



Comisión
Nacional de
**Evaluación y
Productividad**

EXECUTIVE SUMMARY

Annual Productivity Report

2021

Productivity Report 2021

For the sixth consecutive year and by presidential mandate, the National Productivity Commission (CNP) publishes the Annual Productivity Report, whose objective is to monitor the evolution of productivity in Chile, both aggregate and sectoral, to identify areas for improvement. Productivity in Chile has experienced a concerning deceleration since 2000, with its contribution to average annual growth dwindling to a mere 0.1%. In contrast, during the 1990s, the country witnessed an average yearly productivity growth of approximately 2.3%. Sustaining this pace would have resulted in a per capita income level one-third higher than what is currently observed. The stagnation of productivity has first-order consequences for the quality of life. In the most productive countries, people have access to more leisure time and a greater variety of goods of better quality and lower prices. Additionally, real wages are higher, and higher fiscal revenues allow more and better public services to be financed.

It is vital to remember that productivity measures how many goods and services are produced with various productive factors (such as labor and capital). Thus, higher productivity generates more output with the same level of inputs. However, productivity is a variable that is not directly observable and must be estimated. There are various ways to calculate productivity. The CNP estimates it based on the Total Factor Productivity (TFP), based on the output ratio to an index of the productive factors used. As has been reiterated in previous reports, a proper productivity analysis must be carried out with a medium-term perspective, considering that the factors that determine it reflect over several years.

The worldwide health crisis experienced during 2020 and 2021 has generated higher levels of uncertainty. Indeed, productivity estimation has been challenging due to the atypical behavior of the relevant variables for measuring it, which significant supply and demand shocks have affected. Therefore, the CNP complemented the traditional calculations for measuring this variable with additional exercises and measurements that allow for a sensitivity analysis of the behavior of productivity in 2021 and during the 2020-21 period to show its evolution during these two pandemic years.

The results suggest that productivity calculated for the current year and, in general, for the two pandemic years would have increased. However, the GDP would have been heavily affected by the enormous fiscal impulse to support families and companies and by the effects of withdrawals from pension funds. Specifically, regarding the figures in the TFP series, we observe an increase between 7.4% and 8.7% for the aggregate economy in 2021 and between 8.1% and 9.5% for the non-mining economy. This recovery contrasts with the declines in 2020: between -0.1% and -2.1% for the aggregate economy and between -1.9% and -4.0% for the non-mining economy. The figures for 2021 are strongly driven by an overheated economy, which records an aggregate GDP growth of 11.8% and 13.1% for the non-mining economy.

On the other hand, employment dynamics are significantly influenced by the pandemic (quarantines and other restrictions), affecting proper employment measurements and the adjustments used to measure capital utilization. For this reason, sensitivity exercises are conducted for the TFP by adjusting employment for various factors. For example, workers whose contracts were suspended under the Employment Protection Law are excluded, the workforce is trimmed to pre-pandemic levels, or the employment rate is used to adjust capital utilization.

When comparing the productivity measurement without adjustment, with uncorrected adjustments, and with additional adjustments, we find that, on average, for the 2020-2021 biennium, the TFP (Total Factor Productivity) of the aggregate economy would have increased by 3.8% annually and the TFP of the non-mining economy by 3.5% annually. However, it is essential to reiterate that the macroeconomic variables relevant for measuring TFP have been subject to a very high level of uncertainty and a series of shocks during this period. Therefore, once the pandemic subsides, it will be crucial to estimate the evolution of productivity from a medium-term perspective, allowing us to isolate the effects of the economic cycle accurately.

Finally, a positive element of this pandemic has been the massive emergence of information technologies. Even if some of its use will diminish as physical presence increases, it is also

true that its benefits can motivate many companies to implement hybrid systems in the future. These benefits, however, are also accompanied by challenges for public policy, such as the compatibility between work and family life.

Additionally, the CNP incorporates studies on various topics in this report that contribute to the debate about the country's productivity. The first of these, "Dynamism, attractiveness, and productivity in Chilean metropolitan areas," contribute with new perspectives and views conducive to the potential benefits of urban life, mitigating its costs and analyzing the projections for its development. The second study, "Demand and performance of companies: evidence of business relationships between companies," explores how differences in the demand faced by companies lead to different productive outcomes. The report ends with a summary of the activities carried out by the CNP during 2021.

"Dynamism, attractiveness, and productivity in Chilean metropolitan areas."

