

How Immigrants Contribute to Costa Rica's Economy







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Foreword

Strong economic growth and political stability make Costa Rica an attractive destination for immigrants. In 2011, about 9% of its inhabitants were born abroad, mostly in neighbouring Nicaragua. In terms of net immigration the country has one of the largest shares of immigrants in the Latin American region. National immigration policies are based on the protection of the human rights of immigrants and framed by the 2010 General Migration Law. One of the goals of this law is to promote policies that enhance immigration's contribution to national development, but empirical evidence on the degree to which immigrants affect Costa Rica's economy is insufficient. More evidence-based analysis is key to formulating public policies that benefit both immigrants and their host country.

The OECD Development Centre, the International Labour Organization (ILO) and the Commission of the European Union have worked together to tackle these challenging questions. Working across different contexts, the goal is to help countries design effective policies for leveraging immigration for positive development outcomes. This has included providing advice on the governance of comprehensive immigration systems and linking development strategies for policy coherence within a country and across countries.

This report, How Immigrants Contribute to Costa Rica's Economy, is a step forward in assessing the contribution of immigration to development and improving the design of migration and development strategies. It builds upon the joint OECD-ILO project, Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination (ECLM). The project carried out comparable analyses for Costa Rica and nine other countries – Argentina, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand – to present a greater understanding of immigration's economic impacts. Different key components of the economy are explored through a combination of quantitative and qualitative methodologies.

The report examines empirically how immigrants affect key economic outcomes in Costa Rica. These include: the labour market, economic growth and public finance. This study confirms the fact that the overall impact of immigration on the host country is not straightforward. It depends on the country context, its socio-economic conditions and policy framework. Any country can maximise the positive impact of immigration by implementing policies to better manage and integrate immigrants so that they can legally invest in and contribute to the economy while staying safe and leading fulfilling lives. The report provides a basis for dialogue and policy quidance for development

practitioners and policy makers who wish to integrate immigrants into their economy and society to benefit both immigrants and native-born citizens.

Following discussions on guidance for actions with key stakeholders and policy makers in Costa Rica, the European Commission, the OECD Development Centre and the ILO look forward to continuing their co-operation with Costa Rica to optimise immigration for better economic and development outcomes.

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How Immigrants Contribute to Costa Rica's Economy is the fruit of the joint OECD-ILO project, Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination (ECLM), carried-out in ten low- and middle-income countries. The project was managed by David Khoudour, Head of the Migration and Skills Unit of the OECD Development Centre, under the guidance of Mario Pezzini, Director of the OECD Development Centre and Special Advisor to the OECD Secretary-General on Development, Federico Bonaglia, Deputy Director of the OECD Development Centre, Manuela Tomei, Director of the ILO's Conditions of Work and Equality Department, and Michelle Leighton, Chief of the ILO's Labour Migration Branch. Shinyoung Jeon and Hyeshin Park, from the OECD Development Centre, co-ordinated the project, while Theodoor Sparreboom, Chief Technical Advisor in the Labour Migration Branch, led the ILO team. The OECD team included Maria Alejandra Betancourt, Bram Dekker, Fatoumata Diarrassouba and Sarah Kups. The ILO team was composed of Sandra Berger and Jesse Mertens.

This report was drafted by Maria Alejandra Betancourt, Bram Dekker, Shinyoung Jeon, Sarah Kups and Hyeshin Park at the OECD Development Centre. The rest of the ECLM project team provided significant contributions, including valuable comments, advice and feedback on previous versions of the report. Alexandra Le Cam and Patricia Cuber Galarreta, OECD Development Centre, and Hélène Lombard, ILO, provided administrative support for the project, including country missions and event organisation. David McDonald edited the report and the OECD Development Centre's publications team led by Delphine Grandrieux and Henri-Bernard Solignac-Lecomte, turned the draft into a publication. The cover was designed by Aida Buendía.

The ECLM team is grateful for insightful comments provided by Federico Bonaglia at the OECD and from María Arteta, Francesco Carella and Álvaro Ramirez Bogantes at the ILO subegional office for Central America, Haiti, Panama and the Dominican Republic. The project has also benefited from the contribution from previous colleagues at the OECD Development Centre, especially Marcus Böhme, Ragini Chaurasia and Andrea Cinque.

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Facts and figures of Costa Rica

(Numbers in parentheses refer to the OECD average)

The land, people and electoral cycle

| Population (million) ^d | 4.9 | Official language | Spanish |
|--|-------------|--------------------|-----------------------|
| Under 15 (%) ^d | 21.6 (18.0) | Form of government | Presidential republic |
| Population density (per km ²) ^d | 96 (37) | Last election | 4 February 2018 |
| Land area (thousand km²) ^d | 51.1 | | |

The economy

| | | , | |
|---|-------------|---|-------------|
| GDP, current prices (billion USD) ^d | 57.1 | Exports of goods and services (% of GDP) ^c | 32.8 (27.9) |
| GDP growth ^d | 3.2 (2.4) | Imports of goods and services (% of GDP) ^c | 31.9 (27.3) |
| GDP per capita, PPP (thousands, current international USD) $^{\rm d}$ | 17.1 (43.5) | GDP shares by sector (%) ^c | |
| Inflation rate ^d | 0.0 (0.4) | Agriculture, forestry and fishing | 5.2 (1.4) |
| General government total expenditure (% of GDP) ^c | 19.3 | Industry, including construction | 18.9 (22.5) |
| General government revenue (% of GDP) ^c | 14.0 | Services | 73.0 (74.2) |

Well-being

| Life satisfaction (average on 1-10 scale) ^c | 7.1 (6.5) | Mean years of schooling ^b | 8.6 |
|--|-------------|---|-------------|
| Life expectancy ^c | 80 (80) | Proportion of population under national minimum income standard (%) ^c | 20.0 |
| Income inequality (Gini coefficient) ^b | 48.2 | Unemployment rate (%) ^d | 8.5 (5.8) |
| Gender inequality (SIGI index) ^a | 0.05 (0.02) | Youth unemployment rate (ages 15 to 24, %)d | 22.7 (13.0) |
| Labour force participation (% of population ages 15+) ^c | | Satisfaction with the availability of affordable housing (% satisfied) ^c | 52 (54) |
| Native-born | 59 | Enrolment rates ^c | |
| Foreign-born | 70 | Primary (Net) | 97 (96) |
| Population with access to improved sanitation facilities $(\%)^b$ | 95 (98) | Secondary (Net) | 83 (90) |
| | | Tertiary (Gross) | 54 (73) |

Note: Data from a) 2014; b) 2015; c) 2016; d) 2017.

Source: Central Intelligence Agency, The World Factbook 2017. Washington, DC https://www.cia.gov/library/publications/the-world-factbook/index.html; Gallup (2015), Gallup World Poll (database), Gallup Organisation; IMF, World Economic Outlook Database, International Monetary Fund, October 2017 edition, Washington DC; INEC (2010-16), Encuesta Nacional de Hogares 2010-2016 [National Household Survey 2010-2016], Instituto Nacional de Estadísticas y Censos, San José, www. inec.go.cr/encuestas/encuesta-nacional-de-hogares.; OECD, SIGI Social Institutions and Gender index, http://www.genderindex.org/; UNESCO Institute for Statistics, Data Centre, http://data.uis.unesco.org/; World Bank, World Development Indicators (database), http://data.worldbank.org/, Washington DC.

Executive summary

Costa Rica is one of a few net immigration countries in the Latin America and the Carribean region. In 2015, almost one out of every ten people in the country was born abroad. The country's favourable economic development and political stability have attracted many immigrants, particularly from neighbouring Nicaragua. While existing research has explored different aspects of immigration in Costa Rica, many of the economic consequences of immigration remain to be studied. A better understanding of how immigrants shape the country's economy can help policy makers formulate policies to boost the positive effects and mitigate the negative effects of immigration.

To address this research gap, the OECD Development Centre and the International Labour Organization (ILO) carried out a project on the Economic Contribution of Labour Immigration in Developing Countries as Countries of Destination (ECLM). The project was co-financed by the European Union's Thematic Programme on Migration and Asylum and implemented from 2014 to 2018. The project aimed to analyse several economic impacts of immigration in ten partner countries. The empirical evidence stems from a combination of quantitative and qualitative analyses of secondary and, in some cases, primary data sources.

The project's activities in Costa Rica were launched at a national consultation seminar held on 21 April 2016. They were implemented in collaboration with the General Directorate of Migration and Foreigners under the Ministry of Interior and Police, the Delegation of the European Union to Costa Rica and the ILO Country Office for Central America.

The limited impact of immigration in Costa Rica's economy

The analysis in this report focuses on three main channels through which immigrants make economic contributions to Costa Rica: labour markets, economic growth and public finance.

Labour markets: immigrants in Costa Rica appear to be well integrated into
the labour force, with a participation rate around eight to ten percentage
points higher than that of the native-born population over the period 2001-16.
On average, immigrants have lower levels of education than the native-born

population, which is reflected in the occupations they hold and their income. The empirical analysis in this report suggests that immigration may reduce the employment opportunities of native-born workers through increased competition, but does not affect their wages.

- Economic growth: immigrants contribute positively to economic growth. Based on the sectoral distribution of workers and the value added within each sector, immigrants are estimated to contribute between 11.1% and 11.9% of the value added in Costa Rica, above their share of the population (9.1%). Immigrants are over-represented in low productivity sectors such as construction and agriculture, but are more likely to be of working age and have a higher labour force participation rate compared to the native-born population.
- Public finance: in 2013, the latest year for which data were available, public expenditures on immigrants were higher than immigrants' contributions to the government budget. The net fiscal impact for both immigrants and the native-born population is negative, but more so for immigrants. This is due to their lower fiscal contribution which is driven mainly by differences in tax on goods and services and social security contributions. Public expenditures were similar for immigrants and the native-born.

Policies to boost the economic contribution of immigrants

The limited contribution of immigration in most of the three areas examined suggests that the full development potential of immigration is not being fully reliased in Costa Rica. Poor integration of immigrants can harm social cohesion and limit their contribution to the development of host societies. Lack of access to certain public services and to the wider labour market can exacerbate their vulnerability. Policies aimed at promoting integration, by improving access to public services and the labour market, could enhance the economic contribution of immigrants to Costa Rica.

In addition to policies targeted directly at immigrants, non-migration sectoral policies can help further maximise the economic contribution of immigration. It is thus important to bear immigration in mind when designing policies concerned with sectors such as social protection, the labour market and education. Increasing the school enrolment rates of immigrants and their children, and providing them with opportunities to upgrade their skills, could benefit both immigrants and the country as a whole.

While immigrant women perform relatively well on the labour market compared to their native-born peers, the position of women deserves the attention of policy makers, particularly with respect to low employment rates and low pay. In general, Costa Rica should step up its efforts to fight inequality, so as to ensure that everyone benefits from economic growth in the country, including vulnerable groups such as immigrants and women.

Finally, while this report attempts to provide empirical evidence on the ways in which immigrants contribute to Costa Rica's economy, the lack of relevant data resulted in limitations. It is therefore important to improve migration-related data collection and to further develop the analyses, in order to better understand and monitor the different impacts that immigration has on the Costa Rican economy and its citizens.

Chapter 1

Immigrants' contribution to Costa Rica's economy: Overview and policy implications

This chapter provides an overview of the full report. It begins by describing the project on Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination, and explains why Costa Rica is one of ten partner countries involved in the project. It then presents the current economic impacts of immigration on Costa Rica, analysing the ways in which foreign-born individuals affect the labour market and economic growth, and estimating their fiscal impact.

Costa Rica is an attractive destination country for labour migrants. In 2015, almost one out of every ten people in Costa Rica was born outside of the country. This report provides policy makers and the general public with empirical evidence on the economic role of immigrants in Costa Rica. It was written in the context of a joint OECD Development Centre – International Labour Organization project on Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination (ECLM) (Box 1.1). The project was co-funded by the European Union (EU) Thematic Programme on Migration and Asylum. Aside from Costa Rica, nine other low and middle-income partner countries were involved in the project: Argentina, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand.

The report is divided into six chapters. Chapter 1 assesses the overall economic contribution of immigration in Costa Rica and provides policy implications. Chapters 2 and 3 describe the underlying context of immigration in Costa Rica: Chapter 2 provides an overview of the country's immigration history and current policies, while Chapter 3 compares the educational and labour market characteristics of the adult foreign and native-born populations. Chapter 4 investigates the impact of immigration on labour market outcomes of the native-born population, Chapter 5 explores immigration's relationship with economic growth, and Chapter 6 examines the link between immigration and public finance.

This country report can be read in conjunction with the project's comparative report (OECD/ILO, 2018). While the present report provides an in-depth discussion of the economic contribution of immigrants to Costa Rica, the comparative report presents an overview of findings across the ten partner countries. It seeks to explain different patterns based on the characteristics of the countries and their immigrant populations. It also provides policy recommendations on how countries can make the most of immigration.

Box 1.1. What is the value added of the project?

In August 2014, the OECD Development Centre and the International Labour Organization (ILO) launched a project, co-funded by the European Union's Thematic Programme on Migration and Asylum, on Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination (ECLM). This project, implemented from 2014 to 2018, aimed to analyse the economic impact of immigration in developing countries across a variety of dimensions.

Box 1.1. What is the value added of the project? (cont.)

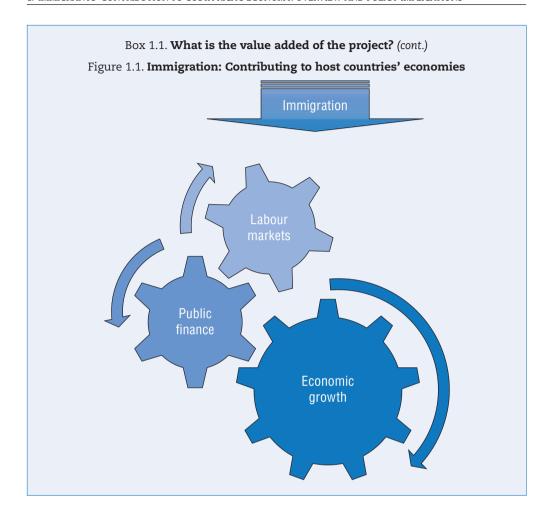
The OECD, ILO and European Union launched the project in order to address a dual reality. More than one-third of international migrants (UN DESA, 2017) and 25% of all working-age international migrant workers (ILO, 2015) currently live in low and middle-income countries, and yet little is known about how these economies are affected by immigrant populations. This stands in stark contrast to the depth of literature on the economic impacts of immigration in high-income (usually OECD) countries (Bodvarsson and van den Berg, 2013; Böhme and Kups, 2017; and Kerr and Kerr, 2011). This missing analysis would not be an issue if the existing research results on OECD countries applied equally to non-OECD countries, but they may be different due to a different context.

A large number of immigrants in developing countries come from within their region while many OECD countries host immigrants from the entire globe. Moreover, the economic and policy context in which these immigrants integrate into the labour market is different. As an example, the share of informal employment tends to be more elevated in lower than in higher-income countries. Both of these factors likely contribute to impacts of immigration that differ between developed and developing countries. Understanding these differences could help low and middle-income countries formulate immigration and integration policies that maximise the development potential of immigration.

The project was carried out in collaboration with ten partner countries: Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. They were selected based on their interest in the project, a substantial (but varying) share of immigrants and a relatively low share of humanitarian immigrants. By working with a diverse group of countries in terms of their geographic location and economic and immigration history and characteristics, the project aimed to provide an indication of the range of possible economic impacts of immigration in developing countries. It therefore addressed not only stakeholders in the ten partner countries, but equally policy makers and other interested parties in other low and middle-income countries with mid-sized to large immigrant populations.

The project examines empirically how immigrants contribute to their host countries' economies by focusing specifically on: (i) labour markets, not only in terms of labour force and human capital, but also employment and wages; (ii) economic growth, in particular production and productivity, at both firm and economy levels; and (iii) public finance, including public spending and fiscal contributions (Figure 1.1).

The methodologies to analyse these various impacts generally follow those used in other contexts and published in the academic literature. Leading migration researchers provided their perspectives on suitable methodologies at an international expert meeting that took place at the OECD in Paris on 23-24 February 2015. Data constraints sometimes made it impossible to analyse all aspects in every partner country. The country reports and the comparative report provide detailed descriptions of their methodologies.



Benefits from studying the economic impacts of immigration in Costa Rica

Costa Rica is now an upper-middle income country, having experienced stable economic expansion since 1990. The country has enjoyed an above average growth rate for the Latin American and Caribbean region (Figure 1.2), with the gross domestic product (GDP) per capita increasing more than twice over the period of 1990-2015. The country's economic growth, coupled with its stable political environment, has made it an attractive destination country for many migrants.

Yearly GDP per capita growth ♦ GDP per capita 1990 (right axis) ◆ GDP per capita 2016 (right axis) 2010 USD 7 45 000 40 000 6 35 000 5 30 000 4 25 000 20 000 3 15 000 2 10 000 1 5 000 costa Rica Guatemala Peru Argentina Honduras Chile

Figure 1.2. Economic growth in Costa Rica is higher than the average in the LAC region

Average GDP per capita growth rates per country, 1990-2016

Note: The left axis shows the annual percentage growth rate of GDP per capita at market prices based on constant 2010 US dollars. The right axis shows GDP per capita at market prices based on constant 2010 US dollars. LAC and OECD represent the Latin America and the Caribbean and the OECD averages, respectively.

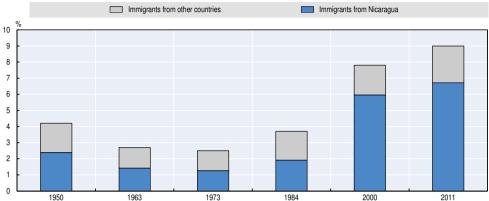
Source: World Bank (undated), World Development Indicators, http://data.worldbank.org.

Immigrants accounted for 9% of the total population in 2011, representing a rise of 1.2 percentage points since 2000. Census data from 1950 onwards – the very first year for which such data are available – show that most immigrants residing in Costa Rica come from Nicaragua (Figure 1.3). In 2011, according to the latest census data, they accounted for more than three-quarters of total immigrants. Other countries of origin include Colombia, Panama and the United States.

A number of studies focus on different aspects of immigration to Costa Rica, including socio-cultural integration (Alvarega, 2007; Brenes, 2004; Rosero, 2005; Sandoval, 2003) and differences in fertility patterns between native-born individuals and immigrants (Gonzalez, 2005; Rosero, Brenes and Chen, 2002). More recently, a study by Reiboiras Finardi (2015) tried to assess the long-term impact of the Nicaraguan immigrant on population ageing through demographic estimations and projections. It found that immigration contributed significantly to slowing population ageing by increasing the working population. This trend is projected to occur until 2030, when the phenomenon will reverse and immigration will contribute to population ageing.

Figure 1.3. The share of immigrants in Costa Rica has increased significantly, mainly due to immigration from Nicaragua

Immigrants as a share of the total population in Costa Rica, 1950-2011



Source: Authors' own work based on INEC (undated a, b).

Gindling (2009) analysed the impact of Nicaraguan immigrants on earnings, inequality and poverty in Costa Rica, but found little evidence of widespread impacts. There seemed to be few indications of wage discrimination between Nicaraguans and native-born workers on average, with lower earnings and higher concentration in low-paying industries due mainly to the lower education levels of Nicaraguan immigrants compared to Costa Rican-born workers. In addition, the study suggests that on average immigration does not have a significant impact on earnings, however these results are mixed for certain groups of workers: low-skilled women saw a slight decrease in wages due to immigration, while the contrary was true for female workers with a high educational attainment. No evidence was found for negative impacts of Nicaraguan immigration on the wages of native men.

A comprehensive study conducted by Morales (2008) analyses the socioeconomic impacts of immigrants in Costa Rica. It explores a variety of dimensions including the political perception of immigrants by native-born individuals, socio-economic differences in the population, access to public services, labour outcomes among the Nicaraguan population and the legal migration framework.

A common concern is that immigrants are net users of government transfers and services. Findings from the report Interrelations between Public Policies, Migration and Development in Costa Rica, produced by OECD and FUNDEVI (2017), contradict this view. The study found that immigrants in Costa Rica benefit less from labour market programmes, such as vocational training and government employment agencies, than native-born individuals. In addition, they are less likely to benefit from agriculture subsidies and cash-based

education programmes, and receive lower social protection and health care coverage than the native-born population.

The present report, How Immigrants Contribute to Costa Rica's Economy, aims to assess the contribution of immigration to economic development in Costa Rica. It attempts to better understand the different characteristics of foreign and native-born workers, and analyse how these differences affect the native-born population. By carrying out this analysis in the context of a ten-country study, the project aims to provide insights that could help government authorities boost the economic contribution of immigration.

The Costa Rican government approved the participation of Costa Rica in the ECLM project, which was launched on the occasion of a national consultation seminar held on 21 April 2016. This event was jointly organised with the General Directorate of Migration and Foreigners under Ministry of Interior and Police (the project's government focal point) and the ILO Country Office in San José.

The limited economic contribution of immigration in Costa Rica

The findings of the report suggest that the economic contribution of immigration in Costa Rica is limited. Immigrants constitute an important source of labour in Costa Rica. Their presence does not seem to affect the wages of native-born workers, but it does appear to be associated with a reduction in native-born employment. The estimated contribution of immigrants to value added exceeds their share of the total population, but is below their employment share. Average public expenditures on immigrants is lower than on native-born populations, but the net fiscal impact is positive or negative depending on the scenarios.

Box 1.2. The challenge of defining "immigrants"

Immigrants and foreigners

No universal definition of an immigrant really exists. The most commonly cited definition accords with the 1998 Recommendations on Statistics of International Migration: "any person who changes his/her country of usual residence, [...] in which an individual normally spends his daily period of rest" (United Nations, 1998). An individual who enters the nation for up to three months is not considered as an immigrant, but rather a visitor. Beyond three months, the individual will be termed a short-term immigrant for the next nine months. Only after one year of legal residency in the country will the immigrant be termed a long-term migrant.

In line with this definition, the Population Division of the United Nations Department of Economic and Social Affairs estimates international migrant stocks by using the country of birth as a reference (UN DESA, 2017). This report adopts this definition, in

Box 1.2. The challenge of defining "immigrants" (cont.)

particular for the empirical analysis, as it is widely used in analytical work and as data are available in all countries covered by the project. International immigrants are therefore individuals who were born in another country than the country in which they live. This definition does not take into account the citizenship of people.

Some people are born abroad but are not foreigners, while others are born in their country of residence but do not have its citizenship. This often relates to the national legislations in terms of citizenship and naturalisation. Four different scenarios in terms of country of birth and citizenship are illustrated in Table 1.1:

- In countries that favour jus sanguinis, it is more difficult for the children of immigrants born in the country to get access to the citizenship of their country of birth (native-born foreigners).
- In countries where jus soli prevails, children of immigrants can become citizens of their country of birth more easily. They are therefore **native-born citizens**, but are often referred to as the second generation.
- In some countries, and depending on the naturalisation rules, individuals born abroad can become citizens of their country of residence after a certain number of years. They are foreign-born citizens.
- While most people born in their country of residence are also citizens of that country, in most cases the foreign-born are also foreigners (foreign-born foreigners). This is because: (i) they do not stay long enough to acquire citizenship, (ii) the legislation in their country of origin does not allow for dual citizenship, or (iii) the rules in their host country are too strict.

