

How Immigrants Contribute to the Dominican Republic's Economy







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Foreword

T he Dominican Republic has one of the most rapidly growing economies in the region and underwent important economic transformation in the last five decades. This has spurred emigration but also inspired the influx of immigrants. Around 425 thousand immigrants representing 4% of the total population were living in the Dominican Republic in 2017. While several studies have tried to understand the way immigrants participate in the Dominican economy, there remains a wide scope in research to understand how immigrants contribute to the economy in its different dimensions. Such research can help policymakers formulate public policies that are based on empirical evidence.

The OECD Development Centre, the International Labour Organization (ILO) and the European Commission 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 the Dominican Republic'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 the Dominican Republic and nine other countries – Argentina, Costa Rica, Côte d'Ivoire, 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 segments of the economy. These segments include: the labour market, economic growth and public finance. This report highlights the fact that the impact of immigration is not straightforward. It depends on the country context and socio-economic conditions. However, any country can maximise the positive impact of immigration by improving 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 guidance 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 the Dominican Republic, the European Commission, the OECD Development Centre and the ILO look forward to continuing their co-operation with the Dominican Republic to optimise immigration for better economic and development outcomes.

Mario Pezzini
Director of the OECD Development
Centre and Special Advisor to the
OECD Secretary-General on Development

Manuela Tomei Director of the ILO's Conditions of Work and Equality Department

Acknowledgements

How Immigrants Contribute to the Dominican Republic'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, 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. Jill Gaston 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.

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List of abbreviations

AFP Pension Fund Administrator

(Administradora de Fondo de Pensiones)

ARS Health Services Administrator

(Administradora de Riesgos de Salud)

BCRD Central Bank of the Dominican Republic

(Banco Central de República Dominicana)

CNM National Migration Council

(Consejo Nacional de Migración)

CONANI National Council for Childhood and Adolescence

(Consejo Nacional para la Niñez y la Adolescencia)

DOP Dominican pesos

DGM General Directory for Migration

(Dirección General de Migración)

DGII National Directory of Internal Taxes

(Dirección General de Impuestos Internos)

ECLM Assessing the Economic Contribution of Labour

Migration in Developing Countries as countries of

destination

ECVMAS Enquête sur les Conditions de Vie des Ménages Après

le Séisme

END National Development Strategy

(Estrategia Nacional de Desarrollo)

ENIGH Income and Expenditure Household Survey

(Encuesta Nacional de Ingresos y Gastos)

ENI-12 National Immigrant Survey (Encuesta Nacional

de Inmigrantes)

EU European Union

GDP Gross Domestic Product

ILAE School Assistance Incentive Provider

(Incentivo a la Asistencia Escolar)

ILO International Labour Organization

INAIPI National Institute for Comprehensive Early Childhood

Care (Insituto Nacional de Atención integral a la primera

infancia)

INM National Migration Institute

IOM International Organisation for Migration

LAC Latin America and the Caribbean

LFS Labour force Survey (Encuesta Nacional de la Fuerza

de Trabajo)

OECD Organisation for Economic Co-operation

and Development

ONE National Statistical Office (Oficina Nacional de Estadística)

PPP Purchasing power parity

PSS Health Service Provider (Proveedora de Servicios de Salud)

SDSS Dominican Social Security System

(Sistema Dominicano de Seguridad Social)

SIUBEN Unified System of Beneficiary Identification

(Sistema Único de Beneficiarios)

USD United States dollars

Facts and figures of the Dominican Republic

(Numbers in parentheses refer to the OECD average)

The land, people and electoral cycle

The economy						
Land area (thousand km²) ^d 48.7						
Population density (per km ²) ^d	220 (37)	Last election	15 May 2016			
Under 15 (%) ^d	29.6 (18.0)	Form of government	Presidential republic			
Population (million) ^d	10.6	Official languages	Spanish			

GDP, current prices (billion USD) ^d	71.6	Exports of goods and services (% of GDP) ^d	25.2 (27.9)
GDP growth ^d	6.6 (1.7)	Imports of goods and services (% of GDP) ^d	28.9 (27.3)
GDP per capita, PPP (thousands, current international USD) $^{\rm d}$	15.2 (41.9)	GDP shares by sector (%) ^c	
Inflation rate ^d	1.6 (0.4)	Agriculture, forestry and fishing	5.8 (1.5)
General government total expenditure (% of GDP) d	17.6	Industry, including construction	27.3 (24.3)
General government revenue (% of GDP) ^d	14.7	Services	66.9 (74.2)

Well-being

		0	
Life satisfaction (average on 1-10 scale) ^d	5.2 (6.5)	Mean years of schooling ^c	7.8
Life expectancy ^d	74 (80)	Proportion of population under national minimum income standard (%) ^d	30.5
Income inequality (Gini coefficient) ^d	45.3	Unemployment rate (%) ^d	5.5 (6.3)
Gender inequality (SIGI index) ^b	0.04 (0.02)	Youth unemployment rate (ages 15 to 24, %)d	12.4 (13.9)
Labour force participation (% of population ages $15+$) $^{\rm a}$		Satisfaction with the availability of affordable housing (% satisfied) ^d	52 (54)
Native-born	64	Enrolment rates ^d	
Foreign-born	75	Primary (Net)	86 (96)
Population with access to improved sanitation facilities (%) ^c	84 (98)	Secondary (Net)	67 (90)
		Tertiary (Gross)	53 (73)

Note: Data from a) 2010-14; b) 2014; c) 2015; d) 2016.

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; BCRD/ILO (2016), Encuesta Nacional de la Fuerza de Trabajo 2000-2014, Banco Central de la República Dominicana and International Labour Organization.; 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

International migration has been an integral part of the Dominican Republic's development process. While the country is a net emigration country with around 12% of the population living abroad, it also increasingly attracts a significant number of immigrants. Given the size of the Dominican emigration, existing research has focused more on the impact of emigration. Consequently, how immigrants contribute to the Dominican economy remains less explored.

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. 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.

A national consultation seminar on 19 May 2015 launched the project's activities in the Dominican Republic. It was implemented in collaboration with the Ministry of Economy, Planning and Development, the Delegation of the European Union to the Dominican Republic and the ILO Subregional Office for Central America, Haiti, Panama and the Dominican Republic.

Immigrants' various economic contribution to the Dominican Republic

This report focuses on three main dimensions of the economic contribution immigrants make to the Dominican Republic: labour markets, economic growth and public finance.

Labour markets: foreign-born and native-born people have different human
capital and labour market characteristics. Immigrants have a higher labour force
participation rate than the native-born population. Their employment rate is also
higher than that of the native-born labour force. On average, immigrants have
lower levels of education than the native-born individuals. This is also reflected
in the occupations immigrants hold. Foreign-born workers are more likely to
have low-skilled jobs in sectors with high informality. Immigrants can affect

the labour market outcome of native-born people. The analysis in this report suggests that immigrants tend to replace native-born workers, in particular for low-skilled men.

- Economic growth: immigrants contribute to economic growth. Given the sectoral distribution of workers and their productivity, immigrants are estimated to contribute between 3.8% and 5.3% of the value added in the Dominican Republic, compared to their share in the population at 4.2%. Immigrants are over-represented in some high and mid-value added sectors like mining, manufacturing, hotels and restaurants and construction, but also in low value added activities of commerce and agriculture.
- Public finance: in 2007, the latest year for which data were available, immigrants
 made a positive and larger net fiscal contribution than the native-born
 population. This is because immigrants paid more in indirect taxes and
 benefited less from public expenditures on social security, social assistance
 and education. This result suggests that immigration did not represent a
 fiscal burden for the Dominican Republic, at least in 2007. It also implies that
 immigrants lacked access to social protection. More recent data are necessary
 to assess the net fiscal contribution.

Policies to boost the economic contribution of immigration

A lack of integration can cause serious problems with social cohesion and hamper the way immigrants contribute to the development of the host country. Priorities thus should be given to policies that invest in immigrants' integration. One way is to reinforce the immigrants' rights that are included in the 2004 migration law to protect their rights and fight against all forms of discrimination. Increasing *de facto* access to education, health and the social security system is also crucial to ensure better integration and the well-being of immigrants.

Increased competition for low-skilled jobs can displace native-born workers from the labour market. Policy makers should address the needs of those possibly affected and ensuring that the conditions are in place for everyone to seek decent employment opportunities. For instance, training programmes can help displaced workers to re-skill and move to other occupations and sectors.

The limited impact of immigration on the economy also means that the Dominican Republic is not fully leveraging the potential of immigration for its development. A more coherent policy framework beyond the policies targeted directly towards immigrants can further benefit the host country as well as immigrants. For instance, better monitoring of labour market indicators and dialogue with social partners to assess the labour market needs can further support migration management systems. More generally, deliberate institutional co-ordination is necessary to implement a coherent agenda between migration

and non-migration sectoral policies and enhance the contribution of migration to sustainable development.

Better assessment of the economic contribution of labour migration needs better data and evidence. In this respect, policy makers should invest in improving migration-related data collection as well as analyses of immigration's potential impact on the economy.

Chapter 1

Labour immigration in the Dominican Republic

This chapter provides an overview of the full report. It first describes the project on Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination and explains why the Dominican Republic is one of the ten partner countries. It then presents the economic impact of immigration on the country. The analysis looks at how foreign-born individuals affect the labour market, contribute to the country's economic growth and public finance. The chapter ends with the policy implications related to how immigrants affect the Dominican economy.

Immigration, especially from neighbouring Haiti, has contributed to the development of the Dominican Republic for the past century. This fact has remained constant as the Dominican Republic's economy has transitioned from agro-export and import substitution towards services and tourism, and as the political structure has evolved to embrace representative democracy. This report aims to provide empirical evidence on the economic contribution of immigrants in the Dominican Republic, for the benefit of policy makers and the broader public.

The report 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). It was co-funded by the European Union (EU) Thematic Programme on Migration and Asylum. Aside from the Dominican Republic, nine other low- and middle-income partner countries were involved in the project: Argentina, Costa Rica, Côte d'Ivoire, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand.

This report comprises six chapters. Chapter 1 assesses the overall economic contribution of immigration in the Dominican Republic and draws policy implications. Chapters 2 and 3 describe the underlying context shaping the economic contribution of immigration to the Dominican Republic: while Chapter 2 provides a brief overview of the country's immigration history and current policies, Chapter 3 compares the educational and labour market characteristics of the adult foreign- and native-born populations. Chapters 4 to 6 investigate different economic impacts of immigration: how immigrants affect the labour market outcomes of the native-born population (Chapter 4), economic growth (Chapter 5) and public finance (Chapter 6).

The country report can be read in conjunction with the project's comparative report (OECD/ILO, 2018). While the current report provides a more in-depth discussion of the economic contribution in the Dominican Republic, the comparative report presents an overview of the findings across the project's ten partner countries. It seeks to explain patterns in these outcomes based on the characteristics of the countries and their immigrant populations.

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

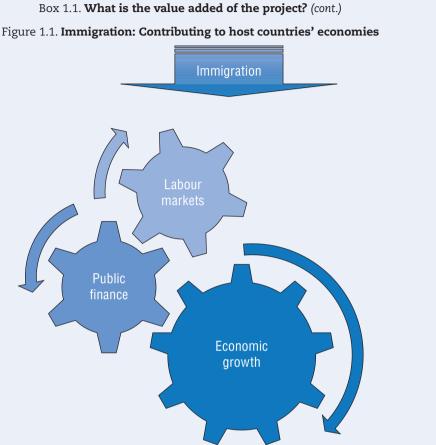
In August 2014, the OECD Development Centre and the International Labour Organization (ILO) launched a project, co-funded by the European Union's Thematic Programme on Migration and Asylum, on Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination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

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 (Kerr and Kerr, 2011; Bodvarsson and van den Berg, 2013; and Böhme and Kups, 2017). 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

Benefits from studying the economic impacts of immigration in the Dominican Republic

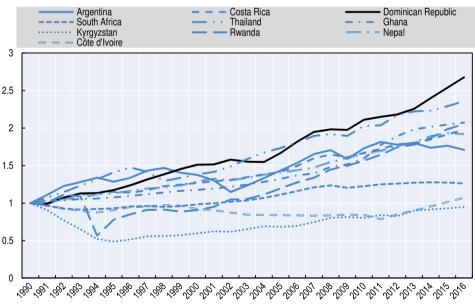
Historically, the Dominican Republic has been a country of immigration. During the 20th century, immigrants mostly from Haiti represented an important part of the labour force in agriculture, especially in sugar plantations. However, it

methodologies.

is from the late 1980's that immigration has experienced an accelerated growth, explained in part by changes in the main country of origin, like the fall of Haiti's president Jean-Claude Duvalier in 1986 and the earthquake in Port-au-Prince in 2010, but also because of the brisk growth of the Dominican economy.

The country has faced one of the most rapid growth rates in Latin America and the Caribbean. The Dominican Republic has also had the fastest growth rate among the ten partner countries of the ECLM project (Figure 1.2) and it is one of the five upper-middle-income countries of the project (OECD/ILO, 2018). The relationship between per capita income, growth and the propensity to emigration is a non-linear one. A rise in GDP per capita allows individuals and households who wish to move abroad to cover the costs of emigrating. Emigration thus is likely to increase with economic growth until it reaches a certain threshold (OECD, 2016). This is shown in the Dominican Republic as well. Since the 1980's, an increasing number of Dominicans have emigrated, especially to the United States, making it a net emigration country now.

Figure 1.2. The Dominican Republic has the most rapidly growing economy among the partner countries



Evolution of GDP per capita at constant 2010 USD (indexed 1990 = 1), 1990-2016

Source: World Bank (2018), "GDP per capita (constant 2010 USD) NY.GDP.PCAP.KD", http://data.worldbank.org/

Given the large number of Dominican emigrants, the empirical studies on migration and the Dominican Republic are mainly related to emigration. These studies focus on the impacts of both the country of origin and also on the countries of destination, for example through remittances and the way they impact entrepreneurship (Amuedo and Pozo, 2010a), school attendance

(Amuedo and Pozo, 2010b) and consumption (Acosta et al, 2008). Likewise, there are studies on the direct impact of emigration on the Dominican labour force. For example, Adams (2003) finds that emigration takes a large share of the mostly highly educated, known in the literature as "brain drain".

Despite the large focus on emigration, some studies have also tried to understand the way immigrants contribute to their host country. The majority of these studies have focused on immigrants from Haiti, the main country of origin, and their impact on the labour market. Aristy-Escuder (2011) finds that the Haitian labour force adapts rapidly to the Dominican labour market and it is complementary to capital and skilled labour, but it is often substitute to low-skilled workers. This study finds a limited impact of Haitian immigrants on the public finances. The World Bank (2012) uses a General Equilibrium Model and finds that Haitians are only partly substitutes of native-born workers, and their impact on wages is very limited as these adjust slowly. Carneiro and Sirtaine (2017) claim there is no evidence that Haitian labour has led to stagnating wages for native-born workers. They also find that it is the native-born low skilled workers in the informal sector that are particularly affected by immigration, as they are the most direct competition.

Although small in quantity, literature on the contribution from immigrants from other countries exists too. Cáceres et al. (2009) conducts a survey on non-Haitian immigrants and finds that immigrants from the countries studied have socio-economic profiles equivalent to those of the middle and uppermiddle sectors of Dominican society, they have higher levels of education than the average of the native-born population and are overrepresented in senior officials and managerial occupations. Romero Valiente (2016) discusses the Spanish immigration and the importance it has had to increase the investment in the tertiary sector.

Studies focusing on both immigration and emigration include the report by the IOM-INM (2017) that makes an extensive description on the characteristics of migrants, the impact they have on the development of the country and the management that the government makes of them. The report Interrelations between public policies, migration, and development in the Dominican Republic (OECD/CIES-UNIBE, 2017) provides evidence on how migration influences specific sectors (the labour market, agriculture, education, investment and financial services and social protection and health) and how sectorial policies affect migration.

The report How Immigrants Contribute to the Dominican Republic's economy is a step forward in assessing the contribution of immigration to development, as it provide a complete and comprehensive analysis of immigration, through a combination of quantitative and qualitative methodologies. In contrast to previous studies, this report aims to analyse the impact of immigration on a wide range of economic outcomes: the labour market, economic growth

and public finance. Moreover, it seeks to understand not only how the economic characteristics of foreign- and native-born workers vary, but how this difference affects the native-born population. Through carrying out this analysis in the context of a comparative ten-country study, the project aims to provide insights that could help policy makers boost the economic contribution of immigration.

The Dominican government approved the participation of the Dominican Republic in the ECLM project in March 2015. It was launched in the context of a national consultation seminar on 19 May 2015. This event was jointly organised with the Ministry of Economy, Planning and Development (the project's government focal point) and the ILO Subregional Office for Central America, Haiti, Panama and the Dominican Republic.

Immigrants' various economic contribution to the Dominican Republic

The findings of the report suggest that the economic impacts of immigrants in the Dominican Republic are limited (for a definition of immigrants, see Box 1.2). The estimated share of value added generated by immigrants is very close to their share of the population. Immigrant workers do not seem to have an impact on native-born worker's wages at the national level. However, they seem to be associated with reduced employment opportunities of the native-born population. At the same time, immigrants make an overall positive contribution to the government finance.

Box 1.2. The challenge of defining 'immigrants'

One important challenge is related to the definitions of immigration and labour migration. Different organisations and countries have their own definitions. For the sake of comparison across countries the project tried to use the same working definitions for all countries, even though available statistics do not always fit these definitions.

Immigrant

No universal definition of an immigrant 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" (UN, 1998). An individual who enters the nation for up to three months is not considered 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 the immigrant will be termed a long-term immigrant.

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

In line with this definition, the Population Division of the United Nation's 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, 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 (immigrant)
Citizenship	Citizens of the country of residence Citizens from another country (foreigners)	Native-born citizens Native-born foreigners	Foreign-born citizens Foreign-born foreigners

Nevertheless, it is important to bear in mind that national legislation often distinguishes between citizens and non-citizens, regardless of country of birth. In the Dominican Republic, the 2004 Migration Law is the one that orders and regulates the migratory flows in terms of entry, stay and exit, as well as the immigration, emigration and the return of nationals. This law is based on the nationality of the migrant and not on the place

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

of birth. By contrast with the previous legislation of 1939, which distinguished between immigrants and non-immigrants, this law introduces several migration categories. Not citizens can be admitted in the categories of permanent residents (section V, articles 33 and 34), temporary residents (section VI, article 35) and non-residents (section VII, article 36). Each of these has various sub-categories. Temporary residents, for example, may include scientists, professionals, journalists, athletes, artists, and other skilled workers. Non-resident sub-categories include tourists, businessmen, crew members, students, passengers in transit, temporary workers and border residents.

In this report, three main sources of data were used: labour force surveys, household surveys and census data. In all the cases and across all chapters, immigrants are defined as the population born outside of the country. The analysis does not distinguish between the different categories defined in the law, but it allows a comprehensive analysis of the foreign-born population and their characteristics.

Labour migrant

The definition of a migrant worker differs from that of an immigrant. The International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families provides a definition of the term migrant worker. Article 2(1) refers to "any person who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national" (UN, 1990). Citizenships thus an important criterion of this definition.

Most immigrants come from Haiti and arrived after 2000

The Dominican Republic has received a relatively high share of immigrants in the last century. Since the census of 1920, Haiti has been the main country of origin (Figure 1.3), and agricultural labour is one of the main reasons they have decided to migrate. Migration was regulated by the 1939 Migration Law and consisted mainly of seasonal working permits to work in the sugar plantations. With the crisis of sugar prices in the mid-eighties and the fall of President Jean-Claude Duvalier, this system came to an end in 1986.

These changes led to movements of Haitian migrants beyond the sugar fields and to search for job opportunities in other economic sectors and other geographical zones in the country. From the early 2000's, immigration, not only from Haiti but also from other countries like the United States and Spain has had an important increase (Figure 1.3). The growth of immigration over the past two decades is embedded in the continued process of state modernisation, sustained by an increase in the service sector and in the tourism industry.

Migration policies have adapted to these transformations. Recent advances include the development of the institutional architecture in the 2004 Migration

Law, creating organs like the National Migration Council, the National Migration Institute and the National Migration School. This has represented important steps toward improving the institutional management of immigration, but the lack of co-ordination and delays in implementation have prevented these institutions to reach their potential.

Hatian-born immigrants Immigrants from other countries 350 000 300 000 250 000 200 000 150 000 100 000 50 000 1920 1950 1960 1970 1981 2002 2010

Figure 1.3. Most immigrants come from Haiti and arrived after 2000 Number of immigrants according to national censuses: 1920-2010

Source: Báez Evertsz (1984) and Cáceres (2015).

A high share of immigrants work, but usually in vulnerable positions

Immigrants participate in the labour market more than native-born individuals. The foreign-born population has higher employment rates and is more likely to be in the working age population than the native-born. Their main sector of activity is agriculture, followed by wholesale and retail trade and construction. However, evidence suggest that immigrants might also work in more vulnerable positions in the labour market: their share in the informal sector is higher (Table 1.2) and they work longer hours.

Haitian immigrants have on average less education than the native-born population. Among the young Haitians, both the most and least educated are overrepresented (Figure 1.4). The share of Haitians that are between 15 and 24 years old and have less than primary education or tertiary education is three times higher in the Dominican Republic than in Haiti. This suggests there is a self-selection of immigrants, meaning that the least as well as the most educated young Haitians are more likely to migrate to the Dominican Republic.

Table 1.2. Immigrants are more likely to be informal workers

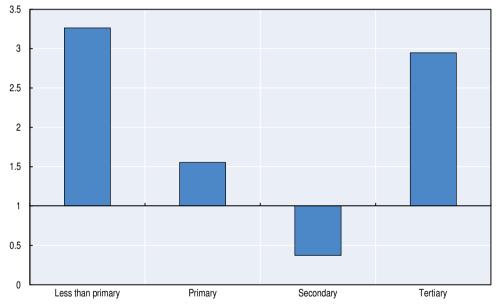
Informal sector employment by place of birth, 2005-14

		Native-born	Foreign-born
2005-10	Formal	40%	29%
	Informal	60%	71%
2010-14	Formal	41%	27%
	Informal	59%	73%

Note: Informal is defined as (1) workers in enterprise with less than five workers, (2) skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers, and elementary workers who are own-account workers and employers, (3) unpaid family workers and domestic services.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Figure 1.4. The share of young highly educated and uneducated Haitians is three times larger in the Dominican Republic than in Haiti



Note: Ratio between the education share of young Haitian in Haiti and the education share of young Haitians in the Dominican Republic. The young correspond to the population between 15 and 24 years old.

