



International  
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# ▶ Productive transformation and sectoral policies during the COVID-19 crisis in El Salvador and Costa Rica

Óscar Ovidio Cabrera Melgar







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## Contents

▶ Preface .....	3
▶ Introduction.....	5
▶ 1. The impact of the COVID-19 crisis on El Salvador and Costa Rica and policy responses?.....	7
1.1. El Salvador .....	8
1.2. Costa Rica.....	9
▶ 2. How productive transformation can mitigate the impact of the pandemic and trigger a process of creating decent jobs .....	13
2.1. El Salvador .....	14
a. Industrial policy, innovation, skills development and decent job creation.....	14
b. Dialogue between the different actors for a policy on productive transformation and employment generation .....	18
c. Tools used to promote products and sectors .....	20
d. Productive transformation, employment, wages and labour productivity.....	21
2.2. Costa Rica.....	28
a. Industrial policy, innovation, skills development and decent job creation.....	28
b. Dialogue between the different actors for a policy of productive transformation and job creation.....	32
c. Tools used to promote products and sectors .....	32
d. Productive transformation, employment, wages and labour productivity.....	33
▶ 3. What can be done today for a job-rich recovery? .....	39
▶ References.....	41



## ► Preface

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Employment – whether wage employment or self-employment – is the main means of access to income for the vast majority of the population. It is therefore the key mechanism through which the benefits of economic growth are distributed, and social justice promoted. Employment, consequently, has a strong qualitative aspect – people aspire, not to any employment, but ‘decent’ employment. Beyond meeting material needs, decent employment is a means to achieving individual self-esteem and social inclusion.

The COVID-19 crisis has been unprecedented in terms of both the impact on employment and how countries have responded through a range of policy measures, covering health, macroeconomic, employment and social protection dimensions. The asymmetric impact of COVID 19 was already reflected in the [2<sup>nd</sup> ILO Monitor](#) (April 2020), which highlighted that some sectors would be less affected by the economic impact and job losses, while other sectors, especially those requiring close contact, such as hotels and restaurants, would be more affected. On the other hand, some sectors have experienced gains, most notably in financial and ICT services, along with some parts of manufacturing. This situation underlines the importance of sectoral approaches to employment.

Employment policies that promote productive transformation are, therefore, key to promote job-rich growth. The time horizon during the pandemic-induced crisis has brought to the fore the need for such policies but in a much shorter period of time. The challenge for governments is to develop and implement faster-acting measures to either support sectors, or to help movement between sectors. This is further complicated by the uneven nature of the crisis and recovery. Some sectors have recovered faster, but for others there is less certainty of a full recovery. Additionally, there is a need to revisit previous development pathways which were not always environmentally sustainable. In this sense, there is a need to develop a better understanding of how to advance employment policies for inclusive and sustainable job-rich growth at the sectoral level.

Much work is already available on identifying the potential for expansion and diversification in production, such as the growth identification and facilitation framework (Lin, 2012); the economic complexity and product space method (Hausmann and Klinger, 2006; Hausmann et al. (2014); and the International Trade Centre’s (ITC) export potential and product diversification indicators (Decreux and Spies, 2016). Other identification tools refer to benchmarking to countries slightly ahead and identifying what could be “taken over” and focus on attracting and facilitating these sectors openly. In these approaches, it is necessary to link (formal) employment creation and inclusion effects, while avoiding relegating the labour market outcomes as a secondary issue.

For these reasons, clearer guidance on how sectoral growth and decent employment can be integrated in sector policies is needed. In this context, the current report reviews the past experience of two small open economies, Costa Rica and El Salvador, in introducing policies aimed at structural transformation, as well as how employment aspects have been included. The purpose is to present a body of evidence on how sector development strategies can include employment and how they are crystalized, for sector expansion and employment-rich growth, and what challenges these policies can face.

Sukti Dasgupta  
Chief  
Employment, Labour Markets  
and Youth Branch



## ► Introduction<sup>1</sup>

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The role of structural transformation in inclusive economic growth has been highlighted in the case studies on El Salvador and Costa Rica developed in this research, where industrial policies have been implemented to boost productive transformation and diversification, and the generation of decent employment.

A well-designed and consensual industrial policy favours increased job training, improvements in working conditions, higher and better-paying jobs, a transition to formality and access to labour rights. (Hidalgo 2017, p. 147; ILO 2020, p. 1).

In the first chapter, we address the management of the impact of the COVID-19 pandemic through a set of public policies to mitigate the impact on the health of the population and the fall in economic growth, job losses and the lower income of workers.

In the second chapter, we analyse the role, in both countries, of industrial policies of productive transformation to lessen the impact of the COVID-19 pandemic and trigger a sustainable process of decent employment.

This starts with the dialogue between business, government and workers for the construction of an industrial policy, which is a fundamental step towards an employment pact. We then elucidate the methodologies implemented to promote products and sectors, finding that El Salvador began to formulate industrial policy in 2014, using the method of economic complexity based on the product space (Rodrik 2006; Hausmann, Huwang and Rodrik 2007; Hidalgo et al. 2007; Hidalgo and Hausmann 2009). Whereas, in the case of Costa Rica, a policy of attracting foreign direct investment (FDI) in electronics and medical devices was developed. Finally, we carry out a succinct review of the impacts of the implementation of industrial policy in the pre- and post-COVID-19 productive transformation on improving employment and increasing labour productivity and wages.

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<sup>1</sup> I appreciate the comments and suggestions of Mauricio Dierckxsens (ILO), Gerson Martinez (ILO) and the support of Diana Navarro Rivas as a research assistant.



## ► 1. The impact of the COVID-19 crisis on El Salvador and Costa Rica and policy responses?

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The global health impact is demonstrated in the approximately 132.4 million people diagnosed and the loss of 2.9 million human lives (as of 6 April 2021). Few countries have been able to implement health strategies to find people infected with the virus, isolate them in appropriate facilities to minimize subsequent transmission, and treat them appropriately to minimize morbidity and mortality (World Health Organization (WHO) 2021).

The impact of the COVID-19 pandemic is inflicting high human costs around the world that triggered a global economic recession of 3.3 per cent in 2020 — much worse than during the 2008/09 financial crisis. The new mutations, high morbidity, birth rates and the ability of economic policies to mitigate the impacts foresee a scenario of divergent recovery between countries and sectors, with a “V-shaped” recovery of the world economy in 2021 with growth of 6.0 per cent (International Monetary Fund (IMF) 2021a).

By region, Latin America is the region with the largest decline in economic growth, at -7.0 per cent in 2020, while, in 2021, a slight recovery of 4.4 per cent is expected. The evolution of the eurozone maintains the global trend with a contraction in economic growth of -6.6 per cent in 2020, with expected growth in 2021 of 4.4 per cent. The Middle East and Central Asia is the third most impacted region, with a slowdown in economic growth of 2.9 per cent in 2020 and a forecast in 2021 of 3.7 per cent. Emerging and developing Asia is the region that best mitigates the impacts of the pandemic, registering a contraction of -1.0 per cent in 2020 and the highest growth by region in 2021 with a rate of 8.6 per cent. Sub-Saharan Africa registers an economic decrease of -1.9 per cent in 2020 and for 2021 a growth of 3.4 per cent.

In 2020, 8.8 per cent of hours worked were lost, compared to the fourth quarter of 2019, corresponding to 255 million full-time equivalent (FTE) jobs.<sup>2</sup> The loss of working hours in 2020 was particularly significant in Latin America and the Caribbean (38.7 million), Southern Europe (5.9 million), and South Asia (79.4 million). By contrast, East Asia (34.5 million), Central Africa (3.3 million), West Africa (7.1 million), and East Africa (9.6 million) experienced relatively minor job losses, reflecting the fact that fewer strict lockdown measures were applied in these subregions (ILO 2021).

The loss of hours worked for 2021 in the base scenario of 3.0 per cent compared to the fourth quarter of 2019 corresponds to 90 million FTE jobs. In the pessimistic scenario, the loss of working hours in 2021 will remain at 4.6 per cent, or 130 million FTE jobs, compared to the fourth quarter of 2019 (ILO 2021, p.2).

The economic impact of the pandemic is indicated in the reduction in demand for exports of goods and services, fall in the price of petroleum products, loss of employment, contraction of consumer credit, drop in family remittances and decrease in household income. Also observed is an increase in public consumption to try to mitigate the economic contraction — which ends up affecting the income of the public sector in general — and a decrease in private investment: decrease in the sales and profits generated by companies (especially shops, services and maquilas), closure of companies and damage to exporting companies, and a reduction in private consumption expenditure as people making fewer purchases, especially those compelled to stay at home.

The implementation of economic policies in the face of the pandemic shows a divergent recovery where countries have implemented expansionary fiscal policies through household cash transfer programmes, job retention programmes, income maintenance programmes (wage subsidies), an extension of deadlines for the payment of taxes, strong investment in the health sector and strengthened liquidity for micro and small enterprises. Financial systems have been provided with liquidity through the release of reserve

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<sup>2</sup> FTE estimates use 48-hour workweeks for the estimation of losses of hours worked.

requirements, monetary policy easing and regulatory frameworks for businesses and households (IMF 2021b).

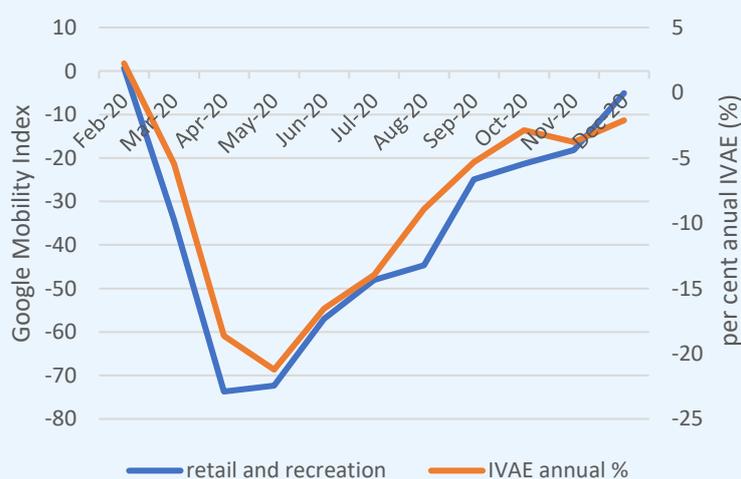
## 1.1. El Salvador

The dollarized monetary regime is more prone to crisis in periods of global depression, such as the one that occurred in 2009 and that of 2020 caused by the COVID-19 pandemic. Since dollarization, the 2009 crisis has been partially weathered through a stage of fiscal self-determination policy (from a primary deficit of -0.9 per cent in 2008 to -3.6 per cent in 2009), followed by a stage of fiscal consolidation or austerity between 2010 and 2019, with a primary deficit of -2.2 per cent to a primary surplus of 0.6 per cent. That has an impact on low real average wages (0.6 per cent per cent), high rates of underemployment (31 per cent on average) and high rates of skilled migration — 39 per cent per cent in tertiary education, 25 per cent in secondary education and 25 per cent in primary education by 2010 (Brucker 2013).<sup>3</sup>

El Salvador has given mixed signals regarding social development between 2009 and 2019. On the one hand, with advances in the cumulative growth in GDP per capita of 21.7 per cent over the decade, households in poverty decreased from 37.8 per cent to 22.8 per cent in the same period. While the Gini inequality index value declines from 45.8 per cent in 2009 to 35.0 per cent in 2019, the concentration of income in the 10 per cent of higher-income individuals is high, although it decreased slightly from 48 per cent to 42 per cent. Latin America is the second most unequal region in the world, with a shift from 56 per cent in 2009 to 54 per cent in 2019 (World Inequality Lab 2021).

As of 30 April, the decreases in mobility recorded by retail and leisure had reached -74 per cent, and the decrease in the Economic Activity Chained Index (IVAE) -18.6 per cent. After 85 days of quarantine, an economic reopening plan was implemented in five phases, the last phase began on 21 August, when the retail and leisure indicator recovered to -44.7 per cent, and by December had reached a recovery of -5 per cent (Google 2021). For its part, the IVAE reached -8.9 per cent in August and -2.1 per cent in December, an evolution similar to Google's local mobility report, according to Figure 1.

► **Figure 1. Annual variation rates of the IVAE and Google Mobility report**



Source: Developed from Banco Central de Reserva de El Salvador, (2021); Google (2021).

<sup>3</sup> The overall emigration rate is defined as: the fraction of the labour force that emigrated to country j.  $M_t$  consists of the number of emigrants counted in the census of the country j at time t.  $N_t$  is the labour force in home country j at time t.

$$m_t^j = \frac{M_t^j}{M_t^j + N_t^j}$$

In March 2020, due to the effects of the COVID-19 pandemic, the Fiscal Responsibility Law was suspended and a phase of fiscal self-determination began, with supplementary budgets, modifications to the budget, contingency reserve funds and emergency decrees. During 2020, these measures led to additional expenditures or unearned income of US\$0.6 trillion, equivalent to 2.5 per cent of GDP (US\$0.1 trillion in health), and US\$0.6 trillion of liquidity support in below-the-line measures, equivalent to 2.4 per cent of GDP; capital injections, loans, asset purchases or debt assumptions led to an expansion in the primary deficit of -5.6 per cent of GDP in 2020 (IMF 2021a).

The value of exports between January and December was US\$5,044 million and for imports \$10,326 million, with a negative trade balance of US\$4,978 million. Compared to the previous year, exports decreased by \$860.7 million (14.6 per cent), while imports decreased by \$1,277.3 million (11.0 per cent) (Banco Central de Reserva de El Salvador 2021).

El Salvador exported to the United States of America (US\$1,976M), Guatemala (US\$852M), Honduras (US\$779M), Nicaragua (US\$366M), and Mexico (US\$124M), among others, and imported mainly from the United States of America (US\$2,677M), China (US\$1,479M), Guatemala (US\$1,218M), Mexico (US\$939M), and Honduras (US\$669M), among other trading partners (Banco Central de Reserva de El Salvador 2021).

Family remittances in 2020 were a stabilizer in the face of the fall in exports, registering an annual growth of 4.8 per cent, an evolution similar to 2019. The flow reached US\$5,929.9 million, equivalent to 24 per cent of GDP, and together with exports of goods and services comprise the main revenues of the economy (Banco Central de Reserva de El Salvador 2021).

