit the knowledge already acquired." Indeed, there is a massive dispersion in titles, grades, levels, and training programs, with more than 5,000 programs in higher education and 150,000 SENCE courses. The current system lacks a cohesive framework for providing clear career trajectories. This issue is compounded by a high dropout rate, as the knowledge acquired by individuals is not recognized through intermediate certifications. Additionally, there are limited opportunities for individuals to resume their training later or to build upon what they have learned through work experience. Addressing these shortcomings is crucial to ensuring a more effective and flexible vocational training system.

It is necessary to develop curricula with the right mix of knowledge and skills, to ensure that qualifications and curricula build into coherent and transparent training-employment pathways. There are at least three national experiences in creating competency-based qualification frameworks: the Technical-Professional Education Framework, led by the Professional Technical Advisory Council (MINEDUC), the ChileValora Occupational Profiles Catalog (MINTRAB), and specific sectoral actions (for example, wines and mining). Although these are valuable

experiences, more is needed. A National Qualifications Framework must be required to integrate all training.

Curricula must prioritize the practice and acquisition of skills; For example, the programs of professional technical high schools should be linked to those of CFTs and IPs in their specialty. Within a qualification framework, a professional technical secondary education graduate could be exempted from equivalent modules in CFTs/IPs in those specialties (for example, exempted for at least one semester). Likewise, secondary education curricula should be more flexible, incorporate practical learning, and allow articulation between technical and professional secondary and higher education with a limited base of compulsory subjects and a more significant number of free-choice courses adapted to local or sectoral needs and contexts. The integration through networks of different educational establishments that allow sharing facilities and take advantage of economies of scale is highly recommended.

### **3. Quality assurance**

Our findings indicate the need for improvement in the current evaluation instruments used to assess educational programs and the quality of institutions. These instruments should consider factors such as the availability of necessary equipment, materials, and infrastructure to create an optimal learning environment. Additionally, there is a lack of instruments specifically designed to measure learning outcomes, which is a crucial aspect of evaluating the effectiveness of education. Enhancing these evaluation tools will enable a more comprehensive understanding of educational performance and facilitate targeted improvements in the learning experience.

Although work is underway to develop indicative performance standards for directors of educational establishments of technical-professional secondary education, until 2016, the only specific indicator was the degree. Furthermore, the quality assurance mechanism of technical-professional secondary education institutions, based on the verification of the Indicative Performance Standards conducted by the Education Quality Agency, presents a strong bias towards scientific-humanist education since it is based on the SIMCE results and does not measure skills. This gives few incentives to higher education institutions to acknowledge intermediate-level

learning since it risks accepting students who still need to meet minimum qualifications or require a high level of leveling.

Teachers or directors need to be satisfactorily evaluated and accredited too. We recommend pedagogical training of specialty teachers, guiding teachers in companies, and having specific instructional material for professional technical training. This requires, among other things, the creation of a special fund for the promotion, updating, and development of teachers and directors of the technical-professional area that require different pedagogical approaches and the ability to integrate "know-how."

In professional technical higher education, there are two quality assurance mechanisms: licensing and accreditation. The National Education Council authorizes the institutions' operations and decrees their autonomy in licensing. As for certification, the National Accreditation Council accredits training institutions that request it since it is not mandatory, although it is a requirement to access public funds, which, according to the 2013 OECD report, "has had very little use as a tool to guarantee the quality of higher education."

Since 2014, guidelines began to be applied to professional technical education. However, some interviewees have stated that these guidelines are not different enough from the university criteria to impact quality. These processes suffer from the same university academic bias and fail to meet the specific needs of technical-professional education. Therefore, it is essential to establish the obligatory nature of institutional accreditation to execute technical-professional programs and the need to incorporate specific and suitable criteria in the teaching field, employability, and student certifications.

There are also no quality assurance mechanisms in training. SENCE has consistently been devoid of learning measurement. The quality standard for OTECs does not include any criteria that regulate teachers' recruitment, evaluation, or training. SENCE enabled a record of instructors without considering critical quality elements. It is essential to make progress in consolidating a more challenging quality system to integrate this type of training into the entire system.



#### **4. Financing and resource management**

There needs to be a vision of country development in the long term regarding the allocation of resources. In benchmark countries, financing is oriented based on the country's strategic objectives, founded on essential priorities, defined systemically, and considering contributions from the Government, individuals, and companies. Chile presents a need for coordination between the financing of the different levels of training, with an almost total fragmentation of the allocation of resources. There are even duplications in objectives and beneficiaries in programs offered by SENCE, CORFO, formal education, and others. Worse still, no financing mechanism links the allocation of resources to the achievement of learning or employability results. The programs rarely provide information on developments and never give an impact evaluation, revealing an inefficient and incoherent program architecture (in purpose and financing) with no focus on building training paths or coordination mechanisms between them.

In secondary education, the resources are subject to the rules of scientific-humanist schools, which prevents the effective use of these resources in services and pedagogical instruments appropriate to the instruction of a technical specialty. The state contribution to technical-professional higher education continues to be well below that allocated to universities. The public financing per student that the CRUCH Universities receive is six times greater than that of the Technical Training Centers. This is even more serious if one considers that while the CRUCH Universities receive financing based on supply and demand, the CFT and IP are financed almost exclusively with subsidies based on demand.

We recommend adapting the preferential school subsidy and the School Integration Programs to include exclusive pedagogical uses of professional technical education in secondary education, subject to learning results (employability, certification, or continuity of studies). In addition, recommendations point to the consideration of financing mechanisms for schools for acquiring equipment, supplies, and materials and provide financing for labor practices, subject to the effective acquisition of skills.

For higher education, it is necessary to rebalance the current public contribution that favors university education at the expense of technical education. Considering the increased investment

and equipment costs of technical careers, financing may include the creation of basal funds for the development of these institutions linked to the production environment or participating in support programs for SMEs with offers of specialized technological services, among other ways.

In the case of training, the situation is critical if one considers the enormous amount of public financial resources invested in the diversity of training programs available (around US\$570 million, close to 0.2% of GDP). Such programs are often duplicated in their purposes or beneficiaries, rarely provide information on results, and never give an impact evaluation. For this reason, we recommend the creation of the Training Fund for Productivity to replace the current financing instruments for training in the priority lines indicated above. This will respond to the different characteristics of the beneficiaries and collect the learning from the current training instruments.

The country needs our young people to have access to quality technical education. Chile should provide all the instruments to meet these objectives, which will undoubtedly have significant returns individually, but above all, it will mean substantial progress for the country's development.