Source: Authors' calculations based on ECVMAS (IHSI, 2012) and 2012 National Immigrants Survey (ONE, 2013).

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

Immigrants might have an impact on the labour market outcomes of native-born workers especially if they have similar levels of experience and education. This effect is analysed following a skill cells approach (Chapter 4). Putting it simply, this method investigates whether the concentration of immigrants in a segment of the labour market, defined by their education and work experience and here called "skill cell", is associated with a change of certain labour market outcomes among the native-born individuals in the same skill cell.

The results of the empirical analysis at the national level, higher immigrant concentration is associated with reduced native-born employment and unemployment (Table 1.3). This seemingly contradictory pattern can be explained by the so-called "discouraged unemployment" in the economic literature. Some of the native-born workers that lose their jobs, as well as some of the native-born unemployed population, will no longer look for jobs as they might consider it is too hard to get employed due to increased competition. As an "unemployed" is defined as person that is not working and wants to work, these people will now be considered "inactive" and not "unemployed". This is reflected in a decrease of both employment and unemployment rates implying a shrink of the labour force. This seems to be the case especially for low-skilled men. On the other hand, the concentration of immigrants does not appear to affect native-born workers' labour income at the national level.

Table 1.3. **Immigrants have an impact on employment but not on wages**Impact of foreign-born share on labour market outcomes (national level)

	Labour income	Employment-to-population ratio	Unemployment
AII	ns	-	-
Male	ns	-	ns
Female	ns	ns	ns
High-skilled	ns	ns	ns
Low-skilled	ns	ns	-

Note: The "ns" means the association between the outcome variables and the immigration share is not statistically significant; - indicates that the association is negative and statistically significant at a 10% level. The immigration share corresponds to the proportion of immigrants in the total population in a skill cell. The sample is restricted to the population between 15 and 64 years old in the labour force and it covers the period 2000-14. Labour income is the logarithm of the hourly real labour income.

Source: Authors' calculations based on the National Labour Force Survey (BCRD/ILO, 2016).

The estimation at the national level assumes that all workers can and are willing to move across the country for jobs. Assuming that labour markets are not national but regional can present different findings. Immigrants seem to choose to locate to regions where there is a higher chance of finding jobs. At the regional level, higher immigration shares in a given regional skill cell are associated with less positive labour market outcomes for native-born workers both in terms of employment opportunities as well as labour income.

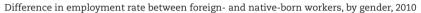
Immigrants contribute a share to value added about equal to their population share

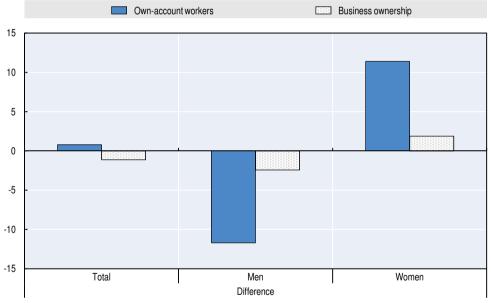
Immigrants are estimated to contribute between 3.8% and 5.3% of the value added in the Dominican Republic. This estimation is based on the distribution of immigrants across sectors: the share of immigrant workers in each sector is multiplied by the value added of the sector, and then this is added up. Immigrants are found to be overrepresented in some high and mid-value added

sectors like mining, manufacturing, hotels and restaurants and construction, but also in low value added activities of commerce and agriculture.

Based on the 2010 census, at the aggregate level there are no significant differences between the self-employment rates of the foreign and native-born employed population. However there are important differences between foreign-and native-born men and women. Among the men, foreign-born workers are less likely to be own-account workers (15.2% vs. 26.9%) or business owners (5.1% vs. 7.5%) than the native-born. Foreign-born women, on the other hand, are more likely to be own-account workers (32.2% vs. 20.8%) and business owners (7% vs. 5.1%) than the female native-born.

Figure 1.5. While women immigrants are more likely to be self-employed than female native-born workers the opposite is true for men





Source: Authors' calculations based on the 2010 National Population and Housing Census (ONE, 2012).

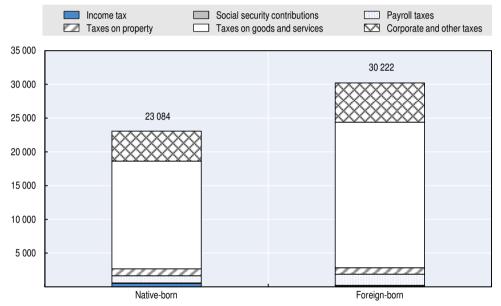
In 2007 immigrants made a positive net fiscal contribution

This report analyses if the amount that immigrants pay on taxes is enough to compensate the expenditures the government makes on them. The direct net fiscal contribution is estimated by comparing the average taxes paid and the average benefits received by both foreign- and native-born populations. Unfortunately, the latest data available on income and expenditures of households -necessary for this analysis- is 2007, so these estimations do not include immigrants that arrive after that year.

Based on these calculations, immigrants appeared to make a positive net fiscal contribution in 2007. They were estimated to make higher fiscal contributions than native-born tax payers, mainly because of higher levels of payments in indirect taxes (Figure 1.6). Public expenditures were on average lower for the foreign-born population than for the native-born, because of lower expenditure on social security benefits, social assistance and education. This result, even though positive from the point of view of the public purse, hints that immigrants lacked access to social protection in 2007.

Figure 1.6. Immigrants made higher fiscal contributions than native-born individuals in 2007

Estimated per capita fiscal contribution by place of birth, in Dominican pesos, 2007



Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

The changes in tax collection as well as in public expenditure that has taken place since 2007 might have changed the fiscal impact of immigrants. The total amount collected on tax revenue has more than doubled since 2007 (OECD et al, 2017). The composition has changed as well, with a lower importance of indirect taxes (from 69% in 2007 to 65% in 2016). Changes in certain policies have facilitated immigrants to contribute. For example, with the Decree 96 of 2016 that implements an alternative numbering system where it is no longer necessary to hold a *cédula* (national identification number) to be affiliated to the social security or to receive benefits. Another example is the National Regularisation

plan, that allowed around 250 000 immigrants to regularise their status (see chapter 2). It might have been reflected in a positive fiscal contribution if this increased the probability to be formally employed. On the other hand, the large inflows of immigration after 2007, for example, following the earthquake in 2010 in Haiti, might have had a different impact if more recent immigrants contribute and spend differently than the immigrants that were in the country in 2007. More updated data is therefore necessary to understand how these changes have affected the net fiscal contribution of immigration in the Dominican Republic.

Conclusions and policy implications

The analysis in this report elaborates how immigration affects different segments of the economy, in particular the labour market outcomes of nativeborn workers, public finance and economic growth.

The empirical analysis suggests that immigration translates into reduced employment opportunities for native-born workers, especially for men. However, it does not affect other labour market outcomes, such as native-born workers' labour income. Increased competition in certain sectors and skill groups may lead to push out native-born workers from the labour market. Policy makers should therefore aim to address the needs of those possibly affected by immigration. One way is to invest in mechanisms that upskill native-born workers, but do not harm immigrants. For instance, the country can invest in training programmes to help native-born workers face the competition and move to booming sectors.

The Dominican government can strengthen labour migration. For instance, better monitoring of labour market indicators to assess the labour market needs can further support migration management systems. Developing consultation mechanisms with the private sector is also important to align labour immigration with labour market needs.

Regardless of their higher level of participation in the labour market, foreign-born workers are also more likely than native-born workers to suffer from vulnerable employment. This is particularly the case for female immigrants. Furthermore, pervasive and increasing informality in the economy represents another challenge for the Dominican Republic. Therefore, policy makers should adopt mechanisms to protect immigrants' rights and fight against the worst forms of vulnerability.

Immigrants' working and living conditions are closely linked with the way they contribute to their host country's economy. Integration of non-Haitian immigration into the Dominican society has been relatively smooth, whereas for Haitian immigration the perception has been that this is a different kind of immigration. This may give rise to racial prejudice and, hence, discriminatory practices. In this respect, reinforcement of the rights that are included in the 2004 migration law must be a priority. Public authorities as well as employees

and employers should therefore prioritise protecting the rights of immigrants and preventing all forms of discrimination and racism.

The report shows that, on the basis of available data, immigrants contribute positively to public finance in the Dominican Republic, mainly by their higher payment in indirect taxes and lower public expenditures. This in turn can mean that immigrants did not benefit enough from social protection. Increasing *de facto* access to education, health and the social security system is crucial to ensure better integration and the well-being of immigrants.

The limited impact of immigrants on the host country economy also means that the country is not fully leveraging the immigration impact on its development. Beyond the policies targeted directly towards immigrants, a more coherent policy framework can further benefit the host country as well as immigrants. A coherent agenda between migration and non-migration sectoral policies and closer institutional co-ordination would enhance the economic contribution of immigrants (OECD, 2017).

Finally, to better assess the economic contribution of labour migration, better data and evidence is key. For instance, an update of the Income and Expenditure Household Survey can allow the evaluation of fiscal contribution of more recent immigrants and take into account the changes that have happened in the past years.

Notes

- China, Colombia, Cuba, Germany, France, Italy, Puerto Rico, Spain, United States and Venezuela.
- 2. The value added share is adjusted for estimated productivity differences based on either the ratios of the average wages or of the years of education of foreign-to native-born workers in each sector. When adjusted by wages, immigrants are estimated to produce 4.3% of value added. When adjusted by years of education, they are estimated to produce 3.8% of value added. The result unadjusted is 5.3%. For methodological information, see Chapter 5.

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ANNEX 1.A1

Data used in this report

The report relies primarily on four data sources: i) the Dominican censuses, ii) the Dominican labour force survey (LFS), iii) the Dominican immigration survey conducted in 2012 (ENI-12) and iv) the National Survey on Household Income and Expenditures conducted in 2007 (ENIGH). All these databases have information on country of birth, age, sex, education and work status.

The two latest censuses in the Dominican Republic were conducted in 2010 and 2002. They contain information on basic demographic and labour characteristics of the individuals. The LFS is carried out by the Central Bank with the technical assistance of the ILO. It contains yearly data from 2000 and 2016 and provides more detailed information of the characteristics of the labour force, however, it seems to undercover the immigrant population. This undercount appears more pronounced in rural than in urban areas. In urban areas, the LFS, estimated 2.5% of the population to be foreign-born, compared to 3.7% according to the 2010 census. The 1.2 percentage point difference corresponds to an undercount rate of 32%. In rural areas, the labour force and census estimates of the foreign-born share are instead equal to 3.3% and 5.7%, respectively. This 2.4 percentage point difference corresponds to an undercount rate of 42%. The 2007 ENIGH is the latest income and expenditure survey. In this survey the share of immigrants is lower than in the census of 2010 (2.81% and 4.19% respectively) explained mostly by the important migration inflows after 2007.

This report uses microdata from other countries different than the Dominican Republic, in particular the Haitian survey l'Enquête sur les Conditions de Vie des Ménages Après le Séisme (ECVMAS) carried out by the Haitian Institute of Statistics and Informatic (IHSI), and the 5% and 1% samples, respectively, of the 2000 and 2010 United States Censuses, provided by the Minnesota Population Center.

Apart from these micro-data sources, various other data sources are used to set the Dominican situation into a regional and international perspective. Among them are various UNESCO Statistics, the Dominican household survey (ENHOGAR 2012), the Revenue Statistics in Latin American and the Caribbean

provided by the OECD Development Centre, statistics provided by the Dominican Central Bank, Budgetary information provided by the General Direction of Budget, the World Economic Forum Indicators, the American Community Survey PUMS data, the World Development Indicators provided by the World Bank, COMTRADE data provided by the Observatory of Economic Complexity, data from the Superintendencia de Electricidad, as well as, enterprise data from the Doing Business Surveys provided by the World Bank.

Chapter 2

The immigration landscape in the Dominican Republic: Patterns, drivers and policies

This chapter describes how immigration and immigration policies have evolved in and have been shaped by the ongoing process of reform and modernisation in the Dominican Republic. The first section presents the country's recent economic context. The second section discusses the evolution of immigration policies and the demographics of the immigrant population. The final section provides an overview of the current implementation of migration policies, emphasising the 2004 Migration Law and the National Regularisation Plan and the challenges that remain in terms of integration.

The Dominican Republic's economic growth has been one of the strongest in Latin America and the Caribbean (LAC) region in recent years. Since the late 18th century, the economy was boosted mainly by exports of agricultural goods until the decline of the sugar industry in the 1980s. The economic model then has transitioned from agro-exports towards services. International migration in the country has accompanied the economic transformations and has been an essential part of the country's development.

While the country is now a net emigration country, the Dominican Republic has historically been a country of destination, attracting immigrant workers to agriculture, in particular to its sugar industry. Immigration has remained significant, notably from neighbouring Haiti, even after the crisis in the sugar sector which reduced demand for agricultural labour. Both economic and sociopolitical disparities between the two countries largely explain the pattern.

The recent economic context

The Dominican Republic is an upper-middle-income country, with an average real growth rate in gross domestic product (GDP) of 5.6% between 1992 and 2016 (World Bank, undated). In the 2000s, economic expansion was boosted by high growth levels in the communications, financial intermediation, mining, and wholesale and retail trade sectors (ILO, 2014). In 2016, the Dominican Republic had the most rapidly growing economy in Latin America and the Caribbean (LAC) for the third year in a row, with a real GDP growth rate of 6.6% according to the World Bank (Figure 2.1).

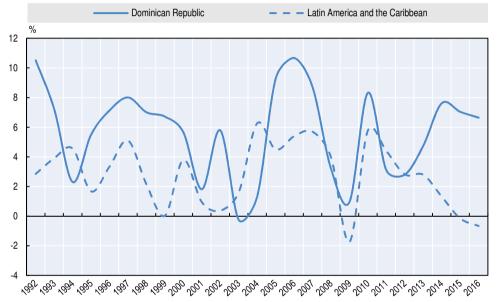
However, important challenges to inclusive growth and development remain. These include the fact that a large share of the jobs created since 2000 has been in low-skilled and lower productivity industries in the informal economy (World Bank, 2016). In 2012, 48.5% of the country's workforce was informally employed (ILO, 2012). Though some progress has been made towards formalising the workforce in efforts to expand social security coverage (ILO, 2014), informality continues to be a structural feature of the Dominican economy. This limits the impact that the country's economic growth could have on income levels and living conditions of workers.

Inequality is another challenge to inclusive growth that has not improved much over time. According to World Bank estimates, the Gini index, which stood at 51.4% in 1992, only decreased to 44.9% in 2015. The income share held by

the lowest 10% in 2015 was only 1.9%, 0.3 percentage points higher than in 1992. The income share of the highest-earning 10% stood at 34.6% in 2015 compared to 42% in 1992. The income distribution in the Dominican Republic remains more unequal than in other Latin America countries such as Argentina, Peru and Uruguay, although more equal than in Chile, Colombia and Costa Rica (World Bank, undated).

Figure 2.1. The Dominican Republic has one of the most rapidly growing economies in Latin America and the Caribbean

Annual percentage growth of GDP, 1992-2016



Source: "GDP Growth (annual %) NY.GDP.MKTP.KD.ZG" World Bank (undated). World Bank (undated), World Bank Data Bank, http://data.worldbank.org/.

The Dominican economy has transitioned from agro-exports towards services

For most of the 20th century, the Dominican Republic's economic structure centred on exports of primary agricultural goods. The sugar cane industry, which the United States injected with capital during its occupation of the Dominican Republic (1916-1924) and Haiti (1915-1934), drove economic growth (Wooding and Moseley-Williams, 2004). The Dominican Republic was the third largest producer of sugar in the world and the largest in Latin America. Sugar cane continued to be important during the Trujillo regime.

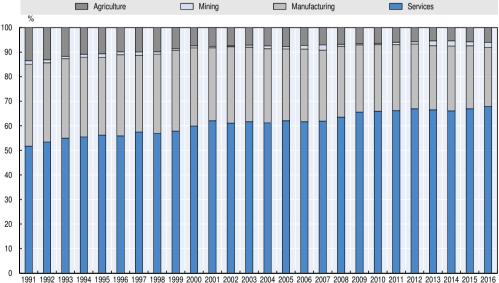
This economic structure underwent major changes beginning in the 1980s. The sugar industry declined as a result of low productivity in the sugar mills of the State Sugar Council (CEA – Consejo Estatal de Azúcar), corruption and quota

reductions under the preferential trade agreement with the United States (Tejada, 2001, cited in Riveros, 2014). In 1997, the General Law Reforming Public Enterprise transferred administration of the mills to private national and foreign investors as of late 1999. However, most of the initial agreements with private investors did not continue beyond the 2004-05 growing season (Riveros, 2014). Today, most of the former CEA sugar plantations are no longer in operation, with the exception of the Barahona sugar mill.

Since the 1990s, the Dominican economy has transitioned from an agroexport and industrial model of import substitution towards a model centred on services, tourism and export processing zones (Figure 2.2) (UNDP, 2005). The 1990s also marked the beginning of a construction boom in urban areas and tourist regions, consisting of apartment buildings and residential complexes, tourist installations, and massive public works such as the construction of a metro system in Santo Domingo undertaken in 2007 (Petrozziello, 2012).

Figure 2.2. The agricultural contribution to gross domestic product has declined, while that of services has increased





Source: Author's calculations based on Central Bank Dominican Republic (n.d) Economic statistics "'Real GDP, 2007 as base year"' https://www.bancentral.gov.do/estadisticas_economicas/real/

History and characteristics of immigration

Many factors have shaped immigration in the Dominican Republic, including the country's economic evolution and immigration policies, which have vacillated between open and more closed regimes. Immigrants' countries of origin also play a role. Given the importance of Haitians in total immigration, events in Haiti have largely affected immigration flows to the Dominican Republic.

Agricultural labour was the main reason of immigration from 1850 to 1986

Immigration has a long history in the Dominican Republic and has followed its economic evolution. From the middle of the 19th century until the fall of Rafael Leónidas Trujillo in 1961, agricultural labour migration was a dominated phenomenon motivated principally by two factors. First, labour was needed for agro activities; in particular the harvest of sugar, and the low wages prevented the Dominican-born peasantry to be interested in this activity (Báez, 1984). Second, an established inter-state recruitment system between Haiti and the Dominican Republic of temporary workers facilitated the flows of migrants from one country to the other (Cuello, 1997).

Immigration flows increased in the latter third of the 19th century and the first third of the 20th century. This was due to a peak in the sugar industry at that time that boosted the Dominican economy. The first three decades of the 20th century coincided with the United States' first occupation of the Dominican Republic and Haiti, and with the economic boom known as the "Dance of the Millions". Workers were easily transported from the western side of the island to the east, laying the foundations for a system for recruiting temporary immigrant workers. Despite some interruptions and variations, this was to continue until the middle of the 1980s (Báez Evertsz, 1984; Cuello, 1997).

The Migration Law 95 of 1939 was the first one to create a legislative frame for the regulation of migration. It covered central issues of immigration: temporary admission requirements, categories of immigration, residency permits, deportations, and denials, rights and regulations of entry (DGM, undated). It created the General Directory for Migration (DGM Dirección General de Migración). The law distinguished foreign citizen into two categories, immigrants and non-immigrants (Art 3). Temporary low skilled workers, predominately from Haiti and working in agriculture, were not considered immigrants (Art 3.4, Art 6). The legislation that regulated temporary workers was the Migration Regulation No 279.

The low-skilled immigration system consisted in the Dominican government annually estimating the number of workers required and the Haitian government recruiting them. Their transportation was ensured in trucks escorted by Dominican military personnel (FLACSO/IOM, 2004). The companies were responsible for managing the temporary residence permits for these workers with the General Directorate of Migration (DGM) and for assuming the costs of repatriation after the harvest had ended. The agreements stipulated that the workers and their family members should remain within the perimeter of the sugar mills where they were working. Hence, their geographic and sectoral mobility was limited, as was their visibility beyond the rural milieu (Riveros, 2014).

Much less massive in character, but important on socio-economic and cultural levels, was the arrival during this period of business people, traders, agricultural settlings and refugees. This occurred largely during the Cuban Revolution and the colonial emancipation in Puerto Rico (1868-98) and coincided, several decades later, with the Spanish Civil War and World War II. These business and political immigrants came mainly from China, Cuba, Italy, Lebanon, Puerto Rico and Spain.

After the fall of Trujillo, seasonal migration was interrupted by political unrest in the Dominican Republic between 1961 and 1965. This included the post-dictatorship transition, conflicts between Dominican president Juan Bosch and the François Duvalier regime in Haiti, the US invasion and the subsequent April 1965 revolution (UNDP, 2005). In 1966, a new treaty for recruiting manual labour was ratified, but tense relations between the Dominican Republic and Haiti led to the closing of the border in 1967 and 1968.

From 1969 to 1979, Haitian migration rose again. It was facilitated by labour migration agreements executed by the CEA and the Haitian regime. These agreements sidestepped the need for approval by the Dominican Congress under the pretext of being extensions of the 1966 pact (Cuello, 1997). A hike in international prices of sugar and a corresponding internal demand for workers to cut cane increased irregular smuggling of Haitian migrants (Báez Evertsz, 1984; Cuello, 1997). The official seasonal labour migration system collapsed along with the fall of the Haitian President Jean-Claude Duvalier in 1986.

The end of Trujillo's regime ushered in a new era in Dominican history. This included new trends towards urbanisation as well as increased movement towards and from the country, mainly from the Dominican Republic to the United States.

Most Haitian migrants arrived after the fall of Jean-Claude Duvalier in 1986

The crisis in the sugar sector began in the middle of the 1980s and intensified during the following decade. It reduced the demand for agricultural labour, leading workers to search for jobs in other economic sectors and other geographical zones of the country.