Foreign direct investment (FDI) inflows in 2020 fell by around US\$435.7 million (68.5 per cent) compared to the same period the previous year. El Salvador is among the countries in the Central American region with the lowest FDI inward (Banco Central de Reserva de El Salvador 2021).

According to the International Labour Organization (2020), the global recession was expected to impact labour markets with respect to the quantity of employment available, the quality of work and the effects on specific vulnerable groups. That was confirmed (ILO 2021) in 2020, when 19.4 per cent of working hours were lost compared to the fourth quarter of 2019, equivalent to 467,000 full-time jobs.

The economic forecasts for 2020 set out by the IMF (2021b) foresaw the second largest collapse in economic growth in the Central American region of 8.6 per cent and a slight recovery in 2021 at 4.2 per cent, while Banco Central de Reserva (2021) presented a decline in economic growth in 2020 of 7.9 per cent.

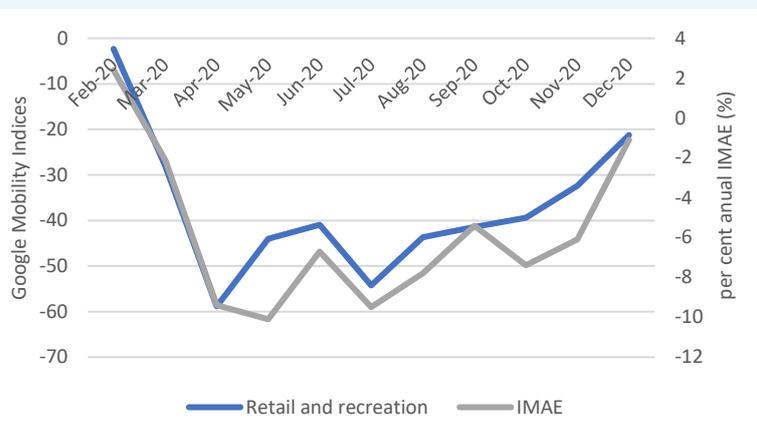
## 1.2. Costa Rica

Macroeconomic conditions were fragile before the COVID-19 crisis. Economic activity slowed, from 4.2 per cent in 2017 to 2.2 per cent in 2019. Market tension resulted from growing fiscal imbalances and climate-related natural disasters, including a tropical cyclone and severe drought. The current account deficit of 2.3 per cent of GDP was financed entirely by FDI inflows. Inflation remained subdued in 2019, given ongoing subdued growth and persistently high unemployment. Meanwhile, central government debt went from 47.1 in 2017 to 56.8 in 2019 (in percent of GDP). While the economic outlook had begun to improve in the second half of 2019, fiscal consolidation efforts, in the context of the authorities' ambitious 2018 fiscal reform, and tight financial conditions were expected to keep moderate growth below 3 per cent in 2019/20 (IMF 2021c, pp. 4–5). On the other hand, GDP per capita grew 5.11 per cent between 2016 and 2019, real average wages grew by 0.9 per cent in 2019 compared to the previous year and migration rates remained low, at 7.1 per cent in tertiary education, 2.9 per cent in secondary education and 1.4 per cent in primary education for 2010.

The impact of the pandemic on economic activity in Costa Rica has been estimated from the decreases in mobility recorded by Google (2021). The monthly averages for commerce and leisure between February and December 2020 begin to show negative figures from March, when the first measures and restrictions for the protection of the population during the COVID-19 pandemic were implemented, reaching a value of -59 in April. The reopening of activities was carried out in four phases; in the last and fourth phase, which occurs between July and August, the capacity of centres of worship was expanded, and in September, most businesses and 50 per cent of common areas were allowed to open. This means that, from July, the mobility of people should steadily increase. Meanwhile, the rates of change in the Monthly Economic Activity Index

(IMAE) maintain similar behaviour to that of the mobility indices, from their fall in March until their subsequent recovery in the last months of the year, as shown in Figure 2.

► **Figure 2. Costa Rica. Annual variation rates of the IMAE and Google Mobility indices**



Source: Developed from Google COVID-19 Community Mobility Reports

Social protection represents a fundamental pillar in the fight against poverty in Costa Rica. On 6 March, 2020, the first case of coronavirus was confirmed in the country, and on 16 March, the Executive Decree of a state of national emergency due to the virus was issued.

According to the WHO, Costa Rica is one of the countries that meets between 60 and 80 per cent of the guidelines for handling public health events. Under the International Health Regulations, among the health actions that Costa Rica took to tackle the pandemic are the suspension of classes, closure of social meeting centres, application of teleworking, barring of entry into the country for foreigners, price regulation of cleaning and hygiene products,<sup>4</sup> restriction of vehicles, and increased health spending and guaranteed supply of products, with an emphasis on foodstuffs and medicine.

The country prepared to reopen its economy by easing the restrictions implemented from 1 May, 2020, and, in the meantime, implemented key policy responses. For the fiscal sector, additional expenditures or unearned income of US\$0.8 trillion occurred in 2020, equivalent to 1.4 per cent of GDP (US\$0.2 trillion in health). No liquidity support was provided through below-the-line measures.

According to the IMF (2021c), the increase in the fiscal deficit in 2020 was justified by the need to respond adequately to the shock of COVID-19 and to allow the operation of automatic stabilizers, as well as income and expenditure compensation measures introduced by the authorities. As a result, despite the widening of the overall deficit, the structural primary balance for 2020 (net of the cyclical impact and ad hoc measures of the COVID-19 crisis) is expected to have improved by approximately 0.3 per cent of GDP compared to 2019 (p. 9). Against this backdrop, in March 2021, the IMF Executive Board approved a US\$1.778 billion agreement for 36 months under its Extended Fund Facility, to help support Costa Rica's recovery and stabilize its economy. The authorities' policy efforts under the programme will be based on three key pillars: (i) gradually implement equitable fiscal reforms to ensure debt sustainability while protecting the most vulnerable; (ii) maintain monetary and financial stability, while strengthening the central bank's operational autonomy and governance and addressing structural financial vulnerabilities; and (iii) promote key structural reforms to promote inclusive, green and sustainable growth (p. 1).

<sup>4</sup> This includes cleaning sprays/wipes/bleach for surfaces and also personal hygiene products for use by people, such as soap, toilet roll and toothpaste.

In December 2020, Costa Rica exported US\$1.04 billion and imported US\$1.33 billion, resulting in a negative trade balance of US\$0.29 billion. Between December 2019 and December 2020, exports increased by US\$168.4 billion (19.3 per cent), while imports increased by US\$73 billion (5.8 per cent) (Banco Central de Costa Rica 2021).

Costa Rica exported mainly to the United States of America (US\$445M), Guatemala (US\$51M), Panama (US\$46M), Nicaragua (US\$40M), Honduras (US\$30M), and the member countries of the European Union (US\$214M), and imported mainly from the United States of America (US\$490M), China (US\$223M), Mexico (US\$90M), and the member countries of the European Union (US\$170M) (Banco Central de Costa Rica 2021).

Family remittances do not represent a significant income for the economy of Costa Rica, given that, in the last five years they represented 0.96 per cent of GDP. This is not the case for FDI flows, which, on average, accounted for 4.3 per cent of GDP between 2015 and 2019. In the first quarter of 2020, FDI reached US\$1,005 million, while in the second quarter it increased by US\$761 million.

In terms of job losses, according to the Inter-American Development Bank (IDB) (2021), the number of social security contributors fell by 48,096 between December 2019 and December 2020. In addition, between February and December 2020, the sectors with the greatest decrease in contributions were: hotels and restaurants, with a decrease of 19,398 workers; transport, storage and communications, with a decrease of 9,185 workers; other service activities, with a decrease of 8,877 workers; construction, with a decrease of 6,918; and trade, with a decrease of 6,282. While the only sector with a significant increase was real estate activities, with 6,156 new contributors. Finally, the year 2020 ended with an unemployment rate of 21.32 for November. This increase in unemployment influenced the country's poverty, which by July 2020 had reached 26.2 per cent, that is, it increased by more than five percentage points, compared to 21 per cent the previous year (IMF 2021c, p. 6).

In terms of lost working hours expressed as a number of jobs, the ILO (2021) estimates that, during the COVID-19 pandemic, 330,000 FTE jobs (48 hours worked weekly) were lost in Costa Rica.<sup>5</sup>

Informality is also an important feature of the Costa Rican labour market, as the number of workers with informal occupations has been increasing, from 784,000 in 2017 to 844,000 in 2019. However, this figure was reduced in 2020 with the onset of the pandemic; those employed in the informal sector of the economy fell to 709,000. This vulnerability makes it likely that the impact of the crisis will not only be reflected in increased unemployment and informality, but also in labour income (which has been falling since 2016 in real terms), especially for the less skilled employed and in the informal economy (ILO 2021).

The economic forecasts produced by the IMF in April 2021 showed a decline of 4.8 per cent of GDP in 2020, and a slight recovery in 2021 at 2.6 per cent. While the quarterly economic growth figures from the Banco Central de Costa Rica estimate that, in the second quarter of 2020 the economy fell by 8.6 per cent, while in the same period of the previous year it grew by 2.5 per cent.

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<sup>5</sup> This measure is constructed by taking the number of weekly hours lost due to COVID-19 and dividing them by 40 or 48. The series is part of an ILO immediate forecasting model, which uses data that is available in near real time to predict total hours worked. The data is published following a delay.



## ► 2. How productive transformation can mitigate the impact of the pandemic and trigger a process of creating decent jobs

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The role of structural transformation in inclusive economic growth has been highlighted in studies developed by Rodrik (2006), Hausmann, Huwang and Rodrik (2007), Hidalgo et al. (2007), and Hidalgo and Hausmann (2009), who argue that growth and development are the result of the diversification and sophistication of all exported products.

Here, we develop the study of El Salvador and Costa Rica, which have implemented industrial policies and strategies for transformation and productive diversification. El Salvador is classified as a lower-middle-income country with a gross national income (GNI) per capita atlas method in current US\$ in 2019 of US\$3,990, and Costa Rica is classified as an upper-middle-income country with a GNI per capita in 2019 of US\$12,070 (World Bank 2021).

We understand industrial policy as “a combination of strategic or selective interventions aimed at boosting specific activities or sectors, functional interventions aimed at improving the functioning of markets and horizontal interventions aimed at promoting specific activities in all sectors” (UNCTAD 2016, p. 34).

The term industrial policy, in this study, covers the diversification and transformation of the agricultural, industrial and service sectors. While manufacturing has often been an important driver of increased labour productivity and a source of technological innovation, it has generally not been able to generate sufficient quality jobs for the displaced agricultural workers and new workers that join the labour market each year (UNCTAD 2016, p. 6). In practice, the services sector has tended to generate a higher proportion of jobs, although many are in the informal economy (self-employment, unpaid employment, etc.), however there is a potential productive transformation through the development of trade in services; services enabled for information technology, software production, call centres, back-office services, finance, banking and consulting, among other services (Pieper 2000, quoted in UNCTAD 2016).

A well-designed industrial policy, agreed between companies, workers and the public sector, together with an effective execution Felipe and Hidalgo (2015), leads us to the increase of job training, the achievement of stable labour relations, improvements in working conditions, greater and better paid jobs, transition to formality and access to labour rights (Hidalgo 2017, p.147; ILO 2020, p. 1).

The connection between productive transformation, industrial policy, education policy and decent employment is confirmed by Torres et al. (2014, p. 99). We conceive of them as elements of the same equation, since, taking advantage of and creating dynamic comparative advantages is the economy, it is synonymous with the accumulation of knowledge and learning capacities — including its ability to learn, and to learn in relation to its competitors (Stiglitz and Greenwald 2014, p. 57). Learning is a social and experimental process that adds explicit and tacit knowledge, and that reflects the basket of products that a country produces and exports with comparative advantages. Better skills increase opportunities for decent employment and access to social security services, and the adoption of better standards in the labour market.

Following Cabrera Melgar (unpublished) in El Salvador, and Villasuso (2000) and Salazar-Xirinachs et al. (2014) in the case of Costa Rica, these countries have implemented industrial and productive transformation policies including import substitution processes, export promotion policies and policies for attracting FDI (Pagés 2010, p. 320).

## 2.1. El Salvador

### a. Industrial policy, innovation, skills development and decent job creation

The “Política Nacional de Fomento, Diversificación y Transformación Productiva de El Salvador” (PNFDTP) (El Salvador, Ministerio de Economía 2014)<sup>6</sup> was part of the five-year development plan “El Salvador productivo, educado y seguro”<sup>7</sup> for the period 2014–2019, which supported a vision of “a new model of development in place, which is expressed in sustained growth based on a more productive, competitive and innovative economy that distributes more and better wealth and income, is connected to the region and the world and which generates high levels of decent employment” (Gobierno de El Salvador 2014, p. 71).

The PNFDTP aims to “strengthen the productive sectors with revealed comparative advantages (RCAs) identified during the sectoral consultations for their adequate insertion in the international market and/or the potential to expand the national productive base, through the application of horizontal and vertical policy measures that enhance competitive advantages with the primary purpose of stimulating the generation of formal employment, national production, the expansion of exports with technological content and the diversification of markets and products” (2014, p. 17).

The PNFDTP has been designed with a combination of functional policies that include the axes of productive diversification, more general policies and fewer interventionist policies based on the market, which seek to: modernize the institutional and legal framework; increase the use of alternative sources of energy; and extend electrical interconnection, training in HR, subsidies for labour training, the purchase of machinery and tax exemptions to attract FDI (free trade zones). The initial funds are derived from loans from the IDB of US\$12.5 million for this first group of policies.

Productive development is classified in Figure 3 as a horizontal industrial policy that seeks to promote specific activities in all sectors that provide a set of public goods, such as: improving the business climate, reducing transaction costs to open a business, providing quality education, ensuring respect for property rights, promoting public–private partnership and simplifying the process of registering companies. A low level of resources — of US\$5 million — was allocated to this.

The axis of productive transformation, however, is constituted in a vertical or a selective industrial policy, wherein this type of State intervention consists of selecting a group of products or specific sectors to benefit from the policy.