This chapter addresses the dynamism and population attractiveness of Chilean metropolitan areas, their relationship with different economic and urban factors, and the risks and consequences of their growth. Cities are defined as a predominant social arrangement for human settlements reflected in the increasing global urbanization. Almost without exception, the world's population has progressively concentrated in cities, as they have attributes that make them highly attractive to families and other economic agents. Accessibility to services and job opportunities, on the one hand, and the existence of agglomeration economies (beneficial to different companies), on the other, enhance increasing urbanization. The latest available evidence shows that for 2012-2017, the migratory rate or population attractiveness is higher in those metropolises with significant economic growth that offer better job opportunities and provide good urban quality of life. However, the development and expansion of all metropolitan areas present significant difficulties that affect their capacity to receive more population, and their consequences and risks can significantly affect their comparative advantages. Among these difficulties are, for example, high housing prices and a growing housing deficit sustained urban expansion, and insufficient access to urban public goods.

The country's current process of regional decentralization offers new opportunities for sustainable, efficient, effective, and attractive development of the country's metropolises. Thus, strengthening the Metropolitan Area Departments (DAM) of the Regional Governments (GORE) as decentralized and multisectoral organizations to govern Chile's large cities is highly desirable. For this purpose, measures and reforms are proposed in their planning instruments, urban management responsibilities, transportation and mobility, financing sources, citizen participation, and intergovernmental relations to promote better planning, investment, and management. This will lead to the potentialization of the benefits of urban life, the mitigation of its costs, and projections for its development.

"Demand and performance of companies: Evidence of commercial relationships between companies"

This chapter analyzes to what extent differences in the demand faced by companies lead to different productivity outcomes. For this purpose, administrative information from the universe of formal Chilean companies during 2015-2019 is considered. The episodes of high growth of the clients of companies are used as demand shocks to estimate changes in the productive structure of suppliers. The results show that episodes of high growth of clients produce significant changes in the effective system of suppliers. They absorb the increased demand by increasing their purchases of inputs and hiring more workers in the short term. Additionally, they increase their investment in fixed assets to increase their production capacity in the medium term. Ultimately, suppliers improve their total factor productivity (based on sales) up to 9 percentage points three years after the high-growth episode of their clients begins.

The work shows that the increase in productive capacity and productivity of suppliers is critical to maintaining the commercial relationship between supplier and seller. As a whole, these results suggest that changes in the demand faced by companies generate relevant changes in the productive structure of companies. Additionally, it highlights that the productive units that benefit most from the market are those with high productive capacities (measured in terms of total factor productivity) and have an increased ability to expand their production in response to higher demand.

Completed and ongoing studies during 2021

The CNP highlights essential issues and supports public discussion with evidence-based studies and recommendations. In 2021, the regulatory review for SMEs study was delivered to the government, identifying the principal regulations and permits that affect the development of SME projects and evaluating both the efficiency of their granting process and the relevance of the regulations. The study proposes public policy recommendations that contribute to reducing unnecessary regulatory barriers that affect both the start and development of SME operations in our country through long processing times or high compliance costs.

In addition, the CNP delivered the Innovation and Technological Adoption in the Financial Sector study to promote its development and increase its competitiveness. This research represents a significant milestone in gathering unparalleled insights from the Chilean sector. It focuses on three key aspects:

- (i) Examining the dynamics of the corporate innovation process, identifying internal and external challenges that could be resolved through regulatory reforms;
- (ii) Investigating the relationship between the sector and Fintech, exploring whether it manifests as competitive response or collaborative efforts; and
- (iii) Delving into open finance models, which involve opening access to customer account data to foster competition, spur innovation, and ultimately enhance long-term productivity levels. The findings shed light on crucial areas for improvement, paving the way for strategic actions that will drive growth, innovation, and economic progress in the sector.

The CNP closes out 2021 with two additional mandates. The first, Efficiency and Effectiveness of Social Public Expenditure in the Context of the Pandemic, evaluates the efficiency and effectiveness of social public expenditure to mitigate the effects of COVID-19 on Chilean households. Additionally, this research study offers insights into the consequences of the pandemic on household incomes and other key variables within Chilean

families. It thoroughly examines the efficiency and effectiveness of social expenditures aimed at alleviating the economic impacts caused by the COVID-19 crisis. Furthermore, it presents a range of recommendations to enhance the efficiency of public social spending, proposing targeted strategies for future policy designs. Through a thorough assessment of the effectiveness of existing measures and the proposal of improvements, this research strives to achieve optimal resource allocation, amplify the positive impacts of social spending, and enhance the overall well-being of households in the midst of persistent challenges. The primary objective is to provide targeted recommendations that concentrate on the enhanced design and implementation of public policies tailored to address the economic crises faced by households. By refining policy approaches, this work aims to alleviate hardships and promote resilience within households, fostering greater stability and prosperity in times of economic uncertainty.

Finally, the study on Efficiency in Primary Health Care Management identifies the gaps (of the factors) that affect the capacity for prevention and promotion of Primary Health Care (PHC). Through an analysis of PHC management, infrastructure, and financing, the study offers policy measures aimed at improving the performance of PHC, which will result in greater efficiency in both control and public spending in the health system as a whole.