The socio-political situation in Haiti in the mid-1980s had two main consequences. First, there was a deepening cleavage as regards destinations, with the better-off migrants leaving for North America, Europe and – more recently – South America, while the least well-off crossed into the Dominican Republic by land. Some business people and slightly better-off migrants moved to the Dominican Republic, but fewer than to other destinations. Since then, Haitian migrants have tended to enter the Dominican Republic on an individual basis and not with the mediation of systems of recruitment used prior to 1986 (UNDP, 2005). The population coming from Haiti increased further

at the beginning of the new millennium because of political conflicts in the country including the fall of President Jean Bertrand Aristide in 2004. However, the highest increase happened in 2010 as a consequence of the earthquake (Figure 2.3).

The earthquake in Port-au-Prince in January 2010 marked the beginning of a new wave of migration from Haiti to the Dominican Republic. Based on World Bank estimations (2012) the emigration from Haiti to the Dominican Republic and other countries increased by 6% the year of the natural disaster. Until 2020, the migration flows are estimated to remain 3% above what would have been expected in the absence of the earthquake (World Bank, 2012).

350 000
300 000
250 000
100 000
100 000
1920
1920
1950
1960
1970
1981
2002
2010

Figure 2.3. **Most Haitian immigrants arrived after 1980**Number of immigrants according to national censuses: 1920-2010

Source: Báez Evertsz (1984) and Cáceres (2015).

An important characteristic of this immigration has been the unauthorised entries of migrants across the land border between the Dominican Republic and Haiti. These movements, which differ depending on the socio-economic and political context of the time, reflect the difficulties of controlling a border of significant length and notorious porosity. Some of the undocumented immigrants cross the border on their own, while others do so with the help of migrant smuggler networks operating on both sides of the border. These networks have diversified and become more entrenched in recent decades (Báez Evertsz et al., 2011).

Migration policies became more restrictive starting in 1986

When migrant workers began leaving the sugar plantations to find work in the cities – and thus became more visible to the general public – Haitian labour migration became an issue of public controversy. Since the 1990s, successive governments have faced pressure to establish more comprehensive and coherent migration policies. The first regularisation process took place in 1990 in response to the increasing number of Haitian immigrants in regular status. However this decree did not meet its objectives and very few Haitian-born immigrants benefited from it (OAE, 1999).

Throughout the 1990s and early 2000s, there was a contentious process to draft a new immigration law. Four different pieces of legislation were considered, starting in 1989-1991, with a draft migration law prepared by representatives of the DGM and the Ministry of Foreign Affairs, with guidance from the International Organisation for Migration (IOM). In 1996, the Migration Department revised and broadened the draft's focus. A third revision was prepared in 1999 by representatives of the Migration Department, the Ministry of Foreign Affairs and the President's Legal Counsel. That draft was presented to Congress but officials of the next government withdrew the draft. In 2001, a working group of migration experts, co-ordinated by the Ministry of Foreign Affairs, began drafting a new piece of legislation and engaging in a consensus-building process with a diverse set of actors. But in 2003, the Minister of Foreign Affairs promptly resigned, leaving the process to flounder and a then Senate commission to take over (Lozano, 2008).

The Migration Law which finally passed in 2004 was a hybrid product of the previous two pieces of legislation. Law 285-04 was passed on President Hipolito Mejia's last day in office (Congress of the Dominican Republic, 2004). It was a new law with important elements for strengthening the normative and institutional framework for migration governance. However, it also contained controversial elements. The hybrid character of the law, approved right before the new Dominican Liberation Party (PLD – Partido de la Liberación Dominicana) came into power, has left the implementation of the Migration Law disjointed and delayed. These implementation issues are described in more detail in the final section of the chapter.

Most immigrants come from Haiti due to large disparities in economic conditions between the two countries

The Dominican Republic receives relatively high immigration flows from Haiti. Based on the 2012 National Immigrant Survey (Encuesta Nacional de Inmigrantes ENI-2012), more than 450 000 immigrants were born in Haiti, representing 87% of the total immigrant population. This high level of immigration from Haiti is due in part to the marked contrasts in the levels of income and development between the two countries, as well as the relatively

cheap travel costs (Aristy-Escuder, 2010; World Bank, 2012). While the GDP of the Dominican Republic exhibited the highest growth rate in Latin America with an average of 5% between 1960 and 2010, Haiti registered the lowest at only 1% (World Bank, 2012). Likewise, the rate of unemployment among Haitian migrants before moving to the Dominican Republic was 40.5% for people coming from Haiti, thus three times as high as immigrants from other countries (ONE, 2013a).

The economic disparities between the two countries were accentuated even more by the January 2010 earthquake in Haiti, increasing emigration to the neighbouring Dominican Republic and other countries. Based on the ENI-2012, 39% of people born in Haiti reported having immigrated after 2010, in comparison to 24% that did so between 2006 and 2009, 19% between 2000 and 2005 and 16% before 2000 (ONE, 2013b).

The growth in immigration since 2000 is also embedded in the continued process of state modernisation, sustained by increases in the services sector and tourism industry. There has been a high demand for Haitian immigrant labour while labour needs in urban construction and in agriculture have remained stable. These activities require low-qualified and low-paid workers; non-Haitian immigrants are principally concentrated in high-skilled sectors (Acuña et al., 2011; Lozano, 2013).

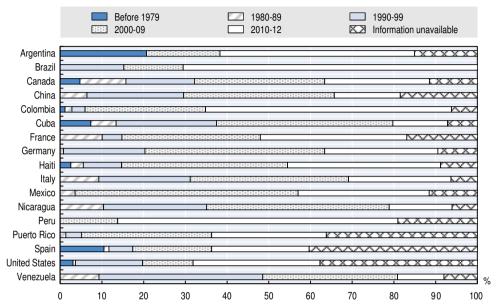
Haitian immigrants often live in precarious conditions and extreme poverty. Moreover, and despite government initiatives such as the National Regularisation Plan, many of them remain undocumented. They often face hostile political and social attitudes and have little access to legal aid and to health and education services, including for their children born in the Dominican Republic (ONE, 2013b). In general, access to services and documentation is often also a problem for the poorest Dominicans.

Current immigrants mostly arrived after 2000

Similar to Haitian immigration, the number of immigrants from other countries increased at the beginning of the new millennium. More than half of the immigrants from Colombia, France, Italy and Puerto Rico that were living in the country in 2012 had entered the country from 2000 onwards (Figure 2.4).

In 2012, based on the ENI-2012, the National Statistical Office (ONE) estimated that a total of 524 632 immigrants resided in the Dominican Republic, equivalent to 5.4% of the national population. Of this total, 458 233 people had been born in Haiti, representing 87.3% of the immigrant population (Table 2.1). The survey also established that the number of individuals born on Dominican territory to immigrant parents (second-generation immigrants) totalled 244 151, representing 2.5% of the total national population. The number of descendants of Haitian immigrants was 209 912, and the balance of 34 239 were descendants of other immigrants.

Figure 2.4. **Most immigrants arrived after the new millennium**Composition of the immigrant population by period of entry and country of origin, 2012



Note: "Information unavailable" corresponds to the people who did not provide information on the year they entered the country in the 2012 National Immigrants Survey.

Source: Authors' calculations based on the 2012 National Immigrants Survey (ONE, 2013a).

Table 2.1. Most migrants come from Haiti, Spain and the United States

Number of immigrants and share in the immigration population

by country of birth, 2010 and 2012

Country of birth	2012 National Immigrants Survey			IX Population and Housing Census 2010			
	Number	% of immigrants	% of women	Number	% of immigrants	% of women	
Haiti	458 233	87.3	34.6	311 969	78.8	38.0	
United States	13 514	2.6	47.3	24 457	6.2	47.7	
Spain	6 720	1.3	37.5	6 691	1.7	39.0	
Puerto Rico	4 416	0.8	44.2	5 763	1.5	46.1	
Italy	4 044	0.8	25.5	3 595	0.9	28.8	
China	3 643	0.7	35.1	1 406	0.4	43.9	
France	3 599	0.7	29.7	1 936	0.5	39.4	
Venezuela	3 434	0.7	52.3	5 132	1.3	50.4	
Cuba	3 145	0.6	41.6	3 639	0.9	44.6	
Colombia	2 738	0.5	49.0	3 416	0.9	49.3	
Germany	1 792	0.3	37.0	1 574	0.4	33.5	
Other countries	19 355	3.7		26 213	6.6		
Total	524 633		35.6	395 791		39.4	

Source: Authors' calculations based on the 2012 National Immigrants Survey (ONE, 2013a) and IX National Population and Housing Census 2010 (ONE, 2012).

The non-Haitian immigrant population, estimated at 66 399 and representing 12.7% of the immigrant population, is diverse, registering over 60 countries of origin.³ In terms of origin by continent, 55.7% of these immigrants were born in the Americas, 30.5% in Europe and 10.9% in Asia (ONE, 2013a).

Non-Haitian immigrants come mainly from the United States, followed by Spain and Puerto Rico. These are also principal destination territories of Dominican emigration. Of course, the number of Dominican emigrants in particular in the United States far exceeds the number of US immigrants to the Dominican Republic, and even the total number of immigrants to the Dominican Republic from any country of origin. According to the 2010 US census, around 917 000 people who were born in the Dominican Republic were living in the country and nearly half of them in New York State alone (Minnesota Population Center, 2017).

Social relations and family ties which join the Dominican diaspora with communities in origin and destination sites, the proliferation of transnational families and the high number of people who have obtained Spanish or US nationality have a bearing on the immigration inflows to the Dominican Republic. Likewise, the strengthening of bilateral economic links between the Dominican Republic and Puerto Rico, Spain and the United States as well as the tourist flows also have an impact on recent migration from these countries (Cáceres, Báez y Caamaño, 2011).

For the period of 2011 to 2015, there was a significant increase in immigrants arriving from Venezuela. The inter-yearly growth was estimated at 35%. This was considerably higher than the percentage increase in arrivals from South America, which was 20% (ONE, 2016). The ENI-2012 showed Venezuela as the third country of origin for immigrants from Latin America and the Caribbean. The preliminary results of the National Immigrant Survey of 2017 indicates an accelerated increase in the number of Venezuelan immigrants between 2012 and 2017, passing from 3 400 to 25 800 individuals, that is, an increase of 653% (ONE, 2018).

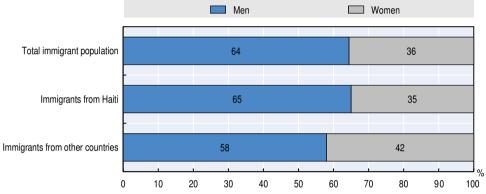
More men than women immigrate to the Dominican Republic

There exists a higher proportion of men in the immigrant population, which is more marked in the immigration from Haiti (Figure 2.5). The relative weight of female migrants is better balanced in the Colombian and Venezuelan immigrant groups, where they represent about half of immigrants. The immigrant group with the lowest share of female immigrants (30%) is from Italy.

Despite the predominance of male immigration, the percentage weight of female immigration has increased (Figure 2.6). At the national level this reproduces the tendency towards the feminisation of migration observed at the global and regional levels (Pizarro and Orrego, 2016). Similarly, some data derived from the ENI-2012 suggest that women are migrating in greater numbers

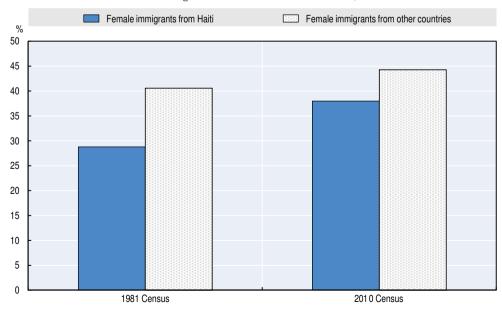
on their own initiative, given that the percentages which indicate better living conditions (29.5%) and employment opportunities (25.1%) as causes for migration were higher than those linked to family motives (19.3%). Moreover, more women (10.2%) than men (6.1%) indicated their studies as a cause for having migrated (ONE, 2013a).

Figure 2.5. **Most immigrants are men**Percentage distribution of immigrant population by sex, 2012



Source: 2012 National Immigrants Survey (ONE, 2013a).

Figure 2.6. **Female migration has increased over time**Share of female immigrants from Haiti and other countries, 1998 and 2010



Source: IX Nacional Census Population and Housing 2010 (ONE, 2012) and Cáceres (2015).

The feminisation of immigration is also observed among Haitians. Women and children made up a larger share of Haitian immigrants that arrived between 2010 and 2012 than in prior years (Guerrero, Donastorg and de los Santos, 2014). This apparent feminisation of Haitian migration as a post-earthquake phenomenon has been linked to inequality and gender-based violence in Haiti, which translate into greater difficulties to access employment and public services, further aggravated in times of crisis. Similarly, this is related to the increase in female-headed households because male family members migrated earlier (Riveros, 2013, based on Wooding, 2011).

More than half of the immigrant population is between 15 and 34 years old

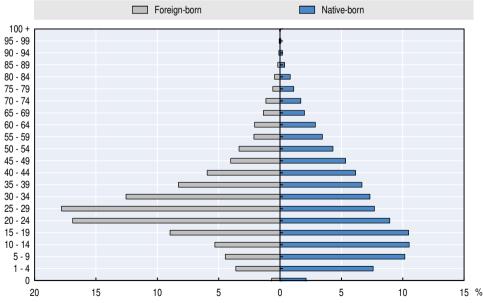
A characteristic of the immigrant population is its youth, since 56.2% of the total population was between 15 and 34 years old in 2010 (Figure 2.7) while the corresponding share for the native-born group was 34.4%. Individuals between 15 and 64 years old, those most likely to be economically active, represented 82% of immigrants. In contrast, only 63.2% of the native-born population were in the same age group.

Figure 2.7. Immigrants are generally young or middle-aged

Percentage composition of immigrant and native-born individuals per age group, 2010

Foreign-born

Native-born



Source: IX Nacional Census Population and Housing 2010 (ONE, 2012).

The predominance of young and middle-aged people is most marked in the Haitian immigrant population. Of the total number of people born in Haiti, 85.6% were between 18 and 64 years old, 12.1% between 0 and 17 and only 2% over 65. Among the population born in other countries, 61.6% were between 18 and 65 years old, 27.7% between 0 and 17 and 10.5% over 65 (ONE, 2013a).

Immigration and integration policy enforcement and implementation

Migration policies and management are part of an ongoing process of reform and modernisation of the Dominican Republic. Recent advances include the development of the institutional architecture and the National Regularisation Plan that the 2004 Migration Law called for more than a decade ago. However, reforms to continue strengthening institutional capacity for migration management and to ensure its sustainability are pending.

By contrast with the previous legislation of 1939, which distinguished between immigrants and non-immigrants, the 2004 Migration Law introduces new migration categories. Foreigners can be admitted in the categories of permanent residents (section V, articles 33 and 34), temporary residents (section VI, article 35) and non-residents (section VII, article 36). Each of these has various sub-categories. Temporary residents, for example, may include scientists, professionals, journalists, athletes, artists and other skilled workers. Non-resident sub-categories include tourists, businessmen, crew members, students, passengers in transit, temporary workers and border residents. This law includes important elements for strengthening the normative and institutional framework for migration governance (Box 2.1) It creates the National Migration Institute (Instituto Nacional de Migración INM) and the National Migration Council (Consejo Nacional de Migración CNM).

In addition to the Ministry of Interior and Policy, the Ministry of Labour plays an important role in labour migration management. The Ministry of Labour is in charge of regulating labour relations and implementing employment policies. However, its institutional role regarding labour migration has been secondary to the more security-oriented Ministry of Interior and Police and its subsidiary Migration Department.

In 2012, the Ministry of Labour created a Labour Migration Unit. It has multiple functions, including to participate in labour migration policy development; work with the Migration Department regarding labour migration; safeguard migrant workers' labour rights through inspection; co-ordinate research on labour migration and its socioeconomic impact on the country as an input for managing migrant workers; collaborate with the Observatory on the Dominican Labour Market to make recommendations to the Ministry of Labour regarding the implementation of migration policy and the labour market; and oversee the application of bilateral or international labour migration agreements (Ministry of Labour, 2012). While promising on paper, the unit has yet to fulfil its potential. Currently, its activities are limited to sporadic trainings and dissemination of information on labour rights to migrant workers (OBMICA, 2016).

Box 2.1. Institutional roles according to the 2004 Migration Law 285-04

The Migration Law 285-04 defines the roles of the implementing bodies of immigration policies. The **Ministry of Interior and Police** is the organism in charge of carrying out the Migration Law, through its **Migration Department** (DGM). The DGM is responsible for the following:

- i) controlling and keeping records of the entry and exit of migrants from the country
- ii) regulating immigrants' stay in the country
- iii) issuing residency and re-entry permits
- iv) authorising extensions of stay or change in migration categories for temporary residents
- v) setting up border entry and exit points as authorised by the executive branch
- vi) determining the legality of foreigners' entry or stay in Dominican territory
- vii) determining and enforcing non-admission, deportation or expulsion of foreigners who do not meet the legal requirements
- viii) inspecting international transportation companies to ensure compliance and documenting infractions
- ix) inspecting work places
- x) submitting infraction paperwork to judicial authorities
- xi) co-ordinating with national and international authorities to facilitate return of Dominican nationals and foreigners admitted as residents, in co-ordination with the Ministry of Foreign Affairs
- xii) providing information and orientation services to prospective immigrants
- xiii) establishing migration agreements with private and public institutions regarding migration control and regulations and the social and economic impact (this is not exclusive, and can be done in co-ordination with the National Migration Council)
- xiv) requesting the assistance of national military and police forces to enforce migration controls when needs exceed the capacity of DGM security personnel.

The **National Migration Council** (Consejo Nacional de Migración) is an inter-institutional committee created to co-ordinate implementation of migration policy and advise the state. Membership includes several ministers and members of the Ministry of Interior and Police.

The National Migration Institute was established to provide technical inputs to the National Migration Council. The Institute is responsible for carrying out studies on international migration and liaising with academia. It has the legal authority to work in all technical activities related to migration.

The National Migration School is the branch of the National Migration Institute in charge of training migration inspectors, border control agents and other migration department personnel.

The Ministry of Economy, Planning and Development also has an important role to play in terms of co-ordinating and developing national development policies and providing technical and methodological support for creating strategic plans and of sectoral and institutional policies. The National Development Strategy (END – Estrategia Nacional de Desarrollo 2030) recognises the need to align migration flows with national development needs (Congress of the Dominican Republic, 2012). The END outlines specific objectives including reorganising and modernising the legal and institutional framework on migration according to international best practices and guaranteeing respect for migrants' rights. To this end, the END establishes goals for strengthening the registration, management and control of migration flows; establishing a quota and/or incentive system for temporary migration and residency; and aligning the different entities and legal framework to guarantee respect for migrants' human rights and ensure their protection from all forms of violence.

The lack of institutional co-ordination has delayed policy measures

Although the 2004 Migration Law called for interinstitutional co-ordination vis-à-vis the creation of the National Migration Council (Consejo Nacional de Migración), procedural gaps have prevented it from functioning. Specifically, the rules of procedure for implementing the migration law, which were to be drawn up by the government's executive branch within 180 days of its approval (article 153), were issued seven years later via Presidential Decree 631-11 (Presidencia de la República Dominicana, 2011). Consequently, the National Migration Council has convened sporadically. However, it has yet to fully assume its role of formulating migration policies and facilitating institutional co-ordination.

In addition, the technical secretariat of the National Migration Council, the National Migration Institute (INM – Instituto Nacional de Migración), whose creation was also called for in the 2004 Migration Law, only came into operation in 2015. This was again due in part to the late issuance of the rules of procedure. The Institute is tasked with carrying out research and providing inputs for the Council to make informed decisions on migration policy.

The National Regularisation Plan for Irregular Migrants is another example of a delayed policy measure. The 2004 Migration Law called for regularising all foreigners with an irregular migration status as a transitional measure crucial to the successful implementation of the new law. In practice, the National Regularisation Plan was set in motion via Presidential Decree 327-13 in 2013 (Presidencia de la República Dominicana, 2013).

Policy reforms are pending to continue strengthening institutional capacity for migration management and to ensure the sustainability of the reforms that have been implemented. For the Dominican government to strengthen labour migration governance as an essential element of sustainable development, it should foster close institutional co-ordination, with a view to helping immigrants integrate.

The Regularisation Plan has helped regularise almost 250 000 immigrants

Delays notwithstanding, the implementation of the Regularisation Plan fostered unprecedented levels of institutional co-ordination regarding immigration. The Ministry of Interior and Police designed and carried out the plan in collaboration with the National Migration Council, the Migration Department and the Ministry of Foreign Affairs. Associated entities included the Ministry of the Presidency, the Ministry of Labour, the Ministry of Public Health, the Central Electoral Board, the state security apparatus, the Dominican-Haitian Mixed Bilateral Commission and civil society. Later, the public prosecutor and diplomatic delegations also became involved, as did non-governmental organisations, employers, labour union confederations, and churches. The IOM provided technical support to the Dominican government throughout the regularisation process.

As a result, 249 768 migrants (85 938 women and 163 830 men) were able to obtain a regular migration status (OBMICA, 2016). They represented 47.6% of the total immigrant population, which was estimated by the 2012 National Immigrants Survey to be 524 632 (ONE, 2013a). The vast majority – 97.8% – of regularised migrants were Haitian nationals (84 061 women and 160 142 men) (OBMICA, 2016).

Most of the regularised immigrants were not able to comply with the requirements for regularisation as set out in the plan, including the presentation of valid identity documents from their countries of origin. Haiti launched a programme to provide or renew identification cards to their citizens (*Programme d'Identification et de Documentation des Immigrants Haïtien PIDIH*) but only 7% of the applicants benefited from this programme as of December 2015 (IOM/INM, 2017). Therefore, the Dominican authorities identified the temporary solution of issuing regularisation cards valid for one year to those without passports and stickers valid for two years for those with passports but that did not fulfil all the requirements (Riveros and Wooding, 2017). Except for some 2 700 retired Haitian sugar cane workers who secured permanent residency, most regularised migrants received an exceptional migration status that does not correspond to any of the migration categories foreseen in the 2004 Migration Law (IOM, 2016).