The selection of sectors is an unprecedented strategy in Salvadoran public policy; Salomón (2021) mentions that, “I believe that it is highly recommended to implement these vertical industrial policies. Identifying which are the strengths of each sector that are needed, and others, does not mean that it only forces it no, there are others that you can see have opportunities for growth or growth potential ... they are the ones that stand out, and they are given that support” (pp. 3–4). That coincides with the views of Cáceres (2021) and Yamagiwa (2021). The initial number of resources allocated was US\$11 million.

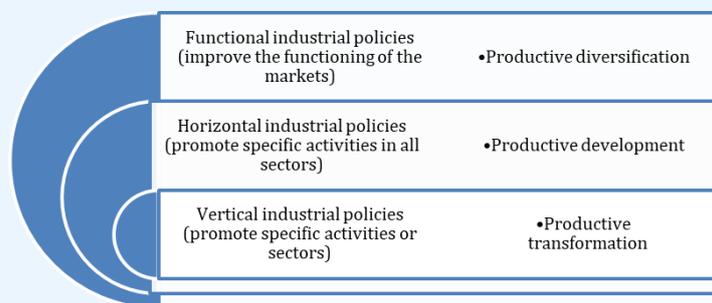
The PNFDTP was initially allocated US\$28.5 million, but as of April 2019, according to the Ministry of the Economy (MINEC), US\$168 million had been invested.

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<sup>6</sup> The National Policy for the Promotion, Diversification and Productive Transformation of El Salvador.

<sup>7</sup> El Salvador: Productive, educated and safe.

► **Figure 3 Industrial policy categories in El Salvador**



Source: Developed from Ministerio de Economía (2014, p. 31) and UNCTAD (2016, p. 71).

Productive diversification incorporates an innovation and technology component that aims to promote the importance of Research, Development, and Innovation (R+D+i) as essential factors to achieve productivity growth and social development.

In 2017, the technical and economic feasibility stage of two innovation and technological development centres — for the textile and clothing industry, and for the plastics industry — were completed; along with the design of the Laboratorio Nacional de Calidad para la Exportación de Alimentos y del Centro de Diseño y Desarrollo Tecnológico del Calzado.<sup>8</sup>

Between 2015 and 2018, a pilot project was carried out on sustainable industrial parks, which included the introduction of an industrial park and the installation of two companies there. The project continues with the consolidation of the Centros de Innovación y Desarrollo Tecnológico: Proyecto del Laboratorio Nacional de Calidad para la Exportación de Alimentos, Factibilidad Técnico-Económica para el Centro de Innovación y Desarrollo Tecnológico Empresarial para el Centro Textil, Centro de innovación y Desarrollo.<sup>9</sup>

In productive transformation, innovation in the selected products and sectors is incorporated using the methodology of product space, through the implementation of the National Agenda for Business Innovation and Innovative Entrepreneurship for seven strategic sectors: plastics; textiles and clothing; chemical-pharmaceutical and cosmetics; food and beverages; footwear; creative industries; and information and communication technology (ICT).

With regard to capacity development, the following actions are among those incorporated in “productive diversification”: (i) establishing technological institutes and updating the curriculum of the Vocational Training Institute (INSAFORP); (ii) introducing doctorate scholarship programmes to train professionals in the exact sciences, engineering and strategic areas; (iii) creating programmes to teach English language at all levels of education and training to facilitate technological engagement; (iv) and strengthening the Sistema Nacional de Formación Técnica y Profesional and the Observatorio de Especialidades Técnicas.<sup>10</sup>

Productive transformation incorporates qualified human resources and the following actions: (i) establishing a permanent training programme for specialized technical personnel in the seven prioritized sectors, through which 200 specialized technicians will be trained each year; (ii) and introducing a programme for economic sectors. Around 320 companies in the tourism sector, 628 companies in the food and beverage sector, and 236 companies in the chemical-pharmaceutical sector have been trained in innovation, quality and/or technology.

In 2014, INSAFORP worked hand in hand with the Ministry of the Economy in developing an assessment of training needs for the sectors necessary to the PNFDT. In 2017, INSAFORP's efforts to consult with

<sup>8</sup> National Quality Laboratory for Food Export and the Centre for Design and Technological Development of Footwear.

<sup>9</sup> Technological Innovation and Development Centres: Project of the National Quality Laboratory for Food Exportation, Technical-Economic Feasibility for the Centre for Innovation and Business Technological Development for the Textile Center, Centre for Innovation and Development.

<sup>10</sup> National System of Technical and Professional Training, and the Observatory of Technical Specialties.

productive sectors continued, identifying training and training needs. In 2018, the Fomilenio II programme created sectoral committees for technical and professional training to identify the demand for skills in specific and priority jobs in certain productive sectors, raise profiles, create a competency certification model and implement the programmes specified in the “Policy for the Coordination of Technical Education, Professional Training and the Productive Apparatus”, launched in 2019 in support of the PNFDTF (Millennium Challenge Corporation, United States of America 2019).

Industrial policies will contribute to the emergence of productive transformation processes in strategic sectors that will raise levels of productivity and added value. This will provide quality employment opportunities and strengthen entrepreneurship to open it up to all sections of the population, particularly working women and entrepreneurs, and people who are not currently included in market dynamics, a concept similar to that proposed by Cáceres (2021, p. 5) as part of the industrial transformation policy, which “[suggests... ]the policy of entrepreneurship, which brings together all the efforts that there are, in the Ministry of the Economy, in the universities, etc.”.

The service sector in El Salvador turns out to be a strategic factor in the promotion and diversification of production, notably in the areas of business services, logistics, industry, ICT, medical services, creative industries, aeronautics and tourism. This service sector generates more jobs when these new areas are opened or expanded thanks to industrial policies, and more decent jobs will therefore be generated for the population, especially for young people.

It is emphasized that the productive development dimension will support productive sectors with capacities to generate formal jobs by way of reducing bureaucracy and the activity of the State and promoting the attraction of national and foreign investment. A crucial part of this strategy is the support that will be provided to micro, small and medium-sized enterprises (MSMEs) for their capacity to generate jobs (Ministerio de Economía 2014, p. 33).

As such, PNFDTF will enhance the National Quality System to boost the competitiveness of national production, the creation of programmes to attract specialized industries that generate better-paid jobs, the provision of incentives and support to establish specialized production and employment support, the promotion of credit for MSMEs and preferential access to government tenders for local companies (Ministerio de Economía 2014, p. 45).

The Ministry of Labour and Social Security, as the governing body of public employment policy, launched the “Política Nacional de Empleo Decente” (PNED)<sup>11</sup> (El Salvador, Ministerio de Trabajo y Previsión Social 2017) which aims to ensure access to decent employment as a human right and involves fair remuneration, safe working conditions, occupational security and stability, and social protection. It makes it possible to develop, coordinate and implement actions that allow men and women in El Salvador to enjoy decent working conditions and access to decent and equal employment.

The PNED structures its interventions in five thematic axes that respond to the areas identified by the diagnostic and consultation process: (i) improving conditions to generate decent employment; (ii) increasing the skills and qualifications of the Salvadoran labour force, through formal education and technical and vocational training that correspond to the needs of the national productive apparatus; (iii) promoting a favourable environment for the development of individual or collective enterprises that allow the creation of economic and social value; (iv) facilitating the transition towards the formalization of economic units and jobs currently in the informal economy; and (v) promoting equal opportunities between men and women and the removal of barriers to access to employment and of discriminatory practices.

The generation of decent employment is a challenge that cannot be separated from the increase in labour productivity, but there is tension between the two objectives because higher productivity in an industry reduces employment. The public policy recommendation is that a trade-off should be found between productivity growth and more and better jobs (Salazar 2014, p. 2).

The transition to formality has been incorporated in point (iv) of the PNED, which characterizes informality among self-employed workers and micro and small enterprises and affects workers with a lower level of

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<sup>11</sup> Política Nacional de Empleo Decente.

education, young people and women. The priority actions are training, linked to social protection, the facilitation of administrative procedures, tax simplification and vocational training and incentives (2017, p. 42–43). Incentives for formalization include the *monotributo* [single tax] that consolidates and reduces the tax burden on SMEs and improves their business ecosystem, and measures that facilitate and reduce the costs of affiliation to social security and move towards universal social protection.

The PNED seeks to establish the necessary conditions for the creation of decent employment in the sectors prioritized by the PNFDT, through the development of programmes and initiatives that promote domestic and foreign private investment, as well as increasing productivity and competitiveness, strengthening programmes to facilitate administrative procedures and reducing the processes and requirements for the establishment of a company (p. 34).

We contextualize the set of PNFDT instruments implemented in El Salvador, that we have classified following Weiss (2015,) using five policy categories: related to (i) the product market; (ii) the labour market; (iii) capital markets; (iiii) the land market; and (iv) technology.

The industrial policy instruments that have been available in the product market that are market-based are: import incentives and tax incentives used by free zones and inward processing warehouses (DPA) for goods and services. meanwhile, in the provision of public goods, the measures are: procurement policies, competitive intelligence, trade fairs, a one-stop-shop and programmes to attract FDI.

Training programmes coordinated by INSAFORP under the PNED and led by the Ministry of Education have been used in the domain of the labour market and the provision of public goods.

Subsidized interest rates and guaranteed loans (market-based instruments) have been used in the capital market domain. The public goods instruments in that domain are: regulatory opportunities for productive and/or high employment-generating loans, reduced regulatory barriers and access to credit for PNFDT sectors (public goods instruments),<sup>12</sup> and considerations for the review of banks' internal credit policies for MSMEs.

► **Table 1. Industrial policy instruments in El Salvador under the PNFDT**

Policy domain	Instruments	
	Market-based	Public goods/Direct provision
<b>Product market</b>	Import tariffs and tax incentives used by free zones and inward processing warehouses (DPA) for goods and services.	Procurement policies, competitive intelligence, trade fairs, one-stop shop, FDI attraction programmes.
<b>Labour market</b>		INSAFORP, Ministry of Labour and Social Protection
<b>Capital market</b>	Subsidized interest rates, guaranteed loans.	Guaranteed credit, regulatory incentives for productive and/or high job-generating loans, reduced regulatory barriers and access to credit for PNFDT sectors, considerations for the review of banks' internal credit policies for MSMEs.
<b>Land market</b>		Free zones, processing warehouses.
<b>Technology</b>	Research and technological development grants.	Science and technology park, National Quality System, research laboratories, a science and technology cluster university, and the public sector.

Source: Developed from Ministerio de Economía (2014).

<sup>12</sup> Normas para clasificar los activos de riesgo crediticio y constituir las reservas de saneamiento [Rules for Classifying Credit Risk Assets and Constituting Write-down Reserves], NCB-022. (Banco Central de Reserva de El Salvador, 2021).

Instruments in the land market based on the provision of public goods include: free zones and processing warehouses where foreign companies are provided with high-quality infrastructure, such as quality energy and water services and internet services, wherein the exemption from tax payments compensates for the costs of locating the business in the country.

Finally, in technology, market-based policy instruments are: subsidies based on research and technological development (credit with subsidized interest rates and tax relief) and other subsidies

## b. Dialogue between the different actors for a policy on productive transformation and employment generation

This began with a process of collaboration between the sectors to eliminate the problems of coordination, diagnosis of sectoral conditions, co-design of an industrial policy and the need to forge a common vision for the implementation of that policy (Morales 2014, p. 17). Coordination round tables were introduced to facilitate dialogue among private parties and among public entities, and between the private and public sectors. In view of the diversity of the public sector participants described in Table 2, a proposal was made for working groups representing the technical political and fields.

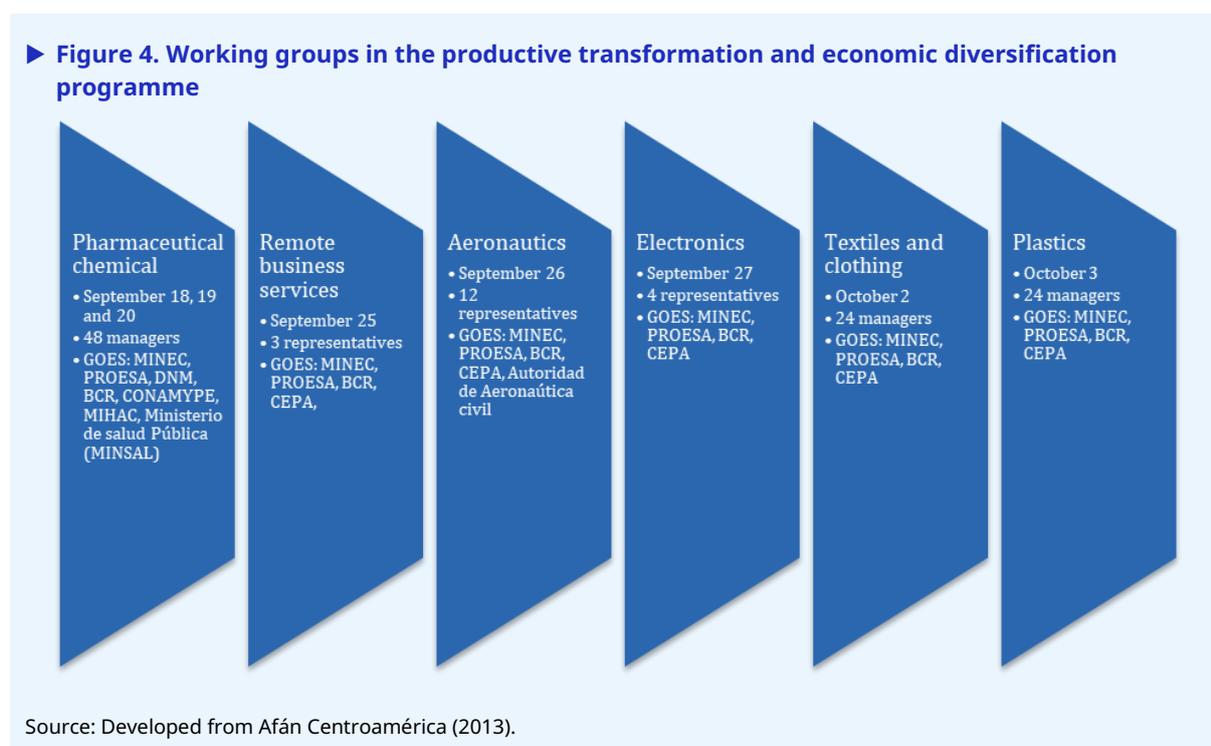


Figure 4 shows the first stage of implementation, which defined the constitution of productive transformation working groups in six strategic sectors: pharmaceutical chemistry, remote business services, aeronautics, electronics, textiles and clothing and plastics. In total, 115 representatives of the private sector participated between September and October 2013 (Afán Centroamérica 2013, p. 5; Morales 2014, pp. 17–18).