Table 1.1. Understanding the difference between immigrants and foreigners

| | | Country of birth | | |
|-------------|---|----------------------------------|--|--|
| | | Born in the country of residence | Born in a foreign country (immigrants) | |
| | Citizens of the country of residence | Native-born citizens | Foreign-born citizens | |
| Citizenship | Citizens from another country (foreigners) | Native-born foreigners | Foreign-born foreigners | |

Immigrants' educational and labour market characteristics differ from those of native-born workers

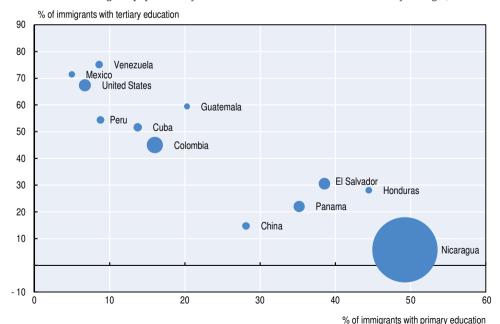
Immigrants represent a higher share of the working age population than native-born people in Costa Rica. In 2011, 84% of the foreign-born population was aged between 15 and 64, while only 66% of native-born population formed part of the same age group. Immigrants are also more likely to participate in the labour market. During the period 2001-16, the labour force participation rate of

the foreign-born population was around 8-10% higher than that of the native-born population. The employment-to-population ratio follows a similar pattern. The unemployment rate is slightly lower for immigrants than for the native-born population. The gap however, is notably larger among young people aged between 15 and 24 (14% for immigrants and 20% for the native-born population). In addition, immigrants tend to work longer hours than native-born workers.

With regard to educational level, immigrants are more likely to have lower levels of education than native-born workers. In 2016, the share of immigrants without a primary school education was 25%, while the corresponding share for the native-born labour force was 10%. This trend is exacerbated by the lower level of school enrolment among immigrant children. The enrolment rate for compulsory primary education is close to 100% for native-born children, but 91% for foreign-born children. The rate is even lower for Nicaraguan-born children at 87%. The educational composition of immigrants varies by country of origin (Figure 1.4). While about half of Nicaraguan-born immigrants (49%) have completed primary education, the majority of immigrants born in the United States (67%), Mexico (71%) and Venezuela (75%) have completed tertiary education.

Figure 1.4. The educational composition of immigrants in Costa Rica varies by country of origin

Size of the immigrant population by share of educational attainment and country of origin, 2011

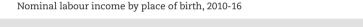


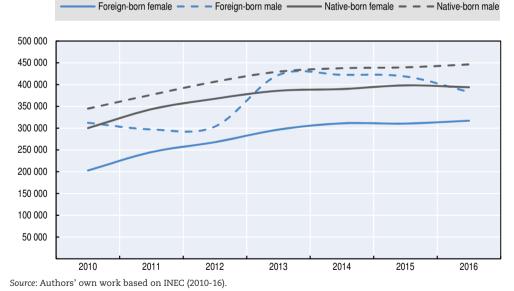
Note: This distribution includes the labour force aged 15 and above. The size of the circle represents the number of immigrants from the country of origin. As a reference, Nicaragua accounts for 76% of the foreign-born labour force. Source: Authors' own work based on the 2011 Census (Minnesota Population Center, 2017).

The relatively lower level of education among immigrants compared to native-born workers is also reflected in the occupations they hold. Immigrant workers are more likely to work in low-skilled jobs, such as elementary occupations, than native-born workers. They are also over-represented in sectors with a high level of informal employment such as domestic services, agriculture and construction. It is likely that female immigrants face more challenges because they have less access to certain occupations.

The average labour income is lower for foreign-born than for native-born workers (Figure 1.5). The average income of Nicaraguan-born workers amounts to 60% of the wages earned by native-born workers. The income gap between immigrant and native-born workers is larger for women. Given that the average labour income of women is lower than that of men in general, immigrant women face a double challenge. Educational characteristics also explain the income gap between foreign-born and native-born workers. The income gap, however, becomes smaller or non-existent when occupational differences are taken into account.

Figure 1.5. Labour income is significantly lower for the foreign-born than for the native-born population





Immigration affects the employment of native-born workers, but not their wages

Given the significant share of immigrants in the labour market, there is frequent debate over whether immigrants affect the labour market outcomes of native-born individuals. This question is explored through a statistical method

called regression analysis. The method investigates how the concentration of immigrants in a skill cell (defined by an individual's education and work experience) is associated with a change in labour market outcomes for native-born people within the same skill cell (see Chapter 4).

There is no evidence that immigration lowers the labour income of native-born workers (Table 1.2). The analysis suggests that immigrants are likely to replace native-born workers. A higher share of foreign-born workers in a skill cell is associated with a statistically significant reduction in the employment-to-population ratio of native-born workers in that cell. In other words, the employment rate of native-born workers decreases as the share of foreign-born workers increases. This indicates increased competition in the local labour market

Table 1.2. **Immigration does not affect the labour income of native-born workers**Impact of immigration on labour outcomes of the native-born population

| | National level | | | | | Regional level | | | | |
|--------------------------------|----------------|----------------|-----------------|-------|-----|----------------|----------------|-----------------|-------|-----|
| | All | Low skilled | High skilled | Women | Men | All | Low skilled | High skilled | Women | Men |
| Employment-to-population ratio | - | _ | ns | _ | - | _ | - | - | ns | - |
| Unemployment rate | + | ns | + | ns | ns | ns | ns | ns | ns | ns |
| Labour income | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns |

Note: The table presents the sign of immigrants' share variables from regressions where the dependent variable is the mean Costa Rican-born labour market outcome for an education*experience group at a particular point in time. "ns" indicates no significant effect, "+" indicates a significant positive effect and "-" indicates a significant negative effect. Source: Author's own work based on INEC (2001-09) and INEC (2010-16).

While immigrants compete with the native-born population for similar jobs, they may also complement the native-born labour force. For instance, female immigration can enable native-born women to increase their participation in the labour market (OECD, 2016). Highly skilled women, in particular, may increase their labour supply as a response to a reduction in the cost of childcare and other household services driven by immigrant inflows (Furtado, 2015). Evidence suggests that this is the case for Costa Rica (see Chapter 4). As large numbers of women from Nicaragua continue to replace native-born women in housework, opportunities for high-skilled native-born women to join the labour market increase.

Immigrant contribution to value added is below their share among the employed

The contribution that immigrants make to GDP in Costa Rica is likely to be substantial given their significant size and over-representation in the labour force. The share of value added produced by immigrants is estimated to be around 12%, which is higher than their share of the overall population at 9%

in 2011 (see Chapter 5). However, the estimated contribution of immigrants to value added is below their employment share (14%), mainly because foreign-born workers are concentrated in low-productivity sectors, such as construction, agriculture and fishing, and hotels and restaurants.

Immigrants could have an impact on the economy through their influence on entrepreneurship. Some studies have found immigrants to be more entrepreneurial than the native-born population (Fairlie and Lofstrom, 2015; OECD, 2010). This might be due to different skills sets (Kahn, Mattina and MacGarvie, 2017) or experience acquired in the origin country (Lassmann and Busch, 2015). Immigrants might also influence the proportion of entrepreneurs among the native-born population, either negatively because of enhanced competition, or positively due to better opportunities (e.g. knowledge spillovers or a larger customer base). However, in Costa Rica, this appears not to be the case. Immigrants and the native-born population are equally likely to be employers, and the businesses they run are similar in size.

In 2013, immigrants paid less in taxes than the native-born population

Another heavily debated question related to immigration concerns whether immigrants cost more than they contribute to the government budget. Immigrants contribute to fiscal revenues through taxes, while simultaneously benefiting from government services and social benefits. This report attempts to estimate the direct net fiscal contribution of both foreign and native-born populations in Costa Rica by comparing the average and total taxes paid and benefits received by both populations (see Chapter 6).

The net fiscal impact for both immigrants and native-born population is negative, but is greater for immigrants. This is due to the lower fiscal contribution made by immigrants, driven mainly by the differences in taxes on good and services and by social security contributions. Public expenditures are almost the same for immigrants and the native-born population under the average cost scenario (Figure 1.6). Under the marginal cost scenario, however, public expenditures for immigrants amount to about 60% of expenditures for the native-born population.

This estimation suggests that immigrants represented a greater burden for public finance than native-born populations in 2013. However, this is the case only when the costs for public debt and pure public goods are allocated to the entire population. Such costs, including debt service and defence expenditure, would probably not decrease if all immigrants were to leave the country. In a marginal scenario where the costs for such public goods are allocated only to the native-born population, immigrants paid more in taxes than they generated in additional public expenditures. Based on this scenario, immigrants do not represent a fiscal burden.

□ Congestible public goods ☑ Public debt ■ Pure public goods ■ Familly allowances □ Pensions □ Health ■ Education CRC 1 600 000 1 400 000 1 200 000 1 000 000 800 000 600 000 400 000 200 000 Native-born Foreign-born Native-born Foreign-born Average cost approach Marginal cost approach

Figure 1.6. Average public expenditures on immigrants are lower than on native-born individuals

Estimated per capita public expenditures by place of birth in Costa Rica, 2013

Source: Authors' own work based on INEC (2013), Encuesta Nacional de Ingresos y Gastos and STAP (2013).

Conclusions and policy implications

Immigrants in Costa Rica seem to be well integrated in terms of labour market participation. The empirical analysis in this report suggests that immigration may reduce the employment opportunities of native-born workers through increased competition. However, it does not affect native-born workers' wages. To address the needs of those possibly affected by immigration, policy makers could consider a mechanism to upskill native-born workers that does not harm immigrants.

Despite their higher employment rate, immigrants often hold low-skilled jobs in sectors with a high level of informal employment. Their vulnerability is characterised by a lack of access to certain public services and to the wider labour market. High education premiums together with a lower school enrolment rate among (children of) the foreign-born population indicate a growing need to address inequality in Costa Rica. Policies aimed at immigrant integration, improved access to public services, and easier access to the labour market for immigrants and other vulnerable groups, could increase their economic participation and improve conditions for both immigrants and the native-born population. While immigrant women perform relatively well on

the labour market compared to their native-born peers, the position of women in general, with low employment rates and low pay, deserves the attention of policy makers.

The government of Costa Rica has made several important efforts to increase enrolment in education in the last years, through infrastructure and a number of reforms, as well as scholarships through the National Scholarship Fund (Fondo Nacional de Becas) (FONABE), conditional cash transfers (Programa Avancemos) and the provision of food in school. Immigrant children have the right to access most of these benefits, however families with immigrants are less likely to benefit from these programmes (OECD/FUNDEVI, 2017). The country therefore needs to maintain these efforts and integrate more immigrants and children of immigrants into these policies, as they represent part of the long-term human capital of the country.

The limited contribution of immigration in most areas reflects a lack of efforts to fully leverage the impact of immigrants on development. Poor integration of immigrants can harm social cohesion and limit their contribution to the development of host societies. Policy makers should therefore aim to facilitate the integration of immigrants, protect their rights and work to combat possible discrimination. Beyond policies targeted directly at immigrants, non-migration sectoral policies can help further maximise the economic contribution of immigration (OECD, 2017). It is thus important to bear immigration in mind when designing sectoral policies, such as those concerned with social protection and the labour market, and to improve co-ordination between ministries to promote a coherent policy agenda.

Finally, better data and evidence are key for better assessment of the economic contribution of labour migration. While this report attempts to provide empirical evidence of the ways in which immigrants contribute to the economy of the host country, limitations appeared due to the lack of relevant and recent data. It is therefore important to improve migration-related data collection and to further develop analysis, in order to better understand and monitor the different impacts that immigration can have on the overall economy.

Note

1. Including, for example, initiatives such as the programme Yo me apunto (I am in), which targeted attendance in schools that need improvement in the 75 most vulnerable areas, identified by the National Development Plan (OECD, 2017); the programme "Colegios de Alta Oportunidad", which analysed the performance of students at risk of exclusion, in order to provide support to help avoid dropout (Estado de la Educación, 2017, p. 199); revision of the early childhood education curriculum to place a stronger emphasis on child learning and early literacy skill; and revision of the secondary education curriculum (Estado de la Nación, 2017), and so on.

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ANNEX 1.A1

Data used in this report

The four main data sources used in the report are the 10% sample of the 2011 and 2000 population censuses provided by the Minnesota Population Center, the 2000-09 Household Survey of Multiple Purposes (Encuesta de Hogares de Propósitos Multiples) (EHPM), the 2010-16 National Household Survey (Encuesta Nacional de Hogares) (ENAHO), and the 2013 National Survey of Households Incomes and Expenditures (Encuesta Nacional de Ingresos y Gastos de los Hogares) provided by the National Institute for Statistics and Censuses (INEC).

The EHPM (2000-09) is an annual survey carried out every July in rural and urban areas of Costa Rica. It is representative at the national level and covers a variety of topics relating to demographic, educational and labour characteristics. The ENAHO (2010-16) is an updated version of the EHPM launched in 2010. The main changes concern sample size, the inclusion of a broader set of thematic concepts, and certain changes in the measurement and estimation of income. The ENAHO sets a larger set of incomes and differentiates self-employment income according to the sector of activity. For wage earners, it reconstructs gross and net salaries and makes inquiries regarding other payments aside from wages, such as bonuses. For self-employed workers, questions on labour income are presented separately according to the characteristics of the self-employment. Unlike the EHPM, which lists the country of birth of individuals, the ENAHO distinguishes four categories or place of birth: Costa Rica, Nicaragua, Central America and other regions. The report took all these changes into account to ensure the datasets were comparable.

The ENIGH survey (INEC, 2013) was carried out from October 2012 to October 2013 on a sample of 7 020 households. It includes information on basic socio-demographic and labour characteristics, as well as income and expenditures on a daily, monthly and annual base. It is representative at the national level and covers rural and urban areas. It includes a variable that ascertains whether the individual was born in the country or abroad, but does not distinguish the country of birth.

These sources of individual and household level microdata were complemented by various data sources. These include Revenue Statistics in Latin America and the Caribbean (OECD et al., 2016) provided by the OECD Development Centre, aggregated data of the censuses between 1950 and 2000 provided by INEC, world development indicators provided by the World Bank (World Bank, undated), the WTO Statistics Database and the UNESCO Statistics database, and data provided by the Costa Rican Central bank, the Technical Secretary of the Budgetary Authority (Secretaría Técnica de la Autoridad Presupuestaria) (STAP) and the Organization of American States.

Chapter 2

The immigration landscape in Costa Rica: Patterns, drivers and policies

This chapter provides the historical and political context of immigration in Costa Rica. It also describes certain demographic characteristics of the current immigrant population. The last section describes integration policies, laws and practices related to immigration.

About 9% of Costa Rica's population is born abroad. Economic and political factors both in Costa Rica and the major countries of origin for immigrants – notably Nicaragua, as well as Colombia, Panama and the United States – have influenced the growth of this relatively large immigrant population. To address these increasing immigration flows, the Costa Rican government has implemented a variety of public policies over time, including regularisation programmes for irregular immigrants.

The composition of immigrant flows, the policy context and the reasons why people choose Costa Rica as a destination country, all influence how immigrants contribute to the economy. Against this backdrop, this chapter provides an overview of recent economic developments, the history and composition of immigrant flows, and policies on immigration and integration.

Costa Rica is a stable country with relatively strong economic growth

Costa Rica is an upper-middle income country with 4.9 million inhabitants. It has a long history of political stability – its democracy has remained uninterrupted since 1953, longer than any other country in Latin America. Until the middle of the 20th century, coffee was the main engine of economic growth, however since then its economy has evolved producing a diversified agricultural portfolio and developing high value-added industries linked to global value chains (OECD, 2016). As a result, the gross domestic product (GDP) per capita has more than doubled over the 1990-2016 period, with the average annual growth rate (4.1%) above the average for the Latin American and Caribbean region (2.3%) (Figure 2.1).

Policies promoting a variety of exports (Monge González et al., 2016) and foreign direct investment (US Department of State, 2014) explain part of this economic growth. The creation of free trade zones in 1981, Costa Rica's integration into the Caribbean Basin Initiative in 1983, and the creation of the joint Central American free trade agreement with the United States in 2004¹ have all played a role and have increased the role of manufactured goods in exports (Figure 2.2). This model proved successful in attracting foreign direct investment primarily to low-tech sectors (textiles), but also in attracting foreign companies gradually to high-tech sectors (electronics, advanced manufacturing and medical devices).

Yearly GDP per capita growth ♦ GDP per capita 1990 (right axis) ◆GDP per capita 2016 (right axis) 2010 USD 7 45 000 40 000 6 35 000 5 30 000 \Diamond 4 25 000 20 000 3 15 000 2 10 000 1 5 000 Danitiza Republic 0 Costa Rica Colombia Guaternala office Chile Peru Bolivia Argentina Honduras Mexico **A**icalagua Brail

Figure 2.1. Economic growth in Costa Rica is higher than the average in the LAC region

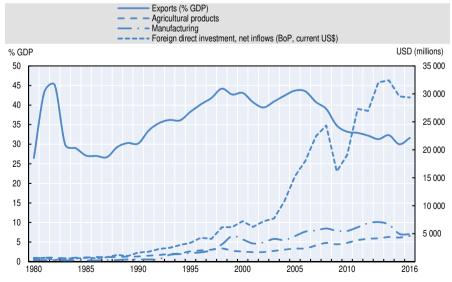
Average GDP per capita growth rate per country, 1990-2016

Note: The left axis shows the annual percentage growth rate of GDP per capita at market prices based on constant 2010 US dollars. The right axis shows the GDP per capita at market prices based on constant 2010 US dollars. LAC and OECD represent the Latin American and the Caribbean and the OECD average, respectively.

Source: World Bank (undated).

Figure 2.2. A variety of manufactured and specialised agricultural products have increased exports in recent years

Exports in goods and services (% of GDP) and the value of exports in agriculture and manufacturing (millions of USD dollar at current prices)



Source: WTO (2016); World Bank (undated).

Costa Rica enjoys high life expectancy and low poverty rates by Latin American standards (Figure 2.3), and an above-average subjective perception of life satisfaction (Gallup, 2015). The country ranks similarly to the OECD average in health and environment dimensions, and above average in social support network aspects. In contrast, education indicators are considerable below the average of OECD countries despite large public expenditure (OECD, 2016). Inequality is greater than the OECD average with a Gini coefficient of 0.49, but similar to the Latin American average (World Bank, undated).

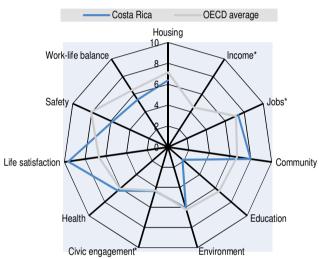


Figure 2.3. **Well-being in Costa Rica is similar to the OECD average** Indicators from the OECD Better Life Index for Costa Rica and the OECD average

Note: Each well-being dimension is measured by one to four indicators taken from the OECD Better Life Index set. Normalised indicators are averaged with equal weights. Indicators are normalised to range between 10 (best) and 0 (worst) according to the following formula: (indicator value – minimum value)/ (maximum value – minimum value) x 10. * = Incomplete index.

Source: OECD (2016).

Costa Rica's comparative political stability and economic growth make it an attractive destination for immigrants. Between 1984 and 2011, the share of immigrants in the total population more than doubled. The following section describes the country's immigration history and the demographic characteristics of its immigrants.

History and characteristics of immigration

The relative importance of immigrants in Costa Rica has increased significantly over the last 20 years. Increased labour migration made it necessary to update migration legislation, which led to the creation of several bilateral agreements between Costa Rica and Nicaragua.

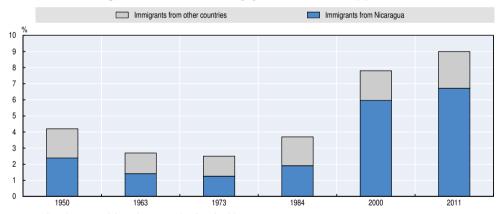
Migrants from Nicaragua constitute the largest immigrant group in

According to the 1950 census, 4.2% of the total population was born abroad (Figure 2.4). This proportion fell to 2.7% in 1963, with only minor changes until 1973. By 1984, the total immigrant population had increased by 1.2 percentage points compared to the previous decade. The migrant share of the population kept rising steadily, reaching 7.8% and 9% of the total population in the 2000 and 2011 censuses, respectively.

Since the first census, immigrants from Nicaragua have accounted for more than half of the foreign-born population, and have driven the increase in the immigrant population since 1984. In 2011, they represented more than three-quarters of the total immigrant population in the country. In contrast, the share of non-Nicaraguan immigrants has remained rather unchanged since 2011, at around 1.8% of the total population (INEC, undated b).

Figure 2.4. The share of immigrants in Costa Rica has significantly increased, mainly due to immigration from Nicaragua





Source: Authors' own work based on INEC (undated a, b).

The year of arrival among Nicaraguan-born immigrants reflects political and economic events as well as natural disasters in Nicaragua (Figure 2.5). The first surge of immigration in December 1972 was due to an earthquake in Managua.² However, it was the climax of the civil war against the Somoza dictatorship in 1977 and the triumph of the Sandinistas in 1979 that led to a more stable increase in immigration. The 1981-89 conflict between the Sandinista government and the Contras is particularly associated with increased immigration, with numbers doubling from 1982 to 1983. Migrant flows from Nicaragua to Costa Rica continued during the decade, due to the political conflict, high levels of inflation and economic instability in Nicaragua. The end of the

Nicaraguan civil war in 1990 led to the institution of a democratic regime, but migrant flows from Nicaragua to Costa Rica remained high throughout the decade due to adverse economic conditions during the post-conflict period (Membreño Idiaquez, 2001). The last immigration peak occurred in the wake of Hurricane Mitch in October 1998.

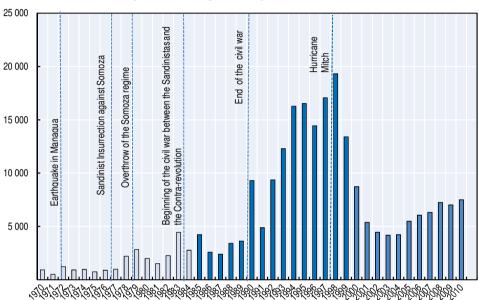


Figure 2.5. **Immigration from Nicaragua was highest during the 1990s** Year of arrival of Nicaraguan-born immigrants as reported in the 1984, 2000 and 2011 censuses

Note: Data on immigrants who arrived between 1970 and 1983 are based on the 1984 census, data on immigrants who arrived between 1984 and 1999 are based on the 2000 census, and data on immigrants who arrived between 2000 and 2010 are based on the 2011 census. The data include only those who declared their year of arrival. In the 1984 census, 22% of Nicaraguans did not declare their year of arrival; in 2000, 15% did not declare their year of arrival; and in 2010 the proportion rose to 46%.

Source: Authors' own work based on INEC (undated a, b).

The increase in the number of Nicaraguan-born immigrants in the 1990s marked the beginning of a bilateral dialogue on migration issues between Costa Rica and Nicaragua, with several agreements on labour migration implemented between the two countries. As a result of meetings held since 1991, the Migrant Labour Convention (Convenio de Mano de Obra Migrante) established legal channels of migration. In 1995, this convention was extended to grant seasonal work cards (Tarjeta de Trabajo Estacional (TTE)) for activities such as domestic service, agriculture and construction, which were determined by the Ministry of Labour to fill labour market needs (IOM/ILO/MTSS, 2011). The card failed to meet its objective, however, and was abolished in 1998. Two main factors led to the collapse of the scheme: requirements substantially restricted the number of

potential beneficiaries, as many Nicaraguans lacked original birth certificates or identity cards; and Costa Rican employers did not offer advantages to workers who migrated under the agreement over those who did so irregularly (Alvarenga, 2000).

In view of the high share of irregular immigration, aggravated by the impact of Hurricane Mitch, the government of Costa Rica implemented a migratory exception known as "the amnesty", which was in force from February to July 1999. The measure allowed irregular immigrants from Belize, Guatemala, Honduras, Nicaragua, Panama and el Salvador, who had entered the country before 9 November 1998, to obtain a (renewable) one-year residence permit. By February 2000, a total of 155 316 individuals had applied for a migrant exemption regime, of which 97.4% were Nicaraguans. Overall, some 140 000 people of Nicaraguan origin regularised their status in Costa Rica (IOM, 2001).

Immigration flows remained high after the amnesty, and the binational dialogue continued. In October 2002, the "Agreement allowing the administration of migratory flows for employment purposes between Costa Rica and Nicaragua" strengthened capacities to exchange information between the Ministries of Labour of the two countries (Bolaños Céspedes, 2009). In April 2004, through the "Joint Declaration of the Labour Ministers of Costa Rica and Nicaragua", an agreement was made to form permanent technical committees with representatives from both countries to improve the management of migration for employment purposes (ibid.).