Simultaneously with the Regularisation Plan, the Naturalisation Plan (Law 169-14) was implemented in early 2014. This special regime of naturalisation came in response to the controversial 2013 constitutional tribunal sentence (168-13) (Tribunal Constitucional, 2013) that ordered an audit of the Dominican civil registry to strip Dominican nationality from all children born in the country to irregular migrants since 1929 (IACHR, 2015). The law 169-14 thus addresses individuals that were born in the Dominican territory but their parents were foreign nationals with irregular migratory status.

Regularisation cards do not afford the same rights as residency. In practice, they are a mere safeguard against deportation while the authorities establish procedures to adjudicate a more permanent status to applicants. When the one-year regularisation cards were about to expire in June 2016, the Ministry of the Presidency approved a one-year extension, which was again renewed one year later and once again in July 2017. The National Migration Council has yet to present recommendations to guarantee a successful transition from the special regime that is the regularisation plan to an ordinary regular regime on the categories and subcategories on the Migration Law 285-04. The inauguration of the National Migration Institute in 2015 is one step forward to improve the co-ordination and multi-sector dialogue with non-governmental stakeholders. Overall, though the Dominican government has touted the quarter of a million regularised immigrants as an indicator of success, the Plan has yet to be brought to a successful conclusion.

The country has a bilateral labour migration accord with Spain

The only standing bilateral labour migration agreement is a reciprocal accord between the Dominican Republic and Spain on the Regulation and Management of Labour Migration Flows, which came into force on 1 May 2007. The agreement establishes rights, requirements and working conditions for three types of migrant workers from either country: a) stable workers for an initial period of at least one year; b) seasonal or temporary workers, for no more than 9 months per year; and c) apprentice workers, to perfect their professional qualifications for a period of 12 months, renewable for an additional 6 months.

Access to certain social services are guaranteed the jure but not the facto

Although in theory immigrants have equal rights to the native-born in many aspects, actual access to services may not be readily available to them (Figure 2.8). The National Health Law (Law 42-01) and the 2015 Dominican Constitution (Article 61) establish the rights to health services for Dominicans and foreigners who reside in the Dominican Republic. However many immigrants lack access to health services, especially those without health insurance, which is around 84% of immigrants (ONE, 2013a). Insufficient access to health services remains an issue for poor Dominicans as well.

Education at both primary and secondary levels is a universal right in the Constitution (Art 63-3 and Art 63-4) and on the General Education Law (Law 66-97, article 9). There exists certain policies addressed specifically to immigrants in the borders on training and education by the National Institute for Comprehensive Early Childhood Care (Instituto Nacional de Atención Integral a la Primera Infancia INAIPI) (CONANI, 2017). However, actual access might not be readily available and children in immigrant households are less likely to attend school (Alrabe et al., 2014, OECD/CIES-UNIBE, 2017).

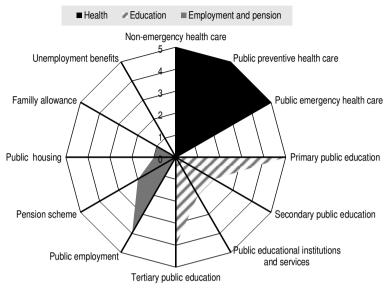


Figure 2.8. Immigrants' access to public service is still insufficient

Note: 0 = not available at all, 1 = only available to citizens, 2 = available to documented immigrants, provided a minimum amount of stay or other conditions, 3 = available to all immigrants, provided a minimum amount of stay or other conditions, 4 = immediately available to documented immigrants, 5 = immediately available for all immigrants.

Source: Authors' calculations based on the 2010 Constitution, the National Health Law 42-01 article 3, Law 87-01 on the Dominican Social Security System, the Resolution 377-15 and the General Education Law of 1997.

All Dominican citizens and legal residents in the national territory have the right to affiliation with the social security system. The National Council on Social Security (CNSS) has been facilitating access to immigrants who have benefitted from the National Regularisation Plan. Most of them have been issued a regularisation card but do not necessarily meet the requirements for residency. Previously, the system required a national identification number from the Dominican identity card (cédula) to enter the system. A cédula is only issued to those with residency. In 2016, the government has started providing alternative documentations to be affiliated so that immigrants receive benefits likewise. As a result, 18 000 foreigners were registered in social security in 2016, among them 35% Haitian nationals which represents an increase of 232% for Haitian citizens in only one year (INM, 2017).

Conclusions

During the last century, the Dominican migration process underwent notable changes. Until the fall of the regimes of Trujillo in the Dominican Republic (1961) and Duvalier in Haiti (1986), emigration was modest and immigration was regulated and agricultural. Since 1986, the Dominican Republic

has become a country where both emigration and immigration flows are high. Immigrants come mainly from Haiti, due in part to the marked contrasts in the level of income, political instability and geographic proximity. Most immigrants are of working age and the majority are men, but female immigration has increased.

Immigrant integration remains a challenge given the increase in the number of immigrants especially after 2010. New initiatives, such as the National Regularisation Plan in 2013 and the operation of Migration Law 2004, have tried to respond to the challenge that have come with these changes. Nevertheless, the Dominican Republic has yet to develop policies to facilitate the integration of the majority of immigrants into Dominican society. Such policies would need to focus on the native-born population as well as the foreign-born, to counteract anti-Haitian attitudes that still exist among parts of the population and to promote a democratic, rights-based understanding of migration.

Notes

- 1. Decree 417-1990 of October 1990.
- 2. On 3 June 2005, a group of nine Dominican civil society organisations, together with Amnesty International, filed a suit with the Supreme Court of Justice to declare various articles of the Migration Law unconstitutional. They argued that the law violates the constitutional principle of equality before the law by distinguishing between types of "foreigners", restricting freedom of movement and ignoring the right to due process. The Supreme Court ruled against the suit at the end of that year (See "Sentencia No. 9 del 14 de diciembre del 2005 de la Suprema Corte de Justicia sobre constitucionalidad de la Ley General de Migración No. 285-04").
- 3. There are differences in the relative weight of migration from other off-island territories in the data given by the sources in Table 2.1. These differences may be attributable to undercounting of the immigrant population, characteristics of national censuses and the special approach of the National Immigrants Survey to measuring and assigning characteristics to the immigrant population; also, in absolute terms, these populations are less numerous.
- 4. The agreement is called the Acuerdo entre el reino de España y la República Dominicana relativo a la regulación y ordenación de los flujos migratorios laborales. See www.ilo. org/wcmsp5/groups/public/---ed_protect/---protrav/---migrant/documents/legaldocument/wcms_382465.pdf.
- 5. Resolution 377-15 of the National Council of Social Security (CNSS).
- 6. Decree 96-16 of February 2016.

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Chapter 3

Immigrant integration in the Dominican Republic: Labour market outcomes and human capital

This chapter discusses the human capital and labour market characteristics of the foreign- and native-born populations in the Dominican Republic. The first part analyses the characteristics in terms of educational attainment and school enrolment of the two populations. The second part explores how foreign-and native-born workers perform according to a number of key indicators of the labour market, including employment and unemployment rates, status in employment, employment in informality, distribution across sectors and occupations, skill mismatches, labour income and returns to education.

Two important factors that determine the economic contribution of labour migrants are their human capital background and their integration into the labour market. When immigrants arrive in a country, they bring with them a set of skills that have the potential to influence the labour market and productivity by modifying the available stock of human capital (Ratha, Mohapatra and Scheja, 2011). Immigrants can also change these skills by learning on the job or by investing in education or training, altering the human capital stock further. Likewise, the way immigrants respond to the labour market needs will affect their integration. This is particularly relevant for the Dominican Republic, a country whose economy has seen important transformations since the change of the millennium as well as an important increase in immigration.

In this report, human capital will be measured by formal educational attainment. Skills and tacit knowledge have been widely accepted as a more complete indicator of individual capabilities but are inherently hard to measure.

The educational attainment of the native- and foreign-born labour forces

Educational attainment has consistently improved in the Latin American region over the past two decades (OECD/ECLAC/CAF, 2016). Between 2000 and 2014, the percentage of the working-age population (aged between 15 and 64) who had attained a primary education fell from 47% to 37% to the benefit of higher levels of education. The Dominican Republic is no exception, and over that period of time educational attainment has improved substantially.

Immigrants are on average less educated than native-born individuals within the labour force

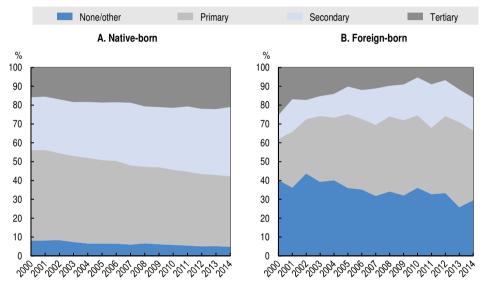
From 2000 to 2014, the educational attainment of both the foreign- and native-born labour forces has increased. The share of native-born that at most completed primary school decreased from 58% to 41% between 2000 and 2014, while the shares that completed secondary and higher education increased significantly. Over the same period, the share of immigrant workers with completed primary education increased by 16 percentage points. This increase is a result of a reduction in the share of individuals without any education. The share of immigrants who completed secondary education has remained stable and the share that completed higher education has decreased (Figure 3.1).

The foreign-born labour force was less educated than the native-born one in 2014. Among immigrants, 30% had no or some primary education. For

the native-born population, this share stood at 5%. The share of immigrants that had completed secondary education (17%) and the share of native-born individuals with the same qualification (36%) are also very different. However, the difference between the shares of the foreign-born and the native-born with a higher education is rather small. While 16% of immigrants have some higher education, around 21% of the native-born have this level of qualification.

Figure 3.1. Education has improved for both the native-born and foreign-born labour forces

Educational attainment for the native-born (Panel A) and the foreign-born (Panel B), 2000-14



Note: The population considered is the labour force, 15 years old and above. Source: Labour Force Survey (BCRD/ILO, 2016).

These education profiles differ according to the place of birth of immigrants (Table 3.1). Around 80% of the non-Haitian labour force has a tertiary education, a similar share to the Haitian population with primary or less than primary levels of education. Nonetheless, there has been a positive evolution in the schooling of the Haitian immigrant population. Among the Haitian immigrants surveyed in 1981, 81.5% had no schooling whatsoever and only 16.8% had completed primary school (Cáceres, 2015).

The shares of the most and least highly educated young Haitians are larger in the Dominican Republic than in Haiti

The profile of the education of immigrants is explained by two factors. One is the distribution of human capital of the country of origin and the other is who emigrates. A comparison of the education distribution of the workingage population (aged between 15 and 64) in the Dominican Republic and Haiti reveals a mixed picture, especially for those between the ages of 15 and 24. The

share of Haitians in this age group who have less than a primary education is more than three times bigger in the Dominican Republic than in Haiti. Similarly, the share of those with tertiary education is also almost three times bigger (Figure 3.2). The two patterns suggest that young people from the two extremes of the human capital distribution in Haiti migrate to the Dominican Republic. Across all age groups, the share with a primary school education is higher among the Haitian-born population in the Dominican Republic than in Haiti, and the opposite is true for the share with secondary school education.

Table 3.1. Immigrants from Haiti are less educated than off-island immigrants

Percentage distribution across schooling levels of Haitian and non-Haitian

immigrants in the labour force, by sex, 2014

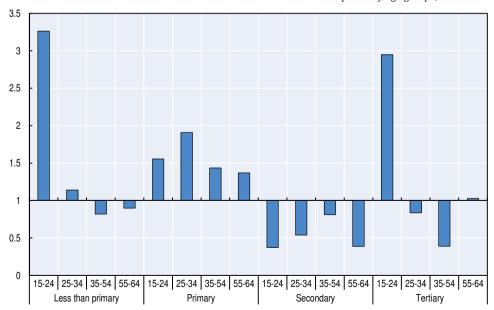
	Haitian immigrants			Immigrants from other countries		
	Men	Women	Total	Men	Women	Total
Less than primary	35.6%	33.3%	34.8%	0.0%	0.0%	0.0%
primary	45.4%	38.9%	43.3%	4.0%	0.0%	2.2%
Secondary	14.9%	23.5%	17.7%	16.0%	15.7%	15.8%
Tertiary	4.0%	4.3%	4.1%	80.0%	84.3%	82.0%

Note: Restricted to the population in the labour force, aged 15 and above.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Figure 3.2. The share of young highly educated and uneducated Haitians is three times larger in the Dominican Republic than in Haiti

Ratio of education share of Haitians in Haiti and the Dominican Republic by age groups, 2012



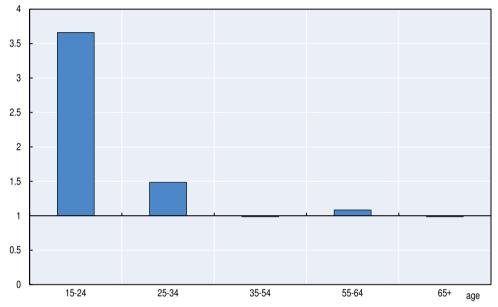
Note: If the ratio is above 1, the share of Haitians in the Dominican Republic is greater than the share of those in Haiti for each group; the opposite is true for a ratio of below 1. Population aged 15 to 64.

Source: Authors' calculations based on ECVMAS (IHSI, 2012) and 2012 National Immigrants Survey (ONE, 2013).

Yet, in absolute terms, the number of young Haitians without an education is significantly larger than the number with a tertiary education. This is reflected in the larger share of young Haitian migrants that are illiterate in the Dominican Republic (23.5%) than in Haiti (6.8%) (Figure 3.3). For all other ages, the level of literacy of Haitians is almost the same in the two countries.

Figure 3.3. The share of young Haitians that are illiterate is higher in the Dominican Republic than in Haiti

Ratio of illiteracy of Haitians in Haiti and illiteracy of Haitians in the Dominican Republic, by age groups, 2012



Note: If the ratio is above 1, the share of Haitians in the Dominican Republic is greater than the share of those in Haiti for each group; the opposite is true for a ratio of below 1. Population aged 15 and above.

Source: Authors' calculations based on ECVMAS (IHSI, 2012) and 2012 National Immigrants Survey (ONE, 2013).

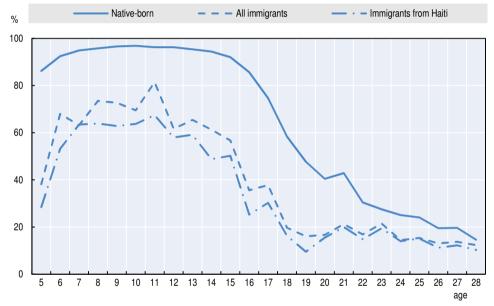
The enrolment rate is lower for immigrant than native-born students

The gross enrolment ratio in education, that is, the degree of participation in education expressed as the share of its corresponding school-age population, was 77.8% in the Dominican Republic in 2012. This is lower than the 84.2% average for the Latin American region. Another important difference with the rest of the region is a higher level of enrolment in private institutions, especially for pre-primary education (58% versus 26%) and primary education (24% versus 20%) (UNESCO, undated). While 25% of native-born students were attending a public institution, the figures are mixed among foreign-born students. More than 85% of the Haitian-born students were enrolled in public institutions, while the majority of the immigrant students from other countries were enrolled in private institutions (78%).

Even if the attendance of immigrants is markedly lower than that of native-born students, it roughly follows the same overall pattern (Figure 3.4). Attendance of native-born students is high until the age of 15. However, the level of attendance of immigrant students is, for both primary and secondary education, systematically lower and starts dropping off at the age of 11. It is only in the age group where students typically start attending tertiary institutions that the gap starts to narrow.

Figure 3.4. School enrolment is lower for foreign-born than native-born students at all ages

Attendance at education institutions by age and place of birth, 2012



Note: All immigrants include immigrants from Haiti.

Source: Authors' calculations based on ENHOGAR (ONE, 2014) and 2012 National Immigrants Survey (ONE, 2013).

Labour force characteristics of the native- and foreign-born populations

The Dominican labour market has changed considerably since 2000. Unemployment has slowly decreased, female labour participation has increased although remaining overall low, and the economically active population has grown on average 2.4%. Yet there are still a number of issues remaining. First, employment growth occurred primarily in low-skill sectors. Hence, despite a decreasing unemployment rate, the quality of jobs is low. Second, real wages have not increased over the past two decades, primarily due to stagnant nominal wages and continued inflationary pressures. Third, the size and importance of the informal sector remain largely unchanged.

In this report, the description of the labour market characteristics of foreign- and native-born workers will follow the structure of the Key Indicators of the Labour Market (ILO, 2015). The key indicators are published by the ILO in order to provide comparable information about the labour market in countries across the world.

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

The labour force participation has been higher for foreign-born than native-born individuals and has not changed notably since 2005 (Table 3.2). The participation is higher for men than women in the two populations, but the gender gap is larger among foreign-born individuals. Even if the labour force participation patterns of immigrants and the native-born are similar, their drivers and conditions differ significantly. For example, remittances from abroad are one of the reasons cited for the low labour market participation of Dominicans (Abdullaev, 2013; Acosta, Fajnzylber and Humberto López, 2008). This is certainly not the case for Haitian immigrants. It is also important to note that migrant workers are concentrated primarily in agriculture and construction, hence their participation patterns are tied to the fate of these sectors.

Table 3.2. Labour force participation is higher for immigrants than for native-born individuals

Labour force participation and unemployment rate by place of birth, 2005-14

		200	2005-09		0-14
		Native-born	Foreign-born	Native-born	Foreign-born
Labour force participation rate (%)	Total	63.4	74.8	63.8	74.6
	Male	78.3	87.8	77.5	89.2
	Female	49.0	52.6	49.4	53.5
	15-24 years old	50.6	66.4	49.6	60.3
	25 years old and over	68.3	78.0	69.3	79.9
Unemployment rate (%)	Total	16.0	10.3	15.1	9.9
	Male	9.8	5.3	9.9	4.6
	Female	25.5	25.0	22.6	22.5
	15-24 years old	30.5	17.4	30.8	18.6
	25 years old and over	11.8	07.9	10.8	7.4

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Immigrants have a lower unemployment rate than native-born individuals...

The immigrant population faces an unemployment rate of 10%, only two-thirds of the native-born average for 2010-14 (Table 3.2). The rate is lower for immigrants for all education levels, independent of age. The differences between these two populations are driven by lower levels of unemployment for male immigrants. The unemployment rate of male immigrants is almost half

that of male native-born individuals. In contrast, there is no difference between native-born and foreign-born unemployment for women. Furthermore, the unemployment rate is higher for Haitian-born immigrants than for immigrants from other countries, at 10% and 8.8% respectively. Female unemployment, which stands at 26.6% compared to the 8.2% of Haitian men, largely drives the higher average unemployment rate of Haitian immigrants.

..., and the unemployment gap is wider for youth

Nearly one in three native-born workers between the ages of 15 and 24 is unemployed in contrast to less than one in five among foreign-born individuals (Table 3.3). Moreover, among the native-born, half of the male unemployed are young. Although unemployment for young female workers is almost twice as high as for young male workers, there is no significant difference between young female native- and foreign-born workers.

Table 3.3. Young immigrants struggle less with unemployment than young native-born individuals

Different measures of youth unemployment by gender, 2000-14

		2000)-14
		Native-born	Immigrant
Youth unemployment as a proportion of total	Total	0.44	0.41
unemployment	Male	0.50	0.37
	Female	0.39	0.43
Ratio of the youth to the adult unemployment rate	Total	2.84	2.50
	Male	3.57	2.19
	Female	2.51	2.54
Youth unemployment as a share of the youth labour	Total	0.31	0.19
force	Male	0.23	0.08
	Female	0.44	0.42

Note: Workers between the ages of 15 and 24.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Immigrants are mainly own-account workers

Native-born workers are significantly less likely to work on their own account than immigrant workers. Between 2010 and 2014, 61% of all foreign-born workers were own-account workers (Figure 3.5) compared to 43% of the native-born. Since immigrants and native-born workers do not differ much in their propensity to be employers, with shares between 3% and 4% from 2000 to 2014, the difference is made up by employees. This relative distribution of native-born and immigrant employers, own-account workers and employees has not changed significantly since 2000.

On average, only 4% of the immigrant working-age population are employers. However, there is a difference between immigrant workers who were born in Haiti and those born elsewhere. While only 2.5% of Haitian workers were employers, 7.5% of other immigrant workers were. But given that the overwhelming majority of immigrants are from Haiti, Haitian employers represent 55% of all immigrant employers in the Dominican Republic.

Wage and salary workers

Employers

Own-account workers

Foreign-born

Native-born

Native-born

Foreign-born

Foreign-born

Figure 3.5. **Two-thirds of immigrant workers are own-account workers**Status in employment by place of birth, 2000-14

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

30

20

Native-born

Λ

10

Immigrants are overrepresented in agriculture and work mainly in elementary occupations

40

50

60

70

80

90

100

The Dominican economy experienced a significant reduction in the importance of manufacturing employment since the turn of the century. The share of the total labour force employed in the sector decreased from 17% in 2000 to around 10% in 2015. Over the same time period, the share working in agriculture decreased slightly, from 15% to 14%. Most of these workers were absorbed into the services sector, which grew from 67% to 76%. This shift was stronger among female workers, in particular for low-skilled occupations. Primarily hotels and restaurants, transport and communication, construction, and other services employed them.

The characteristics of this shift differ between foreign- and native-born workers, particularly in terms of their sectoral distribution (Table 3.4). The most prominent difference is agriculture, with 37% of immigrant workers in this sector, compared to 13% of native-born workers. Immigrants also work more frequently in construction (16.2% versus 5.8%) and less frequently in

manufacturing (4% versus 11%), transport and communication (4% versus 8%), and community, social and personal services activities (4% versus 8%).