The technical working groups were formed of managers from the companies representing each sector and public sector representatives in each sector with the decision-making capacity to provide public goods or correct market failures, such as MINEC, the Exports and Investment Promotion Agency (PROESA), the Central Reserve Bank of El Salvador (BCR), the Ministry of Labour and Social Protection (MTPS), the National Commission for Micro and Small Business (CONAMYPE) and the Development Bank of El Salvador, among others. At the same time, a political working group was set up, on which the general managers of the companies, ministers, presidents of autonomous communities and the Vice President of El Salvador were represented.

The first round-table meetings began with the results of an analysis of diversification and productive transformation for El Salvador developed by Amaya and Cabrera (2012) and approved by MINEC, the National Directorate of Medicines (DNM), PROESA and the Independent Port Executive Board (CEPA). The results showed a set of products that possessed static RCAs related to the intensive use of labour and natural resources, and products with RCAs in the core of the product space called dynamic comparative advantages.

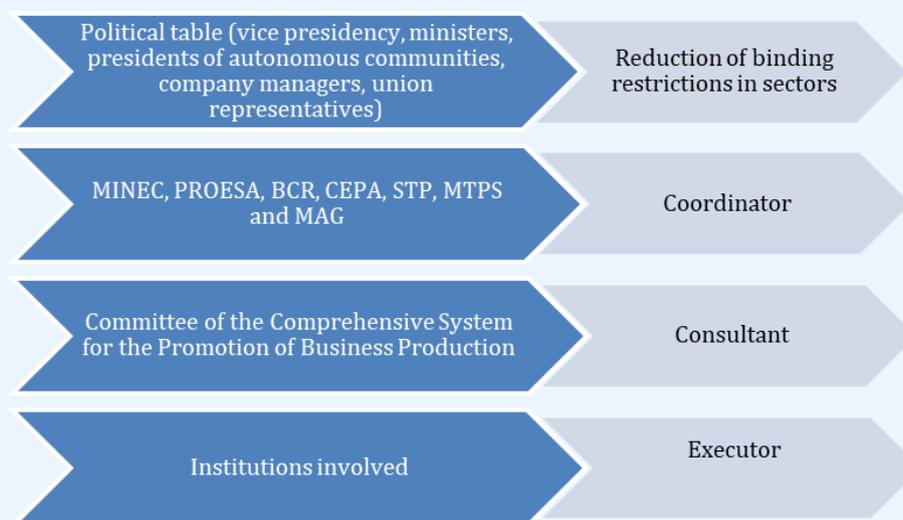
The entrepreneurs accepted that there is a clear RCA for the sectors selected under PNFDT, but noted that it is important for public institutions to understand the operation of companies, in order to identify their needs and requirements. In that sense, this initiative should be considered a national project, with stability and continuity, that allows the inclusive economic growth of the sectors involved and the country.<sup>13</sup>

Within the process of dialogue with companies, business associations, workers, unions and universities, a joint action plan was established that focused on products and sectors with monitoring and evaluation mechanisms, performance indicators and reference points, but for which "implementation will depend on the dynamics of each sector, the public-private-academy work and the resources available for its proper execution." (Ministerio de Economía 2014, p. 73).

In February 2014, with the support of the ILO, dialogues with workers' unions were launched in the six sectors, to inform them about the consultation and dissemination process, and to identify lines of action that could contribute to overcoming the traps of low economic growth and the situation of underemployment and unemployment in El Salvador. The union representatives expressed their support for the strategy of productive transformation, which coincides with their own proposals.

Between March and July 2014, meetings took place with academics and business associations. In August 2014, the agribusiness, footwear, handicrafts and paper and cardboard sectors were included. In total, 196 companies were involved in the public and private sector dialogues that were part of the industrial policy, and they make up the 16 productive sectors consulted (Ministerio de Economía 2014, pp. 46 and 57).

► **Figure 5. Governance of the PNFDT in El Salvador**



Source: Developed from Afán Centroamérica (2013), Morales (2014) and Ministerio de Economía (2014).

In September 2014, the PNFDT was launched with the following sectors: agribusiness, food and beverages, textiles and clothing, chemical-pharmaceutical and natural cosmetics, plastics, electronics, footwear, leather

<sup>13</sup> Prior to the launch of the PNFDT, reference is made to the Diversification and Productive Transformation Programme as a synonym for that policy, given that it emphasized the construction of vertical policies and, during June and July 2014, the promotion and diversification approach was included in the PNFDT.

and accessories, export crafts, paper and cardboard, business services, logistics and transport, medical services, creative industries, aeronautics, tourism and ICT.

Figure 5 sets out the governance of the PNFDT, as article 15 of the Law on the Promotion of Business Production establishes the Committee of the Comprehensive System for the Promotion of Business Production as the entity that works with the directorates of the Ministry of the Economy to coordinate with other entities of the State, the private sector and academia.

### c. Tools used to promote products and sectors

The identification of sectors for inclusion in the consultation process for the PNFDT was based on an exercise to select sectors using two methodologies: (i) product space; and (ii) analysis of the national productive structure.

The first methodology is based on the use of an analytical tool that represents the export structure, where all products exported worldwide are represented in a network called “product space” with a total of 775 nodes or products and 1,525 links representing the degrees of similarity that exist between the products. Each node (circle) represents a product according to the 4-digit Standard International Trade Classification (SITC), revision 2. The colour of each node corresponds to the Leamer classification (2004) to which each product belongs, and the size of each node is proportional to the weight of the product in world exports (see Figure 6).

The colour of the connecting link between any two nodes represents the degree of similarity of the capabilities required for the two products, as measured by their proximity. It means that the products with the greatest similarity are exported together. The colour of the connecting link is assimilated as the productive chains between products. High proximity between two products means that a country has similar capacities for the production of both.<sup>14</sup>

A country is said to have an RCA when its share of exports of a given product exceeds the equivalent share of the world’s exports, and this is captured when the RCA is above 1. Within the product space network, there are labour and natural resource-intensive products that are defined as static comparative advantages.

Leamer sorted products located in the centre (of the product space) have a close similarity or high connection, defined with a blue and red colour ( $\varphi > 0.55$  and  $\varphi > 0.65$ ), between pairs of products: chemistry, machinery, and capital-intensive products (metals, rubber, leather, and textile yarn manufacturing, among others), i.e., core activities. The products that have a low proximity and a weak connection with other products are: oil, fishing, clothing and raw materials (agriculture, livestock production, forestry, cereals and mining). Hidalgo et al. (2007) defines two clusters of products — the clothing and electronics industry — where products have a high connection but only within each cluster and not with the rest of the product space (Hidalgo and Hausmann 2009).

The PNFDT selected 46 export products with dynamic comparative advantages greater than the unit that is located in the core of the product space for 2000–2009, in the textile and clothing, chemical-pharmaceutical and natural cosmetics, plastics, and electronics sectors (Amaya and Cabrera 2013, pp. 34–37).

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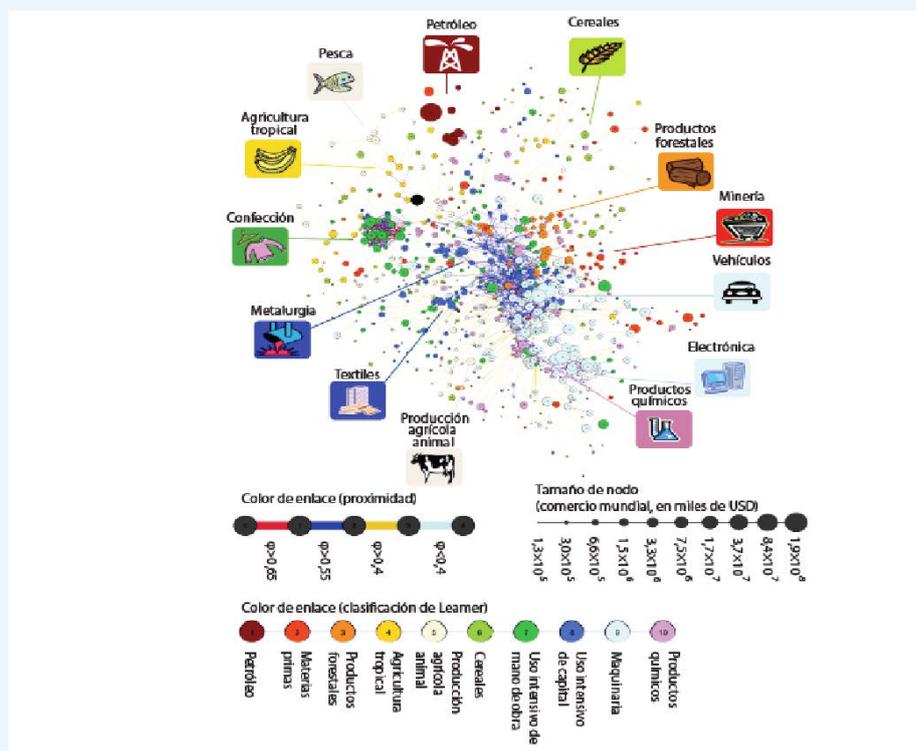
<sup>14</sup> Proximity is defined as if all countries exporting product *i* also export product *j* and they must be very similar products and require the same capabilities. Or, if all countries exporting *i* do not export *j*, then the capacities required for product *i* are very different from those needed to export product *j*:

$$\phi_{i,j} = \min\{P(VCR_i > 1/VCR_j > 1), P(VCR_j > 1 / VCR_i > 1)\}$$

Where  $VCR_{To}$  is the revealed comparative advantage index of a country when exporting product *i*. This is the quotient between the weight of a product in a country’s exports and the weight of that same product in global exports. This representation is based on reasoning that, if all countries exporting *i* also export *j*, then these two products must be very similar and require the same (or similar) capabilities. In addition, if all countries that export *i* do not export *j*, then it would seem that the capacities needed to export *i* are totally different from the capacities needed to export *j*.

The second methodology is the analysis of the national productive structure, whereby sectors have been defined that, in the short term, are at the stage of productive promotion and productive diversification, but which have the potential to transform their products or services in the medium and long term. The criteria used are: (i) generation of added value; (ii) provision of employment; (iii) level of exports; and (iv) degree of chaining. That resulted in the selection of the following products and sectors — agribusiness, food and beverages, footwear, export crafts, tourism, and paper and cardboard.

► **Figure 6. Product space**



Source: Hidalgo et al. (2007).

It was concluded that some sectors were strategic for the promotion and diversification of production and the generation of employment, particularly for young people. Sectors providing specialized services that have possibilities for expansion through global trends were added to the proposal: business services, logistics, computing, medical services, creative industries, aeronautics and tourism.

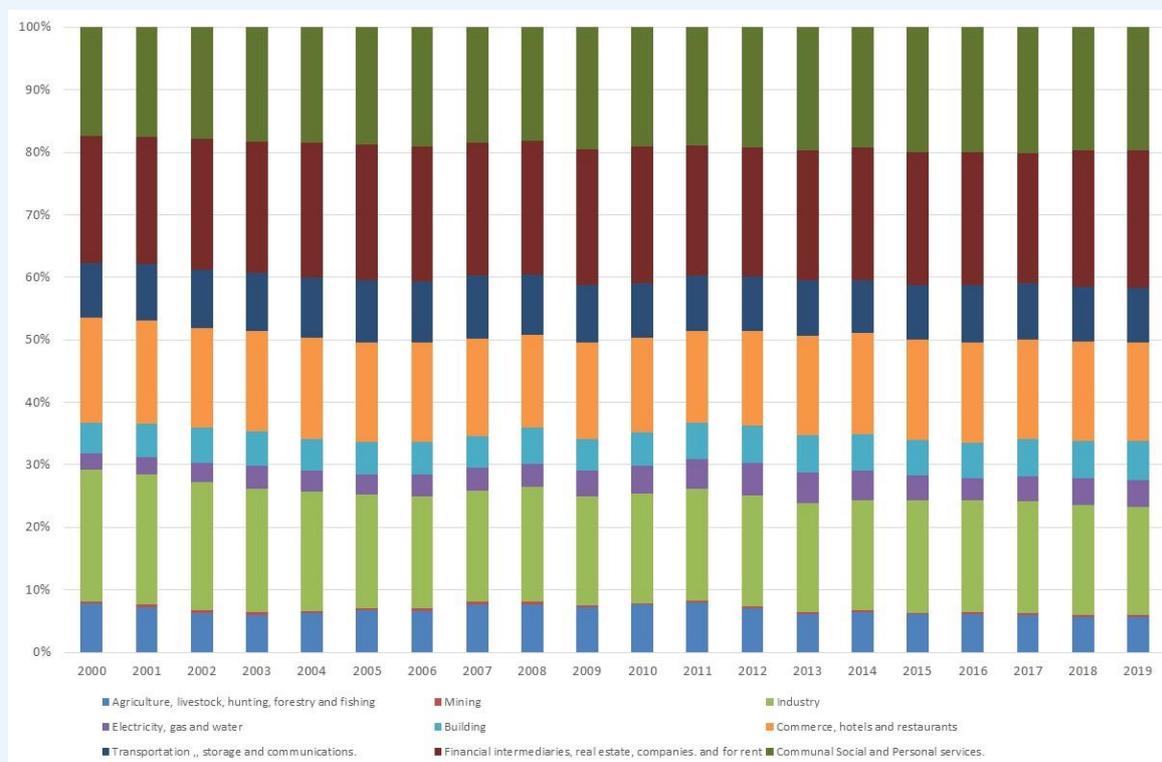
#### d. Productive transformation, employment, wages and labour productivity

The Salvadoran economy is mired in a trap of low economic growth and the export of low productivity products, along with a high propensity to hydrometeorological phenomena and tectonic seismic phenomena that from the year 2000 to date has led to estimated losses of US\$3,432.4 million, approximately 12.7 per cent of GDP in 2019. High vulnerability to climate change and the increase in the frequency and intensity of natural disasters calls for strengthened generation of green jobs<sup>15</sup> in economic sectors that help decarbonize the economy and reduce greenhouse gas emissions (Amaya and Cabrera 2012, pp. 4–14). According to Saget, Vogt-Schilb and Luu (2020), El Salvador has the second highest losses in Latin America between 2008 and 2015, of approximately one year of working life due to these types of risks between 2008 and 2015 (p. 27).