Other immigrants come mainly from Latin America and the United States

While Nicaragua is the origin of most immigrants in Costa Rica, there have been important migration waves from other countries driven by both economic and political factors (Figure 2.6). Economic factors remain predominant for immigrants from a number of countries. For example, according to the 1950 census, Jamaicans constituted the second largest group of immigrants in Costa Rica, accounting for 11.9% of the foreign-born population. Along with immigrants from other British dependencies, they arrived to work on the construction of the Atlantic Railroad, the harbour and banana plantations (Gradín, 2013). Their descendants represent an important part of the Afro-Caribbean population. While the importance of Jamaica as a country of origin has declined, Panama has remained an important country of origin. Immigrants from this country consist largely of members of the Ngäbe-Bugle, a vulnerable indigenous population settled along the border, many of whom are seasonal immigrants that cross the country during harvest season or on a daily basis (Morales and Lobo, 2013).4 Immigration from the United States has also remained significant, mainly because of linked economic activities, but also because Costa Rica is a popular retirement destination among US citizens (Piga, 2001).

Share of immigrants by country of birth, since 1950 □ United States ■ Nicaragua ■ Jamaica ■ European countries ■ Panama Colombia Colombia □ Cuba ☐ El Salvador □ Other countries 2011 2000 1984 1973 1963 1950

Figure 2.6. Latin American countries and the United States remain the main countries of origin

Note: European countries refers only to the four main countries with immigrant outflows to Costa Rica: Italy, Germany, Poland and Spain.

50

40

60

80

90

100

70

Source: INEC (undated a, b).

10

20

30

Examples of political instability driving immigration inflows also abound. For instance, in 1950, 8% of the immigrant population came from Europe, in particular from Italy, Germany, Poland and Spain. Like elsewhere in Latin America, the Second World War and the post-war situation in Europe – along with the search for better economic opportunities - was a major motivation for European immigration. Similarly, a large part of immigration throughout the 1960s, 1970s and 1980s can be explained by political instability in some Latin American countries. For example, immigration flows from Cuba increased after the 1959 revolution. As a result of these inflows, Cuba, which accounted for 1.9% of the immigrant population according to the 1963 census, became the fifth most important country of origin by 1984, doubling its relative share among the foreign-born population (3.9%). Some of these immigrants elected to remain in Costa Rica, while others continued onwards to the United States (Estado de la Nación, 2016). Likewise, the 1984 census showed an increase in immigration from Chile, likely explained by the coup d'état in 1973. Similarly, an increase of migration from El Salvador in the 1970s and 1980s might be due mainly to internal conflicts in the country.

Colombia is also notable as a country where instability is among the causes of emigration. According to the 2011 census, it was the second main country of origin, accounting for around 4.3% of the immigrant population in Costa Rica. Internal conflicts, economic factors and well-developed social networks across borders were the most important determinants of migration for Colombians (Cárdenas and Mejía, 2006). Among the 24 573 Colombians with temporary or permanent residency in Costa Rica at the end of 2013, about one out of three was a refugee.

Many of the immigrants from Nicaragua and Panama come to Costa Rica for agricultural jobs. Nicaragua is the main country of origin for immigrants working on crops such as melon, orange and sugar, while Panama is the main country of origin for immigrants working on coffee plantations (BCCR, 2012, 2014). Between 10 000 and 14 000 immigrants of the Panamanian-born Ngäbe-Bugle population cross the border every year during the harvesting season to work on coffee, sugar cane and banana plantations (IOM, 2013). The high share of individuals without documentation among the Ngäbe-Bugle makes it hard to regulate immigration and guarantee their access to health and education (Morales, Lobo and Jimenez, 2014).

Specific bilateral agreements focus solely on these indigenous workers and their families. The "Joint Programme to Improve Human Security of Temporary Migrants Ngäbes and Bugles", signed in February 2015, aims to track the working conditions of the Ngäbe-Bugle, guarantee their protection in terms of recruitment and employment, and provide information tools in their native language (UNDP et al., 2015).

Immigrants are over-represented among the working-age population

The share of immigrants of working age is larger than the same share of native-born individuals. According to the 2011 census, 84% of the foreign-born population was between 15 and 64 years old, in contrast with 66% for the native born population. This difference is due mainly to the higher share of children among the native-born, rather than the higher share of elderly individuals (Figure 2.7). As a result of this under-representation among children and young teenagers, immigrants account for 11% of the population aged 15 years old and over.

The age distributions suggest that immigration can have a small but positive effect on the dependency ratio – the share of the population aged under 15 and over 64 in relation to the population aged 15 to 64. Low dependency ratios can lead to a "demographic dividend", a boost in per capita income, since a large share of the population is of working age. However, empirical studies have found that the dependency ratio is likely to remain relatively stable until 2050, at around 45% (INEC, 2013), and that the medium and long-term impacts of immigration on the dependency ratio are small (Reboiras, 2015).

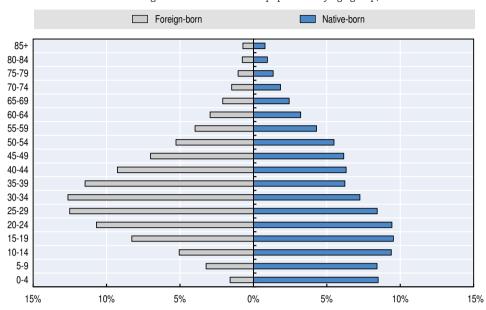


Figure 2.7. A significant proportion of immigrants are of working age

Share of foreign-born and native-born population by age group, 2011

Source: Authors' own work based on INEC (undated a).

There are more immigrant women than men

According to estimates, 51.8% of immigrants are women. This exceeds the share for Central America and Mexico at 50% (ILO, 2017), but is close to the average for Latin America and the Caribbean at 51.6% (ILO, 2017). The share of women varies by country of origin and province of residence. In 2011, women were over-represented among Nicaraguan immigrants in all provinces except Limón (Figure 2.8). The highest share of women is found in the province of San José, where 55.5% of Nicaraguan immigrants are female. Among immigrants from Panama, the opposite tendency is found: in five out of seven provinces more than half of the population is male, including the two border provinces of Puntarenas and Limón, where women account for 48% and 47%, respectively. Prior research suggests that female out-migration tends to be lower in highly patriarchal systems (Massey, Fischer and Capoferro, 2006). This could help explain why Nicaragua, which has a more matriarchal system, exhibits relatively higher female-to-male out-migration.

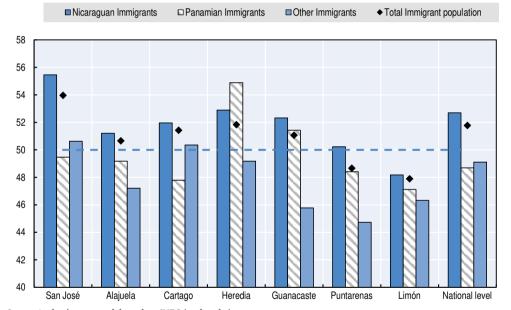
Immigrants are concentrated in the north of the country and the province of San José

The two main provinces that account for a relatively high share of migrants boast economic activities that attract labour immigrants. Alajuela province in the north of Costa Rica hosted 23% of the total immigrant population in 2011,

compared to 20% of the native-born population. The over-representation of the immigrant population in this province might be due to the agriculture sector. Alajuela is the main province for raising cattle (33.5% of total national production) (INEC, 2014a) and coffee (an estimated 30% of hectares under production)⁵ (INEC, 2014b), and the second most important area for growing sugar cane (21.1%, compared to 54.5% in Guanacaste province) (Chaves Solera and Chavarría Soto, 2013). San José province was home to 39% of the total immigrant population in 2011, compared to 32% of the total native-born population. San José province also hosts a significant number of food and textile companies, and is the second most important province for agribusiness.

Figure 2.8. A higher share of Nicaraguan-born immigrants are women and Panamanian-born immigrants are men

Share of female immigrants by country of origin and region, 2011



Source: Author's own work based on INEC (undated a).

Distribution of place of residence also differs according to the country of origin. According to the 2011 census, 94% of Colombian immigrants lived in urban zones, while this figure is 52.2% for immigrants from Panamá and 70.3% for Nicaraguan immigrants (Estado de la Nación, 2013).

Some immigrants – particularly workers in agriculture – are highly mobile. These individuals move within and across borders following the harvest periods of banana and coffee plantation (Estado de la Nación, 2016), resulting in a high flow of entries and exits between Nicaragua and Costa Rica for seasonal remunerated activities.

Immigrant workers migrate to Costa Rica to improve their job opportunities

People decide to leave their countries of origin for a variety of reasons. A survey among immigrant workers in Costa Rica, carried out in 2010 by CID Gallup for the International Organization for Migration (IOM), mapped the reasons why immigrants leave the country of origin and move to Costa Rica. Based on this survey, 64% of respondents stated that they left their country to look for work (IOM/ILO/MTSS, 2011). Other reasons given included improving their quality of life (14%), looking for better wages (6%) and a need for money (3%). When asked why they chose Costa Rica as their country of destination, 64% of respondents cited labour opportunities, 11% believed that it was a more peaceful place to live, 9% mentioned higher wages, 5% cited better labour conditions and 5% stated that it was safer than their country of origin (Figure 2.9).

■ Searching for a job
■ Searching for a better life quality
■ Bad wages
■ Need money
■ Interested by the other country
▶ Extreme poverty

■ Better job opportunities
■ Better labour conditions
■ Safer for me and my family
□ Others

Figure 2.9. Better labour opportunities is the main reason why immigrants choose

Costa Rica as destination

Source: IOM/ILO/MTSS (2011), based on the CID-GALLUP 2010 Latin America survey.

Most immigrants possess some form of documentation when they enter the country. According to the same survey, 70% of immigrants entered Costa Rica with a valid passport, 6% with an identification card of their country of origin and 10% with a safe-conduct pass. Among the interviewed immigrants, 17% entered the country without any kind of legal identification. However, almost 25% of respondents declared that no identification was required to obtain their current job (IOM/ILO/MTSS, 2011).

Immigration and integration policies, enforcement and implementation

The Political Constitution of the Republic of Costa Rica states that foreign citizens have the same individual and social rights and duties as Costa Ricans, with the exceptions and limitations that the Constitution and laws establish. These include: (i) a prohibition on interventions in domestic policy matters (Article 19); (ii) a prohibition on the exercise of leadership or authority in trade unions (Article 60); (iii) a prohibition on being a deputy, minister of state or magistrate, provided the immigrant has not yet been naturalised for at least ten years (Articles 108, 142 and 149); and (iv) a prohibition on being President or Vice-President of the Republic, President or Vice-President of the Legislative Assembly (Articles 115 and 131).

Increased immigration and constitutional concerns led to the drafting of two migration laws within five years

The first recent law to regulate the immigration process was passed in 1986 (General Law 7033). Subsequently, a new General Law of Migration (Law No. 8487) was enacted in 2005 in response to inconsistencies and legal gaps in the previous law and to address the rise in immigration. Numerous institutional and civil society actors (including churches, academia and non-governmental organisations) and international organisations opposed the enactment of this law and, once it was approved by the Legislative Assembly of Costa Rica, advocated for its immediate non-application and the launch of a process to create an alternative, human rights-based law.

This law did not strictly conform to the norms and guidelines established in international instruments or the Costa Rican Constitution. In particular, it conflicted with the guarantee and fulfilment of the constitutional rights of foreign citizens living in the country (Barahona, Carmona and Sauma, 2008). The general principle of this law was "based on the respect of the human rights and integration to the economic, scientific, social, educative and cultural processes of legal migrants" (Article 7). This was interpreted to mean that these constitutional principles should not be applied to irregular immigrants. Other aspects, such as the power of the special migration police (Article 18) to apprehend people who could not justify their legal status (Article 18.1) and keep them imprisoned without a court ruling or maximum term, were in opposition to Article 37 of the Constitution.

To address these issues, a new migration law was drawn up, and the constitutional chamber provided guidelines. The migration authorities pointed out that ensuring alignment with constitutional requirements, as well as the highest standards of human rights, introduced significant changes to the principles guiding the spirit of the law (Sandoval, Brenes and Panigua, 2012).

Different areas of government, the Catholic Church, state universities, business chambers, the National Network of Civil Organisations, political parties and the Permanent Forum on Migrant Population were involved in the creation of this law. After several debates, the 2010 General Law of Migration No. 8764 was approved for implementation in 2011 (Box 2.1).

Box 2.1. General Law of Migration in Costa Rica (LGME 8764)

The 2010 General Law of Migration No. 8764 defines the fundamental aspects of migration policies in Costa Rica. It replaced the General Law of Migration of 2005. Some novel aspects of this law include the following:

- A support structure was established for implementation of the law, including the strengthening of the National Council of Migration (CNM) and the incorporation of two representatives of civil society (Article 10).
- The Migration Administrative Tribunal was created as a second instance for resolving appeals against resolutions of the General Directorate of Migration and Foreigners (DGME) and against the Restricted Visas and Refugees Commission (Articles 25-30).
- The competences of the professional migration and immigration police (Articles 15-19)
 were strengthened and expanded by introducing the principle of professionalisation
 of the migration police. Their competences were expanded to effectively combat the
 crimes of people trafficking and migrant smuggling.
- The periods of apprehension for the purposes of immigration verification are set in accordance with the provisions of the Political Constitution, and therefore cannot exceed 24 hours without a duly substantiated decision (Article 31, Number 5, Section a).
- Refugee status is equated with the definitions established in international instruments (Articles 106-123) and incorporates gender as motive of persecution.
- A social migration fund was set up to support integration actions (Articles 241-245).
- The law incorporates the crime of illicit traffic in persons (Article 249).
- Regulation was introduced exclusively for the Ngäbe-Buglé population with specific types of migratory categories (Reglamento de la ley, título 5).

The 2010 General Law of Migration created the National Council of Migration (Consejo Nacional de Migración CNM). Its objective is to draw up recommendations regarding migration policies and migration policy implementation for submission to the executive branch. In 2013, the CNM submitted a proposal for an "Integral Migration Policy for Costa Rica 2013-2023" to the government, which was subsequently approved (see Box 2.2). This policy was meant to guide the state's actions in creating conditions that could turn migration into a boon for inclusive

development (CNM, 2013). The Ministry of Planning (2017) together with the DGME are in the process of updating this migration policy to include new elements concerning the regulation of transitory migration.

Box 2.2. Integral Migration Policy for Costa Rica 2013-2023

The "Integral Migration Policy for Costa Rica 2013-2023" was proposed by the National Council of Migration. Its selected policy objectives with regard to immigration and some of its specific strategies are as follows:

- Improve processes at the migratory service, for example, through the simplification
 of procedures, inter-institutional co-ordination and the use of computer tools to
 initiate administrative procedures.
- Improve access and quality of information on migration management, through the development of accessible mass information campaigns on immigrant regularisation processes and requirements.
- Generate new sources of income to finance the provision of technological equipment, and mobile and human resources for institutions linked to immigration and border security.
- Develop co-operation agreements between the police institutions and international organisations to improve the identification of criminal activities in Costa Rica's frontier zones.
- Strengthen labour inspections and the application of sanctions to employers violating minimum wage regulations.
- Reinforce the training of officials regarding procedures for the insurance of immigrants and refugees in Costa Rica's social security fund.
- Design inclusive models of insurance for migrant population.
- Promote protocols to simplify formalities in the validation of qualifications obtained abroad.
- Create mechanisms to enable irregular migrants to access student scholarships, conditional government transfers, and funding programmes for migrant and refugee populations.
- Increase the potential beneficiaries of integration programmes.
- Identify the needs of the national productive sectors to promote immigration focused on comprehensive development.
- Ensure that the resources of the Social Migration Fund are carried out in strict compliance with national legislation in force in the field.
- Create gender-sensitive strategies to ensure access to justice and adequate attention to victims of arbitrary actions and corruption in border areas and migration posts.

The granting of visas falls under the auspices of the General Directorate of Migration and Foreigners

The General Directorate of Migration and Foreigners (DGME) is in charge of authorising cross-border, temporal, occupational or project-specific working visas. Individuals can enter with a temporary visa (or no visa, provided that they are citizens of selected countries) with the intention of obtaining temporary residence once they have arrived in the country, provided they pay a fee of USD 200. Temporary residence permits are granted for three months to two years to categories of people including spouses of Costa Ricans, company executives or specialists, investors and retirees. Permanent residence permits, among others, can be granted to individuals who have been temporary residents for at least three years, and allow individuals to work. There are also special visa categories such as those for trans-border workers, students and inter-company transfers.

Non-permanent immigrants who seek to work need to be authorised to do so by the DGME. The Ministry of Labour and Social Security's Department of Labour Migration (DML) provides recommendations on whether this permission should be granted, with the aim of not displacing Costa Rican workers in the labour market. Even though the recommendations of the DML are not binding, they often constitute a key input for the DGME's decision. For immigrants in specific occupations, the department provides a generic recommendation regarding which occupations should be included among those where permission is generally provided. For some activities, the Ministry of Labour establishes the number of recommended posts. This occurs mainly in the agricultural sector and in certain middle and high-skilled occupations (MTSS, 2013, 2016). The technical studies carried out by the DML are based on consultations with associative agro-organisations and on job openings in the national employment agency. Hiring processes in sectors that fall outside the generic list can be complicated and time-intensive. Some have suggested that hiring immigrants is therefore avoided in certain sectors, such as food preparation, or that employers do not seek to regularise the situation of their employees, such as private households as employers (Sojo-Lara, 2015).

In recent years, the majority of requests for labour permits have received positive recommendations. For example, in 2015, 15 402 out of 15 660 requests received positive recommendations. The ratios were similar in 2013 and 2014. In contrast, in 2012, 1 664 out of 6 542 requests were negative. Almost all the positive recommendations were for the agricultural sector. Moreover, very few of the recommendations were provided on an individual rather than a collective basis (MTSS, 2016).

The General Law of Migration also established a regularisation process. Any employer, whether a natural or juridical person, could regularise immigrants working in agricultural, construction (bricklayers, carpenters and labourers) or domestic services for at least six months prior to the implementation of the

law. Initially, this regularisation process was intended to be carried out over a period of nine months, but was extended until July 2014. A new excutive order concerning the regularisation of workers in the agricultural sector was provided in September 2014 and was extended until July 2017.

Immigrants can apply for a migratory identity document for foreigners (Documento de identidad migratorio para extranjeros) (DIMEX). This features a 12-digit identification number, as well as the photograph and signature of the bearer. The document replaced other documents that varied by immigrant category. Executive Order No. 36948 on the "General regulation on legislation against drug trafficking, related activities, legitimisation of capital, financing of terrorism and organized crime" stated that foreigners without a DIMEX had one year to obtain this identification document. After this deadline, banks were allowed to suspend provision of their services to individuals unable to provide the document. The creation of this single card is considered an advance in efforts to integrate immigrants because it does not distinguish between different kinds of migrants and can be used for all administrative procedures.

In 2012, the law established penalties for irregular immigration through the "Regulation of Migration Control". All immigrants were meant to leave the country once their permit expired if it was not renewed. Failing this, they would either be charged USD 100 for every additional month or receive an interdiction to enter the country for a period equal to three times the period they had stayed irregularly. Nevertheless, application of this penalty has not yet been implemented and has instead been postponed through several executive orders. The main explanation for these postponements is insufficient technological means and personnel to collect the respective payments in the different migratory control posts. Penalties for employing irregular immigrants range from two to 12 times a basic monthly salary (Article 177).

Bilateral agreements exist with Nicaragua and Panama

Costa Rica has signed several binational agreements with Nicaragua and Panama. Over time, they have been modified due to changes in the immigration situation. For example, the 1993 Migrant Labour Convention established legal channels for the entry of Nicaraguans into Costa Rica to reduce irregular immigration. This agreement allowed Nicaraguans to work temporarily in agriculture and regulated their working conditions. Following other agreements, in December 2007, the binational agreement "Migrant Management Procedures for Temporary Workers Costa Rica-Nicaragua" was signed. This agreement consists of provisions regulating the entry of Nicaraguan workers to carry out activities in agriculture, agro-industries and construction in Costa Rica (CE, 2014). Employers are responsible for submitting the application to the National Employment Directorate and guaranteeing transportation inside and outside the country. For personnel hired following this procedure, the DGM does not

require a visa or verification of economic means. Most of the agreements with Panama concern indigenous *Ngäbe-Buglé* workers.

Costa Rica has not ratified a number of international agreements concerning migrant workers. In particular, it has not ratified the ILO Convention No. 97 "Concerning Migration for Employment" or the 1990 UN "International Convention on the Protection of the Rights of Migrant Workers and Members of their Families".

Regular immigrants have de juris equal access to services and rights

Immigrants have the right to access various public services. In particular, public preventive and emergency health care, as well as primary and secondary education, are universally provided, including to irregular immigrants (Articles 73, 74 and 78 of the Constitution). In contrast, access to public university and vocational training is limited to regular immigrants. Nevertheless, in reality, cross-border indigenous populations often still have insufficient access to health and education services.

Regular immigrants have the same civil rights as the native-born population. Likewise, all migrants in regular conditions have rights to equal employment conditions and protection (regarding over-time, hours of work, weekly rest, etc.), and have the right to receive family allowances under the same conditions as the native-born population (Article 19 of the constitution).

Access to social security is restricted to regular immigrants and does not provide adequate access to temporary immigrants. This impacts sectors such as agriculture where many immigrants are seasonal workers (OECD, 2017). There are also limitations for people in transitional or irregular immigration status, and individuals in informal work. Among workers in the construction sector, 46% of Nicaraguans migrants do not belong to any regime, compared to 36% of Costa Ricans (Voorend and Robles, 2011). Domestic service is also a sector with low social security participation, with immigrant women accounting for more than one out of five domestic workers (Estado de la Nación, 2011). Overall, a low proportion of working immigrants have pension benefits and even fewer have health benefits. Households with an immigrant member are also less likely to receive government social transfers or to have visited a health facility in the past year (OECD/FUNDEVI, 2017).

Another limitation for immigrants is effective use of the right of access to justice, even if the entire population has *de juris* equal access. This is particularly true for migrants from Nicaragua, who may not access judicial processes out of fear of deportation (ILO, 2015). In response to this issue, the judicial branch created a sub-commission in 2010 entitled "Institutional policy for access to justice by the migrant and refugee population". This body seeks to establish a set of guidelines to ensure effective access to justice for migrants and refugees, regardless of their migratory status (CONAMAJ, 2010).

Negative perceptions of immigrants still persist

Public attitudes towards immigration could potentially affect immigration policy making. For example, it has been argued that the 2005 immigration law, which represented a shift towards more restrictive immigration, reflected social fears related to increasing insecurity and declining quality of life, for which immigrants were blamed (Fouratt, 2016).

Negative views of immigrants appear to be slightly more prevalent than positive views. For example, attitudes towards Nicaraguan immigrants were found to be slightly more negative (39%) than positive (32%) (Rosero, 2004). These negative attitudes might reflect the high inflow of immigrants in the previous decade. A 2005 survey of the Institute of Population Studies at the National University on the perception of immigrants showed that 95% of Costa Ricans perceive the number of immigrants as high (IDESPO, 2005). A follow-up survey (IDESPO, 2006) also showed that Costa Ricans perceive immigrants less positively than the native-born population, although 70% of them recognise the benefits of immigrants and their rights. Despite the subsequent reform in 2009 and efforts made since then, the most recent survey (IDESPO, 2016) still reflects slightly more negative attitudes.

Attitudes towards immigrants vary slightly depending on the country of origin. In the 2006 IDESPO survey, 40.5% of respondents associated positive attributes with Nicaraguans (e.g. reliability, hard work, kindness), a share that was slightly higher for Colombians (52.4%). In the 2016 survey, 25.2% of respondents associated Nicaraguan people with work and effort, 15.1% with impoverishment, and 13% with government-inflicted suffering, revolution and dictatorship. Respondents in the 2006 survey also exhibited a higher willingness to accept immigrants' social rights compared to their civil rights.