Table 3.4. **Agriculture is the main sector of activity of immigrants**Employment by aggregate sector and place of birth (%), 2010-14

	201	0-14
	Native-born	Immigrant
Agriculture, hunting and forestry	13.0	36.9
Wholesale and retail trade	21.4	19.2
Construction	5.8	16.2
Hotels and restaurants	6.1	5.4
Private households with employed individuals	5.6	5.2
Manufacturing	10.4	3.7
Transport, storage and communications	7.8	3.6
Other community, social and personal service activities	8.2	3.6
Real estate, renting and business activities	3.5	1.7
Education	5.2	1.6
Health and social work	3.6	0.8
Extra-territorial organisations and bodies	0.0	0.6
Mining and quarrying	0.3	0.5
Financial intermediation	2.6	0.5
Public administration and defence	5.0	0.3
Electricity, gas and water supply	1.0	0.1
Fishing	0.3	0.0
Total	100	100

 ${\it Source:} \ Authors' \ calculations \ based \ on \ National \ Labour \ Force \ Survey \ (BCRD/ILO, 2016).$

In accordance with the shift from manufacturing to service activities, the reallocation from skilled trade, craft and operative towards service and elementary occupations varies between foreign- and native-born workers (Figure 3.6). Over half of immigrants are in elementary occupations, and even if it is also the largest occupational group of native-born workers, there is a significant difference as it stands at only 22%. Services is the second largest occupational group for both foreign- and native-born workers, but the growth has been faster among immigrants, passing from 8% to 14% between 2000 and 2010. On the other hand, immigrants are underrepresented in white collar occupations and their participation has decreased over time, especially in managerial, professional and technical occupations. The largest difference is in operative occupations that represent only 2% of immigrants and 10% of native-born workers.

The foreign- and native-born are subject to skill mismatches to similar degrees

Skill mismatches are calculated by assigning a required level of education to each occupational category. People are considered overqualified if they have a higher educational attainment than is required for their occupational category.

☐ Native-born, 2005 Native-born, 2000 Native-born, 2010 Foreign-born, 2000 Foreign-born, 2005 Foreign-born, 2010 60 50 40 30 20 10 0 Professionals Service Operative Elementary Technicians Administrative Skilled trade Craft workers

Figure 3.6. Immigrants and native-born workers are mainly in services and elementary occupations

Occupation by major group and place of birth, 2000-10

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

workers

In 2014, the average shares of foreign- and native-born workers who were overqualified for their occupations were almost identical. This is despite the fact that in certain occupations, immigrants were more frequently overqualified and in other occupations, the opposite was true. In particular, a higher share of immigrants than of native-born individuals who are clerical support workers, service and sales workers, and plant and machine operators were overqualified in 2014. In contrast, a higher share of native-born workers in elementary occupations was overqualified (Table 3.5).

workers

workers

Over-qualification presents two main problems. First, when workers with relatively high qualifications accept jobs in lower paying occupations, other workers in these occupations are at a disadvantage. The second problem of over-qualification is the foregone productivity gains. These gains could be potentially high but cannot be quantified.

Over-qualification rates have been rising for both immigrants and native-born workers, but the increase was sharper for foreign-born workers because their over-qualification rates used to be lower. The rise of educational attainments among both population groups without a concurrent increase in the number of available jobs in occupations that require higher education levels can explain this increase. A positive effect of the educational expansion is that

workers

workers

under-qualification rates have been falling. While more than half of foreign-born employed individuals and nearly half of the native-born were underqualified for their jobs in the early 2000s, in more recent years, the shares have fallen to around 45% among immigrants and 35% among native-born individuals.

Table 3.5. The share of foreign- and native-born workers who are overqualified is almost identical

Overqualified as a percentage of employed, 2000-14

	2	000	2	014
	Native-born	Foreign-born	Native-born	Foreign-born
Clerical support workers	35.6	55.1	42.6	77.3
Service and sales workers	9.5	23.8	13.7	26.9
Skilled agriculture, forestry and fishery workers	1.5	0.0	2.2	0.7
Craft and related trade workers	5.7	0.0	9	7.9
Plant and machine operators and assemblers	4.9	0.0	5.6	26.5
Elementary workers	19.0	6.9	36.9	13.3
Total	9. 9	5.5	16.6	16.2

Note: The skill mismatch is calculated by assigning a required education level to each occupation group. Individuals are considered overqualified if they have a higher educational attainment than that required for their occupation.

Source: Authors' calculations based on data provided by BCRD (2016).

Part-time employment is common among female migrant workers

The overall share of workers in part-time employment is slightly higher for native-born workers than for migrant workers (Table 3.6). When looking at male and female workers separately, only male native-born workers seem to be more likely to work in part-time employment, while native-born female workers are less likely to be in part-time employment than immigrant female workers.

Table 3.6. Part-time employment is higher for native-born workers

Part-time employment and time-related underemployment

me employment and time-related underemployment by gender and place of birth, 2000-14

		2000	-14
		Native-born	Immigrant
Part-time employment (as share of employed)	Total	27.4%	22.5%
	Male	23.0%	16.0%
	Female	34.8%	41.7%
Time-related underemployment (as share of employed)	Total	13.8%	13.3%
	Male	12.1%	10.7%
	Female	16.6%	21.1%

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Around 14% of employed workers would like to work more. This timerelated underemployment is quantitatively the same for native-born and immigrant male workers. However, it is slightly different for native-born and immigrant female workers, at 17% and 21% respectively. Immigrant female workers are more likely to be underemployed than native-born female workers and than men in general.

Immigrants are more likely to be informally employed

The size of the informal sector is notoriously hard to estimate. Schneider (2005) estimates that in the Dominican Republic it is at around one-third of the gross domestic product. The report defined workers in the informal employment as those in non-agricultural activities who are (1) without a contract and (2) without social security affiliation. Based on this definition, which does not consider size of the firm or whether it is formal or informal, around 60% of employment is informal and this percentage has remained stable since 2000. This share is estimated to be slightly higher for women than for men and it is significantly higher in urban areas.

The International Conference of Labour Statisticians (Hussmanns, 2003) defines informal employment as follows:

- 1. workers in enterprises with less than five workers
- skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers, and elementary workers who are ownaccount workers and employers
- 3. unpaid family workers and domestic workers.

According to this definition, employment in the informal sector does not seem to be a last resort. In fact, labour income is on average higher than in formal employment (Figure 3.7, Panel A). This observed income differential could suggest that some of the prevailing informal work situation is a voluntary choice, and that the informal sector, although per definition less regulated, is an attractive alternative (Perry et al., 2007). However, these raw income differences do not take into account the non-income benefits of formal employment. On the other hand, the income difference could also suggest that workers in the informal sector are more productive if income represents the marginal productivity of labour.

Labour incomes have been decreasing in both the informal and the formal sectors. This is especially true for informal workers in elementary occupations, legislators, senior officials and managers. (Figure 3.7, Panel B).

While informality remains to present the main challenge in the Dominican labour markets in general, the share of workers with an informal job is higher for foreign-born than for native-born workers, at 73% and 59% respectively (Table 3.7). Immigrants with irregular status may be more willing to accept informal employment. This is true in all years studied and for both women and men. However, among immigrant workers, the share of women in the informal sector is higher than the share of men. The opposite is true among native-born workers.

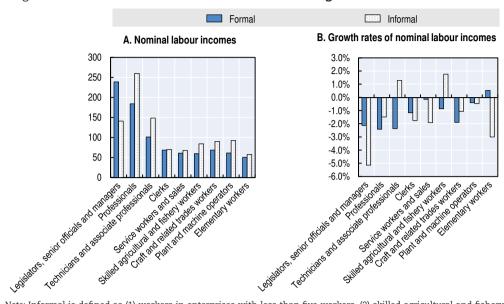


Figure 3.7. Labour incomes in the informal sector are higher than in the formal sector

Note: Informal is defined as (1) workers in enterprises with less than five workers, (2) skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers, and elementary workers who are own-account workers and employers, (3) unpaid family workers and domestic services. The labour income in the figure is hourly income.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Table 3.7. Immigrants are more likely to be informal workers
Informal sector employment by place of birth, 2000-14

		Native-born	Immigrant
2000-05	Formal	41%	41%
	Informal	59%	59%
2009-10	Formal	40%	29%
	Informal	60%	71%
2010-14	Formal	41%	27%
	Informal	59%	73%

Note: Informal is defined as (1) workers in enterprise with less than five workers, (2) skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers, and elementary workers who are own-account workers and employers, (3) unpaid family workers and domestic services.

Source: Authors' calculations based on data provided by BCRD (2016).

The gap in real labour income has narrowed

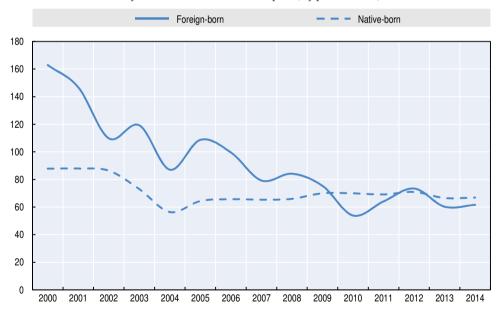
Real labour income has been falling over the past two decades. This trend was exacerbated by the Dominican banking crisis in 2003 but largely unaffected by the global crisis in 2007. The trends for low and high-skilled workers are rather similar, both groups perceiving a rather uniform decrease. On the other hand,

productivity growth consistently accelerated between 2000 and 2014, creating a significant gap between real labour income growth and productivity growth. This gap and the productivity across sectors are further discussed in Chapter 5.

Immigrant workers have been more affected by the decrease in real labour income growth than native-born workers. From 2000 to 2010, the real labour income of immigrant workers decreased faster than that of native-born workers. This decline has narrowed down the gap between native and foreign-born workers, becoming statistically indistinguishable since 2004 (Figure 3.8). Since 2010, labour income has stabilised for native-born workers while that of immigrants has been picking up slightly. In 2014, the latest year available, the hourly labour income of both native and foreign-born stood at 68 and 69 DOP, respectively. However, there are differences when only individuals with certain demographic and educational characteristics are taken into account. For instance, Haitian-born workers had lower levels of hourly labour income at 40 DOP on average in 2014 and this difference was statistically significant. Among the people with a university degree, the hourly income of the foreign-born was higher than that of native-born workers, at on average 209 DOP. Chapter 4 explores in more detail these gaps.

Figure 3.8. In recent years, the labour income of native- and foreign-born have become statistically indistinguishable

Real hourly labour income in Dominican pesos, by place of birth, 2000-14



Note: Labour force aged 15+

 ${\it Source:} \ Authors' \ calculations \ based \ on \ National \ Labour \ Force \ Survey \ (BCRD/ILO, 2016).$

On average, immigrants work longer hours than native-born workers (Figure 3.9). In the period between 2010 and 2014, native-born workers worked 40 hours per week, and immigrants 43. This difference is only significant among male workers and has decreased over time.

Men Women

Figure 3.9. **The foreign-born work longer hours than native-born workers**Mean weekly working hours by place of birth, 2000-14

Note: The analysis excludes individuals that worked zero hours.

2000-04

Foreign-born

Native-born

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Returns to education are larger for foreign-born workers that have secondary education or more

Native-born

There is no doubt that education is one of the key determinants of one's earnings. To assess the returns to education, i.e. increased income by additional educational attainment, this section analyses the different levels of schooling and the possible difference in labour income between immigrant and nativeborn adults. The comparison includes gender, age and whether or not the individual lives in a rural area.

2005-09

Education (measured as enrolment in and completion of the primary, secondary and tertiary levels) has increased massively among workers over the past three decades, and yet growth has only accelerated in a limited number of industries (Abdullaev and Estevão, 2013). This would suggest that education is not the primary constraint in a number of industries.

Native-born

Foreign-born

Foreign-born

For native-born population, the returns to education have not increased since 2000 (Table 3.8). For immigrants, the increase in income by one additional year of schooling has slightly decreased over the period of 2000 and 2014. In 2010-14, for each additional year of schooling, both foreign- and native-born individuals earned on average 6% higher hourly labour incomes. Among native-born population, individuals who completed primary, secondary and tertiary education earned 20%, 60% and 150%, respectively, more than those who did not complete primary education. For immigrants, the education premium is even larger, in particular for those who completed secondary education. Immigrants who completed secondary education earn 100% more than immigrants who have less than primary education.

Table 3.8. The economic returns on education have not increased over time but are larger for immigrants with a secondary education

Returns to schooling by education	al attainment and place of birth, 2000-14
-----------------------------------	---

Year		lditional schooling	Complete	d primary	Completed	secondary	Complete	d tertiary
	Native-born	Immigrant	Native-born	Immigrant	Native-born	Immigrant	Native-born	Immigrant
2000-04	0.06	0.08	0.21	0.34	0.66	1.43	1.48	2.04
2005-09	0.06	0.07	0.21	0.25	0.61	1.15	1.51	1.83
2010-14	0.06	0.06	0.21	0.19	0.59	1.01	1.52	1.74

Note: The returns were estimated through individual year ordinary least square regressions in which the natural logarithm of labour income is regressed on gender, age, age squared and whether or not the person lives in a rural area. The returns were estimated separately for foreign- and native-born individuals. The results show the unweighted averages of the education returns for five years each.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

The share of immigrants earning less than minimum wage is higher than the share of native-born workers

The Dominican Republic has various minimum wages that apply to different sectors and activities, depending on the type of machinery workers operate and the tasks required. There have been a number of changes in the legal minimum wage since 2000; the last one entered into force in June 2013 and increased the minimum salary by 14%. The resulting monthly minimum wage stands between DOP 6 880 and DOP 11 292 for workers in private enterprises in industry and services. The complex structure of minimum wages puts into question the compliance with the existing regulations.

A substantial number of workers earn below the minimum wages. In 2014 around 22.6% of all workers did not earn the minimum for small enterprises (Figure 3.10). More than half (52.4%) did not earn the minimum for large enterprises. For immigrants, these shares were 38.8% for small enterprises and 64.7% for large enterprises.

Real minimum wages have not grown over the past 15 years. As a consequence of decreasing real wages, the number of foreign- and native-born individuals earning less than the small enterprise minimum wage has increased over time. That share of native-born workers rose from 13.7% in 2000 to 22.1% in 2014, while the share of immigrant workers increased only slightly, from 38.4% to 38.8%.

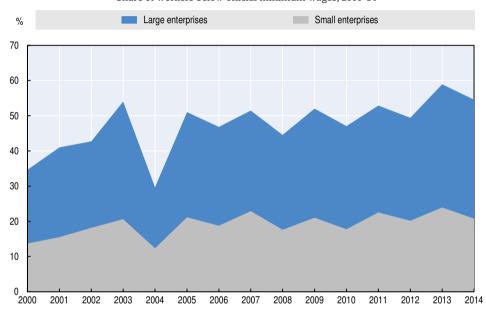


Figure 3.10. Many workers earn below the minimum wage Share of workers below official minimum wages, 2000-14

Note: This figure shows only "National minimum wage for workers in the non-sectorised private sector" (Ministry of Labour, 2013). "Large enterprises" are those with equity of more than DOP 4 million. "Small enterprises" are those with equity of less than DOP 2 million.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

In the Latin American context, the Dominican minimum wages are one of the lowest (ILO, 2011). In 2011, only Haiti had a lower level of minimum wage (USD 209) than the Dominican Republic (USD 221) in purchasing power parity (PPP). These wages are much lower than in Argentina (USD 896 in PPP) and Costa Rica (USD 489 in PPP).

Conclusions

The human capital and labour market characteristics vary significantly for foreign- and native-born populations. Immigrants have a higher labour force participation rate and lower levels of unemployment at all levels of education. While immigrants have a greater dispersion in labour income than native-born workers,

the two groups' average labour incomes do not differ significantly in recent years. These rates and levels vary according to immigrants' countries of origin.

On average, the current immigrant population has lower levels of education than the native-born. This is particularly true for immigrants from neighbouring Haiti. Partly for this reason, half of immigrants are in elementary occupations and are concentrated in agriculture and construction. Their labour participation patterns are therefore tied to the fate of these sectors.

Overall, the employment patterns of foreign-born workers indicate that they respond well to labour market opportunities, but the quality of their jobs remains an issue. Moreover, even if the level of unemployment of immigrants is lower, a higher share of immigrants than native-born population work in the informal sector and the number continues to increase. Also, immigrants work for longer hours, and only half of those working have fixed contracts.

Note

1. Resolution No. 2/2013, Ministry of Labour of the Dominican Republic.

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Chapter 4

How immigrants affect labour markets in the Dominican Republic

The first part of this chapter discusses the income differences between the foreign- and native-born populations in the Dominican Republic. The second part describes the methodology and data used for the analysis, followed by the estimation results and the conclusions.

One commonly heard concern about immigration is that the native-born working population suffers from competition with immigrants (Zimmermann, Bauer and Lofstrom, 2000). If immigrants can perfectly replace native-born workers, this could have a negative effect on wages and employment opportunities of the native-born population. This chapter investigates this relationship using a methodology called skill cell approach. This analysis allows exploring whether the key labour market outcomes of native-born workers are affected by the presence of immigrants who have similar levels of education and work experience.

The chapter is divided into two sections. The first one describes the difference in labour income of the native- and foreign-born population. The second part discusses the effect of immigration on certain labour market outcomes of native-born workers, in particular labour income, employment to population ratio, unemployment rate, underemployment, part time and vulnerable employment.

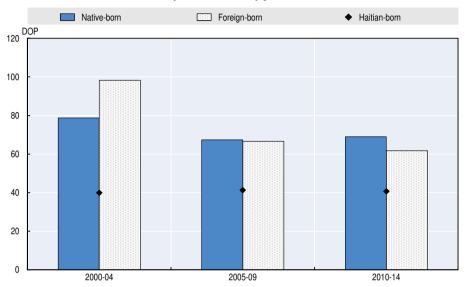
The labour income gap between immigrant and native-born workers

As was seen in Chapter 3, immigrants in the Dominican Republic have higher labour force participation and lower unemployment rates than the native-born population. They are also more likely to work in elementary occupations and in the informal sector¹ and to be own-account workers. All these different labour market characteristics are reflected in the average labour income levels. The unadjusted labour income gap between immigrant and native-born workers is shown in Figure 4.1. In the early 2000s, immigrant workers had a higher average labour income than native-born workers. This pattern reversed after a decade (Figure 4.1). In all periods immigrant workers have a wider range of labour income than native-born workers.

Immigrants from Haiti have a lower labour income than native-born workers as well as immigrants from other countries (Figure 4.1). This gap is likely to be higher for irregular immigrants (Aristy-Escuder, 2015). In the 2000-14 period, Haitian immigrants earned less than native-born workers in all levels of education (Figure 4.2), non-Haitian-immigrants, on the other hand, seem to earn more than native-born workers at the secondary and tertiary levels.² The returns to schooling of immigrants (see Table 3.8) are therefore different depending on the country of origin.

Figure 4.1. Immigrant and native-born workers earn on average the same real hourly labour income

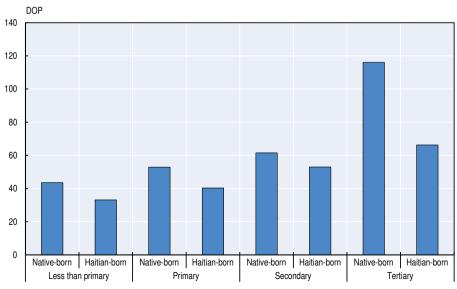
Mean real hourly labour income by place of birth, 2000-14



Note: These results are not adjusted by personal or labour characteristics.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Figure 4.2. **Haitian-born workers earn less than native-born workers**Mean hourly labour income for Haitian-born and native-born workers, by education attainment



Note: Pooled 2010-2014 period.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Among men, the income gap persists when taking into account basic demographic and educational characteristics, but not when comparing individuals with the same occupations (Table 4.1). When controlling for education, age, gender, marital status, province and residence in rural areas, male foreign-born workers earn on average 5% less than the native-born. On the other hand, when taking into account occupations, there is no longer a statistically significant difference in labour income. However, this does not mean that occupation overtakes the effect of place of birth on labour income, as being an immigrant heavily affects which occupation one will hold. Even if men in similar occupations do not receive different income, the access to certain occupations might be constrained for foreign-born workers by regulations, differences in networks or even discriminatory practices.

When only looking at own-account male workers, the place of birth negatively affects one's labour income level. This can be partly explained by the fact that immigrant own-account workers have less knowledge about the products and services that are demanded in the Dominican Republic, fewer connections with potential customers, and less capital or less entrepreneurial aptitude.

Table 4.1. On average, immigrant men earn less than comparable male native-born individuals

Labour income gap of immigrant	

	All	All	All	Employee	Own-account worker
Immigrant	-0.2**	-0.05**	-0.02	-0.04	-0.06***
Female		-0.34***	-0.34***	-0.22***	-0.47***
Interaction between immigrant and female		0.10***	0.10***	0.29***	0.09***
Primary education completed		0.21 * * *	0.11***	0.12***	0.12***
Secondary education completed		0.63***	0.29***	0.35***	0.23***
Tertiary education completed		1.45***	0.65 * * *	0.72***	0.63***
Demographic controls	No	Yes	Yes	Yes	Yes
Occupation	No	No	Yes	Yes	Yes
Observations	300 419	300 419	300 419	141 416	148 152
R-Squared	0.02	0.32	0.42	0.53	0.34

Note: The dependent variable is the logarithm of the hourly real labour income. All estimations include time and area fixed effects. The demographic controls include age, age squared, marital status and the logarithm of amount of hours worked. It includes only individuals in the labour force 15 years old and older. Significance levels * = 0.1, ** = 0.05 and *** = 0.01.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

Foreign-born women earn on average 15% less than native-born women. However, when demographic and educational characteristics are taken into account, they earn on average 5% more. The gap is slightly higher after controlling for the occupational distribution, with foreign-born women receiving 8% more income than native-born women in similar occupations. These

differences are statistically significant. However, there are two things to take into account. The first one is that there might be barriers in the access to certain occupations for foreign-born women, by both their sex and their place of birth. The other one is that gender itself is a big determinant of labour income, with native-born women making 35% less than native-born men.

The effects of immigration on native-born workers' employment and labour income

Native-born workers may fear that immigration could lead to a decrease in their labour income. They may also suspect that immigration could result in job losses or a decrease in the quality of their jobs. This section investigates these possibilities relying on established methodologies.

For this approach, the labour force is divided into different skill cells defined by education levels and work experience. Then, the average labour market outcomes for native-born workers in each skill cell are compared to the share of immigrant workers in the same skill cell. Labour market outcomes include labour income, employment to population ratio, underemployment, and part-time and vulnerable employment. Both groups are controlled for systematic differences in the labour market outcomes of workers in different skill groups across time and for year-specific trends. The underlying assumption is that foreign- and native-born workers only compete with each other if they have the same work experience and education. More details on the approach can be found in the chapter's appendix.