<sup>15</sup> The ILO defines green jobs as decent jobs that contribute directly to environmental sustainability, whether by producing environmental goods or making more efficient use of natural resources (ILO 2018).

The green sectors that the PNFDTF considered key in the agricultural sector are: animal products, vegetable oils, chocolate, wood and wood products, and alcohol and derivatives (Amaya, García and Rivas 2016).

► **Figure 7. El Salvador. Productive structure of value added**

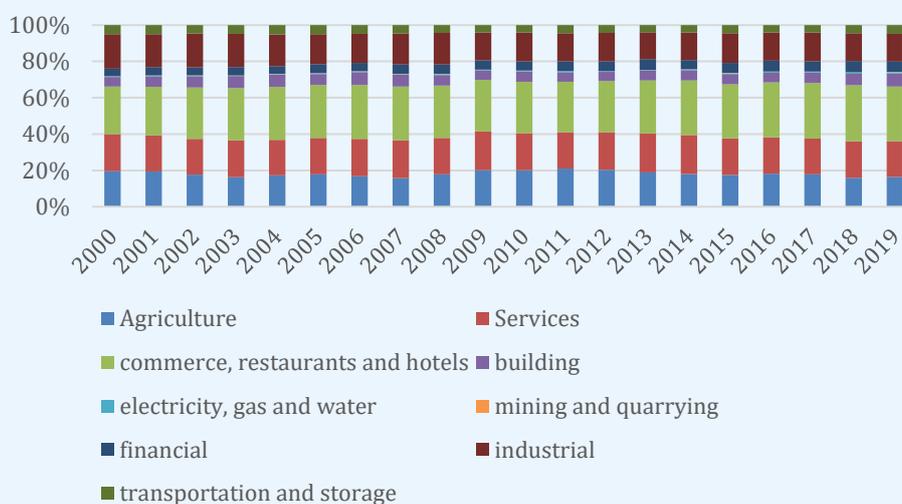


Source: Developed from Banco Central de Reserva de El Salvador (2020).

The value added of manufacturing in 2000 reached 21 per cent of Gross Domestic Product (GDP), and experienced a slight reduction from 18 per cent in 2014 to 17 per cent in 2018 (see Figure 7). The evolution of the manufacturing industry is explained in 2018 by the ten branches that represent 64 per cent of the industrial value added: milling products (10 per cent), manufacture of clothing (9 per cent), processing of alcoholic beverages (7 per cent), manufacture of textile products (7 per cent), manufacture of other non-metallic mineral products (6 per cent), processing and preservation of meat (6 per cent), manufacturing industries and not previously classified (5 per cent), sugar (5 per cent), processing of milling products, starches and products derived from starch (5 per cent) and processing of other food products (4 per cent) (Banco de Reserva de El Salvador 2021).

The services sector has been gaining relative importance in value added at current prices — 66 per cent in 2000, 65 per cent in 2014, and 66 per cent in 2018. The development of non-tradable services can be highlighted, such as: (i) commerce, hotels and restaurants, with a relative importance of 17 per cent in 2000, and 16 per cent in 2014 and 2018; (ii) real estate activities, with 10 per cent in 2000, and 8 per cent in 2014 and 2018; (iii) public administration, defence, social security plans and compulsory affiliation, with 6 per cent in 2000, and 5 per cent in 2014 and 2018; and (iv) transport and storage, with a relative importance of 3 per cent in the three selected years. Marketable services include: (i) financial and insurance activities, with a relative importance of 7 per cent in the three selected years; and (ii) information and communications, with a share of 5 per cent in 2000, and 4 per cent in 2014 and 2018, among others. The share of agriculture reached 7 per cent in 2000, and 6 per cent in 2014 and 2018.

► **Figure 8. El Salvador: Relative importance of employment**



Source: Developed from IDB (2021).

Figure 8 shows us that employment in the services sector had the greatest relative importance in 2000, 2014 and 2019, at 56 per cent, 61.2 per cent and 61.1 per cent, respectively. This was followed by industry, at 19.7 per cent, 15.1 per cent and 15.3 per cent, respectively, and the sharp decline of the primary sector to 19.5 per cent, 18.1 per cent and 16.5 per cent, respectively.

Female employment has been concentrated in services. In the years 2000, 2014 and 2019 it represented 71.9 per cent, 76.6 per cent, and 79.2 per cent, respectively, while in the manufacturing industry it represented 19.6 per cent of female employment in those years and in the agricultural sector, barely reached the respective figures of 3.8 per cent, 3.9 per cent and 3.4 per cent. Overall, female employment, as a percentage of total employment, has remained stable in the two periods examined, at 43.7 per cent. Despite the efforts of the PNFDT, no reduction in the informally employed population was observed in the informal sector in El Salvador. Between 2014 and 2019, 69.3 per cent of the employed population were in the informal sector, and women (71.6 per cent) had higher rates of informality than men (67.6 per cent) and young people (69.3 per cent). The average growth rate of informal employment between 2014 and 2019 was a slight increase of 1.9 per cent; while for men it grew 2.0 per cent and for women 1.8 per cent.

According to the African Development Bank Group (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), and the Inter-American Development Bank (IDB) (2018), 75 per cent of Salvadoran employment was at risk of being replaced by advances in the automation of low value-added work activities before the pandemic. Therefore, countries must take advantage of trends in automation and propose public-private partnerships for a series of public policies that develop a learning economy, since a country's ability to venture into new products depends on the existing set of capacities needed to produce those products. These existing capacities, that combine explicit and tacit knowledge, reflect the basket of products that a country produces and exports with dynamic comparative advantages.

► **Table 2. Job loss and creation between February and December 2020 and feasibility of access to teleworking**

Economic activity	Job losses (-) or creation (+)	Feasibility of teleworking (%)
Agriculture, hunting, forestry and fishing	-806	9.6
Commerce, Restaurants and hotels, Transport, Storage, Accommodation activities and Catering services	-11 694	27.7
Manufacturing industries, Mining and quarrying, and Other industrial activities	-8 301	6.8
Services	-7 176	10.5
Professional, Scientific, Technical and Administration Support Services	-4 312	39.8
Construction Industry	-3 975	1.7
Financial and Insurance Activities	-2 440	30.1
Public Sector	+3 609	17.1
Information and Communications	+546	19.5

Source: Developed from Instituto Salvadoreño del Seguro Social (2021) and Contreras and Erazo (2021).

During the COVID-19 pandemic, the business sector began teleworking, online buying and selling, the digitalization of value chains and the strengthening of its electronic networks, but only 12.7 per cent of employed people had the capacity to telework; that is, one in ten occupations has the possibility of working from home, according to data on the employed population in 2019 (Contreras and Erazo 2021, p. 11). Between February and December 2020, the Salvadoran labour market presented a loss of 35,444 formal jobs. The sectors with the greatest losses are: commerce, restaurants and hotels, transport, storage, accommodation activities and catering services, manufacturing industries, mining and quarrying and other industrial activities, as indicated in Table 2.

The government must take the lead, together with the private sector, in the two areas outlined below. (i) Macroeconomic scope with the objective that “growth can be higher, it can be made more diversified, it can be made more sophisticated, technologically more inclusive, more job-creating, [...] more territorially balanced, more sustainable and decarbonized, in short, all those dimensions that matter for economic and social development that can positively influence modern industrial policies” (Salazar-Xirinachs 2021, pp. 2–3). (ii) Businesses or sectors where productivity can be increased in specific sectors, and in which the economy is leaving behind lower productivity products and sectors that are going to be modernized; more formal job creation and workers must be supported in their transition to new jobs and the acquisition of new skills or abilities so that workers can identify and find job opportunities and receive training (AfDB, ABD, EBRD and IDB 2018, p. 90).

In an environment of high mortality and morbidity rates due to the COVID-19 pandemic, a welfare state must be built for free access to high-quality health systems, education, housing and provision of public services (water, sewerage, energy, security) by increasing services in the face of a new digital reality.

The average nominal hourly earnings of employees by sex and occupation in the period 2011–2014 was US\$3.77 in purchasing power parity in 2017 and by gender, gross salaries for women were US\$3.32 and for men US\$3.26. In the period 2015–2018, the growth rate of total income was 11.7 per cent; 10.7 per cent for women, and 11 per cent for men (ILO 2021).

The evolution of manufacturing and services exports as a percentage of total exports has been increasing to represent 52 per cent and 29 per cent, respectively, in 2010, while in 2019 it rose to 58 per cent and 31 per cent, respectively (see Figure 9).

► **Figure 9. El Salvador. Manufacturing exports/exports of goods**

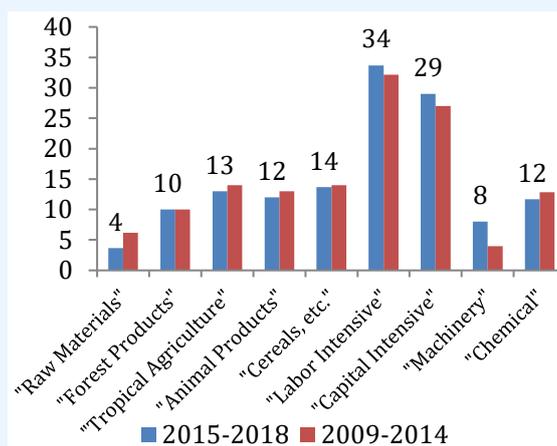


Source: Developed using the Growth Lab at Harvard University (2021).

FDI flows signal a greater attraction of investors to the Salvadoran economy. Between 2015 and 2018, FDI flows to industry reached US\$1,579 million and represented 64 per cent of the total, while in 2011–2014 they represented US\$468 million. Following the policy of productive transformation, the accumulated flows of net FDI were multiplied by three. The balances show a clear upturn, confirming the accumulation of FDI in this sector.

In turn, spending on research and development as a percentage of GDP in El Salvador has been rising, from 0.09 per cent in 2014, to 0.18 per cent of GDP in 2017. El Salvador ranks as the 53rd country (with respect to 166 countries)<sup>16</sup> in the Economic Complexity Index (ECI). In comparison with 2010, the economy of El Salvador has become more complex, moving up eight positions in the ECI ranking, which is explained by the addition of 26 new products in the last fifteen years (Growth Lab at Harvard University 2021).

► **Figure 10. El Salvador: Number of products with comparative advantage 2009-2014 and 2015-2018**



Source: Developed from Simoes and Hidalgo (2011).

Figure 10 shows the number of products with RCAs; in the period from 2009 to 2014 there were 133 products, while in the period from 2015 to 2018 this rose to 135 products. The export specialization between 2009 and 2014 was located in the following Leamer classifications: labour-intensive products (32), tropical

<sup>16</sup> Fourth best positioned economy in Latin America and second in Central America.

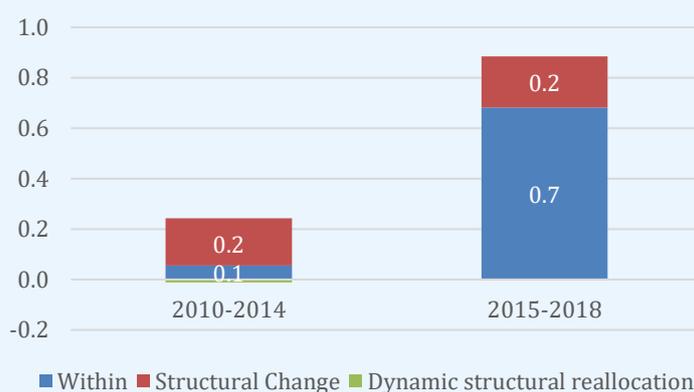
agriculture (14), animal products (13), and forest products (10). The branches in the core of the product space cover 44 products, with 27 products in the capital-intensive sector, 4 in machinery and 13 products in the chemical sector.

The export specialization between 2015 and 2018 was located in: labour-intensive products (34), products of animal origin (12), and tropical agriculture (13), and forest products (10). The core of the product space reaches 49 products in the product space, with 29 products in the capital-intensive sector, 8 in the machinery sector and 12 products in the chemical sector. Economic complexity was increased in 5 products located at the core of the product space, and the number of products with revealed comparative advantage increased from 44 to 49 products.

Amaya and Cabrera (2013, p. 35) demonstrated that the ten most complex products located in the chemical and machinery industry had productivity levels between US\$29,000 and US\$33,000 per worker, higher wages and more stable jobs, but with the same limited employment potential as shown in empirical evidence from Ghana (Baah-Boateng and Twum 2019) and South Africa (Bhorat et al. 2019).

Two methods to evaluate structural change through labour productivity are analysed: (i) productivity grows within economic sectors through the accumulation of inputs (within); (ii) productivity can move from low productivity sectors to high productivity sectors (reallocation) (McMillan and Rodrik 2011, p. 12; Amaya and Cabrera 2012, pp. 15–18).