Conclusions

This chapter demonstrated that the relatively high population share of immigrants is due both to favourable economic and political conditions in Costa Rica and internal conditions in the principal countries of origin, in particular Nicaragua. Immigrants are concentrated among the working-age population and more than half of them are women or girls. Costa Rica has re-designed its immigration policies several times over the last few decades, most recently with the 2010 General Law of Migration and subsequent executive decrees.

Costa Rica is attempting to create immigration and integration policies that reflect the reality that immigration is often driven by external factors. The aim is to maximise the benefits of immigration and protect human rights while protecting citizens' working and living conditions. In this respect, Costa Rica has shifted from a security to a development approach. Despite the focus on the development potential that immigrants bring and their increasing integration

into society, problems related to legal employment procedures for immigrants in certain occupations and lack of access to certain public services still persist.

The following chapters analyse the characteristics of immigrants and their labour market outcomes, as well as their influence on the labour market outcomes of the native-born population. They also estimate immigrants' contribution to economic growth and their fiscal impact, demonstrating that the negative public perception of immigrants is often unjustified from an economic perspective.

Notes

- The Dominican Republic-Central America free trade agreement (CAFTA-DR) was signed in 2004. It was the first free trade agreement between the United States and a group of Central America countries – Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, as well as the Dominican Republic
- 2. Given that the population census tracked the year of arrival at irregular intervals, the reported figures reflect not only immigration but also remigration flows of Nicaraguan immigrants. In particular, a higher number of immigrants in an arrival year close to the census year do not systematically reflect higher immigration flows in that year, but that these immigrants had less time to leave the country again.
- 3. "Acuerdo que permite la administración de los flujos migratorios con fines de empleo entre Costa Rica y Nicaragua", signed 25 October 2002 in Managua, Nicaragua.
- 4. Besides, as stated by Morales, Lobo and Jimenez (2014), it is hard to distinguish between Costa Rican and Panamanian individuals for this population. On the one hand, "documentation" does not have the same value for them and many disregard its relative importance, remaining without a nationality. On the other hand, their settlement is divided between the two countries, as they settled there even prior to the division of borders. The authors emphasize that the Ngäbe-Bugle are a "cross-border" population. Quesada (2006) estimates that in 2006 around 169 130 Ngäbe-Bugle were from Panamá and 2 570 from Costa Rica.
- 5. The estimation was based on the reported number and size of farms engaged in coffee production by province. Only coffee trees at the age of production are taken into account. For each size category (1-2 hectares, 2-3 hectares, etc.), the mid-point size (1.5, 2.5, etc.) is assumed. For farms with less than 1 hectare, a size of 0.5 hectares is assumed and for farms with at least 50 hectares, a size of 75 hectares is assumed. The number of farms is multiplied by the estimated size and then added up to arrive at the total estimated cultivated space.
- 6. This survey was carried in 2010 among a group of 300 immigrant workers living in Costa Rica in the six regions of the country and working in three of the main immigrant occupations: agriculture, construction and domestic work. Out of the sample, 70% were men and 30% were women. For further details, see IOM/ILO/MTSS (2011).
- 7. The survey allowed multiple answers, which is why the total is larger than 100%.
- The safe-conduct document is an alternative to the passport issued by the DGME. It is processed by the worker and serves exclusively for recruitment (IOM/ILO/MTSS, 2011).
- 9. Reglamento de Extranjería (Decreto No. 37112-G, 2012).

- 10. It was postponed by Executive Decree No. 37326 to 23 April 2013, then by Executive Decree No. 37673 until 23 October 2013, by Executive Decree No. 37990 until 1 August 2014, by Executive Decree No. 39398 until 18 December 2016, by Executive Decree No. 40073 until 16 December 2017 and then by Executive Decree No. 40791 until April 2018. At the time of writing it is in force.
- 11. A basic monthly salary is defined in Article 2 of Law No. 7337 of 5 May of 1993.

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Chapter 3

Immigrant integration in Costa Rica: Labour market outcomes and human capital

This chapter lays the groundwork for the subsequent analysis of the economic contributions of immigrants, by comparing the educational and labour market characteristics of the foreign and native-born populations. The first section discusses human capital characteristics, while the second section examines labour force characteristics and labour market outcomes, and explores skills matching and quality of jobs. The chapter looks specifically at levels of educational attainment, employment and unemployment rates, status in employment, income, employment sectors and occupations.

Around 12.5% of Costa Rica's labour force is born abroad. It is therefore highly likely that immigrants make a substantial contribution to the labour market, economic growth and the public budget. This chapter lays the groundwork to assess that contribution by comparing foreign and native-born individuals in terms of their characteristics and labour market performance. The first section focuses on educational attainment and demographic composition. The second presents labour market outcomes such as employment rates and labour income, distribution over different sectors and occupations, and skills matching and quality of jobs.

Educational attainment of the foreign and native-born labour force

Costa Rica has made significant improvements in education attainment, in large part due to its substantial expenditure on education, which accounts for 7% of the gross domestic product (GDP), ¹ and efforts to expand access to education (OECD, 2017a). However, improvements are seen mostly among the native-born population. Immigrants generally have a lower level of educational attainment (Figure 3.1), and school enrolment rates among foreign-born children are below those of native-born children. As a result, this labour pool continues to supply proportionally more low-skilled workers to the labour market in Costa Rica.

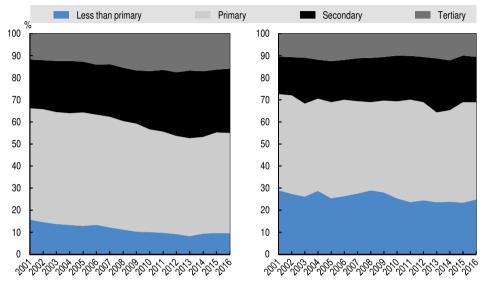
The immigrant labour force is less educated than the native-born labour force

The education gap between the immigrant labour force and the native-born labour force has intensified, with educational attainment among the native-born labour force improving more than the foreign-born labour force between 2001 and 2016 (Figure 3.1). In 2001, the shares of those with less than primary school education among the foreign-born labour force (29%) was almost double that of the native-born labour force (16%). By 2016, the shares had further diverged to 25% and 10%, respectively. More strikingly, while the share of individuals with at most a primary school degree dropped by 5 percentage points among the native-born population (from 51% to 46%), it remained practically unchanged among the native-born population. The share of secondary-school graduates increased in both groups, but much more so among the native-born population: among native-born workers, the share rose from 22% to 29%, and among foreign-born it increased from 33% to 41%. There was no change in the share of individuals

with a tertiary degree among the foreign-born labour force, while the same share increased by 4% among the native-born.

Figure 3.1. The foreign-born labour force is less educated than the native-born labour force

Distribution of educational attainment in Costa Rica by place of birth, 2001-16



Note: This distribution covers the labour force aged 15 years and older. Source: Authors' own work based on INEC (2001-09) and (2010-16).

One factor that contributes to lower levels of education among the immigrant labour force is the lower level of school enrolments among immigrant children (Figure 3.2).² The enrolment rate for compulsory primary education from ages 7 to 12 is almost 100% among native-born, but 91% on average for foreign-born children, and is particularly low for children born in Nicaragua at 87%. By upper secondary school the gap widens further.

This low rate of school enrolment and the correspondingly low take up of family allowances can be explained by lack of knowledge on the part of immigrants concerning their right of access to education, and lack of documentation on the part of children or their parents (AECID/UNICEF, 2011). Although presentation of a certificate of regular migration status is not necessary for primary and less than primary education, at least one example of documentation from the country of origin is necessary to enrol, which parents are sometimes unable to provide. This is the case not only for children born abroad, but also for children of immigrants born in Costa Rica (ibid.). Adverse economic conditions also play a role in forcing children and teenagers to leave education.

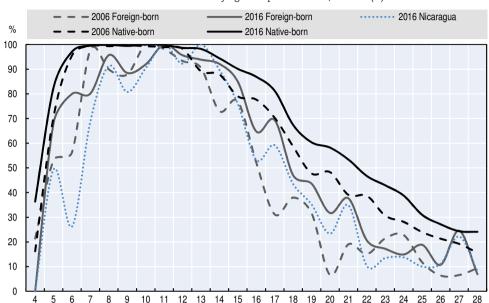


Figure 3.2. School enrolment rates are higher for native-born than foreign-born children

School enrolment rates by age and place of birth, 2006-16 (%)

Note: The school enrolment rate is the ratio of children of official school age enrolled in school to the population of the corresponding official school age.

Source: Authors' own work based on INEC (2001-09) and (2010-16).

Children with an immigrant background (i.e. either they or one of the parents was born abroad) tend to perform less well in school than native-born children with native-born parents, based on the results of the 2015 PISA (OECD, 2015). This is the case for Costa Rica and for two partner country taking this test, Argentina and the Dominican Republic, but not for Thailand where the results are not statistically different (OECD, 2016b). In Costa Rica, the performance of students with an immigrant background is lower by 20 points in science, 26 in reading and 30 in mathematics than the native-born children. Once socioeconomic characteristics³ are taken into account, the differences in science and reading become statistically insignificant and are reduced by almost half in mathematics (OECD, 2016b, 2017b). However, these scores may exhibit bias as they only take into account 15 year-old children still in education; children that have dropped out –and that might be in a more disadvantageous socioeconomic position– are not considered.

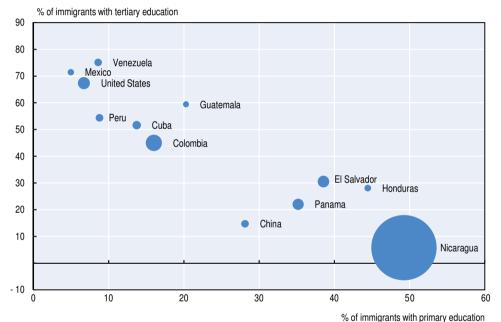
Immigrants workers from Colombia and the United States are more educated than those from Nicaragua and Panama

Immigrant workers in Costa Rica have quite different education levels, depending on their country of origin (Figure 3.3). In 2011, a large share of immigrant workers born in Venezuela (75%), Mexico (71%) the United States

(67%) and Colombia (45%) had tertiary education. Countries of origin for medium-skilled workers were China (47%), the Dominican Republic (50%) and Peru (36%). Nicaraguan-born immigrants mostly have primary education (49%), as well as Panamanian-born immigrants (35%). Given that 76% of the foreign-born labour force is born in Nicaragua, according to the 2011 Census, their educational attainment dominates the foreign-born labour force in Costa Rica.

Figure 3.3. The educational composition of immigrant workers in Costa Rica varies by country of origin

Size of the immigrant labour force by share of educational attainment and country of origin, 2011



Note: This distribution includes the labour force aged 15 and above. The size of circle represents the number of immigrants from the country of origin. As a reference, Nicaragua accounts for 76% of the foreign-born labour force. Source: Authors' own work based on a 10% sample of the 2011 Census (Minnesota Population Center, 2017)

Comparison of labour market outcomes of the foreign and native-born population

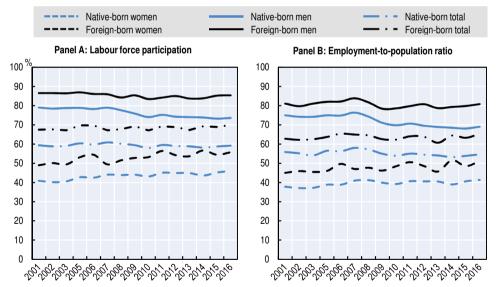
In 2016, immigrants represented 12.5% of the total working-age population (aged 15 and above) and 12.7% of employed workers in Costa Rica. The native and foreign-born labour forces are growing moderately, with the latter having a higher rate of growth (2.3% and 4.2%, respectively) for the period 2001-16 (INEC, 2001-09, 2010-16). However, the characteristics of employment differ between the two populations and have exhibited different patterns over time. This section further explores these differences following the structure set out by the ILO's

Key Indicators of the Labour Market 2015. The indicators are based on the labour force aged 15 years old and above according to the National Household Survey (INEC, 2010-16) and the Multi-Purpose Household Survey (INEC, 2001-09), as well as a 10% sample of the 2011 National Population Census provided by the Minnesota Population Centre.

Immigrants participate proportionately more in the labour market than native-born individuals

The labour force participation rate was around 8-10% higher among the foreign-born population than among the native-born population during the 2001-16 period (Figure 3.4, Panel A). The rate of both foreign and native-born women increased over this period, but was higher among female immigrants (6 percentage points) than among native-born women (4 percentage points). Among men, the labour force participation of immigrants remained rather stable at around 80%, while that of native-born men decreased slightly to 74%. In all periods, participation of men is considerable higher than that of women.

Figure 3.4. **Immigrants are more frequently active on the labour market**Labour force participation and employment rate by sex and place of birth, 2001-16



Note: The calculations cover the population aged 15 and above. Source: Authors' own work based on INEC (2001-09) and (2010-16).

Over time, the employment-to-population ratio exhibits patterns similar to those of the labour force participation rate (Figure 3.4, Panel B). Furthermore, the unemployment rate among immigrants is slightly lower than that of the

native-born population (6.6% and 7.7%, respectively, in 2016). These results are similar to those in five out of ten partner countries studied in the project (OECD/ILO, 2018), and when combined indicate that immigrants in Costa Rica adapt well to the labour market of the country.

Even if differences in the overall unemployment rate are not particularly marked between the two populations, the gap varies according to age and level of education. Unemployment rates among the young labour force (15-24 years old) are almost three times higher than those among workers aged 25 years old and above (20% among native-born youth and 14% among foreign-born youth). The unemployment rate is particularly high for young native-born individuals with less than primary education (26.2%), but stands at 9% for their foreign-born counterparts (Figure 3.5). One possible explanation for this difference is a greater willingness on the part of uneducated immigrants to undertake low-quality jobs (sometimes referred as 3D jobs: dirty, dangerous and demeaning) than the uneducated young native-born population. The gap in youth unemployment between foreign and native-born workers narrows with education and is actually slightly lower among young native-born individuals with tertiary education.

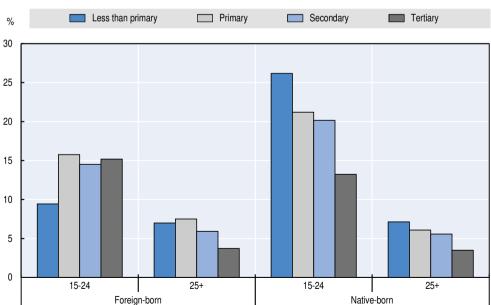


Figure 3.5. The employment rate is lower for foreign-born than native-born youth with lower levels of education

Note: The calculation is restricted to the labour force aged 15 and above and uses pooled data from 2010-16. Source: Authors' own work based on INEC (2010-16).

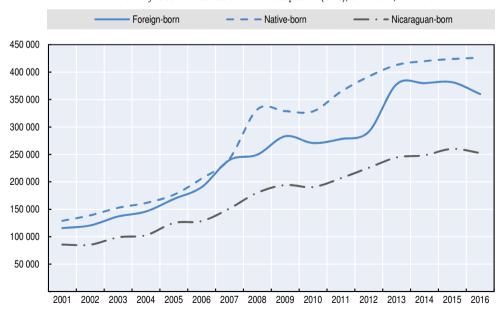
Workers in Costa Rica are mostly waged and salaried workers regardless of place of birth, but immigrants earn less and work longer hours

The overall share of waged and salaried workers in Costa Rica is comparatively high among partner countries, with immigrants having slightly higher shares. Between 2010 and 2016, the average share of these workers in Costa Rica was 75.9% for native-born workers and 79.6% for the foreign born. These shares have remained steady. Similarly, the shares of employers have remained steady at 4.1% for native-born workers and 3.6% for the foreign born. These employer shares are comparable with Argentina and South African among the partner countries (OECD/ILO, 2018).

Immigrants work on average 3.4 hours more and earn less than the native-born population. The average labour income is lower for foreign than for native-born workers (Figure 3.6). In particular, the wages of Nicaraguan-born workers amount to only 60% of those earned by native-born workers. The labour income gap varies by gender, with a larger difference between foreign and native-born women (CRC 317 000 compared to CRC 393 000 in 2016, respectively) than between foreign and native-born men (CRC 383 000 compared to CRC 446 000 in 2016). Women's wages are considerably lower than those of men, so foreign-born women are at a double disadvantage.

Figure 3.6. Immigrants earn on average less than native-born workers

Nominal monthly labour incomes of main occupation (CRC), evolution, 2001-16

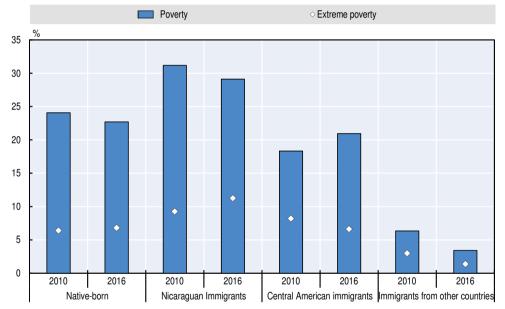


Note: Foreign-born includes Nicaraguan born and non-Nicaraguan born. Source: Authors' own work based on INEC (2001-09) and (2010-16).

Given the lower wage levels, it is unsurprising that poverty incidence was almost 7 percentage points higher for immigrants from Nicaragua (the main country of origin) than for the native-born population in both 2010 and 2016 (Figure 3.7). Poverty rates among the Nicaraguan extreme poverty increased by 2 percentage points between those years for the Nicaraguan population, but remained stable for the native-born population. Conversely, the poverty incidence was lower for Central American and immigrants from other regions than for the native-born population.

Figure 3.7. Incidence of poverty for the native-born population is lower than for Nicaraguan-born immigrants

Incidence of poverty and extreme poverty, by place of birth, 2010 and 2016



Note: In this survey, a person is considered poor if the per capita household income is beneath the poverty line. The poverty line is calculated as the per capita monthly amount necessary to obtain a basic basket of alimentary and non-alimentary goods. A person is considered extremely poor if the per capita household income is lower than the amount necessary to obtain the alimentary basic basket.

Source: Authors' own work based on INEC (2010-16).

Immigrant workers are over-represented in construction, domestic services, accommodation and food, and agriculture

Costa Rica's service sector accounts for the largest share of total value added. The sector has contributed more than 70% of value added since 2012 (World Bank, 2017). Reflecting its importance, the majority of all workers are active in service sectors, regardless of place of birth (Figure 3.8). In 2016, the largest immigrant employer was the wholesale and retail trade sector (15.8%), accounting for a comparable share among native-born workers (18.6%). Other sectors that employ

a large share of immigrants are domestic services (13.6%), agriculture (14.3%) and construction (14.3%). During the period 2001-16, immigrant workers were consistently over-represented in these sectors, which are characterised by high levels of informal employment: 60% of workers employed in these sectors do not participate in the social security system (Estado de la Nación, 2016). Female immigrant workers are mainly active in domestic services and hotels and restaurants, while male immigrant workers are concentrated in construction and agriculture.

Figure 3.8. Workers in Costa Rica are mainly concentrated in service sectors, especially if they are native-born individuals

Share of employment by sector, 2016

■ Activities of households as employers ■Wholesale and retail trade and repair ■Accommodation and food service activities ■ Other services □ Transportation and storage and communications □ Administrative and support service activities □ Education □ Financial intermediation ■ Professional and public administration □ Agriculture ■ Industry 71 Services Foreign-born Industry Agriculture Services Native-born

Source: Authors' own work based on INEC (2010-16).

Since the 1980s, the agricultural sector in Costa Rica has diversified and developed a dynamic export model (see Chapter 2). Immigrant workers, especially Nicaraguan-born migrants located in the border region (Region Huetar Norte), have been part of this transformation and constitute an important part of the labour force working in non-traditional crops such as pineapple, cassava and citrus. Employers face challenges in sourcing foreign-born workers with regular status for this type of work: hiring only regular migrants would cause a shortage in the labour force required for sowing and harvesting (MTSS, 2013, p. 62).

Male Nicaraguan-born immigrants are highly represented in more traditional crops, such as coffee, orange and sugar cane. This is due to lower interest among the male native-born workforce as a result of the physical wear involved in this kind of work (ibid., p. 60), and the geographic location of the facilities, with many plantations located on the border between the two countries. Nicaraguan-born workers mobilise at the individual level and with the help of contractors to work in fields located in Costa Rica (ibid., p. 76).

Agriculture

70

Industry

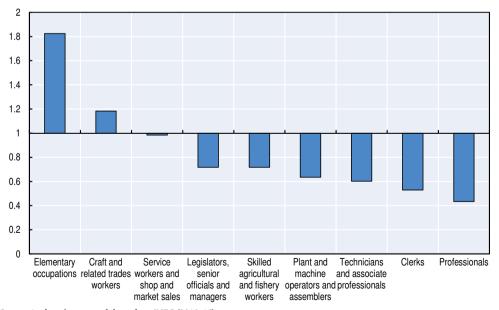
100

Female Nicaraguan-born workers play a different role in this agricultural process, working in packing houses and, to some extent, in the harvesting of oranges (ibid., p. 64). For these jobs, contracting through a contractor is practically inexistent, as female native-born workers are interested in these activities. Immigrant women therefore encounter greater difficulties in accessing the labour market than both male immigrants and their native-born counterparts, which is reflected in uncertainty and lower job quality (ibid., p. 76).

Immigrants are over-represented in low-skilled occupations such as elementary occupations

In line with sectors where immigrants are over-represented, a higher share of immigrants than native-born workers are employed in low-skilled occupations. In 2016, more than 40% of immigrants worked in elementary occupations (e.g. domestic workers and agricultural labourers). Among native-born workers, the share was around 18 percentage points lower. Craft and related trades workers (12%) was the other sector where immigrants were over-represented in 2016 (Figure 3.9). The distribution of occupations of immigrants remained relatively stable over the 2001-16 period.

Figure 3.9. **Immigrant workers are over-represented in elementary occupations**Ratio of the share of immigrant workers to the share of native-born workers, 2016

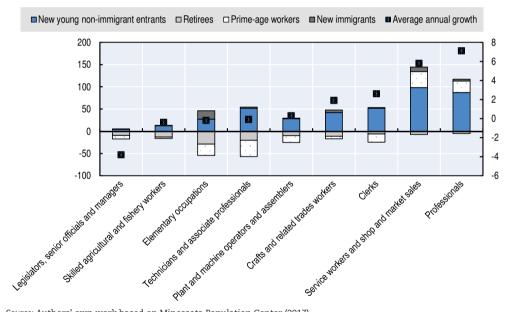


Source: Authors' own work based on INEC (2010-16).

The arrival of immigrants can alter the distribution of occupations over time. Based on a demographic accounting framework (see the Methodological Annex), immigrants arriving between 2001 and 2011 played an important role in the employment growth of elementary occupations. Even if the annual employment growth of elementary occupations was among the lowest (-0.2%) between 2000 and 2011, 41% of new immigrant workers (who arrived after 2000) were active in these occupations (Figure 3.10). This represents the highest demographic contribution of immigrant workers compared to other occupations, although growth was still lower (18 890) than among young native-born entrants (27 260). Immigrants also played a positive role in employment growth in service work and shop market sales occupations (21%).

Figure 3.10. Immigrant workers contributed most to the growth of employment in elementary occupations

Employment growth by occupation (left axis) and average annual growth rate (right axis) between 2001 and 2011



Source: Authors' own work based on Minessota Population Center (2017).

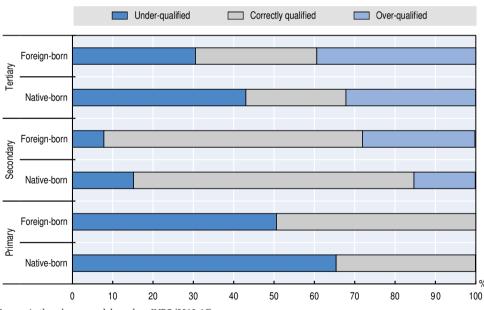
Skill mismatch for tertiary educated individuals is higher among the foreign-born population

The skills of immigrant workers are in general better matched to the occupations they hold than those of native-born workers in Costa Rica's labour market (Figure 3.11). Comparison of the education level of a worker with the skills typically required for that worker's occupation (ILO, 2014), over the last 15 years, show that around half of workers were well-matched to their occupations,

with the share being slightly lower for native- than for foreign-born workers. The share of under-qualified workers is around 11 percentage points higher among native- than foreign-born workers. Conversely, 16% of foreign-born workers are over-qualified, a share that is four percentage points higher than among native-born workers.