The relationship between immigrant concentrations and labour market outcomes of the native-born is analysed following the skill-cell approach proposed by Borjas (2003) and variations of it by Facchini, Mayda and Mendola (2013). Following Borjas, the first skill groups are defined solely by the education level and estimated work experience. This assumes that workers are completely mobile across the national territory. Following Facchini, Mayda and Mendola, groups are also defined by region. They assume that labour markets are regional rather than national. For both approaches, only individuals of working ages (15 to 64) are included. The work experience is estimated by subtracting a worker's expected age at the end of education from his or her current age. Work experience is divided into 5-year band to create the experience groups. As labour market outcomes may systematically differ by workers' education and work experience and by the year analysed, variables that control for them are included in the analysis. The main data source used for the analyses is the national labour force survey (BCRD/ILO, 2016).

A prior study analysed the effect of Haitian immigrant concentrations at the local level on wages. It predicted current immigrant concentration based on past immigrant concentrations. The study found that immigration slightly increased the wages of native-born workers that did not complete primary school (Sousa, Sanchez and Baez, 2017)

At the national level, immigration affects employment but not labour income

Immigrants are more likely to be active in the labour market than the native-born population and less likely to be unemployed (Chapter 3). Does their participation in the labour market affect the native-born population? At the national level, the immigrant concentration is negatively correlated with the employment and unemployment rate of the native-born population (Table 4.2). This implies that in general, within a group of individuals with a given education and experience level, it is more likely that the employment and unemployment rate of native-born individuals is low when the share of immigrants is high, and vice versa. A higher share of immigrants is also related to a higher share of the native-born population working part-time.

These findings suggest that the native-born population reduces their labour supply in response to the presence of immigrants with similar characteristics, though it needs further analysis to establish causality. While the presence of immigrants seems to affect the labour supply of the native-born population, both in terms of hours worked and in terms of participation, the level of income is not related to immigration.

Different groups of individuals, in terms of experience and education, might experience differing effects of immigration. The analysis is therefore repeated separately for both the low and high-skilled,³ as well as for men and women. Among the high skilled native-born population, in contrast to the overall results, a higher share of immigrants with the same level of experience and education is associated with a lower labour income. Among the native-born population with a lower education level, the immigrant concentration was not associated with labour income, a result in line with the overall effects found. The high and low-skilled experience distinct effects on their labour market outcomes, and the overall results seem to be driven by the results on either one of the groups. For the native-born high-skilled, the share that works par-time is higher when the share of immigrants is higher. Among the native-born low-skilled, the share of part-time workers is unaffected, but their employment and unemployment rate is, both of which are negatively associated with immigration.

For native-born men, employment and unemployment rates are negatively associated with the share of male immigrants with similar qualifications, and therewith in line with those found for the low-skilled. The results for the gender specific regressions have to be interpreted with caution, as the skill cells approach relies on the estimated years of experience which is less reliable for women (Fachinni, Mayda and Mendola, 2013).

The different outcomes found for the high- and low-skilled suggest that these two groups react differently to the presence of immigrants. As a response to the high concentration of immigrants, some of the low-skilled native-born

workers seem to leave the labour market, but this is not the case among the high-skilled. However, the high-skilled also reduce their labour activity as observed in the higher share working part-time. For the high-skilled, on top of the decreased number of hours worked, their hourly labour income also seems to decline in the presence of immigrants. Additional analysis (not shown) confirms that the labour force participation rate of the native-born low-skilled is negatively affected by immigration, but no such relationship was found for the high-skilled.

These results are similar to those found in the other partner countries of the project. Half of the countries found a negative correlation between immigration and the employment-to-population ratio. In only one country, Rwanda, immigration was associated with changes in wages (OECD/ILO, 2018).

Table 4.2. Immigrants have an impact on the employment rate of the native-born population

Impact of foreign-born share on labour market outcomes of the native-born population (national level)

	Hourly labour income	Employment-to- population ratio	Unemployment	Underemployed workers	Part-time employees	Vulnerable workers
All	ns	-	-	ns	+	ns
Men	ns	-	-	ns	+	ns
Women	ns	ns	ns	+	ns	+
High-skilled	-	ns	ns	ns	+	ns
Low-skilled	ns	-	-	ns	ns	ns

Note: Hourly labour income refers to the logarithm of the hourly real labour income. Underemployed workers are those that are in part-time employment but that would like and are available to work more hours per week. Part-time employees are defined as the population working less than 35 hours per week. Vulnerable workers are own-account workers and contributing family workers. ns = no statistically significant effect; - = statistically significant negative effect at a 10% level: + = statistically significant positive effect at a 10% level.

Source: Authors' calculations based on the National Labour Force Survey (BCRD/ILO, 2016).

There are several factors that are not taken into account in the analysis, which might affect the results. First, the estimations do not distinguish between recent and non-recent immigrants. The market adjusts to an increase of the labour supply over time. Recent immigrants may affect the labour market outcomes of native-born workers more strongly than immigrants that arrived a longer time ago. Furthermore, the skills of foreign- and native-born workers may become more similar over time, potentially making recent immigrants more competitive on the labour market.

Second, minimum wages vary greatly by occupation and industry. Not only have minimum wages changed repeatedly over the past 15 years, but they also affect workers with different qualifications and experience in different ways (Kristensen and Cunninham, 2006).

Third, the estimations in Table 4.2 assume that the labour market for all types of workers is national. This is a strong assumption. Not all workers

are willing to move across the country for job openings. Furthermore, some individuals might react to the presence of immigrants by re-locating within the country, to regions where they see more opportunities for themselves.

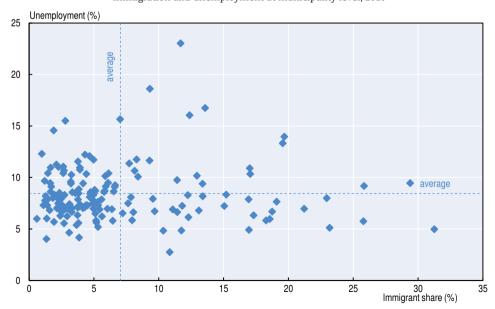
Finally, the emigration of Dominicans poses an important challenge in the estimation of labour income dynamics. With almost 1.3 million Dominicans living abroad (OECD/CIES-UNIBE, 2017), there is a strong outflow of workers from various levels of education and experience. The following sections address the last two factors.

At the regional level, immigration affects both employment and labour incomes

At first glance, more immigrants appear to live in areas that have low or average levels of unemployment (Figure 4.3). Among the 62 municipalities with above-average unemployment, the majority (44) has immigration shares below average. Only 18 out of the 155 municipalities have both an above-average unemployment rate and an above-average immigration rate. One possible reason for this situation is self-selection. This means that immigrants choose to live in municipalities where there is a higher chance of finding employment.

Figure 4.3. Immigrants tend to live in municipalities with low or average unemployment rates

Immigration and unemployment at municipality level, 2010



Note: Unemployment is calculated as the share of those without work or any income-generating activity but who are looking for a job. Immigration is calculated based on t population 15 years old and above.

Source: Authors' calculations based on National Labour Force Survey (BCRD/ILO, 2016).

The labour market situation and condition differ per region, and for many individuals the local labour market might be more relevant than the national one. For example, the eastern part of the country has a high concentration of immigrants, due to the geographic proximity with the Haitian border. But not only the share of immigrants, the sectors in which they work also differ by region. While most immigrants (74%) in Cibao Nordeste work in agriculture, only about 3% of immigrants in Ozama, the capital region, do so. The following analysis therefore considers the labour markets at a regional level (ten administrative regions), exploring the correlation between the share of immigrants and labour market outcomes of native-born individuals with similar characteristics within the same region.⁴

At the regional level, higher immigration levels continue to be associated with lower employment-to-population ratios, similar to the national level result (Table 4.3). Unlike the findings at the national level, unemployment appears to be unaffected by immigrant concentration. This might be because immigrants move to regions with the best labour market opportunities, which is generally related to a low unemployment rate. Additional analysis, both at the national and regional levels, (not shown) reveals that the labour force participation rate is negatively associated with immigration. This suggests that native-born individuals are leaving the labour market in reaction to the presence of immigrants.

Table 4.3. At the regional level, an increase in immigration is associated with a decrease in employment

Impact of foreign-born share on labour market outcomes of the native-born population (regional level)

	2000-14
Hourly labour income	-
Unemployment	ns
Employment-to-population ratio	-
Underemployed workers	+
Part-time employees	ns
Vulnerable workers	ns

Note: Hourly labour income refers to the logarithm of the hourly real labour income. Underemployed workers are those that are in part-time employment but that would like and are available to work more hours per week. Part-time employees are defined as the population working less than 35 hours per week. Vulnerable workers are own-account workers and contributing family workers. ns = no statistically significant effect; - = statistically significant negative effect at a 10% level.

Source: Authors' calculations based on the National Labour Force Survey (BCRD/ILO, 2016).

In contrast to findings at the national level, the immigrant concentration is negatively associated with the labour income of the native-born population with similar qualifications. The difference between the national and regional results on income might be due to the higher concentration of immigrants in areas where labour income in general is higher. Also in contrast with the

national level finding, the underemployment rate of the native-born is positively associated with the presence of immigrants. Underemployment is defined as working less than 35 hours while desiring to work more. The unemployment rate and part-time employment seem unaffected.

Emigration does not alter the relationship between immigration and native-born labour market outcomes

Emigration could change, both directly and indirectly, the labour market outcomes of the individuals remaining in the Dominican Republic. First, the labour supply could decrease as previous members of the labour force emigrate. Second, remittances could alter the behaviour of the individuals remaining in the country. For example, evidence from Latin America in general (Acosta, 2011; Hanson, 2007; Kim, 2007) and the Dominican Republic in particular (OECD/CIES-UNIBE, 2017) shows that women living in households that receive remittances are more prone to reduce their participation in the labour market.

In the Dominican Republic, emigrants outnumber immigrants. Currently, around 12% of Dominican-born individuals reside abroad. Accounting for the outflow of people born in the Dominican Republic is therefore important. The analysis (not shown) suggests that while emigration influences labour market outcomes directly, it does not alter the effect immigration has on the labour market outcomes of the native-born. However, these results have to be interpreted with caution as it was based on only two years and a limited number of observations. Furthermore, the share of emigrants per skill cell is based on the Dominican-born immigrants in the United States. They may have different characteristics in terms of education and work experience compared to the emigrants living in other countries than the United States.

Conclusions

The labour income of immigrants in the Dominican Republic is very similar to that of the native-born population with similar characteristics. Immigrant men earn slightly less while immigrant women earn more than their native-born counterparts. Once also taking into account the occupation, there are no significant differences in men's labour income based on the place of birth. Immigrant women, on the other hand, earn on average 8% more compared to native-born women in the same occupation.

The evidence presented in this chapter suggests that in the Dominican Republic, immigration is associated with a lower employment rate of the native-born population. Both at the national and the regional levels, native-born individuals are less likely to work when the concentration of immigrants with similar skills is high. This finding is consistent with the results found in the other partner countries of the project. In four partner countries, including the Dominican Republic, a negative relationship between immigration and the

employment rate of the native-born population was observed (OECD/ILO, 2018). The increased competition with immigrants seems to reduce the labour income of the native-born population, but only at the regional level. This contrasts the results in most other partner countries, where no such relationships were found.

It is important to note that these results do not allow a causal interpretation. That is, it cannot be concluded that immigration leads to a drop in the employment-to-population ratio or labour income. One reason is that immigrants are not randomly distributed across different skill cells or regions of the country. For example, higher wages in one part of the country can attract immigrants.

Notes

- In this report, workers in informal employment are defined as (1) workers in enterprises
 with less than five workers); (2) skilled agricultural and fishery workers, craft and
 related trades workers, plant and machine operators and assemblers, and elementary
 workers who are own-account workers and employers; (3) unpaid family workers and
 domestic services.
- 2. The sample of non-Haitian immigrants with less than secondary education is too small to be able to compare with Haitian and native-born workers.
- 3. High-skilled is defined as having finished at least secondary education.
- 4. The regions are based on the Decree 710-04 that divides the country in ten administrative regions. These regions are: Cibao norte, Cibao sur, Cibao Nordeste, Cibao Noroeste, Valdesia, El Valle, Enriquillo, Ozama, Higüamo and Yuma.
- 5. The regression analysis was identical to the skill cell regressions earlier in the chapter, with the difference that the share of emigrants from the skill cell were included as an adtional control variable. Only the years 2000 and 2010 were included in the analysis, because of availability of the emigration rate per skill cell. Given that the majority of Dominican emigrants move to the United States, the emigrant share of a skill cell was identified as the number of Dominican immigrants in the United States with a given skill combination over the respective labour force size in the Dominican Republic Dominican immigrants are identified based on the 5% and 1% samples, respectively, of the 2000 and 2010 US Censuses (Minnesota Population Center, 2017).

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ANNEX 4.A1

Methodology

This chapter is based on the skill-cell approach developed by Borjas (2003) and followed by Facchini, Mayda and Mendola (2013). In this approach, workers of comparable levels of skill are grouped into cells, typically based on two dimensions, education and experience. The impact on different outcomes of native-born workers by the share of immigrants is analysed by cell, with the underlying assumption that native-born and immigrant workers only compete if they have the same skill level. This chapter distinguishes between four education groups: less than primary education, primary education, secondary education and tertiary education. Work experience is estimated based on the age minus the expected age at the end of education. The ages are: 15 for less than primary, 17 for primary, 21 for secondary and 23 for tertiary education. Work experience is divided into 5 year bands to create the experience groups. Women's work experience is adjusted downwards by four years to account for possible time out in the labour market due to maternity and domestic tasks (see Blau and Kahn, 2013). The sample is restricted to native-born individuals between 15 and 64 years old.

The data comes from the pooled sample of the National Labour Force Survey between 2000 and 2014. The emigration shares are identified based on the 5% and 1% samples, respectively, of the 2000 and 2010 US Censuses (Minnesota Population Center, 2017). In all cases, only the population between 15 and 65 years old is taken into account.

To estimate the result, each dependent variable is regressed using ordinary least square regressions in the share of immigrants in cell. The variables are labour income, unemployment, employment-to-population ratio, underemployed workers, part-time employees and vulnerable workers. They are then controlled for education, experience, year of the survey and their interactions. Underemployed workers are those that are in part-time employment but that would like and are available to work more hours per week. Part-time employees are defined as the population working less than 35 hours per week. Vulnerable workers are own-account workers and contributing family workers.

These 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 the education level (e_i) , work experience (w_j) , time period (c_t) and their two-way interactions. Contrary to previous research (see Borjas, 2003; Facchini, Mayda and Mendola, 2013), the data includes both men and women. The main results at the national level are:

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

	Hourly labour income	Unemployment	Employment to population ratio	Under employment workers	Part time employment	Vulnerable employment
Coefficient	-0.095	-0.073*	-0.298***	0.076	0.204**	0.170
(standard error)	(0.223)	(0.041)	(0.078)	(0.094)	(0.082)	(0.117)
Observations	570	570	570	570	570	570
R-squared	0.980	0.981	0.989	0.784	0.880	0.987
High-skilled						
Coefficient (standard	-1.537**	-0.032	-0.200	0.157	0.492***	0.310
error)	(0.576)	(0.116)	(0.215)	(0.142)	(0.139)	(0.185)
Observations	270	270	270	270	270	270
R-squared	0.992	0.992	0.994	0.762	0.891	0.976
Low-skilled						
Coefficient (standard	-0.091	-0.115*	-0.290***	0.026	0.097	0.066
error)	(0.279)	(0.064)	(0.086)	(0.135)	(0.104)	(0.192)
Observations	300	300	300	300	300	300
R-squared	0.970	0.983	0.990	0.788	0.930	0.960
Men						
Coefficient (standard	0.106	-0.115**	-0.216**	0.013	0.192**	0.139
error)	(0.236)	(0.046)	(0.092)	(0.095)	(0.095)	(0.120)
Observations	570	570	570	570	570	570
R-squared	0.978	0.966	0.989	0.774	0.911	0.974
Women						
Coefficient (standard	-0.217	-0.075	-0.113	0.162*	0.025	0.194**
error)	(0.406)	(0.158)	(0.085)	(0.090)	(0.091)	(0.086)
Observations	524	524	524	524	524	524
R-squared	0.961	0.965	0.985	0.690	0.809	0.980

Note: Underemployed workers are those that are in part-time employment but that would like and are available to work more hours per week. Part-time employees are defined as the population working less than 35 hours per week. Vulnerable workers are own-account workers and contributing family workers. Significance levels * = 0.1, ** = 0.05 and *** = 0.01. Source: Authors' calculations based on the National Labour Force Survey (BCRD/ILO, 2016).

The estimations are the regional level follow the same methodology, but they take into account the regional distribution of foreign-born workers along with their skill distribution (see Facchini, Mayda and Mendola, 2013). The equation to be estimated becomes:

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

where d is a fixed effect taking into account regional divisions in a country (provinces, districts, etc.) k (k = 1...K). Two-way interactions with other fixed effects are also included. Based on this estimation the results at the regional level are:

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

	Hourly labour income	Unemployment	Employment to population ratio	Under employment workers	Part time employment	Vulnerable employment
Coefficient	-0.167**	0.003	-0.232***	0.071***	0.049	-0.013
Robust standard errors	0.074	0.019	0.0257	0.023	0.032	0.030
Observations	5 509	5 528	5 538	5 513	5 513	5 513
R-squared	0.882	0.836	0.898	0.421	0.520	0.896

Note: Underemployed workers are those that are in part-time employment but that would like and are available to work more hours per week. Part-time employees are defined as the population working less than 35 hours per week. Vulnerable workers are own-account workers and contributing family workers. Significance levels * = 0.1, ** = 0.05 and *** = 0.01

Source: Authors' calculations based on the National Labour Force Survey (BCRD/ILO, 2016).

Chapter 5

Immigration and economic growth in the Dominican Republic

This chapter first explores the link between immigration and entrepreneurship in the Dominican Republic. It then considers the relationship between immigration and productivity, and finally explores the contribution of immigrants to economic growth.

Immigrants may not only be employees, but instead be self-employed or even create their own firms. This entrepreneurial activity and the potential filling of skills gaps can affect existing firms in positive and negative ways. For example, firms of native-born individuals may suffer from the additional competition, but also benefit from higher productivity levels within their firms. Second, as workers, consumers and investors, immigrants can affect the economy in larger ways, such as altering the gross domestic product (GDP).

This chapter extends the previous chapter's focus on the labour market integration to assess the impact of immigrants to broader economic effects. It is divided into three sections. The first one discusses certain characteristics of firms owned by foreign-born workers and the potential spill over effects of immigration on firm creation by the native-born population. The second part discusses the links between immigration and productivity and the third one estimates the value added generated by immigrants. Overall, immigrants appear to have opposing effects on entrepreneurship in the Dominican Republic. On the one hand, they are less likely to be business owners; on the other hand, a higher concentration of immigrants in a municipality leads to a higher business ownership rate by the native-born people. Their estimated added value ranges from 3.8% to 5.3% depending on the assumptions.

Immigration and entrepreneurship

Immigration can affect entrepreneurship – understood here as the exploitation of business opportunities – in two main ways. The first is that immigrants can be entrepreneurs themselves. The second is that the presence of immigrants can either increase or decrease entrepreneurial activities of nativeborn individuals. One possible cause of increases is that immigrants may have skills that make it easier for native-born entrepreneurs to start or grow their business if they hire them (Duleep, Jaeger and Regets, 2012). Another is that they may increase the availability of capital or the size of the domestic market and therefore make certain business ideas that rely on additional capital or a larger market more viable. On the other hand, increased levels of competition could put some existing firms out of business (Fairlie and Meyer, 2003).

Entrepreneurship as a concept is difficult to define (Anderson and Starnawska, 2008). In the absence of specialised surveys that investigate entrepreneurial activity within both nascent and existing firms, small business ownership is often taken as a stand-in even if it only covers part of

entrepreneurship (Sahut and Peris-Ortiz, 2014). This report analyses the extent of immigrant self-employment and in particular business ownership. Self-employed comprise both own-account workers and employers, and business owners are defined here as being employers.

Census data indicate important gender differences in self-employment patterns by place of birth

In some OECD countries (in particular in Southern, Central and Eastern Europe), immigrants have a high propensity to be self-employed (OECD, 2011). Several reasons have been given for this, including the following:

- characteristics of immigrants, such as their own prior self-employment experience or that of their parents or grandparents or a higher level of risk tolerance (Akee, Jaeger and Tatsiramos, 2013; Andersson and Hammarstedt, 2010)
- labour market marginalisation that leaves immigrants with few viable alternatives (Clark and Drinkwater, 2000)
- certain business opportunities that are more open to immigrants than to others (Lofstrom, 2002).

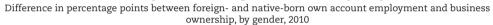
However, for OECD countries overall, the average immigrant self-employment rate is only slightly more elevated than the native-born rate (OECD, 2011). In the partner countries, it is actually lower in six out of nine other countries (OECD/ILO, 2018).

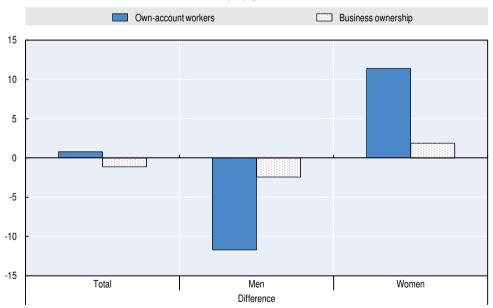
The relationship between migration and self-employment in the Dominican Republic has predominantly been analysed with regards to emigration. Some research suggests that remittances received by households with emigrants decrease the tendency to create new businesses (Amuedo-Dorantes and Pozo, 2006). This contradicts the findings in a number of other countries (Funkhouser, 1992; Woodruff and Zenteno, 2001; Yang, 2008). Recent findings suggest, however, that at least in urban zones, households that received remittances had a higher likelihood of owning a business. In contrast, having a household member that was an emigrant, return migrant or immigrant, or receiving remittances for rural households did not affect this likelihood (OECD/CIES-UNIBE, 2017).