► **Figure 11. El Salvador: Breakdown of average labour productivity growth**



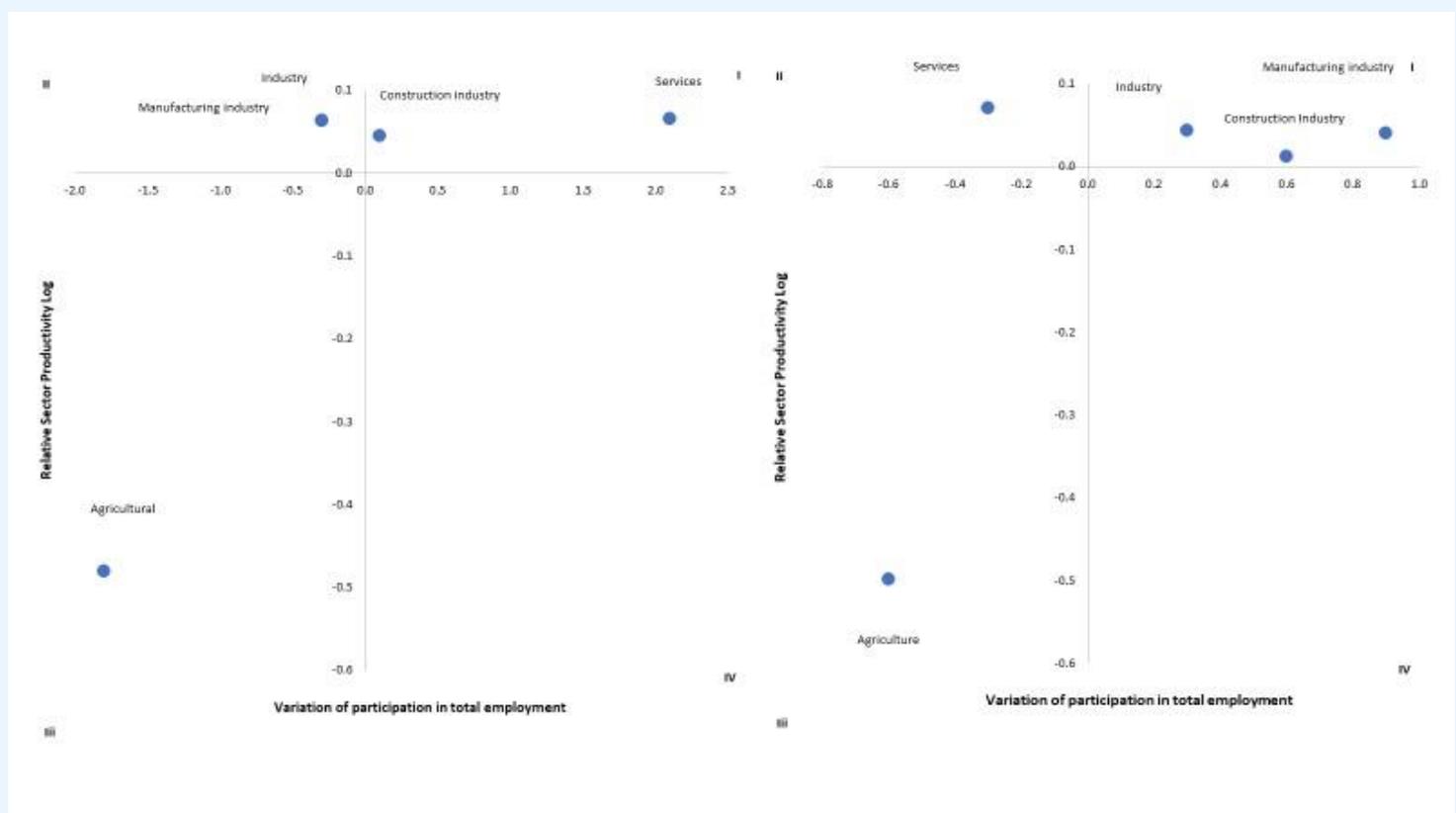
Source: Developed from Banco Central de Reserva de El Salvador (2021) and Dirección General de Estadísticas y Censos (2020).

Figure 11 shows that labour productivity grew 0.2 per cent between 2010 and 2014, while in the period 2015 to 2018, productivity grew 0.9 per cent. We can break down productivity into three factors. The first, the effect of productivity growth within the sector (within), measures how much of the changes in aggregate productivity can be explained by the change in labour productivity within an individual sector (within-sector productivity growth effect (WSPGE)). The second, static structural reallocation effect (SSRE), captures the changes in productivity associated with the reallocation of employment from low productivity sectors to high productivity sectors — which we call “structural change”. The third measures dynamic structural reallocation (DSRE).

Productivity growth within grew by 0.1 per cent between 2010 and 2014, and by 0.7 per cent between 2015 and 2018, while the cumulative productivity of Structural Change has grown 0.2 per cent in both periods of analysis. Although the effect of DSRE has remained stationary, according to the technical staff of the IMF there were increases in productivity and reallocation of the labour force from the low productivity agricultural sector to sectors such as manufacturing. Thus, “the technical staff recommends continuing with the implementation of the policy of development, diversification and productive transformation [...]” (IMF 2019 p. 16).

Figure 12 confirms the results of the IMF, where it compares the changes in the share of employment and the logarithm of sectoral productivity/global productivity in 2010–2014 (illustration on the left) and 2015–2018 (illustration on the right). In the first period, the share of employment in global industry and manufacturing is shown, located in the second quadrant, while construction and services present positive contributions in employment and positive productivity, and the agricultural sector sinks into a loss of employment and very high relative labour productivity. Whereas, in the period from 2015 to 2018, there is evidence of growth in labour productivity and the transition of workers to construction and manufacturing.

► **Figure 12. Change in share of employment and log of sectoral productivity/global productivity 2010–2014 (left) 2015–2018 (right)**



Source: Developed from BCR, (2021) and (Dirección General de Estadísticas y Censos, 2020).

IMF staff go on to mention that “the policy, in place since 2014, supports the development of strategic sectors by (i) creating technology hubs to help businesses move up the product quality ladder; (ii) facilitate financing by providing seed capital to entrepreneurs; and (iii) support the accumulation of human capital through partnerships between companies and the Instituto Salvadoreño de Formación Profesional” (p. 16).

Policy actions, in line with those suggested by Salomón (2021), are: (i) continue with education policy and vocational training policy that certify capabilities, and a business environment that provides certainty and security in the legal framework for investments made, since “I think one of the problems that the country has is that it has many laws, but it has laws that are imperfect, and they are imperfect because a lot of them leave it to the judgment of the public servant who comes to supervise you ... I think they have to make clear laws, clear rules, so that this business associate is incentivizing you to invest more” (p. 5). Cáceres (2021) recommends entrepreneurship through increased credit from public banks — but without specifying which productive sectors — MSMEs or self-employed workers, a portfolio of investment projects in the manufacturing sector, and tourism.

## 2.2. Costa Rica

### a. Industrial policy, innovation, skills development and decent job creation

In the opinion of Kucera, Schmidt-Klau and Weiss (2020, p. 27), Costa Rica has a long tradition of horizontal industrial policies to promote the transition from low productivity activities to high productivity, within the framework of the import substitution process and the Central American Common Market (CACM), which facilitated the accumulation of social capacities despite the crisis of the model in the early eighties (Paus 2014, p. 188).

Costa Rica, unlike other Latin American countries, has long maintained a commitment to human development. The Industrial Protection and Development Law of 1959, sought to consolidate the domestic manufacture of previously imported goods to generate economic growth, reduce the balance of payments and generate local technologies to allow a more dynamic development of the primary goods sector. For this purpose, the CACM was formed.

By the 1970s, the policies of the Export Substitution Industrialization (ESI) model included incentives for maquila production and exports, and opened up a learning space for local producers and supported local production of new products. The model did not, however, involve disciplinary measures that would have forced local companies to be internationally competitive. The structural shift towards new and higher value-added activities was reflected in higher productivity growth, with foreign producers playing a leading role in both domestic production and exports (Paus 2014, pp. 185–190).

Since the Figueres Administration (1982–86) a new economic model was chosen — of market liberalization — with a substantially reduced role for the government in the economy, as opposed to the previous model of import substitution. The objectives of the new model were to stabilize the main battered macroeconomic indicators and integrate them into the world economy through the liberalization of imports, trade agreements, and export promotion that would trigger the inflow of FDI.

To this end, a triad of institutions was established: the Costa Rican Investment Promotion Agency (CINDE), the Costa Rican Foreign Trade Promoter (PROCOMER) and the Ministry of Foreign Trade (COMEX). They pursued an industrial policy focused on high-tech enterprises that was based on a frank and precise dialogue with international high-tech companies, given comparative advantages in accumulated social capacities, proximity to the United States of America and incentives, including free zones and deposits for inward processing for goods and services, subsidized interest rates and guaranteed loans, among others.

In terms of the work of each institution, CINDE is a private organization dedicated to attracting FDI and supporting the process of the new export-oriented economic model in a wide range of industries, including electronic components, electrical equipment, medical devices, software, chemicals, beverages and foodstuffs, tourism, financial services and call centres. For its part, PROCOMER is the implementing agency of the Law on Export Processing Zones (EPZs), that is, it is responsible for the administration and coordination of incentive contracts with the operating companies of the EPZs, as well as for new applicants; it carries out control and accountability processes, however, it is not directly involved in FDI promotion activities. Finally, COMEX, created in the late 1980s, became another important driver of EPZ law and is currently responsible for policy design, legislative reform and coordination between public and private organizations related to EPZs (Monge-Gonzalez, Rivera and Rosales-Tijerino 2010, pp. 12–26).

However, the industrial policy based on the external engine of attracting FDI has not, to date, resulted in a chain with the domestic productive sector, “the internal engine has always been outdated, true, and above all, the problem we have faced is the problem of productive chains” (Sauma 2021, p. 2).

In particular, the electronics company Intel made it clear that an industrial policy focused on attracting FDI without providing a base that nurtured employees with training and innovation to the standards of the multinational, and without local companies that undertook complementary investments to keep up, discouraged their permanence. As a result, the tech giant moved its assembly operations to Asia. Yet, due to

the efforts of the Costa Rican authorities to reduce technology and skilled employment training gaps, Intel opened a new operation in 2014.<sup>17</sup>

In 2012, the Government of Costa Rica negotiated a US\$35 million loan with the IDB to boost business innovation and human capital formation, called the Innovation and Human Capital for Competitiveness Program. Its general objective is to “contribute to productivity growth by supporting innovation activities in the productive sector and the formation of advanced human capital in strategic areas defined in the National Plan for Science, Technology and Innovation of the Government of Costa Rica” (Law No. 9218).

To accumulate greater capacities and develop local companies, Pacheco and Sauma believe that the problem of the high social burdens faced by SMEs in Costa Rica must be solved, as these leave them with little opportunity to export since their fixed costs (mainly in wages) are too high. Pacheco’s proposal consists of “reviewing the fiscal and social security stimuli that we are giving to these companies, I believe that a series of measures can be created to lower the internal costs of the company” (2020 p.11).

More recently, foreign trade and investment policy has been an integral part of Costa Rica’s development strategy, which identifies economic growth as an essential ingredient in increasing the well-being of the population, through the generation of employment and conditions that favour greater macroeconomic dynamism and solidity. Under the leadership of COMEX, the policy is aimed at boosting the country’s economic growth, promoting the diversification of the exportable supply and its destination markets, and opening up new and better development opportunities to the population. This will be achieved through: (i) the negotiation, management and implementation of trade agreements; (ii) the promotion of foreign trade and the development of productive chains; and (iii) the consolidation and expansion of the attraction of FDI from various sources, as a complement to and catalyst for the country’s exportable supply. To this end, COMEX works closely with PROCOMER and CINDE, and its coordinated work under well-defined leadership and a long-term strategic vision have been fundamental in articulating state policy in this area (Ministerio de Comercio Exterior 2019b, pp. 2-3).

Costa Rica stands out in the region for the strategic and systematic application of instruments with the potential to contribute to the realization of the externalities or positive spill overs of FDI. In the field of innovative business development, several programmes were implemented with the aim of promoting capacity-building by domestic enterprises, mostly SMEs. These programmes include: the Incentive Fund, the Support Programme for Small and Medium Enterprises (PROPYME), and the Development Fund for Micro, Small and Medium Enterprises (FODEMIPYME); however, in practice, the funds available for the promotion of innovative activities continue to be limited. In terms of human capital development, the aforementioned Incentive Fund<sup>18</sup> stands out, and, among a set of more recent initiatives, so do the activities of the National Learning Institute (INA), which works closely with the private sector (which participates in the Institute’s Board of Directors) and responds to companies’ requests for specific courses or the diagnosis of needs and the development of training programmes. It collaborates industriously with CINDE to understand investors’ needs (García, López and Ons 2021, pp. 147–149).

Structural policies also need to address productivity and inclusion issues to avoid getting stuck in a “vicious circle” in which people with low skills and poor access to opportunities are confined to low-productivity, low-wage jobs, reducing aggregate productivity and further exacerbating inequality. To address informality, which has reached 41 per cent of workers, the OECD has recommended the adoption of a comprehensive strategy, including action to reduce non-wage labour costs, simplify the minimum wage structure, strengthen enforcement, reduce barriers to entrepreneurship and improve training and education. In response, a National Strategy for the Transition to a Formal Economy was approved through a tripartite

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<sup>17</sup> Monge-González (2017) mentions Intel’s contribution to GDP, namely: “Intel’s share of Costa Rican production has ranged between 0.29 per cent and 0.90 per cent during the period 1998–2015. In other words, Intel’s production has come to represent in that period, at most, just under 1 per cent of Costa Rica’s GDP. On average, the operation of this multinational has reached 0.61 per cent of the GDP of the Costa Rican economy” (p. 20).

<sup>18</sup> It is a fund of the Ministry of Science, Technology and Telecommunications (MICITT) that emphasizes scientific and technological training and education, and also has competitive resources to co-finance the development of R&D projects in different topics, to through non-refundable supports. (García, López, & Ons, 2021, p. 147).

agreement in February 2018, with high-level actions in each of the recommended areas and an overall goal of reducing informality to 33 per cent by 2025 (OECD 2018, pp. 60–69).

Pacheco (2021, p. 4) suggests that, in order to move employment from informality to formality, students' abilities must be developed and encouraged through salaries commensurate with the acquisition of new skills. Further, Costa Rica "is not generating the profile of graduates at the university level that allows it to be incorporated into segments of greater innovation", thus, Pacheco insists that we must pay attention to companies and provide them with incentives, whether monetary, fiscal or otherwise, "so that companies can take advantage of some spaces where the government wants to promote its agenda." The ideas presented by this author follow the line of the OECD recommendations and therefore, we consider them highly applicable, with potential to achieve the goals set by Costa Rica to reduce informality.

Another important element to consider in the creation of decent employment in Costa Rica is the promotion, since 1983, of the free zone regime, which gave an important boost to companies developing industrial parks in order to offer physical space to exporting companies, both domestic and foreign, which also qualify as beneficiaries of the incentives of this regime, and facilitated the attraction of FDI to the country. This regime offers income tax exemption incentives and exemption from import duties, among others, and continues today. Beyond efforts on exports and the concomitant effort to attract FDI, the result of the absence of an industrial policy and the emphasis placed on export promotion is that, outside of the free zone regime, primary export sectors predominate — pineapple, coffee, bananas, African palm — which underscores the limitations of the strategy followed to date (Martínez and Padilla 2017, p. 246).