Skills mismatches are more significant for workers with primary and tertiary education levels. About one-third of workers with secondary education have skills mismatches (30% among native-born and 36% among foreign-born workers). At both secondary and tertiary levels of education, a higher share of foreign-born than native-born workers are over-qualified, with a difference of 13 percentage points for secondary and 7 percentage points for tertiary education levels. About 65% of native-born workers with primary education and 43% with tertiary education are under-qualified. Among foreign-born workers, the corresponding shares are 51% and 31%.

Figure 3.11. Skill mismatches are high among workers in Costa Rica with tertiary education



Skills match and mismatch by level of education, 2016

Source: Authors' own work based on INEC (2010-16).

Conclusions

Costa Rica attracts a comparatively high share of immigrants, the majority of whom have a lower average level of education. The educational gap between foreign-born and native-born workers is growing, because an increasing share

of native-born workers are graduating from secondary and tertiary education, while educational attainment among foreign-born workers has not changed. The lower levels of school enrolment among immigrants and their children indicate that this gap will continue to increase over time.

Immigrants participate proportionally more in the labour market than the native-born population, and have a higher employment-to-population ratio and lower levels of unemployment, which indicates strong adaption to the Costa Rican labour market. Their participation is especially high in the agriculture, construction and domestic services sectors, and they are more likely to work in low-skilled occupations. In fact, immigrants contribute significantly to employment growth in elementary occupations. Because of the differences in education and their distribution across sectors and occupations, immigrants earn less, work longer hours and have a higher incidence of poverty. The next chapter examines whether these differences in average labour income change when demographic and occupational characteristics are taken into account, and evaluates the link between immigration and certain labour market indicators among the native-born population.

Notes

- 1. Law No. 7676 (1997) stipulated that expenditure on education had to amount to at least 6% of GDP. The law was superseded by Law No. 8954 (2011), which increased the minimum expenditure to at least 8% of GDP, but this objective has not yet been achieved (Ministry of Finance, 2017 p. 11).
- 2. The school enrolment rate refers to the number of students in the age group of a given level of education, expressed as a percentage of the total population in that age group. In Costa Rica, elementary education corresponds to children aged from 7 to 12 years old, the first and compulsory cycle of secondary education corresponds to children aged between 12 and 15 years old, and the second cycle of secondary education, which is not compulsory but free, corresponds to the population aged between 15 and 18 years old.
- 3. The socio-economic status measured in the PISA is assessed on the basis of the following variables: the International Socio-Economic Index of Occupational Status (ISEI); the highest level of education of the student's parents, converted into years of schooling; the PISA index of family wealth; the PISA index of home educational resources; and the PISA index of possessions related to "classical" culture in the family home.

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ANNEX 3.A1

Methodological annex of demographic decomposition

Following Chapters 3 and 4 of Matching Economic Migration with Labour Market Needs (OECD/European Union, 2014), the decomposition used in this chapter is based on a demographic accounting method, applied to changes in the distribution of workers by occupation.

This method builds on the following equation concerning the measure of change in a particular variable between two points in time:

$$\Delta(T) = E + I + \Delta(PA) - R;$$

where

 $\Delta(T)$ = the total change observed in the variable over the period

E = non-immigrant entrants over the period

I = new immigrants who arrived over the period

 $\Delta(PA)$ = change in the non-immigrant prime-age group over the period

R = non-immigrant retirees over the period

This equation shows that total change over the period equals inflows minus outflows, while deaths and emigration are included implicitly. The table below summarises how these components are obtained based on data on the labour force from the 2001 and 2011 population censuses.

Table 3.A1.1. Definition of components for the demographic accounting decomposition

| (1) = (2) - (3) | (2) 2011 population census | (3) 2001 population census |
|---|--|----------------------------|
| Non-immigrant entrants (E) | LF (aged 15-34 excluding foreign-born without long-term residence) | LF (aged 15-24) |
| Retirees (-R) | LF (aged 55+ excluding foreign-born without long-term residence) | LF (aged 45+) |
| Change in the prime-age group $(\Delta(PA))$ | LF (aged 35-54 excluding foreign-born without long-term residence) | LF (aged 25-44) |
| New immigrants (I) | LF (foreign-born without long-term residence aged 15+) | 0 |
| Total change: $\Delta(T) = E + I + \Delta(PA) - R$ | LF (aged 15+) | LF (aged 15+) |

Note: LF = labour force.

Non-immigrant entrants to the labour market are calculated by subtracting the labour force aged 15-24 in 2001 from the labour force aged 15-34 in 2011. This assumes that all persons aged 15-24 who were part of the labour force in 2001 are still in the labour force ten years later (when they were aged 25-34). Similarly, retirees are those in the labour force who were aged 45 and above in 2001 minus those aged 55 and above in 2011 (temporary withdrawals and reentries prior to definitive retirement are implicitly netted out). The change in the size of the prime-age group equals the labour force aged 35-54 in 2011 minus the labour force aged 25-44 in 2001. Finally, the number of new immigrants is calculated as immigrants with a duration of residence of less than ten years, and such immigrants are excluded from the other components to avoid double counting. As can be verified from the table, these four components add up to the labour force in both 2001 and 2011.

Chapter 4

How immigrants affect the labour market in Costa Rica

This chapter provides empirical evidence concerning the impact of immigration on Costa Rica's labour market. The first section discusses the income differences between immigrant and native-born workers in Costa Rica. The second section presents the impact of immigrant workers on the labour market outcomes of native-born workers, followed by the results of estimations. The Annex details the chapter's underlying methodology and data.

How are immigrants integrated into the Costa Rican labour market? To what extent does their presence affect the employment opportunities and incomes of native-born workers? These questions are critical for both policy makers and native-born individuals, especially in a country where 12.5% of the working population is foreign born. While interest in the labour market impacts of immigrants in developing countries is growing, few empirical studies have been undertaken to date. This chapter aims to address that gap by providing empirical evidence concerning the relationship between immigration and the labour market outcomes of native-born workers in Costa Rica, using an econometric approach (see Annex 4.A1).

The first section discusses the income differences between foreign and native-born workers, and explores the underlying factors contributing to these differences. The second section explores the association between immigrant workers and the labour market outcomes of native-born workers, with a focus on the employment rate and wages.

Differences in labour income between native and foreign-born workers

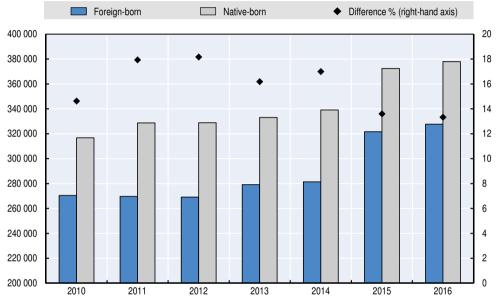
On average, the labour income of the foreign-born population is 15% below that of the native-born population. Immigrants in Costa Rica are more likely to work in elementary occupations and have a lower level of educational attainment than the native-born population, and their labour income reflects these differences. Figure 4.1 shows the unadjusted labour income gap between native and foreign-born workers. The income gap has remained relatively stable over time, but nominal income has increased significantly for both the native and the foreign-born population. Immigrants from Nicaragua experience a larger wage gap than other immigrants, with their wages on average amounting to 62% of those of the native-born population in 2016.

The importance of personal characteristics becomes apparent when comparing average labour income between individuals with different levels of education. For example, the average income of individuals who have finished primary, secondary or tertiary education is on average 17%, 78% and 248% higher than the average labour income of individuals without education (Figure 4.2). The wage differences related to the level of education, also called educational premiums, might depend on the country where the education is obtained. If degrees from other countries are considered to be of lower quality, immigrants

might receive smaller educational premiums (Card, 2005). This seems not to be the case for Costa Rica, where the educational premium for tertiary education is, at 302%, higher for immigrants than for the native-born population with otherwise similar characteristics (248%).

Figure 4.1. Labour income is significantly lower among the foreign-born than the native-born population

Nominal labour income by place of birth, 2010-16



Source: Authors' own work based on INEC (2010-16).

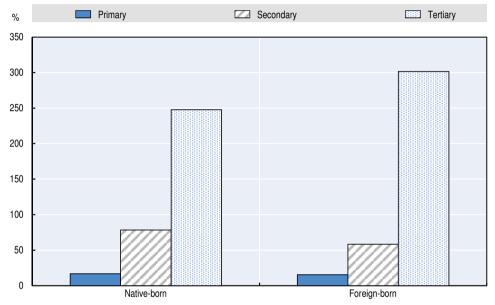
Aside from the level of education, immigrants also differ from the native-born population in other observable characteristics, such as experience (slightly lower), gender composition (slightly more female workers among immigrants), average hours worked per week (higher) and the region where they live. All these factors affect labour income, and therefore differences in these variables have to be taken into account when comparing labour income between the two groups. Regression analysis compares how the level of one variable, such as labour income, is related to another variable, such as the place of birth, while taking into account differences in the other variables.

Table 4.1 shows that, on average, labour income among immigrant men is about 7% below that of native-born men, once between-group differences in education, experience, number of hours worked, and the region are taken into account. When occupational differences are included in the regression, such as the tendency for immigrants to work more often in elementary occupations,

the difference in labour income is no longer significant. Thus, labour income differences between native and foreign-born men are related mostly to the different occupations they hold, as the average wages for both groups within occupations are similar.

Figure 4.2. Labour income increases significantly with educational attainment, both for the native and the foreign-born population





Note: The presented results are equal to transformed regression coefficients from ordinary least squares (OLS) regressions for the labour force aged 15 and above. Control variables included are sex, age, age squared, region and year. Data from 2007 to 2009 are excluded because it could not be definitely determined that net income was reported. Source: Authors' own work based on INEC (2001-09, 2010-16).

The labour income of immigrant women is similar to that of native-born women, controlling for the effect of personal characteristics, and they have a higher income compared to that of native-born women within the same occupation. Gender is an important determinant of labour income, as native-born women's income is 28% below that of native-born men. The relationship between labour income and gender is influenced by the place of birth, as reported by the interaction effect between the variables immigrant and female (Table 4.1). The table reports a negative overall effect for immigrants (-0.7), but a positive effect for the interaction between women and immigrants (0.6). To calculate the effect of place of birth on women both variables must be taken into account, demonstrating that the impact for women is minimal (-0.1). Therefore, place of birth seems irrelevant for women's labour income once

personal characteristics and the region are taken into account. Interestingly, when occupational differences between foreign and native-born women are also taken into account, the regression analysis shows that immigrant women earn more than native-born women, with an average of around 7% (-0.02+0.09). This is confirmed by the separate analysis focusing solely on women. Immigrant women do relatively well compared to native-born women, but a significant income gap with men remains.

Table 4.1. Lower income among immigrants is largely explained by demographic differences

Regression coefficients indicating relationship between labour income and individual characteristics

| | All workers | All workers | Men | Women |
|----------------------------------|-------------|-------------|---------|---------|
| Immigrant | -0.07*** | -0.02 | -0.02 | 0.07*** |
| Female | -0.28*** | -0.27*** | | |
| Interaction immigrant and female | 0.06*** | 0.09*** | | |
| Primary education completed | 0.24*** | 0.19*** | 0.17*** | 0.22*** |
| Secondary education completed | 0.71*** | 0.43*** | 0.40*** | 0.47*** |
| Tertiary education completed | 1.46*** | 0.70*** | 0.65*** | 0.71*** |
| Occupation (fixed effects) | | Yes | Yes | Yes |
| Observations | 102 896 | 102 896 | 65 240 | 37 656 |
| R-squared | 0.47 | 0.53 | 0.45 | 0.62 |

Note: The dependent variable is a logarithm of the monthly labour income. All estimations include year and region fixed effects. The regression also controls for age and age squared, and the logarithm of number of hours worked. It includes individuals 15 years and older. Significance levels * = 0.1, ** = 0.05 and *** = 0.01.

Source: Authors' own work based on INEC (2010-16).

The results of the labour income analysis provide no reason to believe that immigrants are discriminated against in terms of lower wages. When demographic differences are taken into account, the wage gap is relatively small (7% for men) or non-existent (for women). But there are differences between the occupations that foreign and native-born populations hold, which directly affect their wage levels. There are several potential explanations for these differences in occupations. Lack of access to labour market information and better-paying sectors might make immigrants resort to elementary and more vulnerable jobs in sectors such as agriculture or construction. Conversely, foreign-born individuals may have different personal preferences and hence make different job choices. It is likely that immigrant networks play a role in this regard, leading to increased employment in sectors and occupations where immigrants are already present. The next section looks beyond integration to explore how immigrants affect the labour market outcomes of the native-born population.

The effect of immigration on labour incomes and employment of the native-born population

The income level of immigrants is very similar to that of the nativeborn population once differences in education and experience are taken into consideration. Does equal level of pay indicate that the presence of foreign-born workers has little impact on the incomes of the native-born population? Or does it imply that immigrants are good substitutes for native-born workers? The question of whether and how immigrants affect the labour market outcomes of the native-born has received growing attention in high-income countries, where the effects of immigrants on income and employment tend to be limited (Longhi, Nijkamp and Poot, 2010). However, such effects are more likely to be negative for certain sub-groups such as low-income or low-skilled workers (Friedberg and Hunt, 1995; Hanson, 2008; Kerr and Kerr, 2011; Longhi et al., 2010). Very few studies have been conducted on the impact of immigrants on the labour market outcomes of the native-born population in Costa Rica, thus the empirical evidence on this subject is limited (Estado de la Nación/IOM, 2001). This section addresses that gap, using immigrant concentrations to analyse their relation to the labour outcomes of the native-born population.

Data and methodology

Following Borjas (2003) and Facchini, Mayda and Mendola (2013), this section employs a skill cell approach, which utilises levels of experience and education to examine the impact of immigrants on the labour market outcomes of the native-born population with similar skills (see Box 4.1 for the methodological details). The underlying idea is that individuals who differ in skills and experience do not compete for the same jobs. Four levels of education and ten levels of experience are recognised, 1 creating a sample of 40 cells within which the native and foreign-born populations are comparable in terms of qualifications and would hence be expected to compete with each other.

The analysis is based on the Multi-Purpose Household Survey 2001-09 (Encuesta de Hogares de Propósitos Multiples) (EHPM) and the 2010-16 National Household Survey (Encuesta Nacional de Hogares ENAHO). The later survey updated and replaced the former. The measurement of income for wage earners was changed with the aim to disentangle gross and net income (INEC, 2010 p. 15). This led to changes in the definitions of income and the ways in which taxes were addressed in the survey. These changes are accounted for in this analysis and the variables harmonised.

Box 4.1. Linking native-born labour market outcomes with foreign-born shares

The analysis presented below follows the skill-cell approach proposed by Borjas (2003) and Facchini, Mayda and Mendola (2013) with variations. It investigates whether the average labour market outcomes of native-born workers (e.g. the employment rate or labour income) of a particular education and experience level are affected by the share of immigrants with similar qualifications. This analysis is explained in more detail in Annex 4.A1. The underlying assumption is that native-born and immigrant workers only compete if they have the same skill and experience levels.

The differences between the two approaches relate to the definitions of the relevant labour market employed and the additional impacts taken into account. Borjas defines the skill groups solely by the education level and estimated work experience. This assumes that workers are completely mobile across the national territory. Facchini, Mayda and Mendola define groups also by region. The definition of a region differs by country. This assumes that labour markets are not national, but regional. Both approaches include only individuals of working age (15 to 64). In order to account for the fact that labour market outcomes may differ systematically by education, work experience or year, the analysis includes variables that control for these factors.

There are several shortcomings to this approach. Most importantly, for the regional approach, the composition of the immigrant labour force and its distribution across the country is not random. Regions in which the labour market develops positively probably attract more immigrants, while individuals might be more likely to immigrate if their skills are in high demand. Therefore, the results cannot be interpreted as conclusive proof, for example, that the presence of immigrants increases or decreases labour incomes. Furthermore, by focusing on immigrants with qualifications similar to those of the native-born population, the analyses focus on the competitive or substitution effect. The complementarity of immigrant workers with different skills is discussed briefly at the end of the chapter.

Correlations between the proportion of foreign-born individuals and the labour market outcomes of the native-born population

The link between the labour market outcomes of the native-born population and the concentration of foreign-born individuals is first explored by looking at correlations. These analyse the degree to which the variation in two variables is related – in other words, is the level of one variable related to the level of another? The relationships explored here concern links between changes in the labour market outcomes of the native-born population of a given education level, region and survey year, and changes in the immigrant concentration of the same education, region and survey year. However, a correlation – negative or positive – does not prove that a change in the immigrant concentration provokes

a change in the labour market outcome. Other factors, such as economic cycles, for example, could affect both immigrant concentration and the labour market outcomes of the native-born population.

There is a negative correlation between immigrant concentrations – in a given region and of a specific education level – with the employment rate of the native-born population with the same education in the same region as the immigrants (Figure 4.3). On average, a 10% increase in the share of immigrants of a particular educational level in a given region is associated with a 1% decrease in the employment rate of the native-born population of the same educational level in that region. This association does not prove causality, as immigrants might be drawn to work in areas where the native-born population leaves the labour force. Furthermore, underlying factors that are not controlled for could influence changes in both variables.

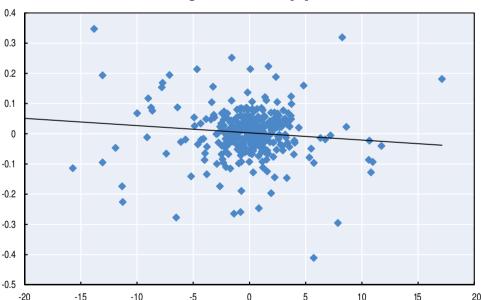


Figure 4.3. Immigrant concentration is negatively associated with the employment rate among the native-born population

Note: The difference in employment rate is the standardised difference between two following years, the difference in the immigrant concentration is the difference in percentage points between two consecutive years, only taking into account the immigrants with similar educational background and in the same region.

Source: Authors' own work based on INEC (2001-09, 2010-16).

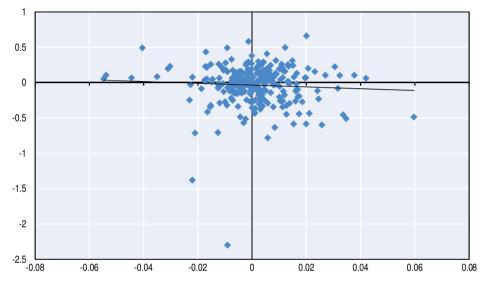
The average labour income of the native-born seems not to be correlated with immigrant concentrations (Figure 4.4), as the coefficient is small and not statistically significant. Furthermore, the R-squared, an indicator of how

much variance in one variable is explained by the variance in another, is very low. This suggests that immigrant concentration is not an important determinant of labour income of the native-born population with similar qualifications.

Figure 4.4. Immigrant concentration and the labour income of the native-born population are not correlated

Changes in immigrant concentration and native-born labour income of a given education level, region and survey year

Change in log of real labour income of the native-born



Change in immigrant share in the labour force

Source: Authors' own work based on INEC (2001-09, 2010-16).

The employment rate of the native-born population decreases in the presence of foreign-born workers

The results from regression analysis confirm the negative association between immigrant concentrations and the native-born employment rate (Table 4.2). The overall employment rate is negatively associated, while the unemployment rate is positively associated with the share of foreign-born workers. The labour income of native-born workers seems unaffected. At first sight, these results seem to suggest that immigrants take the jobs of the native-born, who then become unemployed. However, the story is more complex. The association between immigrants and the labour outcomes of the native born differ by education level and by the level of analysis chosen.

Table 4.2. At the national level, a high immigrant concentration is associated with a low employment-to-population ratio among the native-born population

Correlation between immigration and the labour market outcomes of the native-born population, national level

| | All | Low skilled | High skilled | Women | Men |
|--------------------------------|-----|-------------|--------------|-------|-----|
| Employment-to-population ratio | _ | _ | 0 | - | _ |
| Unemployment rate | + | 0 | + | 0 | 0 |
| Labour income | 0 | 0 | 0 | 0 | 0 |

Note: The table reports the sign of the immigrants' share variables from regressions where the dependent variable is the mean Costa Rican-born labour market outcome for an education*experience group at a particular point in time. An "o" indicates no significant effect; a "+" indicates a significant positive effect; and a "-" indicates a significant negative effect.

Source: Author's own work based on INEC (2001-09, 2010-16).

At the national level, the overall effect of immigrants on the employment-to-population ration and the unemployment rate of the native-born population seems to be driven by two separate groups (Table 4.2). Among the low skilled, the employment rate of native-born workers is negatively associated with concentrations of immigrants, however the unemployment rate is unaffected. In other words, low-skilled native-born individuals who compete with many foreign-born workers that are similar in terms of experience and education are less likely to be employed, but are not more likely to be unemployed compared to individuals who compete with few foreign-born workers. Among the highly skilled, the opposite is true. While high-skilled, native-born individuals are not more or less likely to be employed due to the presence of immigrants, they do become more likely to become unemployed when the share of immigrants with similar qualifications is high.

The labour income of the native-born population is unaffected by the concentration of immigrants. This is the case for both high and low-skilled workers and does not differ when the analysis is broken down by gender. Labour market outcomes might differ depending on the level of analysis chosen, however. Analysis at an aggregated (national) level might disguise effects that take place at a more segregated (regional) level (Facchini, Mayda and Mendola, 2013). Therefore, it is important to compare labour market outcomes at both the national level and regional level. For labour income, the results are consistent between the national and region level.

The regional level analysis confirms the negative association between native-born employment-to-population ratios and immigrant concentrations. However, two differences emerge when comparing the national and regional analysis. At the regional level, the employment-to-population ratio of the highly skilled is negatively associated with immigrant concentrations, in contrast to the insignificant results at the national level. Additionally, the unemployment

rate is unaffected at the regional level while a negative association was found at the national level. A possible explanation is that some native-born workers react to the inflow of immigrants and move from regions that attract many immigrants to regions with fewer immigrants, but do not immediately find work in the new region (Facchini, Mayda and Mendola, 2013). If they move between regions but stay within the country, this affects the results at the regional level but not at the national level.

Table 4.3. Immigration is associated with a lower employment rate among the native-born at the regional level

Correlation between immigration and labour market outcomes of the native-born population, regional level

| | All | Low skilled | High skilled | Women | Men |
|--------------------------------|-----|-------------|--------------|-------|-----|
| Employment-to-population ratio | - | - | - | 0 | - |
| Unemployment rate | 0 | 0 | 0 | 0 | 0 |
| Labour income | 0 | 0 | 0 | 0 | 0 |

Note: The table reports the sign of the immigrants' share variables from regressions where the dependent variable is the mean Costa Rican-born labour market outcome for an education*experience group at a particular point in time. An "o" indicates no significant effect; a "+" indicates a significant positive effect; and a "-" indicates a significant negative effect.

Source: Author's own work based on data from INEC (2001-09, 2010-16).

A part of the difference in the labour market effects of immigration on the high and low-skilled native-born might be due to wage differences. Migration, internationally but also within a country, can be costly and might be merited only if the potential earnings are attractive enough. In this case, it is likely that relocation is more common among high-skilled than low-skilled individuals, given their significant wage differences (Table 4.1). Previous research has confirmed that education is an important factor in the mobility decisions of individuals (Malamud and Wozniak, 2012). However, until the underlying cause of the differences between regional and national-level results among the high skilled is established, efforts to ascertain the reason for the differences between high and low-skilled workers will remain speculative.

Nicaraguan women might increase native-born women's labour force participation

Immigrants compete with the native-born population for jobs, but could also replace the native-born in a sector that has received less attention: domestic work. The labour force participation rate of women is traditionally lower than that of men, as women generally perform many of the caregiving tasks in the household. The presence of immigrants can provide opportunities to hire labour for housework, allowing women to join the labour market and contribute to Costa Rica's economic growth. This section explores the relationship between the share of immigrant women and the labour force participation rate of native-born women.