The self-employment and business ownership rate can be measured based on the labour force survey or the population census. The labour force survey is the usual source of information about labour market characteristics and is for example utilised by the ILO to calculate Key Indicators of the Labour Market. According to differently formulated questions, the average self-employment rates as calculated based on the labour force survey is much higher than the rate calculated based on the census. In addition, the difference in the self-employment rates between the native- and foreign-born varies between the two data sources.

According to the 2010 census, the average self-employment rates of foreign-and native-born workers are similar, but this hides strong differences among foreign- and native-born men and women. In 2010, the share of employed immigrants and native-born individuals that were own-account workers were 23.3% and 22.5% respectively. This means that the rate was less than one percentage point higher among immigrants (Figure 5.1). At 5.5%, the immigrant business ownership rate was around one percentage point lower than the native-born rate of 6.6%. However, when comparing men and women, drastic differences emerge. In particular, a much lower share of immigrant men are own-account workers (15.2%) or business owners (5.1%) than among native-born men (26.9% and 7.5%, respectively). Among women, the opposite is true: 32.2% and 7% of immigrant women in employment are own-account workers and business owners, respectively, compared to 20.8% and 5.1% of native-born women in employment.

Figure 5.1. Immigrant women are more frequently self-employed than their native-born counterparts and immigrant men less frequently





Note: A positive difference indicates that the respective rate is higher among the foreign- than native-born population. Source: Authors' calculations based on the 2010 National Population and Housing Census (Oficina Nacional de Estadística, 2012).

According to the labour force survey, in contrast, the pattern looks very different. In 2010-14, the average own-account occupation rate was estimated at 43% for foreign- and 61% for native-born employed individuals (Figure 3.9). The business ownership rates are 4% and 3%, respectively.

A possible reason for the discrepancy in the difference between foreignand native-born individuals is the under-coverage of immigrants in the labour force survey in general. While the census counted nearly 400 000 immigrants in the country in 2010, the labour force survey only covered around 280 000 immigrants (Kone and Ozden, 2017). The undercount appears more pronounced in rural than urban areas. In the latter, 2.5% of the population are estimated to be foreign-born according to the labour force survey, compared to 3.7% according to the 2010 census. The 1.2 percentage point difference corresponds to an undercount rate of 32%. In rural areas, the labour force and census estimates of the foreign-born share are instead equal to 3.3% and 5.7%, respectively. This 2.4 percentage point difference corresponds to an undercount rate of 42%. In the census, the own-account employment rate of foreign-born workers is higher than that of native-born workers in urban areas but the opposite is true in rural areas. It may be that the labour force undercount in rural areas affects agricultural employees in particular. If so, this would increase the estimated own-account worker rate of immigrants in the labour force survey.

When personal characteristics are taken into account, immigrants are less likely to be own-account workers or business workers. According to census data, immigrant men are around 28 percentage points less likely to be own-account workers than native-born men with a comparable age and education and living in the same region; for women, the difference is 22 percentage points. Similarly, for business owners, the predicted probability is also 5.5 and 4.0 percentage points lower for immigrant men and women, respectively, than for comparable native-born individuals. The results based on the labour force survey actually point in the same direction, even if the difference in probabilities is smaller.²

The firms of foreign- and native-born business owners are similar in size

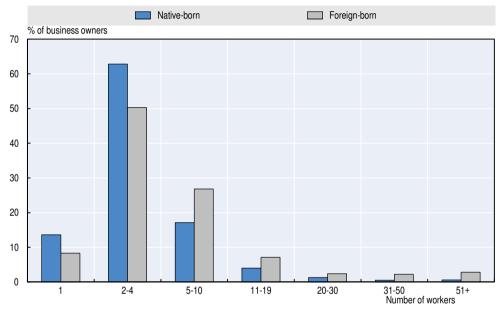
Companies owned by immigrants do not appear to be larger than those owned by similar native-born individuals. Based on pooled 2000-14 labour force data (BCRD/ILO, 2016), the estimated share owning very small companies (with less than five workers) is 59% among immigrants and 73% among native-born individuals (Figure 5.2). However, the differences in the proportions for each individual category are not statistically significant. Similarly, when the age, sex and education levels of business owners are taken into account, there is still no association between being an immigrant and owning a larger-sized business.³

The presence of immigrant workers may increase local business ownership of native-born individuals

While immigrants do not increase the average business ownership rate through starting businesses themselves, they may increase it through facilitating entrepreneurship among native-born individuals. The authors therefore analysed whether native-born individuals living in municipalities with higher concentrations of immigrants are more likely to own businesses than those in municipalities with lower concentrations of immigrants.⁴

Figure 5.2. Differences in the business size of foreign- and native-born employers are not significant

Size of firms owned by foreign- and native-born employers



Source: Authors' calculations based on the 2000-14 Encuesta de Fuerza de Trabajo (BCCR/ILO, 2016).

The results suggest that a higher immigrant concentration is associated with a higher likelihood of native-born individuals being business owners. Specifically, a ten percentage point higher immigrant share in the population aged 15 and above is associated with a 0.6 percentage point higher likelihood that a native-born individual owns a business. The results are similar in an alternative analysis that takes into account the fact that immigrants are not randomly distributed across different municipalities. This may appear as only a small boost to native-born entrepreneurship, but when considering that the share of the adult population who are business owners is a mere 1.9%, it is actually quite substantial.

Immigration and productivity

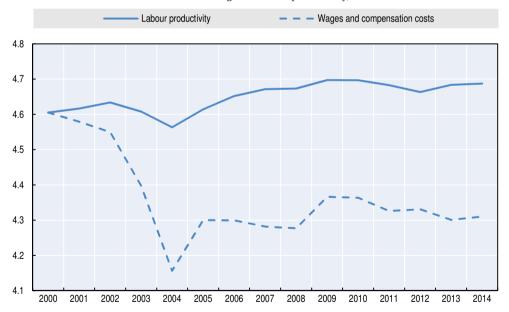
Aside from affecting the rate of entrepreneurial activity, immigration can influence the productivity of enterprises. Past research has shown for example that firms with a diverse workforce may be more likely to introduce new product

innovations and reach international markets (Nathan and Lee, 2013) but that productivity can decrease if workers have trouble communicating with each other (Niebuhr, 2010). Moreover, increases in the labour supply may lead firms to invest less in innovations, although this may be a greater concern in more technologically advanced countries (De Michelis, Estevão and Wilson, 2013). The United States have recently shown that immigration increases productivity (Peri, 2012), in part through a more efficient task allocation, as did a sample of 20 OECD countries (Aleksynska and Tritah, 2015).

Productivity is rising and differs across sectors

As was described in Chapter 2, the Dominican Republic's output has increased significantly throughout the past quarter century. Labour productivity has increased, while nominal wages have remained largely stable. Due to the increasing inflation after the Dominican financial crisis in 2002, real wages fell drastically and have still not recovered (Abdullaev and Estevao, 2013). This has created a gap between real wages and labour productivity (Figure 5.3).

Figure 5.3. **Real wage growth has not kept pace with labour productivity growth**Growth rate of real wage and labour productivity, 2000-14



Note: Labour productivity is the output produced by a person employed (Constant 2011 PPP) per hour. The series converted into indices for the year 2000 = log(100).

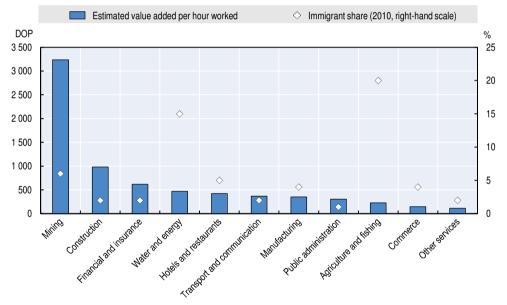
Source: Author's calculations, based on the Encuesta de Fuerza de Trabajo (Banco Central de la República Dominicana, 2014) and World Bank (undated).

The labour productivity of different sectors varies strongly. In 2016, the estimated average value added per hour worked ranged from DOP 112 in the

"other services" sector (e.g. social services) to DOP 3 235 in the mining sector (Figure 5.4). Over the 2000 to 2016 period, the ratio of the value added per hour worked in a sector to the value added per hour worked in the economy overall is relatively stable for most sectors. The mining sector is the most significant exception, with the ratio varying from 1.5 (in 2002) to 11.1 (in 2011). This is mainly because commodity prices largely drive the sector's value added. Lower-productivity sectors are agriculture, commerce and other services, and higher-productivity sectors are mining, energy and water, and financial and insurance activities. Manufacturing, construction, hotels and restaurants, transport and communication, and public administration all fall within 0.9-1.4 of the average.

Figure 5.4. Immigrants show no clear pattern of being concentrated in low- or high-productivity sectors

Estimated value added per hour worked by sector



Note: Value added per hour worked is estimated by dividing the value added of the sector by the number of workers receiving income from the sector times the average hours worked times 50.

Source: Authors' calculations based on Oficina Nacional de Estadística (2012) and Banco Central de la República Dominicana (undated a and b).

There is no clear pattern of immigrants being concentrated in low- or high-productivity sectors. In fact, immigrants are over-represented in the high value added sector of mining, but also in the mid value added sectors of manufacturing, hotels and restaurants and construction and in the low value added activity of commerce. Without further information on individual workers' occupations and tasks, no conclusions can be drawn about immigrants' individual levels of productivity, as the range of productivity across firms and functions varies widely even within the same sector.

The business environment can influence output growth. Most of the biggest business obstacles identified in an enterprise survey of companies in the Dominican Republic's formal sector are factors that immigration could affect only indirectly (World Bank, 2017). The most commonly mentioned obstacles are corruption, stability of electricity and tax rates. Among firms with more than 100 employees, an inadequately educated workforce is only the third most commonly named obstacle. Immigration could therefore have beneficial effects if it provides workers with the qualifications required in the labour market, although it is unclear whether it currently does. On the more negative side, medium-sized firms mentioned the competition practices of the informal sector as a problem in particular. Insofar as immigration could increase the size of the informal sector, this could become a larger obstacle for formal firms.

More data is necessary to further explore the links between productivity and immigration. Given the importance of productivity for long-term economic growth, it would be ideal to be able to analyse the causal link between immigration and productivity. However, this analysis is highly complex. Immigrants are not randomly distributed across sectors or regions of the country. For example, higher-productivity sectors may disproportionally attract immigrants or on the contrary present entry barriers to them. Thus, the correlation of immigrant concentrations and productivity growth rates in different sectors could suggest a relationship that is in fact not in any way driven by a causal effect of immigration on productivity.

The preferred method to understand the relationship between immigration and productivity is to compare the productivity of firms with and without immigrants. An example of this type of research is an analysis that linked work permit application with publically available data on companies in the United States. It found positive productivity effects among research-focused firms (Ghosh, Mayda and Ortega, 2014).

The National Statistical Office of the Dominican Republic periodically carries out an enterprise survey, the National Survey on Economic Activity (Encuesta Nacional de Actividad Económica, ENAE). The survey took place in 2009, 2011, 2012, 2013 and 2016. Only formal companies with at least ten employees are surveyed. They are in the sectors of mining, electricity, water, manufacturing, construction, transport, information and communication, commerce, and hotels and restaurants. Most years, the survey covers the value of outputs and inputs, including the number of employees and their salary costs.

The 2016 survey also included an additional module on the employment of foreigners. This module was developed through co-operation between the project and the National Statistical Office. It collected information on whether a company employed foreigners, and if so, their status as dependent or independent workers, sexes and wages.

The share of formal companies that employed at least one foreign national in 2015 was 16.5%. The share was higher than the average in the hotels and restaurants (34.1%), water (26.1%), construction (20.0%), and manufacturing (18.1%). In total, formal enterprises in these sectors were estimated to employ 10 613 foreign-born workers. The majority of these workers were men, with their share ranging from 69.0% in the information and communication sector to 100% in the mining sector (Oficina Nacional de Estadística, 2017).

The data of this survey can allow an analysis of the correlation between the concentration of foreign nationals in a company and the productivity of this company. The estimation is based on the value of their outputs and inputs, with foreign citizenship as a proxy for the immigration status. ⁶ A large enough sample would allow a causal analysis where the past regional and sectoral immigrant concentration is taken as an instrument for the current immigrant concentration in firms. However, this survey's sample size is not sufficiently large.

Immigration and economic growth

The Dominican economy grew fivefold in the past quarter century and has been one of the fastest growing economies in the region in recent years. The sectors of construction, financial services and tourism initiated the growth, and more recently trade, manufacturing and agriculture contributed. Salary increases have not kept up with the fast growth the economy has enjoyed since 1990. As a result, the poverty rate, which had sky-rocketed as a result of the 2002 crisis, has not declined as fast as expected. Since 2013, however, the decline in the moderate poverty rate has been more pronounced. Moderate poverty has reached the 2000 level of 32%, down from 50% in 2004 and from 41% in 2013 (Carneiro, 2016).

Immigrants contribute to economic growth in several ways. This section outlines their estimated contribution to total value added and, given their important role in agriculture and construction, their specific contribution in these sectors. First, however, it discusses whether immigration delays the point at which wages start rising more drastically due to labour shortages.

Immigrants contribute a share to value added about equal to their population share

Part of the value added produced in the Dominican Republic is generated by immigrants. Their share can and has been estimated based on assumptions about their relative productivity (Martin, 2007; ILO/OECD/World Bank, 2015). For this estimate, the value added of each sector is multiplied by the share of immigrants in the total number of workers in the sector. The value added share is adjusted for estimated productivity differences based on either the ratios of the average wages or of the years of education of foreign- to native-born workers in each sector. The individual shares are then added up to obtain an estimate of the total value added share produced by immigrants.

Prior research employing this methodology suggests that in 2012, immigrants contributed 7.4-7.5% of value added. This study was based on the 2012 National Immigrants Survey (Lizardo and Hernández, 2013). Under the second estimate – the estimate is adjusted for the wage ratios between foreign-and native-born workers –, the share of the immigrant contribution drops. Immigrants are estimated to contribute particularly strongly to agriculture (14.7-19.4% of agricultural value added) and construction (27.2-32.8%), but this contribution represents less than half of the total contribution of immigrants.

An analysis based on the 2010 census comes to a similar conclusion, but only under a similar productivity adjustment. The unadjusted estimate puts the immigrant contribution at 5.3%, which exceeds the immigrant share in the population according to the 2010 census (4.2%) (Table 5.1). In the prior estimate based on the immigrant survey, this was also the case. The adjustments for the wage and education ratios lower the estimate significantly, and the education ratio puts it below the immigrant population share.

Table 5.1. The share of value added produced by immigrants is estimated to exceed their population share

	Value added (current million Dominican pesos 2014)	Immigrant share (2010 census)	Estimated value added (unadjusted)	Estimated value added (adjusted for wage ratio)	Estimated value added (adjusted for education ratio)
Agriculture and fishing	160 681	0.20	32 136	21 531	16 408
Mining	44 509	0.06	2 671	1 629	1 839
Manufacturing	403 363	0.04	16 135	18 070	9 538
Utilities	46 405	0.02	928	1 104	896
Construction	249 669	0.15	37 450	28 462	26 549
Retail	263 879	0.04	10 555	8 971	6 725
Gastronomy	207 686	0.05	10 384	10 488	10 217
Transport and communication	294 044	0.02	5 881	5 233	6 638
Finance	105 806	0.02	2 116	1 904	2 170
Real estate	244 879	0.04	9 795	13 419	8 978
Public administration	136 643	0.01	1 366	1 448	1 602
Education	126 356	0.02	2 527	7 783	2 721
Health	78 485	0.02	1 570	1 428	1 792
Other services	226 593	0.02	4 532	7 613	3 581
Total	2 588 998		138 047	129 089	99 660
Share (% value added)			5.3	4.3	3.8

Note: The immigrant share is estimated based on individuals aged 15 and older. The wage ratio is calculated as the ratio of the average monthly labour income from the primary job of immigrants to the average monthly labour income from the primary job of native-born workers in the sector. The education ratio is calculated as the ratio of the average years of education.

Source: Authors' calculations based on the 2010 Population Census (Oficina Nacional de Estadística, 2012) and the 2010-14 Encuesta Nacional de Fuerza de Trabajo (CRD/ILO, 2016).

The estimated value added share does not mean that GDP would be 4-5% lower if immigrants left. Some of the reasons are technical. For example, some of the sectors are very large, with strongly varying levels of value added per worker across sub-sectors. Since immigrants are probably not distributed equally across these sub-sectors, the estimate of their contribution to the sector is imprecise.

Similarly, labour income and education ratios are imprecise approximations of productivity differences. There are many reasons for this, but one could be that the over- and under-qualification rates of foreign- and native-born individuals are not equal. On average, this does not appear to be the case, but in specific occupations and likely also sectors, rates might differ (see Chapter 3). This could indicate that the productivity differential between foreign- and native-born individuals is larger than their relative education levels suggest.

Other reasons explaining why the effect of GDP would be different are conceptual. For example, the estimate does not capture the fact that some foreign-born workers may be easily replaced by native-born unemployed workers, while others fill important skill gaps. The effect of native-born workers on GDP may be a multiple of what they themselves produce. The estimate also does not take into account that the other economic roles of immigrants – being consumers, investors, entrepreneurs and tax payers – also have economic implications.

The value added generated by immigrants in agricultural and constructions sectors is higher than their share in employment

Immigrants are particularly over-represented in the agriculture and construction sectors. Not surprisingly, much of the research on the impacts of immigration in the Dominican Republic is therefore focused on these sectors. The importance of agriculture in value added has declined in recent years, while for the construction sector it has risen (Table 5.2). According to the 2010 census, 10.2% of workers⁷ work in agriculture while the sector generated only 6.3% of value added. In wholesale and retail trade and other services, the employment share in 2010 exceeded the value added share in 2010-14. Part of the explanation may be that a relatively high share of the workers in these sectors works on a part-time basis, although the same is true for some other sectors such as hotels and restaurants. Construction employed 7.1% of workers and created 10.3% of value added. Other sectors in which the value added share exceeded the employment share are mining and quarrying, manufacturing, electricity, gas and water, hotels and restaurants, transport and communication, and financial and insurance activities.

The census and household surveys may understate the share of immigrants employed in the construction sector. According to a 2010 survey on construction workers, 53.1% of workers are Haitians (OMLAD, 2011), as opposed to only 16.4% according to the 2010 census. The 2012 immigrant survey also indicates that

the share of Haitians in construction is higher (29.9%) (Lizardo and Hernández, 2013). The difference in the share of agricultural workers who are foreign-born is much less dramatic between the census and the immigrant survey.

Table 5.2. Manufacturing and services contribute the most to value added

Share and growth rate of value added by sector (current PPP), 2000-14

	Share in tota	Share in total gross value added (%)			age growth ra	te (%)
	2000-04	2005-09	2010-14	2000-04	2005-09	2010-14
Gross value added	-	-	-	5.8	8.2	6.8
Agriculture	7.4	7.1	6.3	3.3	5.7	5.5
Mining and quarrying	0.8	1.2	1.1	28.0	5.1	40.9
Manufacturing	22.6	18.0	16.1	5.2	1.3	5.5
Electricity, gas and water	2.5	2.2	1.9	5.9	3.7	4.3
Construction	8.0	10.8	10.3	1.6	18.9	4.2
Wholesale and retail trade	7.6	9.7	10.6	3.1	14.3	7.7
Hotel, bars and restaurants	9.2	8.9	7.9	15.4	1.2	6.3
Transport and communication	8.3	10.3	11.6	14.2	10.5	7.6
Financial and insurance activities	3.9	3.9	4.1	8.1	13.7	5.3
Public administration and defence	4.3	4.3	4.7	5.4	20.9	8.3
Other services	25.3	23.6	25.6	4.7	9.8	7.9

Source: Author's calculations based on data provided by BCRD/ILO (2016).

Today, the most important products of the agricultural sector are rice, banana, cocoa, sugar cane, avocado, milk goods, tomatoes and coffee, in that order.⁸ In the past, the main cash crops were sugar cane and rice. The importance of sugar cane has dropped since the 1980s. Over the 1995-99 period, it represented only 11.6% of the value produced by the 41 most important agricultural products, and over the 2000-14 period, this share dropped further to 7.3%. The decline in the importance of the sugar cane sector has encouraged some immigrant workers to move to other crops or sectors (OECD, 2009).

Based on a survey of workers in agriculture and construction, one study suggests that Haitian workers generate up to 18.9% of the production value in the construction sector and 17-25% in the production of bananas, rice and sugar cane (CEFASA, 2012). In the construction sector, the authors also find a strong complementarity between immigrant and native-born workers and a clear division of tasks. They conclude that the presence of immigrant workers increases the overall productivity in this sector.

Conclusions

Immigration appears to have opposing effects on entrepreneurship in the Dominican Republic. On the one hand, a smaller share of foreign- than native-born workers are business owners, thereby lowering the aggregate business ownership rate. On the other hand, a higher concentration of immigrants in a municipality may increase the share of native-born individuals who own businesses. Despite the numerous potential benefits of launching new businesses, not all businesses create jobs or are innovative. Many new businesses do not survive for long and contribute little to economic growth. Governments should therefore review their policies to ensure that incentives are geared towards new enterprises with a high probability of succeeding (Shane, 2009).

Depending on the assumptions about the relative productivity of immigrants, their contribution to value added may exceed their population share. In part, this is due to their higher concentration among the adult population and their higher labour force participation rate. However, when it is assumed that differences in educational attainment indicate productivity differences, the contribution of immigrants to value added is smaller than their population share.

Together, these pieces of evidence may indicate that indirect effects of immigration on economic growth in the Dominican Republic may outweigh direct effects. The value added calculation suggests that the rise in GDP may be relatively proportional to the rise in the population through immigration. This would imply that what immigrants produce hardly affects GDP per capita. However, immigration may allow native-born workers to engage in more productive activities. The chapter explored one way in which this may happen: an increased business ownership rate among native-born individuals when more immigrants live in the area. But there may be other effects that have not been fully explored. For example, the productivity of native-born workers could rise when they work together with foreign-born workers; or they may be able to switch to higher value-added jobs.

These possible additional effects deserve further research attention. The first question that could be explored is whether immigration boosts productivity. An analysis of the formal enterprise survey would be a first step in this direction. Going further, the economic growth effects could be analysed in a formal way based on a computable general equilibrium model.