Structural change, as a result of innovation, higher productivity in existing sectors and the escalation towards more complex and knowledge-intensive sectors and processes, is a gradual undertaking that involves the transformation of the composition of an economy's production, foreign trade and employment. It is hoped that this process will provide higher growth rates, greater export competitiveness and quality employment (Martínez and Padilla 2017, p. 233).

From 2014 to 2018, the sectors with the largest share of Costa Rica's exports were: services with 36.39 per cent of total exports — composed mainly of tourism and services based on ICT — agriculture with 24.57 per cent, machinery with 14.84 per cent and electronics with 13.99 per cent (see Table 3).

► **Table 3. Costa Rica. Share by sector of total exports (%), 2014–2018**

	2014	2015	2016	2017	2018	Average
Agriculture	16.21	26.18	26.70	27.65	26.12	24.57
Chemical	3.34	6.01	5.69	5.62	6.12	5.36
Electronics	43.06	9.77	6.84	5.68	4.63	13.99
Machinery	13.40	13.64	14.25	16.26	16.67	14.84
Metals	1.20	1.67	1.49	1.87	1.90	1.62
Minerals	0.11	0.19	0.20	0.21	0.21	0.18
Other	0.85	1.35	1.07	1.35	1.01	1.13
Services	20.53	39.12	41.90	39.35	41.03	36.39
Stone	0.50	0.75	0.69	0.92	0.93	0.76
Textiles	0.54	0.88	0.90	0.87	0.86	0.81
Vehicles	0.27	0.45	0.27	0.22	0.52	0.35
Total	100	100	100	100	100	100

Source: Developed from Atlas of Economic Complexity.

Costa Rica entered the global value chain of tourism through public initiatives for the development of the workforce, such as vocational hospitality classes on the preparation of food and cleaning, taught by the INA; then moved on to the second stage of public-private initiatives, where hotels train their employees in line

with international standards. The third and final stage consists of the expansion of FDI, with a wider range of specialization courses for tour guides and the management of tourism microenterprises; and the adaptation of the INA's programme offerings following requests from the private sector to update and restructure its curriculum to better suit the demands of the industry. Currently, the tourism industry is a mix of foreign and local investment, with foreign hotels growing in both mid-range and luxury options, concentrated in coastal regions and the Central Valley, while locally owned and managed accommodation alternatives tend to be smaller and focus on the lower end of the market (Christian et al. 2011, pp. 210–216).

As tourism has grown, so has the number of workers in this sector; hotels and restaurants alone went from representing 123,009 jobs in 2016, to 140,539 jobs in 2019, comprising 6.5 per cent of the employed population, according to information from the *Encuesta Continua de Empleo* (Instituto Nacional de Estadística y Censos de Costa Rica 2020).<sup>19</sup>

On the other hand, companies exporting ICT-based services concentrated on a few sectors of economic activity; 54 per cent of the exports delivered through ICT are part of call centre operations, computer programming and combined office administrative services. In terms of target markets, demand from the North American region accounts for 60 per cent of exports of ICT-based services (Torres Mora 2018, pp. 22–23).

The agricultural sector, which accounts for only 5 per cent of total foreign investment, according to García, López and Ons (2021), is one of the engines of the Costa Rican economy, mainly because it is the second sector, with the highest generation of jobs (11.9 per cent of the employed population, equivalent to 259,438<sup>20</sup> jobs (Instituto Nacional de Estadística y Censos de Costa Rica 2020) and a contribution of about a quarter of national exports (26 per cent of total exports in 2018). It supplies the demand from more than 110 markets, such as the United States of America and the European Union, with more than 350 products. The products with the largest share are bananas (US\$ 1,005 million), pineapple (US\$ 962 million), and coffee (US\$ 274 million). Together, all three account for 80 per cent of primary agricultural exports (Ministerio de Comercio Exterior 2019a, pp. 11–13).

Despite the labour-intensive nature of this industry, the application of strict public and private industry standards and increasing competition between suppliers from developing countries, the skills of the workforce are an increasingly important factor in the competitiveness of the industry (Fernandez-Stark, Bamber and Gereffi 2011, pp. 16–23).

Table 3 shows that, in 2018, machinery constituted the sector with the third highest exports in Costa Rica, experiencing a growth of three percentage points between 2014 and 2018 (from 13.4 per cent to 16.7 per cent). This is mainly explained by the increase in exports of medical instruments (from 4.4 per cent in 2014 to 11.6 per cent in 2018) and orthopaedic appliances (from 1.0 per cent in 2014 to 3.4 per cent in 2018).

The Costa Rican medical device industry is relatively young and has been shaped by the efficient search strategies of leading multinational companies that establish operations in the country to take advantage of its strategic location, qualified human capital, and political and economic stability. Original equipment manufacturers were initially attracted to Costa Rica as a low-cost destination for manufacturing. However, today, the presence of human capital with experience in the sector has been listed as more important than cost in attracting companies to establish operations in the country. The complexity of products manufactured in Costa Rica has gradually increased as a result of two factors: existing companies increasing the sophistication of product lines, and the recruitment of companies with devices in more complex product categories (Bamber and Gereffi 2013, pp. 34–35).

During the pandemic, the medical device industry grew in Costa Rica. Not only was essential equipment for the care and protection of the population donated (masks, gloves and resources for emergency authorities and hospitals), but for the first quarter of 2020, this sector's exports grew by 10 per cent, to a value of US\$171 million. In addition, it should be noted that medical devices comprised 32 per cent of total exports (Gudiño 2021). As for its impact on job creation, the Ministerio de Comercio Exterior (2021), maintains that the life

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<sup>19</sup> Continuous Employment Survey.

<sup>20</sup> According to the Continuous Employment Survey.

sciences sector is one of the most dynamic in the country's economy, and that it had generated a cumulative total of 38,248 jobs by the end of 2020.

## **b. Dialogue between the different actors for a policy of productive transformation and job creation**

In Costa Rica, a process of dialogue around productive transformation is necessary because, for the most part, the failures of the government, rather than market failures, have been the main justification for productive development policies that did not achieve the original objectives of promoting business growth and job creation during the 1960s and 1970s. In addition, the lack of evaluation and monitoring of policies hinders the necessary adjustment and correction to such policies in accordance with changing circumstances (Monge-Gonzalez, Rivera and Rosales-Tijerino 2010, pp. 7–9).

Public-private collaboration in Costa Rica's strategic economic planning is rare, even though some organizations, such as the Chamber of Industry and the private Competitiveness Council are trying to promote a strategic economic policy dialogue, with modest success so far. However, the policy of attracting FDI is the salient exception (Oqubay and Lin 2020, pp. 769–770).

Three organizations provide institutional support for the growth of the medical equipment sector: (i) CINDE, a non-governmental organization dedicated to promoting economic growth in Costa Rica by attracting FDI; (ii) PROCOMER, a public body focused on the promotion of Costa Rican exports; and (iii) COMEX, the ministry primarily responsible for trade policy and the negotiation of trade agreements with other countries. CINDE, PROCOMER and COMEX have been instrumental in providing leadership for the continued development of the sector. CINDE, in particular, is a key facilitator, providing a forum for companies in the sector to come together and share their concerns, as well as providing access to a variety of governmental and non-governmental actors to address specific challenges. These organizations have played an important role in maintaining the country's commitment to the medical device sector across different government administrations (Bamber and Gereffi 2013, p. 39).

Pacheco, Salazar-Xirinachs and Sauma (2021) unanimously state that the success of the institutions that were created or renewed with the policy of promoting exports and attracting foreign investment (CINDE, PROCOMER and COMEX) is due to the coexistence of public and private governance structures on their boards of directors, which maintains a fluid dialogue with universities, companies and the government to generate the required workforce. However, Sauma (2021) is clear in saying that, although there has been discussion about how to develop that triad of institutions for the internal market, no solution has yet been found (p.8). Meanwhile, Salazar-Xirinachs (2021) proposes that "we must enter into this concept of social dialogue for productive development. The social dialogue of clusters and the unions and employers do not send the politicians of the business sector, nor the union politicians" (p.29).

## **c. Tools used to promote products and sectors**

Since the late 1990s, the industrial policy of Costa Rica has been a story of success through focusing on a specific sector, rather than a wide range of sectors or clusters, to achieve better economic performance. The chosen sector was that of medical equipment and was developed with the support of CINDE, which made the necessary efforts to attract capital-intensive foreign investment in the form of medical equipment companies that settled in the country, creating jobs and increasing the sophistication of the processes and products offered. This required strategic vision and flexibility to adapt the industrial policy to support specific subsectors with promising value-added potential. Costa Rica's high-tech sectors, particularly in the area of medical equipment, serve as growth clusters in which each new player or activity adds depth to the entire sector and thus makes it more attractive to new entrants (Kucera, Schmidt-Klau and Weiss 2020, pp. 27–30).

Currently, the methodology used in Costa Rica to identify key economic activities consists of an ecosystem of 20 indicators and five analyses to prioritize a set of goods and services. This selection process is described within the first phase of the *Estrategia Territorial para una Economía Inclusiva y Descarbonizada 2020–2050*,<sup>21</sup>

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<sup>21</sup> Decarbonized and Inclusive Territorial Economic Strategy for Costa Rica 2020-2050 (DITES).

prepared by GeoAdaptive (2021, pp.76–79) in collaboration with the Ministry of National Planning and Economic Policy (MIDEPLAN).

In the selection process for goods, four main methods were used to select the key assets that will contribute to the restructuring of the productive matrix:

- Analysis of current production — Economic Participation. This was based on a universe of 2,850 goods which were evaluated using a productive characterization analysis to identify the main income generators. This identified 18 goods which represent 67 per cent of the country's export basket in 2018 and which were ranked based on their export value, growth and competitiveness, in turn allowing the identification of the seven established goods that represent 52 per cent of total exports in 2018;
- Prospective Analysis I — Intensive and Extensive Margins. This started with a universe of 1,189 goods. A comparative analysis took into consideration new products and products that are part of the Environmental Goods Agreement. This allowed the identification of the 28 best goods, which were ranked based on demand and their potential. That resulted in nine selected goods;
- Prospective Analysis II — Macroeconomic Comparison. From a universe of 1,798 goods, a comparative analysis was carried out with those countries that 30 years ago presented indicators similar to those of Costa Rica today, and which have focused on high-technology goods, allowing the identification of 72 goods. These goods were ranked based on global export demand and value, which allowed 11 additional wagering goods to be identified;
- Prospective Analysis II — Economic Complexity. This method considered indicators such as product complexity index, know-how and several available alternatives, which allowed the identification of 51 possible transitions. These were filtered by considering data such as export value, world demand, product Gini, job quality index, CO2 emissions and carbon footprint proxy. That resulted in 21 transitions that allowed the identification of 27 goods. Finally, through quantitative analysis and the information available on open platforms, three nascent goods were identified. This made a total of 30 selected goods that will contribute to Costa Rica's goals of inclusive and decarbonized growth.

Key services were identified through three main methods:

- Current Production Analysis — Economic Participation. From a universe of 48 services, a ranking was established by considering export values in 2014, percentage of GDP they represent, percentage contribution to employment, and wages. As a result, six basic services were identified, which represent 73 per cent of total exports;
- Prospective Analysis I — Macroeconomic Trends and Behaviour. This was based on 37 services which were ranked through a comparative analysis considering export values, growth trends, world demand, and percentage of contribution to employment. This made it possible to identify six betting services;
- Prospective Analysis II — Macroeconomic Comparison. Based on 59 services, a ranking was established using export growth statistics from those countries that 30 years ago had a relative comparative advantage similar to that of Costa Rica today. From this, it was possible to identify 11 additional betting services. Finally, a total of 23 services, both base and bet, were analysed using the composite index consisting of indicators of export value, percentage of employment, and CO2 emissions, resulting in seven services for prioritization. As in the goods process, there was also a qualitative analysis that used open-based information sources to identify seven nascent services. This resulted in a total of 14 key services to achieve the goals of growth, inclusion and decarbonization by 2050.

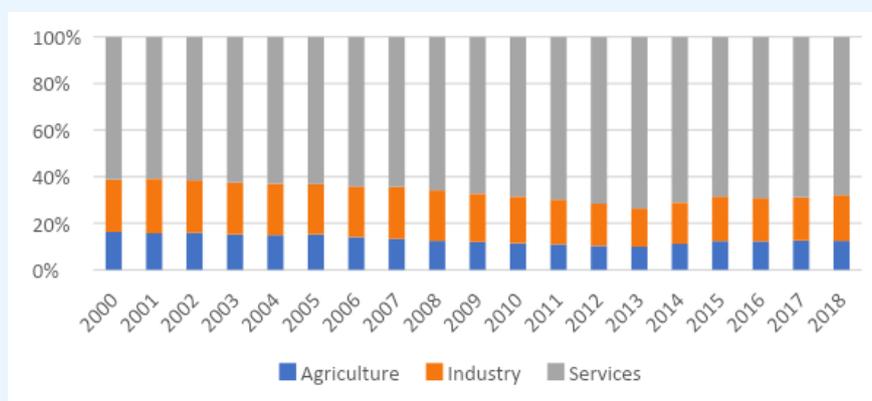
#### **d. Productive transformation, employment, wages and labour productivity**

According to data from the Banco Central de Costa Rica (2021), the value added by the manufacturing industry in 2000 reached 18.4 per cent of GDP, which fell slightly to 14.2 per cent in 2009 and reached 11.8 per cent in 2018, denoting a tertiarization of the economy, but of services of high added value, such as information technology and information.

Costa Rica has achieved some structural change, from agriculture to manufacturing and services, albeit to varying degrees and with varying levels of success, but is caught between too high labour costs to compete with lower-middle-income countries and insufficient technological complexity to compete with high-income and upper-middle-income countries.

The evolution of employment in the manufacturing industry reached 22.4 per cent of total employment, which gradually fell to 19.7 per cent in 2018, while employment in services has been increasing its relative importance from 61.3 per cent in 2000, to 67.9 per cent in 2018. Agriculture has led the same trend in the reduction of the secondary sector, from 16.3 per cent in 2000, to 12.4 per cent in 2018 (see Figure 13).

► **Figure 13. Costa Rica. Employment in Agriculture, Industry and Services (% of total employment)**



Source: Developed from World Bank (2021).