In Costa Rica, the likelihood that a woman works in housework is related to her country of origin. Women from Nicaragua are more likely (35%) to work in this sector compared to other immigrant women (9%). Therefore, the analysis focused on female immigrants from Nicaragua, and explores the relationship between the share of Nicaraguan women in a region with the labour force participation rate of native-born women in the same region. Regression results show that there is no overall relationship, but these mask the opposing results found for women of different educational backgrounds. Among low-educated women, there is no relationship or a negative relationship between the share of Nicaraguan women in that area and their labour force participation rate. For women with tertiary education, the relationship is positive (Table 4.4).

Table 4.4. A positive relationship exists between female immigration and the labour supply of high-skilled, native-born women

| Highest completed education | AII | <primary< th=""><th>Primary</th><th>Secondary</th><th>Tertiary</th></primary<> | Primary | Secondary | Tertiary |
|--|---------|--|---------|-----------|----------|
| Share of Nicaraguan-born female immigrants | -0.11** | 0.09 | -0.12* | -0.23** | 0.30** |
| Observations | 205 227 | 13 873 | 99 474 | 64 480 | 28 170 |
| Pseudo R-squared | 0.11 | 0.05 | 0.04 | 0.09 | 0.15 |

Note: The regressions include control variables for age, age squared, education, rural, and region and year fixed effects. The labour supply decision is analysed using a probit regression, and the average marginal effect is reported. Significance is indicated as follows: * 10% significance level, ** 5 % significance level and *** 1% significance level.

Source: Authors' own work based on INEC (2001-09, 2010-16).

These opposing effects might be explained by the skills complementarity of Nicaraguan women and those of high-skilled, native-born women. Most Nicaraguan-born women in Costa Rica are low-skilled, and therefore do not compete directly with jobs of interest to high-skilled native-born women. However, the results suggest that immigrants do provide increased opportunities to participate in the labour market. This may be because immigrant women from Nicaragua replace native-born women in housework, or because their presence increases demand for high-skilled workers and thereby provides more attractive opportunities to join the labour market. While labour force participation increases among high-skilled, native-born women, the opposite is true for low-skilled women. Nicaraguan women in Costa Rica do not all work in housework, and thus might compete on the labour market for jobs of interest to native-born women. These results are in line with findings from Italy where the presence of female immigrants affected the labour supply of high-skilled, but not of low-skilled native-born women (Barone and Mocetti, 2011). The analysis adds further evidence that low-skilled immigrants and native-born individuals compete, but it also suggests that a part of the native-born population - most likely those with skills complementary to those of immigrants - could benefit.

Conclusions

Immigrants in Costa Rica have average labour incomes similar to those of the native-born, but this varies by gender. Men's wages are on average 7% lower if they are born abroad, while those of women do not differ once personal characteristics are taken into account. The wage gap in Costa Rica is smaller than that found in other partner countries. However, immigrants more often work in sectors where informality is high, and therefore their position is vulnerable. This, combined with the lack of access to certain public services, as mentioned in Chapter 3, places immigrants in a disadvantaged and vulnerable position.

Immigrants affect the employment rate of the native-born, but not their labour income. Competition for jobs with immigrants of similar qualifications seems to be a reason for some native-born individuals to leave the labour market, as the presence of immigrants decreases their employment rate. The estimated labour market impacts in Costa Rica are consistent with those found in some other countries. In four of the partner countries, including Costa Rica, a negative impact on the employment rate was observed (OECD/ILO, 2018), while in other partner countries no relationship was found. Labour income is unaffected, consistent with the results from other partner countries, where no relationship was observed, except for a positive impact in Rwanda. This confirms findings from earlier research in Costa Rica (Gindling, 2009), which found that immigrants do not significantly affect the earnings of the native-born.

Note

1. There are six socio-economic regions of Costa Rica: Brunca, Central, Chorotega, Huetar Atlántico, Huetar Norte and Pacífico Central.

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ANNEX 4.A1

Methodology

The methodology for this chapter follows Facchini, Mayda and Mendola's 2013 analysis of the labour market impact of immigration in South Africa. Their analysis is in the tradition of Borjas (2003) and Card (2001).

This so-called "skill cell approach" bases estimations on group-level ordinary least squares (OSL) regressions. Workers of comparable skill levels are grouped, typically based on two dimensions: education and experience. Each of the native-born labour market outcomes is regressed on the share of immigrants in the labour force in each skill group. The coefficient of this regression shows the impact size. The underlying assumption is that native and foreign-born workers only compete if they have the same skill level. This chapter distinguishes four education groups: less than primary education, primary education, secondary education and tertiary education, as well as 10 work experience groups based on the mean employment rates of individuals by education, sex and age; this makes 40 groups in total. Data include a pooled sample of the Multi-Purpose Household Survey (EHPM) taken from between 2001 and 2009 and the National Household Survey (ENAHO) for 2010-16.

Dependent variables include labour income, unemployment, the employment-to-population ratio, under employment, part-time employment and vulnerable employment; however, some results are not shown as they were not significant. Part-time employment is defined as the population that works less than 35 hours per week. Under-employed workers are those in part-time employment but that would like and are available to work more hours per week. Vulnerable workers are own-account workers and contributing family workers.

The regressions show the correlation between the dependent variable and the concentration of the foreign-born population in each cell, but they do not claim a causal relation. The model used for this estimation is:

$$Y_{ijt} = \beta m_{ijt} + e_i + w_j + c_t + (e_i * w_j) + (e_i * c_t) + (w_j * c_t) + u_{ijt}$$
(1)

where Y_{ijt} is the labour market outcome for a native-born worker with education i (i = 1...4) and work experience j (j = 1...10) for year t. Furthermore:

$$m_{ijt} = M_{ijt} / (M_{ijt} + N_{ijt})$$
 (2)

where M_{ijt} is the number of foreign-born workers with education i, work experience j at time t, and N_{ijt} is the number of native-born workers with education i, work experience j at time t. The other explanatory variables are a set of fixed effects that aim to take into account education level (e_i), work experience (w_j) and time period (c_t), and their two-way interactions. In contrast to previous research (see Borjas, 2003; Facchini, Mayda and Mendola, 2013), the data include both men and women.

For the sub-national level, the same methodology was used, but takes into account the sub-national distribution of foreign-born workers along with their skill distribution (see Facchini, Mayda and Mendola, 2013). The following equation is estimated:

$$Y_{ijt} = \beta m_{ijt} + d_k + e_i + w_j + c_t + (e_i * w_j) + (e_i * c_t) + (w_j * c_t) + (e_i * d_k) + (d_k * c_t) + (w_j * c_t) + u_{iit}$$
(3)

where d is a fixed effect taking into account sub-national divisions in a country k (k = 1...K). Two-way interactions with other fixed effects are also included.

All Low skilled High skilled Women 0.14 Labour income -1.25-1.16-0.17-0.88 (0.79)(1.20)(0.36)(0.24)(0.64)Employment-to-population -0.29** -0.17* -0.20-0.19** -0.25*** (0.12)(0.09)(0.17)(0.08)(0.08)Unemployment 0.07* 0.02 0.05* 0.03 0.06 (0.04)(0.05)(0.05)(0.03)(0.03)

Table 4.A1.1. Estimations at the national level

Note: The analysis includes individuals aged 15-64 years. The coefficients shown are from regressions where the share of immigrants in a particular skill cell is the independent variable. Separate regressions are run for each labour outcome variable and for each sample, as indicated in the column headings. The regressions include control variables for age, age squared, region and year fixed effects. Statistical significance is indicated as follows: * 10% significance level, ** 5% significance level and *** 1% significance level.

Source: Author's own work based on INEC (2001-09, 2010-16).

Table 4.A1.2. Estimations at the regional level

| | All | Low skilled | High skilled | Men | Women |
|--------------------------------|----------|-------------|--------------|----------|--------|
| Labour income | -0.24 | -0.18 | -0.04 | -0.14 | -0.17 |
| | (0.14) | (0.12) | (0.11) | (0.10) | (0.17) |
| Employment-to-population ratio | -0.24*** | -0.24*** | -0.21*** | -0.18*** | -0.04 |
| | (0.03) | (0.04) | (0.06) | (0.03) | (0.04) |
| Unemployment | 0.003 | -0.02 | 0.02 | 0.001 | 0.02 |
| | (0.01) | (0.02) | (0.02) | (0.01) | (0.03) |

Note: The analysis includes individuals aged 15-64 years. The coefficients shown are from regressions where the share of immigrants in a particular skill cell in a given region is the independent variable. Separate regressions are run for each labour outcome variable and for each sample, as indicated in the column headings. The regressions include control variables for age, age squared, region and year fixed effects. Statistical significance is indicated as follows: * 10% significance level, ** 5% significance level and *** 1% significance level.

Source: Author's own work based on INEC (2001-09, 2010-16).

Chapter 5

Immigration and economic growth in Costa Rica

The previous chapter explored how immigration affects the labour market outcomes of native-born individuals. This chapter returns to the economic context presented at the start of Chapter 2. It first discusses how immigration and economic growth may be related and seeks to identify what share of value added is generated by immigrants. The second part shifts the focus to the relationship between immigration and entrepreneurship.

This chapter explores how immigration is related to economic growth in Costa Rica. In view of the comparatively high share of immigrants in the country and their over-representation in the labour force, their contribution of gross domestic product (GDP) may be assumed to be substantial. Their concentration in sectors with traditionally lower levels of productivity suggest, however, that their effect might be more limited. Conversely, if immigrants working in sectors such as domestic services facilitate the increased labour participation of highly educated native-born women (Barone and Mocetti, 2011; Chapter 4), their contribution may be more important than appears at first glance.

Immigration, value added and productivity

The relationship between immigration and economic growth is far from clear. The two may or may not influence each other mutually, and they could both be affected by other factors. For example, immigration may promote innovation and hence economic growth, a booming economy could attract new immigrants, and a natural disaster could hamper the economy and reduce the country's attractiveness as a migration destination. But it is also possible that such mutual effects are minor or practically non-existent. The direction and size of the relationship is empirically difficult to determine and cross-country studies have come to different conclusions.

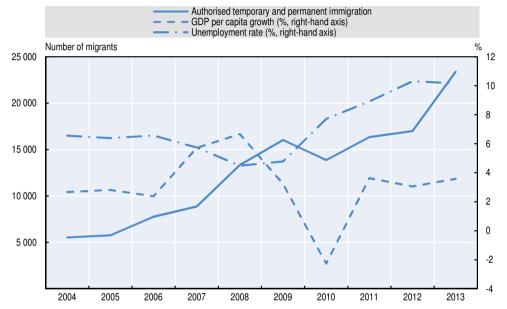
As noted in Chapter 2, economic opportunities are an important factor motivating immigrants to come to Costa Rica; however, other factors – such as the political situation or natural catastrophes in their homeland – also play a role in many cases. The greater the importance of such "push" factors in the country of origin, the lower the likelihood that economic boom and bust cycles in the country of destination will affect immigration flows. Nonetheless, immigration that is not primarily economically motivated can affect economic growth both in the short and long term.

A simple comparison of the annual economic growth rate with authorised immigration flows does not show an immediate link between the two (Figure 5.1). Over the 2004-13 period, immigration flows increased constantly, with only a small slowdown in 2010. Meanwhile, GDP per capita growth rates oscillated over the 2006-11 period, with a growth peak in 2008 (+6.7%) and a recession in 2010 (-2.3%). However, authorised immigration flows remained high during the economic decline in 2008-10 and increased steadily over the 2012-13 period during which growth rates were stable. The fact that this simple comparison does

not reveal a clear link between immigration flows and economic growth does not necessarily imply that immigrants in Costa Rica do not play an important role in its economy, perhaps filling vital functions that were previously unfilled. Moreover, it does not indicate whether immigrants' per capita contribution to GDP is on average higher or lower than that of the native-born.

Figure 5.1. There is little apparent correlation between GDP per capita growth and immigration rates

Authorised migration flows, GDP per capita growth and unemployment in Costa Rica, 2003-13



Note: The "permanent" immigration category includes individuals already living in the country who changed their status from temporary to permanent immigrants.

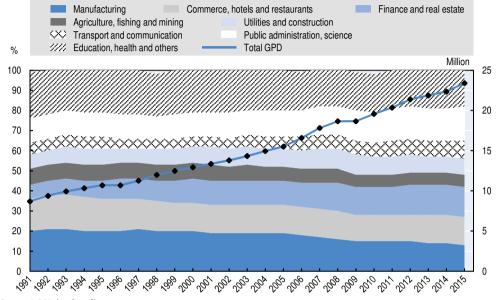
Source: Organization of American States (2015); World Bank (undated).

The immigrant contribution to value added is above their share of the population

The distribution of value added across economic sectors has shifted from primary to high value-added and knowledge-intensive sectors (OECD, 2016) (Figure 5.2). Over the 1991-2015 period, education, social and health services, and other social activities experienced the largest growth, from 7% to 15%, followed by public administration, professional, and scientific and technical administration, from 12.3% to 17%. Conversely, manufacturing was the most important sector in 1991, accounting for 20.3% of value added, but has decreased in recent years to 13% in 2015. This is in spite of the fact that certain sectors of the Costa Rican industry have turned towards higher-value added activities that are less reliant on high labour and natural resource inputs (OECD, 2013).

Figure 5.2. The Costa Rican economy has shifted from primary to high value-added and export-oriented sectors





Source: BCCR (undated).

The value added generated by immigrant workers is estimated to be lower than their share of the employed population. This estimate is derived by multiplying the value added produced in an economic sector by the share of immigrants working in that sector and adding up the resulting estimated value added produced by immigrants in each of these sectors. In order to account for potential productivity differences due to different levels of education, it is assumed in the adjusted estimation that the relative ratio of the years of education indicates productivity. For example, if immigrants in a particular sector had 11 years of education and native-born persons had ten years on average, then foreign-born workers are assumed to be 10% more productive than native-born workers.

Immigrants' estimated contribution to value added is below their share among the employed, but above their population share. According to the non-adjusted estimate, 11.9% of value added is produced by immigrants (Table 5.1). The adjusted estimate suggests a slightly lower value of 11.1%, due to the fewer years of schooling among immigrant populations. Both shares are lower than the immigrant share of the employed population (14.3%), according to the 2011 census. This result is driven by the above-average concentration of immigrants in sectors with relatively low value added, such as construction, agriculture and fishing, and hotels and restaurants. However, the share of value added produced by immigrants is higher than their share of the overall population in 2011 (9.1%).

This is because immigrants, in comparison to the native-born population, are more likely to be of working age, and are more likely to participate in the labour force, as pointed out in Chapters 2 and 3.

Table 5.1. Immigrants contribute a lower share of value added than their share of employed individuals

Gross value added by sector in Costa Rica, million CRC, 2012

| | Value added (2012) | Immigrant share (2011 census) | Productivity adjustment (education ratio) | Estimated value added (unadjusted) | Estimated value added (adjusted for education ratio) |
|--|-----------------------|----------------------------------|---|--|--|
| Agriculture and fishing | 1 264 236 | 16.31% | 0.76 | 206 172 | 155 728 |
| Mining | 68 308 | 13.19% | 1.24 | 9 008 | 11 139 |
| Manufacturing | 3 155 297 | 11.32% | 0.95 | 357 265 | 340 943 |
| Utilities | 650 231 | 6.02% | 0.86 | 39 157 | 33 554 |
| Construction | 1 252 621 | 23.57% | 0.91 | 295 262 | 269 676 |
| Wholesale and retail trade | 2 203 235 | 10.95% | 0.99 | 241 309 | 238 573 |
| Transport and storage | 904 190 | 6.14% | 1.06 | 55 521 | 59 114 |
| Hotels and restaurants | 617 532 | 19.69% | 1.00 | 121 592 | 121 675 |
| Information and communication | 819 952 | 8.64% | 1.03 | 70 875 | 73 157 |
| Finance | 1 096 857 | 4.71% | 0.94 | 51 653 | 48 525 |
| Real estate | 2 079 035 | 21.64% | 0.93 | 449 955 | 416 762 |
| Professional, scientific technical, administrative and support service | 2 353 839 | 12.85% | 0.93 | 302 466 | 280 572 |
| Public administration | 1 014 478 | 3.05% | 0.89 | 30 896 | 27 630 |
| Education and health | 3 242 804 | 5.41% | 0.96 | 175 421 | 168 981 |
| Other activities | 659 462 | 21.56% | 0.95 | 142 157 | 134 782 |
| Total | 21 382 077 | 14.28% | | 2 548 710 | 2 380 812 |
| Share | | | | 11.9% | 11.1% |

Note: The immigrant share is restricted to the sample of employed individuals aged 15 and above. The productivity adjustment factor is calculated as the ratio of the mean years of education of immigrants to the mean years of education of native-born workers.

Source: Authors' own work based on the 2011 Census (Minnesota Population Center, 2017), and BCCR (undated).

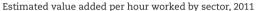
The finding that an estimated 11% of value added can be attributed to immigrant workers does not imply that GDP would be exactly 11% lower if all immigrants left Costa Rica. In reality, both the immediate and long-term impacts may be higher or lower. The contribution to value added is an approximate estimation based on limited data and necessary assumptions. For example, productivity may vary strongly across sub-sectors and immigrants may be working disproportionally in companies with different levels of productivity. In addition, the ratio of estimated years of schooling is a crude proxy for productivity differences between foreign and native-born individuals. These estimations do not capture the fact that immigrants' economic activities can have broader effects. Furthermore, native-born, unemployed individuals might be able to replace immigrant workers if they leave. Conversely, in cases where foreign-born workers fill vital gaps in the economy or enhance the labour

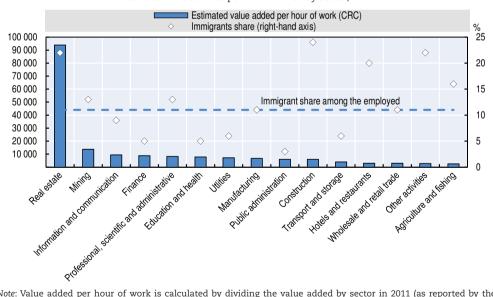
productivity of native-born workers, the economic impact of their departure might be much larger.

Labour productivity has stagnated in recent years, but a link with immigration is difficult to establish

As noted previously, labour productivity, measured by value added per hour worked, varies greatly across sectors. In 2011, it ranged from Costa Rican Colones (CRC) 2 528 for agriculture and fishing, to CRC 93 842 for real estate (Figure 5.3). The labour productivity measure is equal to the value added of the sector divided by the estimated number of hours worked in the sector. The measure does not, therefore, take into account the value of other inputs, such as capital and land. In general, value added per hour worked is higher in sectors in which physical and human capital investments are likely to be significant. These include real estate and information and communication, as well as financial and insurance activities. Aside from work in agriculture and fishing and other activities, value added per hour is also quite low in wholesale and retail and the hotels and restaurants sector. These are sectors in which relatively large shares of workers are low skilled.

Figure 5.3. **Immigrants are more represented in sectors with low value added per hour of work**





Note: Value added per hour of work is calculated by dividing the value added by sector in 2011 (as reported by the Central Bank of Costa Rica) by a multiplication of the number of average hours per week by sector reported by ENAHO (2012) (since information on hours of work are not available in the census), multiplied by the number of weeks worked (50) multiplied by the estimated number of employees in the sector. The estimated number of workers is obtained by multiplying the total Costa Rican working population in 2011 by the shares of workers in each sector as reported by the 2011 Census.

Source: Authors' own work based on INEC (2010-16); the 2011 Census (Minnesota Population Center, 2017); and BCCR (undated).

Based on the distribution of immigrants across economic sectors, their value added per hour worked is estimated to be lower than that of native-born workers. A higher share of foreign than native-born workers work in low productive sectors such as agriculture and fishing, construction, hotels and restaurant and other social activities. While immigrants are most overrepresented in real estate, this sector only accounted for 8% of employment in 2010-14, compared to 29% for the four sectors mentioned above. Hence, the comparatively high concentration in the real estate sector will have less of an influence on the average productivity of foreign-born workers than their high concentration in the other four sectors.

It is unclear whether a link exists between immigration and foreign direct investment or trade

Immigrants can strengthen the investment and trade ties between their country of origin and the country of destination (Co, Euzent and Martin, 2004; Dunlevy and Hutchinson, 1999). Companies can benefit by obtaining access to more and potentially cheaper capital, more diverse and again potentially cheaper inputs, and a larger number of potential buyers.

Over the past three decades, Costa Rica has opened up to international markets and managed to attract significant inflows of foreign direct investment (FDI), becoming one of the most favoured investment countries in Latin America. FDI net inflows as a share of GDP grew from 1.1% in 1980 to 6.5% in 2013, well above the average for Latin America and the Caribbean (3.5%) and the OECD (1.68%) (OECD, 2016). The country has a liberal and open legal framework that protects foreign investors' rights and the free flow of capital across borders. In addition, one of the most successful policy tools to attract FDI is the Free Trade Zone Regime, which grants foreign and domestic companies that meet certain investment requirements tax breaks for investments in the country (PROCOMER, 2011).

Overall, FDI inflows have increased from USD 667 million in 2000 to USD 3 069 million in 2015. The main sources of investment during the period 2000-14 were the United States (55.6% of the total FDI in Costa Rica), Spain (8.0%), Mexico (6.0%), Colombia (4.0%) and Panama (3.4%) (Figure 5.3). Three of the main countries of origin for immigrants – Colombia, Panama and the United States – were also among the most important source countries for FDI. Nicaragua, the main country of origin of immigrants for Costa Rica, generally has low levels of FDI outflows (0.7% of GDP) (UNCTAD, 2017).

With the exception of the United States, the main trade partner of Costa Rica, the country's trade partner ranking differs for imports and exports. Over the period 2000-14, the top country of origin was the United States with a 40% share of total imports consisting mainly of industrial goods, many of which were used as inputs for export production. Other import countries were China

(8.8%) and Mexico (7.5%). Within the same period, the main export country was also the United States (41.1%), whereas China and Mexico together accounted for only 3.8% of exports. Neighbouring countries were the most important export partners after the United States, with Panama at 5.9%, Nicaragua at 5.5%, Guatemala at 5.0% and Honduras at 3.9%. While the export of traditional agricultural goods remains the backbone of commodity export trade, a variety of industrial products and high value-added goods and services have further boosted exports. In 1995, agricultural exports were higher than industrial exports, accounting, respectively, for 53.2% and 46.8%. By 2015, this situation had reversed with industrial exports higher than agricultural exports (45% and 55%, respectively). Nicaragua accounts for only 5.5% of exports and 0.8% of imports.

These statistics do not reveal whether immigration links cause trade and investment activities to increase. A lot of factors aside from immigration – such as the size and proximity of the origin economy and the complementarity between the goods and services produced in the two countries – affect the strength of trade and investment flows. In addition, aside from possible impacts at the macro level, immigrants might also contribute to economic growth at the firm level.

Immigration and entrepreneurship

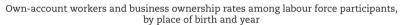
Immigration can affect the creation and performance of firms in various ways. First, immigrants can start companies themselves. Indeed, self-employment - which in addition to employers (called business owners here) includes own-account workers - is more elevated among immigrants than among the native-born in many OECD countries (OECD, 2011). Various explanations have been advanced for this. Immigrants may be younger, more risk tolerant and have a greater (family) history of self-employment - all characteristics that have been linked to higher self-employment rates (Brown et al., 2011; Le, 1999); they may be marginalised in the labour market and become self-employed as a last resort (Naudé, Siegel and Marchand, 2017; Clark and Drinkwater, 2000); or they may have access to business opportunities unavailable to native-born individuals, such as selling goods and services in ethnic enclaves (Lofstrom, 2002). However, in a number of ECLM partner countries, including Costa Rica, the opposite is true, and self-employment rates are lower among immigrants than native-born individuals. Second, the presence of immigrants might allow native-owned firms to start or expand, for example, by increasing demand for their product or the supply of needed skills or capital, but can also represent additional competition that could thwart their growth. Third, firm productivity might be boosted if immigration is associated with technology transfers (Hornung, 2014), or if a more diverse workforce is more productive due to skill complementarity (Ottaviano and Peri, 2005).

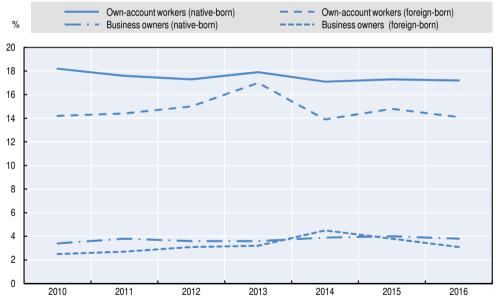
This section demonstrates that immigrants in Costa Rica are not disproportionately job creators. Among those in the labour force, the business ownership rate and company size appear to be equal with those of native-born individuals.

Immigrants do not disproportionally create businesses

According to the National Household Survey (Encuesta Nacional de Hogares) (ENAHO), a smaller share of immigrant than native-born labour force participants are self-employed. This difference stems from a lower share of own-account workers (Figure 5.4). The share of business owners is very low, regardless of the country of origin. In most recent years, the difference between business ownership rates between native and foreign-born individuals was not statistically significant.

Figure 5.4. The self-employment rate of immigrants is lower than that of native-born individuals





Source: Authors' own work based on INEC (2010-16).

The smaller share of own-account workers is not due to the personal characteristics of immigrants. Regression analysis shows that when personal characteristics such as age, sex, partnership status, highest educational attainment, region, and whether someone lives in an urban or rural area are comparable, immigrants are still 3 percentage points less likely to be an

own-account worker than similar native-born workers. The result is similar when foreign and native-born workers within the same sector and occupation are taken into account, although the difference shrank to 2 percentage points. In contrast, native and foreign-born workers with similar characteristics are equally likely to be employers.

Firms that are owned by foreign and native-born individuals are similar in size. Around 85% of the companies have between two and nine workers, around 10% have between ten and 29 employees, and around 5% have 30 employees or more. For companies with more than ten workers, firm size is indicated by a range instead of a precise number. To calculate the averages, mid-points of the range were taken (e.g. for the 10-19 range, 14.5 was used).² The average size of firms owned by native-born individuals was 6.7 and the average size of companies owned by foreign-born individuals was 8.3. This leads to the conclusion that immigrant-owned companies are on average slightly larger than native-born owned companies. However, as the figures are based on a range rather than on precise values, the estimated average is inaccurate and therefore the results have to be interpreted with caution. Once personal characteristics of the owner are taken into account, it appears that foreign and native-born individuals with similar characteristics own companies with similar sizes.³

Immigration does not increase entrepreneurial activities among the native-born population

Immigrants can affect the level of entrepreneurial activities not only as business owners, but also by increasing or decreasing the likelihood of nativeborn individuals starting their own businesses or staying in business. For example, the presence of several immigrant-run firms may increase reluctance among native-born workers to become entrepreneurs themselves, either because they fear the increased competition or are concerned that their business may fail as a result of this competition. Conversely, native-born workers may be more likely to start a business if they believe that immigration makes their business more likely to succeed. For example, immigrant workers may possess skills that are otherwise scarce, they might significantly increase demand for the business's products or they might increase the availability of finance.

The question of whether the entrepreneurship rates of the native-born population are affected by the presence of immigrants in Costa Rica was analysed empirically using census data from the years 1984, 2000 and 2011 (Table 5.2). The analysis focused in particular on whether native-born workers that lived in a canton with a high concentration of immigrants were more likely to be an employer than similar native-born workers that lived in a canton with a low concentration of immigrants. Because it is possible that the business ownership rate of native-born individuals affects immigration – for example, if immigrants are recruited to work for these business owners – an additional analysis was

carried out in which the prior immigrant concentration in the canton was used to predict the current immigrant concentration in the same canton.⁴

Table 5.2. Immigration does not appear to increase entrepreneurship among the native-born population

Marginal effects of immigrant concentration in canton from (instrumented) probit regressions

| | Basic analysis | Instrumental variable analysis |
|-------------------------|----------------|--------------------------------|
| Immigrant share in 2011 | 0.00046*** | 0.0014 |
| Number of observations | 288 301 | 288 301 |
| Pseudo R ² | 0.0954 | |

Note: The presented results comprise the average marginal effects from probit regressions. The dependent variable is whether or not a native-born individual aged 15 or above is an employer. The explanatory variable is the immigrant share in the same canton in 2011, and the control variables are sex, age, age squared and education level. The instrumental variable analysis used the share of immigrants in the canton from a previous census, following Card (2001).

Source: Authors' own work based on the 2001 and 2011 Census (Minnesota Population Center, 2017).

Immigration does not appear to encourage entrepreneurship among the native-born population in Costa Rica. In the initial analysis, it does appear that the rate of business ownership among the native-born population of working age is slightly higher when more immigrants are present. A 10 percentage point higher share of immigrants in the local area is associated with a 0.5 percentage point higher rate of native-born individuals becoming employers (Table 5.2). However, once the prior immigrant concentrations are used to predict current immigrant concentrations, this relationship no longer exists. This change in the outcome may have occurred because the native-born business ownership rate might be indicative of factors that also attract immigrants to the same areas.

It was not possible to determine whether immigrant employees or owners make firms more productive

Immigration can have positive or negative effects on productivity within their country of destination. For example, immigrants can introduce new technologies from their home countries (Hornung, 2014; Markusen and Trofimenko, 2009) or be particularly innovative (Akcigit, Grigsby, Nicholas, 2017). More diversity in firms may also lead to higher productivity. Finally, if immigration improves or worsens some of the factors that firms perceive as obstacles, such as the recruitment of skilled employees, then this could also affect productivity.

The main obstacles that businesses in Costa Rica face, according to the World Bank Enterprise Survey 2010, are access to finance, informality and a lack of skilled workers (World Bank, 2017). Around 26% of firms reported lack of finance as their main obstacle, followed by the informality of competing firms (23%) and lack of educated workers (13%). Immigration could potentially address the difficulties companies encounter in finding workers with the right skills. However, it is not clear to what extent this is actually the case. As discussed

in Chapter 3, the share of university graduates is lower among foreign than native-born individuals, in particular for Nicaraguan immigrants.

Unfortunately, due to a lack of data it is impossible to estimate the relationship between immigration and productivity in Costa Rica. An accurate estimation would require information on labour productivity disaggregated by sub-sector and sub-national geographic levels, ideally using firm-level data, distinguished by place of birth of owners and employees. Without such data, the analysis is restricted to anecdotal evidence that does not provide a clear understanding of the possible impacts that immigrants might have.

Conclusions

Costa Rica's economic performance has been driven by the shift from low value to high value-added and from a domestic to an export-oriented approach. Immigrants tend to be more concentrated in low productivity sectors. This implies that their contribution to value added is below their share among the employed population; however, due to their high labour force participation rate their contribution to value added is above the share of immigrants in the population. Entrepreneurship, which under the right circumstances can boost economic growth, does not appear to be affected by immigration. Immigrants do not own businesses more frequently than native-born workers, and native-born individuals are not more likely to become entrepreneurs in the presence of a larger concentration of immigrants.

This chapter aimed to assess the impact of immigration on economic growth. However, it is difficult to establish a causal link between the two, as immigrants might be attracted by a growing economy, or could cause the economy to grow because of their contributions. Furthermore, the lack of data apparent in this chapter does not allow for a conclusion on the impact of immigrants on productivity in Costa Rica, or for policy recommendations on how to make the most of immigration. In the future, investment in an enterprise survey that contains, besides the necessary economic questions, information on the country of birth of its owners and employees would allow for a deeper understanding of productivity dynamics in general, and the effects of immigrants on productivity in particular.

Notes

- This analysis is based on logit regressions, where the outcome variable is own-account
 workers, the main variable of interest is the place of birth, and the regression controls
 for age, gender, marital status, education, the region and whether the individuals lives
 in an urban or rural area. The results are not shown.
- For the final category of 100 and more, there was no mid-point that could be used for calculations. Instead, averages were calculated by replacing this category with its minimum value, 100.

- 3. This analysis was based on ordinary least squares (with the estimated number of employees) and ordered logit (for the company size category (<10, 10-29, 30+)) regressions.
- 4. The basic analysis was based on probit regressions. The dependent variable was whether a native-born individual was self-employed or not, the explanatory variable was the immigrant share of the canton in which they live, and the control variables were sex, age, age squared and education level.

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Chapter 6

Immigrants' contribution to public finance in Costa Rica

This chapter compares the direct net fiscal contribution of foreign and native-born populations in Costa Rica. The first section presents an overview of the fiscal revenues and expenditures in the country. The second section estimates the average and total taxes paid and benefits received by both populations using a methodology explained in the chapter and further developed in the Annex. It then presents the estimate of the net fiscal impact and discusses the effect of different personal characteristics in the contributions. According to the estimation, the net fiscal impact for both immigrants and native-born populations is negative, but it is more negative for immigrants. This difference is driven by the lower fiscal contributions of immigrants and not by differences in public expenditure.

Immigrants may have a positive or a negative impact on the government budget. On the one hand, they contribute to fiscal revenues through taxes. On the other, they are the recipients of government services and social benefits. This is especially relevant in Costa Rica, where health and elementary and secondary education are universally provided (see Chapter 2) and where the fiscal deficit has increased drastically following the Great Recession (IMF, 2016). Existing studies on OECD countries have found mixed results regarding the direct fiscal impact of immigration (OECD, 2013), but there is no comparable body of evidence for non-OECD countries.

Public revenues and expenditures

In 2013, total tax revenue in Costa Rica amounted to 20.1% of the gross domestic product (GDP). This value is very close to the 21% average of the 20 countries in Latin America and the Caribbean (LAC) (Figure 6.1). It has also followed a similar trend in the last two decades, with revenue as a share of gross domestic product (GDP) rising from 1995 to 2008, succeeded by weaker growth up to 2013 (OECD/ECLAC/CIAT/IDB, 2016). This value also contrasts with that of the OECD area, which has an unweighted ratio of 34.1%, and has been relatively stable at just over 1 percentage point above its 1990 level.

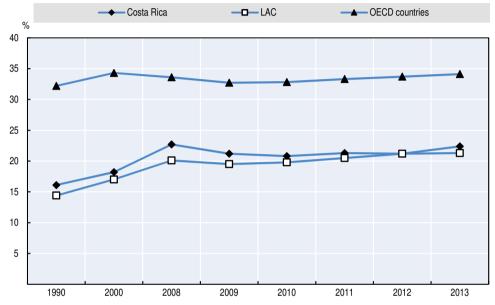
With regard to the tax structure, revenues consist of indirect taxes on goods and services (40.8%), social contributions (33.7%), income taxes (18.2%), payroll taxes (4.4%), property taxes (1.8%) and other taxes (1.1%) (OECD/ECLAC/CIAT/IDB, 2016). This tax structure, along with the high income threshold for income tax payments, has negative implications for the progressivity of tax systems, placing a higher tax burden on the lowest and highest incomes earners (IMF, 2017).

One key difference between Costa Rica and the rest of the region is the greater importance accorded to social security contributions (Figure 6.2). This can be explained by the heterogeneity of schemes in Latin America. Countries such as Chile, Mexico and Peru rely heavily on private, personally funded schemes, and therefore have lower social security taxes. Countries such as Brazil, Nicaragua, Panama and Costa Rica, however, have mixed or public systems that push the average upwards. Costa Rica adopted a mixed social security

system in 1998, which is managed by the public sector, but complemented by compulsory contributions to privately managed pension funds.

Figure 6.1. Tax revenue as a share of GDP in Costa Rica is similar to the LAC average

Tax revenue as a percentage of GDP, 1990-2013



Note: The LAC average refers to a group of 20 Latin American and Caribbean countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. Chile and Mexico are also part of the OECD. The OECD average is the unweighted average for the 35 OECD member countries.

Source: OECD/ECLAC/CIAT/IDB (2016), Revenue Statistics in Latin America and the Caribbean 2016, http://dx.doi.org/10.1787/rev_lat_car-2016-en-fr.

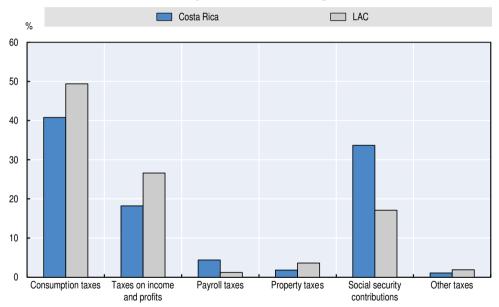
General government expenditure in Costa Rica amounted to 30% of GDP in 2014 (Figure 6.3). It has increased 6 percentage points from 2008 to 2014. This rise is mostly attributed to a fast increase in the remunerations of the public sector. Despite the fact that public employment is low, it accounts for a large share of public expenditure (OECD, 2016b, 2018). As a consequence, the public balance has deteriorated.

Costa Rica's education expenditure is relatively high, compared to the Latin American average and even that of the OECD. Out of total public expenditure, 14% is spent on congestible public goods (e.g. policing, the penal system, labour, sewage, energy, mining, communication, transportation and security), 16% on pure public goods (administration, defence, environment, agriculture,

industry, commerce, tourism and finance), 27.6% on education, 3.4% on health and 15.9% on social protection (Figure 6.4). While the last two components are lower than in OECD countries, where the averages are 18% and 33%, respectively, education expenditures is comparatively high (IMF, 2017). In 1997, Law No. 7676 made elementary school compulsory and free, and stipulated that education expenditures must amount to at least 6% of GDP. This goal was achieved in 2009. In 2013, Costa Rica spent 7% of its GDP on education, above the regional average of 4.5%. In contrast, defence spending only accounted for 1% of total expenditure in Costa Rica, well below the regional average for Latin America of 7.5% (World Bank, undated).

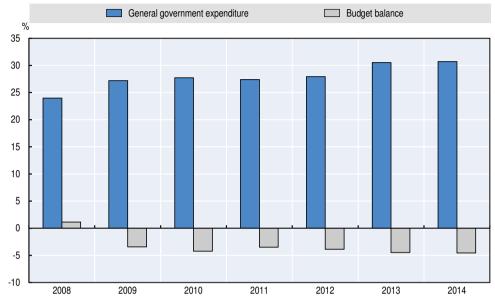
Figure 6.2. Social security contributions are comparatively more important in Costa Rica than the regional average

Distribution of public revenues across categories, 2013



Note: The LAC average refers to a group of 20 Latin American and Caribbean countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. Chile and Mexico are also part of the OECD. Source: OECD/ECLAC/CIAT/IDB (2016), Revenue Statistics in Latin America and the Caribbean 2016, http://dx.doi.org/10.1787/rev_lat_car-2016-en-fr.

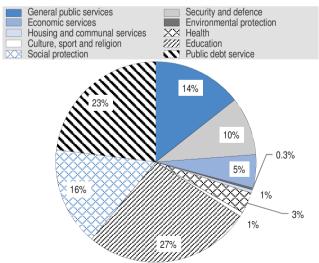
Figure 6.3. **Government expenditure in Costa Rica has increased**General government expenditure and budget balance, as a percentage of GDP, 2008-14



Source: OECD (2016b).

Figure 6.4. Social expenditures on health, education and social protection account for more than 45% of government expenditures

Expenditure of the central government by functional classification, 2013



Source: Authors' own work based on STAP (2013a).

Fiscal revenue

Social security (34% of tax revenue)

Costa Rican social security has one of the highest coverage rates in Latin America. In 2010, 57% of the economically active population was covered by the pension system and 63% by health insurance, compared to an average of 44.7% for the region as a whole, which is characterised by significant heterogeneity (OECD/IDB/World Bank, 2014). The contributions for social protection are managed by the Costa Rican Social Security Fund (Caja Costarricense de Seguro Social or CCSS). The CCSS operates through social security schemes and is both the provider and funder of its own services (OECD, 2016c).

Firms are responsible for withholding and paying payroll taxes from their employees' gross salaries. These withholdings and employer payments amount jointly to 35%. Out of this 35%, 14.3% and 8.3% are paid to the CCSS from the employer and employee side, respectively. The additional 11% from the employer and 1% from the worker that are withheld are destined for other institutions. For independent workers, the rates of social security contribution range from 8% to 12%, according to the amount of the declared income.

The estimation of the share of social security contributions paid by immigrants is based on their share of self-reported contributions in the nNationa Income and Expenditure Household Survey (Encuesta Nacional de Ingresos y Gastos ENIGH). It takes into account contributions from primary and secondary jobs for both independent and dependent workers. Based on this estimate, the relative share of native-born and foreign contributions is applied to the total contributions received by the government. The average contribution is calculated by dividing the total adjusted contribution by the number of foreign and native-born individuals.

Table 6.1. Estimates show that native-born individuals on average pay higher social security contributions than foreign-born individuals

Estimated social security contributions in Costa Rica by place of birth, 2013

| | Estimated social security contributions (CRC million) | Contribution shares | Average social security contributions (CRC) |
|--------------|--|---------------------|---|
| Native-born | 1 980 269 | 93.3% | 462 867 |
| Foreign-born | 141 515 | 6.7% | 337 961 |
| Total | 2 121 784 | | 451 731 |

Note: OECD data classify social security contributions and payroll taxes as two different categories. Source: Authors' own work based on INEC (2013), OECD et al. (2016) and STAP (2013a).

According to this estimation, the average social security contribution is CRC 337 961 (approximately USD 675) for foreign-born and CRC 462 867 (USD 920) for native-born individuals. ¹The share contributed by immigrants is lower than

their population share. These differences are the result of the lower average income of immigrants (Figure 6.5) and their lower level of participation in social security. Indeed, 49.5% of immigrants declared that they contributed to social security, compared to 67.9% of the native-born population.

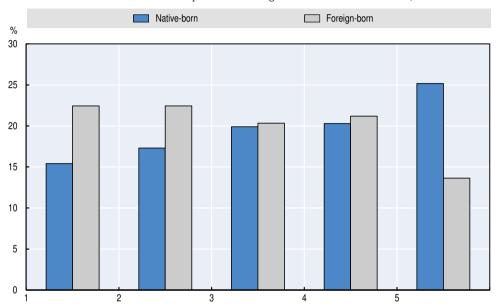


Figure 6.5. **More immigrants live in low-income households**Distribution across income quintiles for foreign and native-born individuals, 2013

Note: Each number represents a quintile of per capita net income, one being the lowest and five the highest. Source: Authors' own work based on INEC (2013).

Personal income tax (6% of tax revenue)

Income tax in Costa Rica is assessed on gross income generated in the national territory, independent of the nationality or residency of the tax payer. For dependent workers, monthly incomes above CRC 714 000 are taxed with marginal rates ranging from 10% to 15%. The upper threshold of income after which only 15% applies is CRC 1 071 000. For independent workers, the rates vary between 10% and 25%. Some expenses can be deducted, such as certain taxes and insurances, and it is also possible to get deductions depending on marital status and number of children under 18, or under 25 if they are studying. Given the high income tax threshold, less than 15% of wage earners pay income tax (OECD, 2016b).

The estimation of immigrants and native-born individuals is calculated based on applying basic rules for independent and dependent workers to self-reported income from ENIGH survey. This means that their reported income

minus the main deductions is multiplied by the relevant average tax rate. If a worker has multiple jobs, the estimation consists of the sum of the estimated tax payment for each source of income. Only the deductions on marital status and children are taken into account, and are assigned to the head of the household. The individual estimated tax revenues of foreign and native-born individuals are then added, in order to estimate the tax payment share of immigrants and the native-born. These shares are then multiplied by the total income tax collected by the government.

Table 6.2. Average income tax payments of native-born individuals are estimated to be slightly higher than those of foreign-born individuals

Estimated personal income tax payments in Costa Rica by place of birth, 2013

| | Estimated income tax payments (million CRC) | Income tax payment shares | Average income tax payments (CRC) |
|--------------|---|---------------------------|-----------------------------------|
| Native-born | 293 077 | 92.5% | 68 503 |
| Foreign-born | 23 817 | 7.5% | 56 878 |
| Total | 316 894 | | 67 467 |

Source: Authors' own work based on INEC (2013) and STAP (2013a).

According to this estimation, immigrants account for 7.5% of income tax payments, lower than their population share. The average income tax payment is CRC 56 878 (approximately USD 115) for foreign-born and 68 504 (USD 135) for native-born individuals.

Corporate income, profit and capital taxes (10% of tax revenue)

As in the case of personal income tax, corporate income taxes are levied on all gross incomes generated in the national territory, irrespective of the place of foundation of the corporation. Corporate income tax is calculated on the gross income of all firms with a monthly income above CRC 47 million (in 2013). Rates range between 10% and 30%. In addition, there is a municipal tax on business, whose rate depends on the municipality in which the company is located (Ministerio de Hacienda, undated).

Given that it is unclear to what an extent the corporate income tax should be allocated to owners (including stakeholders) and employees (see Dustmann and Frattini, 2014), these taxes are simply divided among all adult inhabitants. Average corporate profit and capital tax payments are estimated at CRC 113 285 (approximately USD 225) for native-born and CRC 144 528 (USD 230) for foreign-born individuals. The estimated average amount paid by immigrants is higher given that their share of the adult population is more important (Figure 2.7).

Taxes on goods and services (41% of tax revenue)

The main tax on consumption is the sales tax. The current standard rate is 13%, with the exception of electricity (5%) and wood (10%). The tax has numerous exemptions, including the products of the basic basket,² medicines and basic goods for education. On certain goods such as tobacco, alcohol and vehicles, there are some additional specific taxes.

The estimation of tax payments on good and services by immigrants and native-born individuals is calculated based on the reported monthly expenditures per household in the income and expenditure survey, and on the number of native and foreign-born individuals in the household. Since the survey does not provide information on individual expenditures, it is assumed that each member of the household spent an equal share of the total expenditure. Each expenditure on a good or a service is assigned a specific tax rate. Monthly expenditures on the goods are multiplied by these rates and then summed up to estimate total tax payments per household. Additional consumption taxes such as stamp taxes and certain taxes on imports and exports are also taken into account. The payments by native and foreign-born individuals are then calculated using their share in each household multiplied by estimated household tax payments.

Table 6.3. Estimated per capita consumption tax payments of foreign-born individuals are around a quarter lower than those of native-born individuals

Estimated contribution on taxes on goods and services in Costa Rica by place of birth, 2013

| | Estimated taxes on goods and services (million CRC) | Tax payment share | Average tax payments (CRC) |
|--------------|---|-------------------|----------------------------|
| Native-born | 2 115 273 | 93.2% | 494 423 |
| Foreign-born | 153 264 | 6.8% | 366 019 |
| Total | 2 268 536 | | 482 975 |

Source: Authors' own work based on INEC (2013) and OECD et al. (2016).

Based on this estimation, native-born individuals pay on average CRC 494 422 (USD 985) per year on consumption taxes, and immigrants pay CRC 366 018 (USD 730). The contribution of immigrants is smaller than their population share.

The lower average tax payment can be explained by the differences in total expenditure and its composition. In the first income quantile, on average, 33% and 29%, respectively, of the consumption of foreign-born and native-born individuals are goods exempt from Value Added Tax (VAT), because they belong to the basic basket. Immigrants are over-represented in the lowest three income quantiles.

In order to tackle fiscal problems, the government proposed two bills in 2015 to increase revenue by about 2% of GDP. The bills stipulate that the majority of this increase – about 1.3% of GDP – will come from the introduction of a full-fledged

VAT system (OECD, 2016b). The proposed VAT bill will broaden the base to include most services, which are currently exempt, and increase the rate from 13% to 14% in the first year and to 15% in the second year. This reform may increase the relative contribution of immigrants, as it will remove some of the exemptions that exist under the current law, but given that low-income households would receive compensatory transfers (IMF, 2017), the overall effect is unclear.