In the period 2011–2014, the average nominal hourly earnings of employees by gender and occupation averaged US\$7.56 in purchasing power parity in 2017; and by gender, gross wages for women were US\$7.69 and for men US\$7.47. In the period 2015–2018, the growth rate of total income was -3.4 per cent; -2.73 per cent for women and -3.81 per cent for men (ILO 2021).

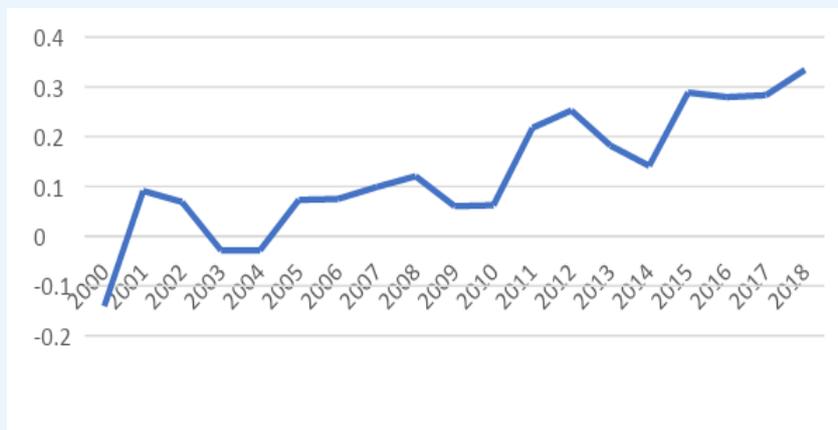
► **Table 4. Costa Rica. Accumulated flow of foreign direct investment in the manufacturing industry and other sectors. Millions of US\$.**

Sectors	2005–2009	2010–2014	2015–2019
Industry	2 382.2	3 209.7	5 446.5
Other	6 536.4	8 861.2	7 073.5
Total	8 918.6	12 070.9	12 520.0

Source: Developed from Banco Central de Costa Rica.

FDI flows show signs of greater attraction of investors to the Costa Rican economy; between 2015 and 2018, FDI flows directed to industry were US\$2,382 million and represented 26.7 per cent of the total (see Table 4).

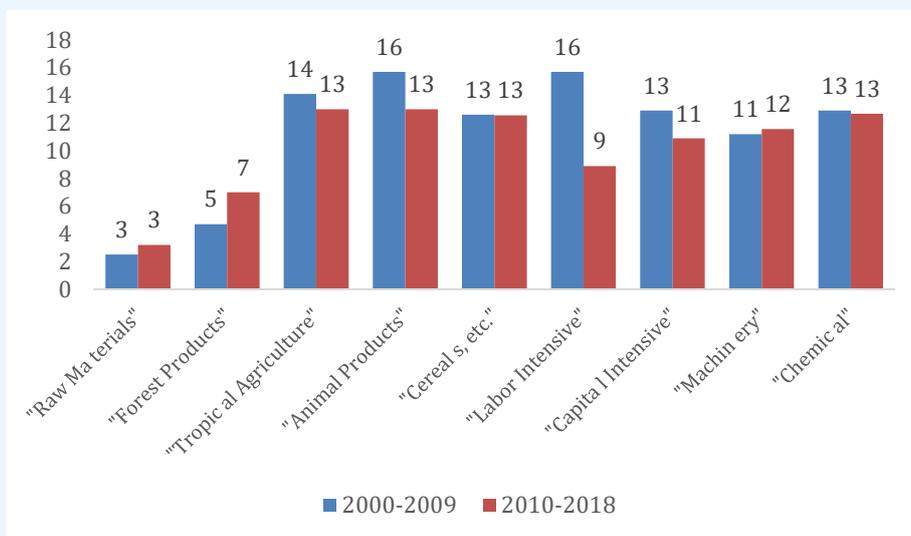
► **Figure 14. Costa Rica: Economic Complexity Index - 2000-2018**



Source: Simoes and Hidalgo (2011).

The economic complexity index is shown in Figure 14. It has been rising during the period from 2000 to 2018, from a value in negative territory of -0.1, to 0.33 in 2018, thus it has been successful in improving economic complexity and is ranked 53rd of 137 countries (Simoes and Hidalgo 2011).

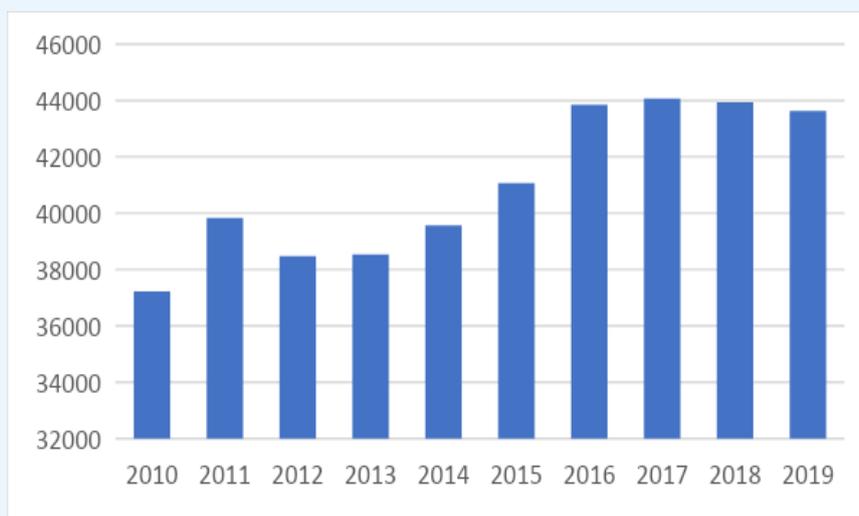
► **Figure 15. Costa Rica: Number of products with comparative advantage 2000-2009 and 2010-2018**



Source: Developed from Simoes and Hidalgo (2011).

The evolution in the number of products with RCAs shows a reduction of ten products between the period 2010–2018, compared to the period 2000–2009. The number of products in the core of the product space between 2000 and 2009 was 37 products, while in the second period this reached 35 products (see Figure 15).

► **Figure 16. Costa Rica: Output per worker (GDP constant 2011 international \$ in PPP)**



Source: Developed from the ILO.

Labour productivity in constant dollars in 2011 in purchasing power parity shows an upward trend between 2010 and 2011, followed by a reduction in productivity between 2012 and 2013. From 2014, productivity rises again and has remained stagnant in 2019, at a value of US\$43,620 per worker (see Figure 16).

According to Costa Rica's National Statistics and Census Institute, in the fourth quarter of 2020, the impact of COVID-19 was expressed in the loss of 229,667 jobs, with the trade and services sector most affected, specifically, households as employers (45,524 jobs), communication and other services (39,354 jobs), and hotels and restaurants (23,977 jobs). In the secondary sector, construction was the only branch in which the employed population increased (290 new jobs). However, this was overshadowed by the loss of 29,284 jobs in the manufacturing industry. Finally, in the primary sector (agriculture, livestock and fishing) the number of employees fell by 13,013.

A sectoral analysis conducted for the United States of America and Europe indicates that the five sectors with the greatest potential to accelerate productivity between 2019 and 2024 due to COVID-19 are: health, construction, ICT, retail sales and pharmaceuticals. In the case of Costa Rica and its productive structure, it is worth resuming the analysis of the health and ICT sectors specifically. In the case of health, it is indicated that the biggest driver of potential productivity gains is, firstly, the acceleration of telemedicine during the pandemic, which could well become a permanent feature; second, there is a greater focus on operational excellence through more flexible task scheduling and the adoption of best practices in procurement and operations. For its part, the ICT sector has upward productivity, due to the increase in demand for online services. Many ICT companies are fixed-cost platform companies that can scale quickly in response to demand, increasing productivity. The pandemic also intensified the appeal of cloud computing to enable other business activities, including e-commerce and remote work (McKinsey Global Institute 2021, pp. 12-13).

According to the CINDE (2021), the Costa Rican sectors in which investment should be made to generate employment and greater opportunities for the population are as follows:

- Smart manufacturing sectors: Life sciences and manufacturing;
- Knowledge-intensive service sectors: Digital technology, creative industries, corporate sector, and business processes;
- Health and wellness sectors: Wellness, and tourism infrastructure.

Thinking about Costa Rica's economic recovery post-COVID-19, Pacheco (2021), Salazar-Xirinachs (2021), and Sauma (2021) agree that the main sector that should be promoted to generate decent employment and support productive transformation is tourism. "Why do I like the tourism sector? Well, because it can

accommodate many of the conditions that the country offers naturally. It is a sector with a significant level of formality, as far as I understand, it still generates important spaces to innovate and to create niches where micro and small entrepreneurs or small and medium-sized entrepreneurs could have space to invest, especially places like the Caribbean Coast" (Pacheco 2021, p. 14). In addition, Salazar-Xirinachs (2021, p. 32-33) advocates rescue of the medical device sector, the business services sector, and the transport and trade sector, as he believes that strategies are needed to generate demand in each sector.



### ► 3. What can be done today for a job-rich recovery?

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The economic impact of the COVID-19 pandemic in El Salvador and Costa Rica presents us with the common scenario of a sharp decline in economic growth, job losses, and an increase in teleworking.

The total lockdown in El Salvador and partial lockdown in Costa Rica, and the reopening, were effective, with the closure of airports and ports, as well as reduced human mobility which had the biggest impact on the commercial sector, hotel and restaurant sectors, tourism, households as employers and the industrial sector. The sectors on which the 2020 recession had a moderate impact are: agriculture, food production, medical supplies and equipment, medicine and telecommunications.

The two countries have implemented policies to strengthen demand; expansionary fiscal and financial policies (in both countries) and expansionary monetary policies (in Costa Rica), together with supply policies (cash transfers, provision of food, tax payment moratoriums for entrepreneurs, social protection for vulnerable groups, etc.) to mitigate the impact in the short term. As a result, economic growth and employment are expected to experience a rebound effect from 2021, but will take several years to recover their pre-pandemic levels.

The business sector expanded during the COVID-19 pandemic, through teleworking, online buying and selling, digitalization of value chains, and strengthening of electronic networks, call centres, back-office services, and finance, banking and consulting services, among others; but there are limits to automation in both countries.

Although the transformation and productive diversification in industry in these countries is a medium-term objective, efforts must continue in this post-COVID-19 stage to develop backward and forward linkages with the other sectors and raise labour productivity and generate sufficient jobs. In both countries, a greater proportion of jobs are concentrated in the service sector, which is a mechanism for generating more and better jobs post-pandemic through marketable services that rely on automation and better skilled workers.

Both countries are facing a change in the productive and labour paradigm as a result of accelerating the digitalization of the economy and the States' leadership in proposing public-private partnerships for a series of public policies that develop a learning economy, aware that, in the short term, the ability of a country to venture into new products depends on the existing capacities necessary to produce those products.

However, realistically, health policy goes hand in hand with productive transformation and the creation of decent jobs in the short term. During 2021, a multilateral health policy should be implemented that focuses on the distribution of free testing kits and accelerating the vaccination of the population, to speedily mitigate the morbidity and mortality rates in both countries. In fact, as of 18 June 2021, 16 per cent of the population in El Salvador and 14.5 per cent of the population in Costa Rica have been fully vaccinated (Ritchie, Ortiz-Ospina, Beltekian, Mathieu, Hasell, Macdonald, Giattino, Appel, Rodés-Guirao and Roser, 2020).

For the transformation policy to be effective, work must continue to build a welfare state to strengthen the capacities of the population and workers through free access to high-quality health systems, education, housing, and public services (water, sewerage, energy, security), with increased services in the face of a new digital reality.

In turn, analysis of the experiences of El Salvador and Costa Rica reveals that investment in the development of skills, science and technology and vocational training has been essential to productive diversification. Efforts need to be refocused on increasing the quality of education, however, as Costa Rica has done, and careful thought must be given to which industries to support to diversify economies and move from low-productivity sectors to high-productivity sectors.

El Salvador provides an illustration of the methods for selecting products and sectors that have comparative advantages that are greater than unity and higher levels of productivity and complexity, with relative success in productive transformation and employment generation that was made possible by the establishment of productive transformation roundtable meetings or negotiations in each sector between the government,

employers, trade unions and academia. These negotiations involved a repeated circle of identifying restrictions and bottlenecks, attending to these, sharing results, and returning, once more, to identification.

On the other hand, Costa Rica shows that it is possible to succeed through industrial policies that focus on developing a single sector or subsector (rather than a group of sectors) by attracting FDI, if that the policy advocates for technological and knowledge spills to reach local companies (mainly SMEs). That avoids a widening of the gap between sectors with high productivity, high wages and high investment, and other sectors that are left behind, without the possibility of creating links with the former type of sectors.

The study of the design and implementation of industrial policy and generation of decent employment in the two countries analysed leaves us with a number of challenges to continue investigating and evaluating the impacts on the pandemic on economic complexity, the development of workers' skills and abilities, the generation of decent employment, the transition to formality, and better income levels.

In a post-COVID-19 scenario, policies should focus on two strategies:

- (i) boost economic activity in those sectors that have a multiplier effect weighted by final demand (input-output methodology) or that present a proximity greater than 0.5 (product space methodology), with the ease of strengthening the demand that is missing, the reduction in the demand for imports that improves their national trade balance and encourages services that generate decent employment and decarbonization;
- (ii) job creation that considers the number of formal jobs per dollar invested, and higher income and productivity above the average, as well as programmes to retrain workers and encourage formalization.

In short, industrial policies must work in the short term to reduce the gaps of productive dualism, where modern sectors that are near the "crest of the Schumpeterian wave" (telecommunications, pharmaceuticals, aeronautics, medical equipment) coexist with sectors in already standardised technologies (textiles, tourism, food, soft drinks, automotive repair, etc.), and companies with few technological components and subsistence companies (mainly, self-employment and informality).

Three lessons can be derived from this research: (i) industrial policies must be part of a national plan in order to persist in the medium term, independent of the government of the day; (ii) countries that have at their disposal the entire arsenal of demand policy, such as monetary, credit, exchange rate and fiscal policy, have greater space to implement productive transformation policies; and (iii) diversification and productive transformation, together with the creation of decent employment must entail a continuous dialogue with the different social forces (employers, government, workers, think tanks, political parties, academia, etc.) and evaluation of the effectiveness of the selected products and industries or the cessation of products or sectors that do not produce the expected results.

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