Taxes on property (2% of tax revenue)

In Costa Rica, 71% of property taxes are levied on immovable property, while the other 29% are levied on financial and capital transactions. Immovable properties such as land and real estate are taxed annually 0.25% of the value of the property. There is also an additional tax known as the "solidarity tax" or "tax on luxury houses". In 2013, this tax affected houses with a value above CRC 291 million, with rates varying between 0.30% and 0.55%. The tax on immovable property transactions amounts to 1.5% of the value of the transaction. Securities transactions are subject to a single and definitive tax of 8% on the yields generated by the operation. Shares pay 8% of the dividends if they are registered in the stock market, or 15% if they are not.

The estimation of contributions on tax property by immigrants and nativeborn is based on rent information from the ENIGH survey. The survey contains information on sales and purchases of immovable property, but not on the value of immovable properties owned by the household. Instead, the value is approximated with the rent received by households that own immovable property. For households that live in their property, the approximation is based on the imputed locative value of housing, defined as the rent the household would have to pay if they did not own the property. This contribution is assigned to the head of the household and spouse. Payments by native and foreign-born are calculated using their share of the total collection of property tax.

Table 6.4. Native-born individuals are estimated to pay more in property tax than foreign-born individuals

| Parising and December 11 and the second | | : C+- D: | 11 | C 1-:41- | 0010 |
|---|--------------|--------------|-----------|---------------|--------|
| Estimated contribution on | property tax | in Costa Ric | ca by bia | ice of pirth. | . 2013 |

| | | Estimated tax payments (million CRC) | Estimated tax payment share | Per capita tax payment |
|--------------------|--------------|--------------------------------------|-----------------------------|------------------------|
| Taxes on immovable | Native-born | 63 398 | 95.6% | 15 987 |
| property | Foreign-born | 3 128 | 4.4% | 7 470 |
| | Total | 71 526 | | 15 228 |
| Taxes on immovable | Native-born | 26 105 | 92.4% | 6 102 |
| property | Foreign-born | 2 139 | 7.6% | 5 110 |
| | Total | 28 245 | | 6 013 |
| Total property tax | Native-born | 94 503 | 94.7% | 22 089 |
| | Foreign-born | 5 268 | 5.3% | 12 580 |
| | Total | 99 771 | | 21 241 |

Source: Authors' own work based on INEC (2013) and OECD et al. (2016).

The largest component of the remaining tax revenue is taxes on transfers of vehicles paid solely by businesses. The tax rate is 2.5% and is applied on the value of the vehicle determined by the Tax Administration according to the value market.

The tax payment share is estimated to be equal to the adult population share. By this estimation, the average contribution is CRC 46 964 (USD 95) for the native-born population and CRC 56 078 (USD 110) for immigrants.

Fiscal expenditure

Pure public goods, debt and congestible public goods

Two calculations are made to estimate the expenditures on pure public goods and congestible goods for immigrants and the native-born population. The first allocates the cost equally to immigrants and the native-born (average cost scenario). The second allocates the cost solely to the native-born population under the assumption that the total expenditures would be equally high if foreign-born individuals had not migrated to the country (marginal cost scenario). For this estimation, congestible public expenditures are those related to security, sewage, energy, mining, communication, transportation, culture, recreation, sports and the penal system. Pure public goods are those related to administration, defence, environment, agriculture, commerce, tourism and finance.

Table 6.5. The allocation of public goods expenditures depends on the assumptions

Expenditures on public goods and debt allocated to foreign and native-born individuals in Costa Rica under average and marginal cost scenarios, 2013

| | Total expenditures | Per capita costs (CRC) | | | |
|--------------------------|---|------------------------|-------------------------------|--------------------------------|--|
| | (million CRC) Native- and foreign-beauerage costs | | Native-born, marginal cost | Foreign-born, marginal cost | |
| Pure public goods | 388 050 | 82 617 | 90 703 | 0 | |
| Public debt | 2 130 627 | 453 614 | 498 012 | 0 | |
| Congestible public goods | 947 957 | 201 396 | 201 396 | 201 396 | |
| TOTAL | 3 464 635 | 737 627 | 809 822 | 201 396 | |

Source: Authors' own work based on INEC (2013) and STAP (2013a).

The two different scenarios lead to quite different estimated expenditures. When costs are equally distributed, the estimated 2013 per capita expenditures on these public goods was CRC 737 627 (approximately USD 1 470). When costs of pure public goods and public debt are allocated to native-born individuals only, they are estimated to "cost" CRC 809 822 (USD 1 615) and foreign-born individuals CRC 201 396 (USD 400).

Social security payments

Social security payments represented a total of 15.9% of public expenditure in 2013, or around CRC 1 024 billion. Out of this expenditure, 75.7% corresponded to pensions, 23.2% to family allowances and 1.1% to other social security payments.

Pensions

Employees are entitled to retire with an old-age pension at 65 if they have paid contributions into the pension system for a period of at least 300 months, or a proportional pension if they have made contributions covering a period between 180 and 300 months. There is also a non-contributory basic pension regime for people above 65 years old living in poverty that does not fall within the contributory regime.

The amounts of pension benefits are estimated based on reported pensions in the ENIGH survey. This only takes into account national contributory and non-contributory pensions. The estimation shows that immigrants account for 2.1% of national pension benefits, lower than their population share. Their estimated per capita pension is also lower at CRC 39 028 (about USD 80), compared to CRC 177 473 (USD 355) for native-born individuals.³ One of the driving factors is difference in access: according to the ENIGH survey, only 62% of immigrants participated in the social security regime in comparison to 88% of the native-born population.

Table 6.6. The estimated per capita pension benefits received by immigrants are lower than those received by native-born persons

Estimated pension benefits received by native and foreign-born individuals, 2013

| | Pension payments (million CRC) | Pension payment shares | Average payments (CRC) |
|--------------|--------------------------------|------------------------|------------------------|
| Native-born | 759 275 | 97.9% | 177 473 |
| Foreign-born | 16 342 | 2.1% | 39 028 |
| Total | 775 618 | | 165 130 |

Source: Authors' own work based on INEC (2013) and STAP (2013a, b).

Family allowances

Family allowances target populations in or at risk of poverty. Out of these allowances, 30% are dedicated to education, 9% to health, 20% to housing and 16% to elderly protection (ECLAC, 2012). Several institutions manage these allowances, notably the Joint Social Aid Institute (Instituto Mixto de Ayuda Social IMAS) and the Fund for Social Development and Family Allowances (Fondo de Desarrollo Social y Asignaciones Familiares FODESAF) (STAP, 2013c). Other institutions have specific functions such as the National Council of Older Persons (Consejo Nacional de la Persona Adulta Mayor) (CONAPAM), and the National Child Welfare Agency (Patronato Nacional de la Infancia) (PANI).

Other social security payments (1.1%) are linked to specific programmes related, in particular, to social exclusion, for example, through the National Comission on Indigenous Affairs (Comision Nacional de Asuntos Indigenas CONAI).

Estimation of family allowances was calculated based on the household income and expenditure survey. This contains information on payments and participation in social assistance programmes, which account for 80% of family allowance expenditures (FODESAF/IICE, 2014). Key programmes include the following:

- Bono de vivienda (BANHVI): this subsidy for families in poverty can be used to purchase land or housing.
- Bienestar y promoción familiar (IMAS): this set of benefits is oriented towards increasing the income of families. It can be provided as cash transfers, school supplies, training, etc.
- Avancemos (IMAS): this benefit takes the form of conditional cash transfers on education for families in situation of poverty.
- Becas FONABE: this programme provides scholarships on education for families with insufficient resources.
- CEN-CINAI: this subsidy provides health and nutrition help for children in poverty.
- Atencion al adulto mayor (CONAPAM): this benefit provides help to people aged 65 years old and above in situations of poverty and extreme poverty.

The estimation is carried out separately for programmes using transfers in kind or in cash. The allowances in cash are calculated using the reported payments in the survey, while the estimation for programmes in kind uses the total expenditure per programme and divides it across self-declared recipients in the survey. It assumes that the average cost for foreign and native-born recipients is the same. The expenditure on programmes of family allowances other than those listed accounts for 20% of the total expenditure (FODESAF, 2014). Given the lack of information, this amount is estimated to be equal to the population share of households with members who have children living in the household.

Table 6.7. Average per capita family allowance payments received by immigrants in 2013 were lower than those received by native-born individuals

Estimated family allowances received by native and foreign-born individuals, 2013

| | Estimated total payments on family allowances (million CRC) | Share of transfer payments | Average transfer (CRC) |
|--------------|---|----------------------------|------------------------|
| Native-born | 232 729 | 94.8% | 54 398 |
| Foreign-born | 15 577 | 5.2% | 37 202 |
| Total | 248 307 | | 52 865 |

Source: Authors' own work based on INEC (2013) and FODESAF/IICE (2014).

Participation by immigrants in social security is lower than their population share. Estimated per capita transfers received by immigrants amounted to CRC 37 202 (approximately USD 75), compared to CRC 54 398 (USD 110) for the native-born.

Education expenditures

Costa Rica has one of the highest levels of public investment in education in Latin America, at 7% of GDP. Enrolment is close to the regional average at all levels of education, but has risen rapidly since the turn of the century. The gross enrolment rate for pre-primary education increased from 47% in 2000 to 74% in 2012, and for secondary education from 61% to 104% over the same period (OECD/CAF/ECLAC, 2014). Access to primary and secondary education is free and guaranteed for the entire population, independent of their immigration status. On the other hand, public universities are not free and access for immigrants is dependent on having a regularised status.

The estimation on education expenditure is made by dividing the total cost of public education by the number of people enrolled in each level of education. It assumes that the average cost for immigrants and native-born is the same. It also assumes that children that attend private schools add zero cost to public expenditure. The average cost of underage children for immigrants is associated to immigrant expenditure, even if the child is born in Costa Rica. If the student is the child of a native-born and a foreign-born person, half of the average cost is associated to each group. This estimation is made based on the relationship variable in the survey. It assumes that children of the head of the household are also children of the spouse.

According to the ENIGH survey, 30.1% of the immigrant population were less than 25 years old in 2013, compared to 46% for the native-born. The school attendance rates of immigrants aged between 6 and 18 years old and native-born individuals in the same age range do not differ substantially. However, a significant difference emerges in higher education, with 42% of native-born individuals aged between 19 and 25 years old still enrolled in an educational institute, compared to 14% of immigrants.

Per capita education expenditures are estimated to be higher for foreign than native-born individuals: the average expenditure for foreign-born individuals and their children is CRC 495 659 (USD 990), compared to CRC 358 075 (USD 715) for native-born individuals and their descendants. This higher average for immigrants is mainly driven by higher usage rates at the pre-primary and primary level. Conversely, estimated use of post-secondary education by immigrants is lower than their population share.

Table 6.8. Per capita education costs were estimated to be lower for native than foreign-born individuals

Estimated education costs by level of education and place of birth, 2013

| | Share of public expenditure | Estimated immigrant usage share | Estimated total expenditure for immigrants (million CRC) | Estimated total expenditure for native-born (million CRC) |
|---------------------------|-----------------------------------|---------------------------------|--|---|
| Pre-primary | 6.2% | 19.4% | 21 116 | 87 458 |
| Primary | 36.6% | 17.4% | 110 965 | 525 638 |
| Secondary | 33.7% | 10.5% | 61 327 | 524 889 |
| Post-secondary | 20.5% | 3.6% | 12 785 | 344 067 |
| Other non-allocable level | 2.9% | 2.6% | 1 354 | 49 890 |
| Total | 1 739 492 | 11.9% | 207 549 | 1 531 943 |
| Average expenditure (CRC) | 370 341 | | 495 659 | 358 075 |

Note: This corresponds to all types of education that could not be classified into the other groups. It includes people who attend vocational schools such as those offered by the National Training Institute (Instituto Nacional de Aprendizaje), people who attend specialised educational centres for the attention of students with special educational needs, special schools for people with a physical or intellectual disability, and so on. (INEC, 2014). Students in Educación abierta (those attending programmes designed to prepare for exams for the Ministry of Public Education for Cycle 1, 2 and 3 and Bachillerato) are classified as secondary education.

Source: Authors' own work based on INEC (2013), STAP (2013a) and UNESCO Institute for Statistics (undated).

Health expenditures

Health services in Costa Rica are provided by both public and private institutions, but the public health system predominates (OECD, 2016c), and aims to provide universal health care for the entire population, independent of immigration status. The CCSS is the main provider of public health services and is charged with providing general and specialised medical care through hospitals, clinics and Basic Provision Units of Integrated Health Care (EBAIS). The CCSS accounts for 85% of total health expenditures and is both the provider and funder of its own services.

The estimation of total public expenditures for immigrants and the native-born is based on the reported utilisation of medical services according to the income and expenditure survey. The survey includes information on the number of medical consultations and hospitalisations provided by the CCSS in the year the respondent benefited from the services. Medical consultations include those provided in hospitals, clinics and EBAIS. This information is combined with the average cost per region of these services reported by the CCSS to estimate the total cost for immigrants and the native-born population. It assumes that all medical consultations took place in the same region where the household is located.

Table 6.9. Per capita public health expenditures were estimated to be similar for foreign and native-born individuals

Estimated health expenditures by place of birth, 2013

| | Estimated public expenditure on health (million CRC) | Share of expenditure | Average public expenditure on health (CRC) |
|--------------|--|----------------------|--|
| Native-born | 202 778 | 92% | 47 397 |
| Foreign-born | 17 526 | 8% | 41 886 |
| Total | 220 304 | | 46 903 |

Source: Authors' own work based on INEC (2013), STAP (2013a) and CCSS (2014).

Immigrants' share of public expenditure is slightly lower than their population share. While the difference between immigrants and the native-born is not statistically significant in terms of the average number of hospitalisations and days interned, there is a significant difference with regard to consultations. Indeed, 61.2% of native-born individuals attended a CCSS medical unit in 2013 for a medical consultation, compared to 44% of foreign-born individuals.

The net fiscal impact of foreign and native-born individuals

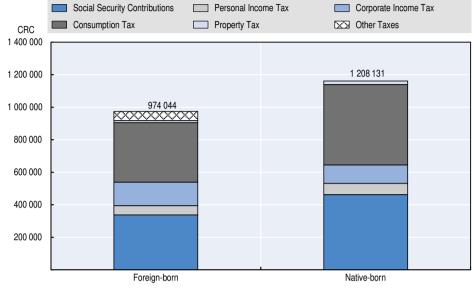
The contribution made by immigrants is lower across all components of tax revenues. On average, foreign-born individuals contribute CRC 935 553 (approximately USD 1 865) per year, while native-born individuals contribute on average CRC 1 208 998 (USD 2 410) (Figure 6.6). These differences are driven in particular by differences in taxes on goods and services and by social security contributions.

Public expenditures are almost the same for immigrants and the native-born under the average cost scenario. Immigrants receive lower average payments in pensions, but generate higher education costs when their children are taken into account. Under the marginal cost scenario, public expenditures for immigrants amount to approximately 60% of expenditures for the native-born.

Overall, contributions to both the public budget and public expenditure were estimated to be lower for foreign than native-born individuals. In 2013, the net fiscal effect for both immigrants and the native born was negative under the average cost scenario. However, the negative net fiscal contribution of the foreign-born population is more than double that of the native-born. Under the marginal cost scenario, however, the net fiscal contribution of immigrants is positive (Table 6.10).

Figure 6.6. Immigrants are estimated to make lower fiscal contributions than native-born individuals

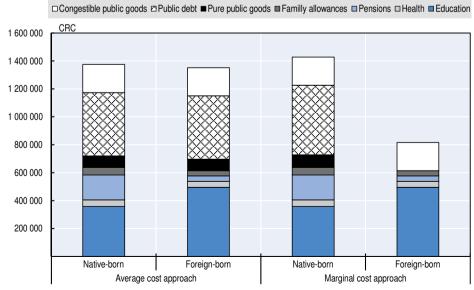
Estimated per capita tax payments by place of birth, 2013



Source: Authors' own work based on INEC (2013) and OECD et al. (2016).

Figure 6.7. Average public expenditures on immigrants are lower than those on native-born individuals

Estimated per capita public expenditures by place of birth in Costa Rica, 2013



Source: Authors' own work based on INEC (2013) and STAP (2013a).

Table 6.10. The fiscal burden imposed by immigrants is higher than that of native-born individuals

Estimated net fiscal contribution of native and foreign-born individuals in Costa Rica, 2013

| | Per capita costs (CRC) | | | | |
|---|----------------------------|-----------------------------|-------------------------------|-------------------------------|--|
| | Native-born, average costs | Foreign-born, average costs | Native-born, marginal cost | Foreign-born marginal cost | |
| Per capita public expenditures | 1 374 970 | 1 351 372 | 1 427 454 | 815 141 | |
| Per capita public revenues | 1 208 131 | 974 044 | 1 208 131 | 974 044 | |
| Per capita net fiscal contribution | -166 840 | -377 328 | -219 323 | 158 903 | |
| Per capita net fiscal contribution (% GDP per capita) | -3.2% | -7.1% | -4.2% | 3% | |

Source: Authors' own work based on INEC (2013) and STAP (2013a).

Utilisation of benefits

Immigrants are less likely to be enrolled in the social security regime and receive benefits less frequently. One explanation for the higher per capita pension payments received by the native-born population is the different age structure. The proportion of the native-born population above 65 years old is significantly higher than that of the foreign born, most of whom are of working age. However, these differences persist, even after controlling for age and other demographic and educational characteristics (Table 6.11). This is also the case for the probability of receiving family allowances.

Table 6.11. Immigrants are less likely to receive pension or social allowance payments

Marginal effects of social security benefit receipt for immigrants in Costa Rica

| | | Pension | | | Social benefits | |
|---------------------|----------|----------|----------|----------|-----------------|--|
| Immigrant | -0.07*** | -0.09*** | -0.17*** | -0.08*** | -0.06*** | |
| Age controls | Yes | Yes | Yes | Yes | Yes | |
| Additional controls | | Yes | Yes | | Yes | |
| At | | | Age 65 | | | |

Note: The analysis was carried out based on logit regressions. The table reports average marginal effects. Age controls are age and age squared. For the pension estimation, there is an over-65 years old indicator variable. Additional controls include: being a female, being in a couple and years of schooling. Source: Authors' own work based on INEC (2013).

The reduced likelihood of receiving pension benefits may be explained by the lower participation of immigrants in social security regimes or lack of awareness among immigrants about payments to which they are entitled.

Conclusions

The estimates presented in this chapter suggest that when the costs for certain public goods (that usually do not require additional investments as the population grows) were allocated only to the population born in Costa Rica, immigrants paid more in taxes than they generated in additional public expenditures. However, when the costs for public debt and pure public goods were assigned equally to the entire population, immigrants on average represented a greater burden for public finance than native-born individuals. Given that debt service and defence expenditure, for example, would be unlikely to decrease if all immigrants left the country, the result is somewhere between these two estimates. In order to arrive at these estimates, a large number of simplifying assumptions had to be taken and the estimates are necessarily imprecise. They should therefore be interpreted with caution.

Compared to other low and middle-income countries for which the effects of immigration on the fiscal balance have been studied, both the per capita net fiscal impact of immigrants in terms of GDP per capita and the difference in native-to-foreign-born impacts are comparatively small. Interestingly, if immigrants had the same average age as native-born individuals, the difference between the net fiscal impacts of foreign to native-born would hardly shift, in stark contrast to several other partner countries (OECD/ILO, 2018).

Notes

- 1. Under the exchange rate of CRC 501.7 to 1 USD, as of 30 June 2013.
- The basic basket is defined in Executive Decree No. 4082-H of 29 November 1982, "Reglamento de la ley del Impuesto General sobre las Ventas". It includes an extensive list of breads, vegetables, grains, meat, dairy, fruits, and cleaning, education and health-related products that are considered as essentials and are exempted of VAT.
- 3. Nevertheless, once the estimated CRC 92 932 million in pension payments from abroad are added in, even if the average is still lower for immigrants, the total share of pensions for immigrants increases to 8.2%.
- 4. Gross enrolment in secondary education, regardless of age, is expressed as a percentage of the population of official secondary education age. It exceeds 100% due to the inclusion of over-age and under-age students due to early or late school entrance and grade repetition.

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ANNEX 6.A1

Methodology

The methodology used in this analysis follows closely that developed by Dustmann and Frattini (2014) in their analysis of the direct fiscal impact of immigration in the United Kingdom. In particular, the contribution of immigrants and the native-born population to the different expenditure and revenue elements are estimated based on a household survey and overall government budget information, as described in the individual sections, and then added up.

Formally, the model to estimate the government surplus or deficit (GSUR) in year t is the difference between fiscal revenue REV_t and fiscal expenditures EXP_t ; rev_{it} is the amount received by the government from revenue source i in year t, and exp_{it} is the expenditure for service j in year t:

$$GSUR_{t} = REV_{t} - EXP_{t} = \sum_{i=1}^{N} rev_{it} - \sum_{i=1}^{N} exp_{jt}$$

each revenue and expenditure item *revit* and *expjt* is decomposed into the amount paid or received by the native-born population (k = 1) and the foreign-born population (k = 2):

$$GSUR_{t} = \sum_{k=1}^{K} \left(\sum_{i=1}^{N} \alpha_{it}^{k} rev_{it} - \sum_{i=1}^{N} \beta_{jt}^{k} exp_{jt} \right) = \sum_{k=1}^{K} \left(REV_{t}^{k} - EXP_{t}^{k} \right) = \sum_{k=1}^{K} GSUR_{t}^{k}$$

Where α_{it}^k represents the share of payments of group k relative to revenue source i in year t, and β_{jt}^k represents the share of public expenditure for service j assigned to group k, so that $\sum_{k=1}^K \alpha_{it}^k = 1$ for every i and $\sum_{k=1}^K \beta_{jt}^k = 1$ for every j. This chapter estimates the apportioning coefficients α_{it}^k and β_{jt}^k to estimate the total revenues and expenditures for each population k.

The estimation was made using the 2013 National Survey of Household Incomes and Expenditures (Encuesta Nacional de Ingresos y Gastos de los Hogares) (ENIGH). This survey was developed by the National Institute of Statistics and Census (Instituto Nacional de Estadísticas y Censos) (INEC) to collect information on income and expenditures and other well-being measures. The 2013 edition

of this survey was the sixth to be conducted. It was nationally representative and surveyed a total of 7 020 households and 19 301 individuals. In this sample, 8.8% of respondents were born abroad, a proportion close to the 8.97% found in the 2011 census (Table 6.A1.1).

Table 6.A1.1. Sample sizes of the 2013 Income and Expenditure Household Survey and the 2011 census

| | ENIGH (2013) | | 2011 Census | |
|--------------|--------------|------------------|-------------|------------------|
| | Total | Population share | Total | Population share |
| Native-born | 17 611 | 91.1% | 3 915 813 | 91% |
| Foreign-born | 1 690 | 8.9% | 385 899 | 9% |
| Total | 19 301 | | 4 301 712 | |

Source: Authors' own work based on INEC (2011, 2013).

Information on tax rules and public expenditure are taken from the information provided by the Ministry of Economics for the year 2013. In addition, information concerning social payments was taken from the 2014 report on social investment programmes by municipalities (FODESAF/IICE, 2014). Data on public revenue in 2013 are taken from the OECD Development Centre (OECD et al., 2015).

How Immigrants Contribute to Costa Rica's Economy

A better understanding of how immigrants shape the economy of Costa Rica can help policy makers formulate policies to boost positive effects and mitigate negative effects of immigration. This report finds that immigration has a limited, but varying, economic impact in Costa Rica. Immigration tends to reduce the employment rate of the native-born population, but does not affect labour income. The estimated share of value added generated by immigrants is above their share of the population. In 2013, immigrants' contribution to the government budget was below that of the native-born population, while expenditures for both groups were similar. Policies aimed at immigrant integration, by increasing de facto access to public services and to the labour market, could enhance immigrants' economic contribution.

How Immigrants Contribute to Costa Rica's Economy is the result of a project carried out by the OECD Development Centre and the International Labour Organization, with support from the European Union. The project aimed to analyse several economic impacts – on the labour market, economic growth, and public finance – of immigration in ten partner countries: Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. The empirical evidence stems from a combination of quantitative and qualitative analyses of secondary and in some cases primary data sources.

Consult this publication on line at http://dx.doi.org/10.1787/9789264303850-en

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