Notes

- In the census, the options are wage employee, employer or boss, family worker or non-family worker without pay, own-account worker and other. In the labour force survey, the options are employer or worker of the general government, employer or worker of a public enterprise, employer or worker of a private enterprise, professional own-account worker, non-professional own-account worker, employer of unincorporated companies, family aid or non-family non-paid worker, and domestic service.
- 2. These results were based on probit regressions of employed individuals. Their own-account or employer status is the dependent variable, being a foreign-born worker is the explanatory variable and age, education level and region are control variables.

- This conclusion was based on an ordered logit regression in which different business size categories were regressed on foreign-born status, age, age squared, education and year.
- 4. The analysis was carried out based on a probit regression of the native-born population aged 15 and above. Business ownership is the dependent variable and sex, age, education, region and rural status are the control variables. The immigrant share in the population aged 15 and above is the explanatory variable. The population census was the data source used
- 5. Since immigrants are not randomly distributed across the country, in one analysis the immigrant share in 2002 is an instrument for the immigrant share in 2010 (Sousa, Sanchez and Baez, 2017). This approach relies on the fact that immigrants often move to areas where other immigrants from their home countries already live. In this instrumental variable regression, the marginal effect is similar (0.056) to that in the basic regression.
- 6. Unfortunately, at the time of writing, the preparation of the ENAE data aside from the foreign employment module is not yet complete. Therefore, this analysis could not be included in the report.
- 7. Excluding the 5% of cases where the sector is unknown.
- Authors' calculations based on data from the National Statistical Office on the Value
 of Production of the Principal Agricultural Products at Current Prices, by Year, 1995-2004. In
 order to minimise the influence of harvest losses or yearly fluctuations in commodity
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Chapter 6

Immigrants' contribution to public finance in the Dominican Republic

This chapter assesses the net fiscal contribution of the average foreign- and native-born person in the Dominican Republic in 2007. It first discusses the evolution of key characteristics of the fiscal system. It then presents the estimation of the contributions of immigrants and native-born individuals to different taxes and expenditures. Finally, it combines these individual estimates to arrive at the net fiscal contributions of the two populations.

A frequently raised concern about immigration is that it represents a burden for public budgets. If immigrants pay less taxes while creating equal or higher government expenditures compared to native-born individuals, this would indeed be the case. In the Dominican Republic, where a higher share of foreign- than native-born individuals are in informal employment (and hence possibly pay less direct taxes) and where immigrants, at least nominally, have access to different public services, this concern may be particularly common.

The fiscal impact of immigration can be assessed based on an accounting methodology. Government expenditures and revenues are divided into different categories and the shares that can be attributed to foreign- and native-born individuals are estimated based on a household survey. For the Dominican Republic, this is the 2007 National Survey on Household Income and Expenditures (ENIGH – Encuesta Nacional de Ingresos y Gastos de los Hogares) (ONE, 2007). The methodology has been applied before to analyse the fiscal impact of immigration in the United Kingdom (Dustmann and Frattini, 2014) and in several OECD countries (OECD, 2013). The way in which the individual expenditure and revenue shares were estimated is explained for each element in the respective section.

The methodology has some disadvantages. One principal drawback is that it focuses on one year (2007) that is already a decade past at the time of drafting this report. This was necessary as the ENIGH was the most suitable data source because it contains detailed information about households' expenditures and revenues. Given the larger immigration flows since the turn of the century, the fiscal impact of immigrants may well have changed and thus warrants a future replication of the analysis using the 2017 ENIGH. Another issue is that this methodology does not estimate the lifetime net fiscal contributions of native- and foreign-born individuals. Instead, it only assesses the contributions for one year. Given that individuals tend to pay more taxes and use fewer public services during their peak working-age years than when they are children or retirees, the results of one year may not be representative of the relative fiscal contribution of immigrants over their lifetime. In many of the partner countries, immigrants are currently over-represented in the key working-age categories but may well stay in the country when they are older. A further disadvantage that is not methodology-specific is the considerable uncertainty in the estimates.

Advantages of the methodology include that it requires fewer assumptions than other methodologies. Also it can be implemented relatively consistently across different countries.

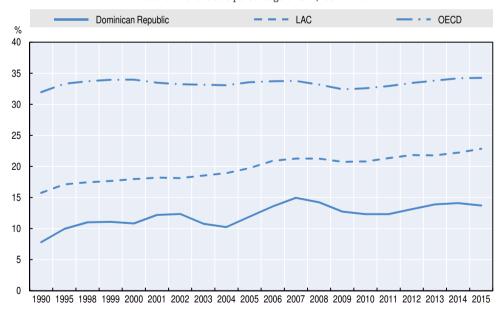
The structure of the chapter is as follows. First, there is a brief overview of the fiscal developments in the Dominican Republic in a comparative perspective. Second, the results of the fiscal impact analysis are presented.

The current fiscal situation in the Dominican Republic

Tax revenue as a proportion of gross domestic product (GDP) in the Dominican Republic has increased over the last two decades, but it still is considerably lower than the rest of the Latin America and the Caribbean (LAC) region. In 2014, at 14%, it had the second lowest level after Guatemala. The average in LAC region was 22.2% (Figure 6.1). The ratio has had a long-term rising trend over the past 20 years in both the Dominican Republic and the region overall. The decrease in this ratio in 2009 is the result of the fall in economic activity and commodity prices caused by the global financial crisis (OECD et al., 2017). This contrasts with the OECD average, where the tax-to-GDP ratio has been stable at around 34% over the past 20 years.

Figure 6.1. The Dominican Republic's tax-to-GDP ratio is below the average for its region

Total tax revenue as percentage of GDP, 1990-2015



Note: LAC is the unweighted average of a 24 Latin American and Caribbean countries. OECD is the unweighted average of the 35 OECD countries. Chile and Mexico are part of both groups.

Source: Revenue Statistics in Latin America and the Caribbean (OECD et al., 2017).

Not only are there differences in the tax-to-GDP ratio, but also in the structure of the tax revenues (Figure 6.2). The Dominican Republic relies more on indirect taxes than the rest of the region. In 2014, 63.5% of tax revenues consisted of taxes on goods and services, more than the LAC region average at 49.5%. As a comparison, the OECD average was 32.7% of total tax revenue. Corporate and individual income taxes generated 31.7% of total tax revenues in the Dominican Republic in the same year, higher than the LAC average and similar to the OECD average.

Income and profits Social security Pavroll Property Goods and services Other Dominican Republic LAC (22) OECD (35) 10 20 30 40 50 60 70 90 100

Figure 6.2. Tax revenues come mainly from taxes on goods and services

Tax revenue per type of taxation as percentage of total taxation, 2014

Note: LAC is the unweighted average of 24 Latin American and Caribbean countries. OECD is the unweighted average of the 35 OECD countries. Chile and Mexico are part of both groups.

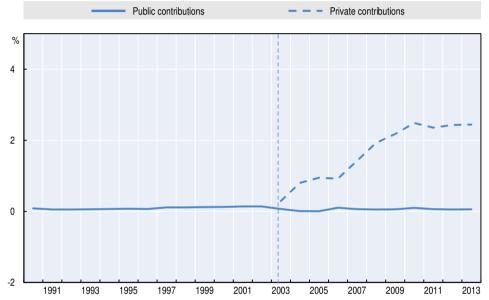
Source: Revenue Statistics in Latin America and the Caribbean (OECD et al., 2017).

A difference between the Dominican Republic and the rest of the region is the importance of social contributions, with less than 1% of tax revenues coming from these contributions as compared to the 16.4 % on average in LAC region. This is due to the diversity of social security schemes in the region. The social security scheme in the Dominican Republic is regulated by Law 87-01 on the Dominican Social Security System (Consejo Nacional de Seguridad Social, 2001), implemented in 2003. It is based on a contributory scheme with individual defined contribution capitalisation accounts. Each worker is free to select the Pension Fund Administrator (AFP – Administrador de fondo de pensiones) that

manages his or her individual funded account, a Health Services Administrator (ARS – Administradora de riesgos de salud) and/or a Health Services Provider (PSS – Proveedor de Servicios de Salud). At the moment there is only one public AFP and the majority of social contributions are managed by a private AFP (Figure 6.3).

Figure 6.3. The social contributions are on individual capitalisation accounts, managed mainly by private fund administrators

Public and private social security contributions as percentage of GPD, 1991-2013



Source: Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

According to the estimations of the Dominican tax office, the Dominican Republic has significant levels of tax evasion, despite a sustained decrease in recent years. Between 2004 and 2010, tax evasion has been reduced by 12 percentage points, partially because of investments in the efficiency of tax management. At the end of this period, it reached 29.7%, despite a slight increase in 2009 probably caused by the financial crisis (DGII, 2015).

In addition to tax revenues, there are non-tributary incomes, but these are low compared to Latin America, where countries like Chile, Colombia, Ecuador and Venezuela receive non-tax incomes on oil, metal, gas, copper, etc. In the Dominican Republic, non-tax revenues account for less than 1% of GDP in all years since 2000 except 2007, but it was followed by a reduction the next year due the closure of the mining company Alcombridge Dominicana. Overall, public revenue comes mainly from taxes.

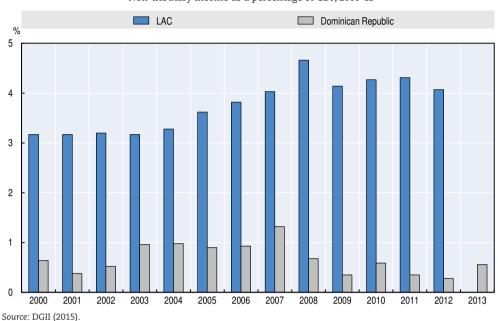


Figure 6.4. **Non-tributary revenue is low compared to the Latin America average**Non-tributary income as a percentage of GDP, 2000-13

Latin American governments in general and the Dominican Republic in particular spend a lower proportion of their GDP when compared to OECD countries. In 2014, the average expenditure of OECD countries, accounted for 41.5% of GDP. It was 33.1% for LAC region and 18.1% in the Dominican Republic (OECD, 2016). Government expenditures per capita increased by an annual average rate of 3.9% in LAC countries between 2007 and 2014 and 2% in the Dominican Republic, a higher increase compared to the 1.0% in OECD countries during the same period.

The Dominican Republic has relatively low levels of social expenditures. In 2007, the central government allocated 11.1% of its expenditures to education, 7.9% to health, 6% to social protection, 4.3% to social security, 44.9% to congestible public goods (meaning police and penal system, labour, water and sewage, energy, mining, communication, transport, and finance and security), 7.2% to pure public goods (meaning security, defence and environmental protection), and 18.5% to public debt (DIGEPRES, 2007). This is in contrast to the higher average levels of social expenditure² in Latin America and OECD countries (Figure 6.5).

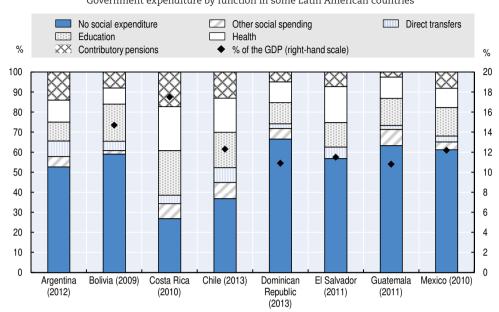


Figure 6.5. **Social expenditure is lower in the Dominican Republic than in the LAC region**Government expenditure by function in some Latin American countries

Note: The left axis represents government expenditure by function in some Latin American countries. The right axis represents the government expenditure as share of the GDP. Years in parenthesis.

Source: Authors' calculations based on: Government at a Glance: Latin America and the Caribbean (2016) and Commitment to Equity Institute Data Center on Fiscal Redistribution (2017).

Estimating the fiscal impacts of immigration

This section presents the estimation of the net fiscal contributions of foreign- and native-born individuals. For this, first, the estimation of the contribution share of the two populations to each major tax and public expenditure category is presented, followed by the overall result. Unless noted otherwise, the estimation of the tax and expenditure shares was based on the ENIGH 2007 survey.

The per capita fiscal revenue payments made by immigrants in 2007 were higher than the ones made by the native-born

In 2007, the fiscal payments made by the foreign-born were higher than the ones made by the native-born in four of the six major tax categories: corporate and other income taxes, social security contributions, payroll taxes and taxes on goods and services.

Personal income tax (2.2 % of tax revenues)

All individuals living in the Dominican Republic are subject to income tax on their domestic and global income, independent of their nationality. This

personal income tax is levied on income from all sources, including salaried and independent work. Some deductions are possible, like amounts paid in compliance with life insurance contracts or compensation paid due to disability or illness. For wage earners, this tax applies to the excess of a certain threshold (290 243 Dominican pesos [DOP] per year in 2007) and the tax rate varies between 15% and 25% on the gross wage including extra hours, bonuses and vacations.

The self-reported income tax payments for both dependent and independent workers, in primary and secondary jobs, were used to estimate the share of contributions for these populations. These shares are then multiplied by the total income tax reported by the government. According to these estimations, immigrants contribute 0.6% of the total personal income tax collection (Table 6.1). This is lower than their population share in 2007 (2.8%).

Table 6.1. The estimated per-capita personal income tax payment of foreign-born individuals is lower than that of the native-born population

Estimated personal income tax payments by native and foreign-born individuals, 2007

	Estimated personal income tax (million DOP)	Tax payment shares	Per-capita income tax payment (DOP)
Native-born	4 698.34	99.4%	517
Foreign-born	26.66	0.6%	101
Total	4 725.00		505

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007) and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

Corporate and other income taxes (18.6% of tax revenues)

All corporations and other for-profit organisations located in the country pay a tax on their taxable income. The tax rate was 28% before 2014 and was subsequently modified to 27%. The tax payment share is estimated to be equal to the adult population share. The reason is that it is difficult to allocate the split up the tax between shareholders, workers and consumers. Following this approach, the per-capita corporate income tax is DOP 4 283 for a native-born individual and DOP 5 601.5 for a foreign-born individual. The difference stems from the fact that the share of adults is higher among the foreign- than among the native-born population.

Social security contributions (0.4 % of tax revenues)

The social contributions are managed by a Pension Fund Administrator (AFP) that can be public or private, but most workers choose a private AFP. These contributions are on the gross wages and are paid by both employers and employees. Employers contribute 16% of the gross wages and employees 6%. The lower earnings threshold is the minimum wage and the upper ceiling is 20 times the minimum wage. Those belonging to the contributory scheme

contribute additionally to a solidarity fund of 0.4% of the total contributory wage. This contribution is compulsory and it is used to cover the pensions for people over 65 whose personal accounts are not sufficient to cover the minimum requirements in the contributory regime. This fund is managed by the public AFP, independent of whether the AFP chosen by the worker is private or public. Currently, only wage earners can belong to this regime.

The social security contribution share was calculated on the compulsory contributions to the solidarity fund for wage-earner workers making at least the minimum wage and that declare belonging to an AFP.³ According to this estimation, at 4.4%, the contribution share of immigrants was larger than their population share in 2007 (Table 6.2).

Table 6.2. Immigrants' per capita contributions to social security appeared to outstrip those of native-born individuals in 2007

Estimated contributions to social security by native- and foreign-born individuals, 2007

	Estimated social security contributions (million DOP)	Contribution shares	Per-capita social security contributions (DOP)
Native-born	822.20	95.6%	90
Foreign-born	37.79	4.4%	144
Total	860.00		91

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007) and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

Payroll taxes (4.6% of tax revenues)

Wage earners earning more than the minimum wage have to pay payroll taxes. The employee pays 0.05% of the gross wage to the professional training institute contributions and the employer pays 1%. The corresponding ceiling is ten times the minimum wage.

The payroll taxes of native- and foreign-born individuals were estimated by applying these tax rules to the gross wage reported in the ENIGH 2007 survey. The contribution of immigrants was estimated as 3.8% of the total collection of payroll taxes, higher than their population share in 2007 (Table 6.3).

Table 6.3. The estimated per-capita payroll tax payments were higher for foreign- than native-born individuals in 2007

Estimated payroll tax payments by native- and foreign-born individuals, 2007

	Estimated taxes on payroll (million DOP)	Taxes payment shares	Per-capita payroll tax payment (DOP)
Native-born	9 503.17	96.2%	1 045
Foreign-born	436.82	3.8%	1 659
Total	9 940.00		1 062

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007) and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

Taxes on goods and services (69.1% of tax revenues)

Taxes on goods and services represent the largest revenue component in the Dominican Republic. The main revenue is the value-added tax that applies to goods, imports and certain services. Before 2012, its rate was 16%. There were exemptions for several products considered part of a basic basket. Following a reform, the usual and reduced tax rates changed to 18% and 16%, respectively, although several exemptions remain. Additional taxes apply for certain goods such as alcohol and cigarettes.

The estimate of the indirect tax payments is carried out by assigning the value added tax and additional tax rates to each good and service reported to have been consumed in the ENIGH survey and then totalling the estimated indirect tax payment per household. As the database does not provide information on individual consumption, the total consumption of the household is divided equally between household members. Based on this estimation, the contribution on taxes consumption in 2007 of immigrants was on average DOP 21 565, higher than the average for the native-born (Table 6.4).

Table 6.4. Immigrants are estimated to have paid more indirect taxes in 2007

Estimated payments on taxes on goods and services made by native- and foreign-born individuals. 2007

	Estimated taxes on goods and services (million DOP)	Taxes payment shares	Per-capita value-added tax payment (DOP)
Native-born	144 927.12	96.2%	15 943
Foreign-born	5 576.88	3.8%	21 565
Total	150 604.00		16 101

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

Taxes on property (4.5% of tax revenue)

In 2007, buildings for housing or commercial, professional, or industrial activities owned by individuals valued above DOP 5 000 000 were taxed 1% per year on the excess of this amount. There are certain exemptions to this tax, particularly on property located in rural areas and dedicated to farming or under the protection of Law 158-01 on the promotion of tourism.

The ENIGH survey reports the property tax paid by the household. This amount was assigned to the head of the household. According to this estimation, immigrants contributed 2.53% of property tax payments in 2007, lower than their population share (Table 6.5).

Other miscellaneous taxes made up less than 1% of tax revenues. Given that is in unclear how these other taxes should be allocated, these taxes were divided across the adult population. The estimate of these per capita tax payments is DOP 164 for the native-born and DOP 215.5 for the foreign-born.

Table 6.5. Property-tax payments are estimated to be similar between the average native- and foreign-born individuals, 2007

Estimated property taxes payments by native- and foreign-born individuals, 2007

	Estimated taxes on property (million DOP)	Taxes payment shares	Per-capita property tax payment (DOP)
Native-born	9 466.82	97.5%	1 041.4
Foreign-born	246.17	2.5%	935.15
Total	9 713.00		1 038.41

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

The average fiscal expenditure was higher for the native-born than for the foreign-born population in 2007

The estimation of the share of fiscal expenditure distinguishes two approaches for pure public goods: one based on the average cost and another one on the marginal cost. Under both assumptions, the total per capita expenditure in 2007 was higher for the native-born than for the foreign-born.

Pure public goods, debt and congestible public goods (70.7% of public expenditure)

There are two approaches to estimate the foreign- and native-born shares of public expenditure on pure and congestible public goods and debt. The first one allocates the cost equally to immigrants and native-born individuals (an average cost scenario). The second approach allocates the cost of pure public goods and debt solely to native-born individuals. This assumes the marginal cost to immigrants is zero as the total expenditure would be the same even if they had not arrived in the country.

The distinction between pure and congestible public goods relies on whether they are likely to decrease in quality or availability if they have more users. In this estimation, pure public goods refer to expenditure in administration, defence, environment, agriculture, commerce, tourism and finance. Congestible public goods refer to expenditures on security, sewage, energy, mining, communication, transportation, cultural and recreational activities, sport, and the penal system. Of course, the distinction between the two types of public goods is somewhat arbitrary. It is likely that components of the goods and services classified as "pure" can become over-burdened when there are more users, and that similarly some of the public goods classified as "congestible" are in fact either pure public goods or only become congested at usage levels not likely to be reached.

Table 6.6. Due to the methodology, native-born individuals are estimated to pay as much or more than foreign-born individuals on a per-capita basis

Expenditures on public goods and debt allocated to foreign- and native-born individuals, under average and marginal cost scenarios, 2007

	Total expenditures	Per-capita costs (DOP)			
	(million DOP)	Native- and foreign-born, average costs	Native-born, marginal cost	Foreign-born, marginal cost	
Pure public goods	19 502.44	2 085	2 145	0	
Public debt	50 166.36	5 363	5 519	0	
Congestible public goods	121 548.52	12 995	12 995	12 995	

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Dirección General de presupuesto (DIGEPRES, 2007).

Social security payments (10% of public expenditure)

The Dominican Republic has several programs on social assistance for households in poverty or at risk of poverty that count for 6% of the national budget, targeting mainly children and the elderly. The ENIGH survey provides information on the participation of households in the main programmes existing in 2007. If the household benefited from the programme, the estimation of total social security payments is carried out by attributing the average cost of each programme to the head of the household for every child in the household. For conditional cash transfers related to the education programme and school breakfasts, only children attending school were taken into account. The average per-capita cost of each programme was either taken directly from reports by the Ministry of the Economy or where inferred based on the total programme expenditure divided by the number of beneficiaries as estimated based on the survey. The rest of the programmes that are not listed in the ENIGH survey are calculated with the total amount of money that people declared to receive as a subsidy from the government and were subsequently adjusted to the share of the total amount spent on social assistance according to the national budget.

Table 6.7. Social assistance benefits for foreign-born individuals are low on a per-capita basis

Estimated expenditures in social assistance allocated to native- and foreign-born individuals, 2007

	Estimated public expenditure on health (million DOP)	Share of expenditure	Per-capita public expenditure on social assistance (DOP)
Native-born	16 204.43	99.5%	1 783
Foreign-born	71.47	0.5%	272
Total	16 275.89		1 740

Source: Authors' calculations based on the 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007) and Dirección General de presupuesto (DIGEPRES, 2007).

According to this estimation, 0.5% of social assistance expenditure went to immigrants, lower than their population share in 2007 (Table 6.7). This is

partly explained by less knowledge of the existence of these programmes in households where the head is an immigrant. For example, 25.5% of the households where the head of household is foreign-born declared they knew about the existence of the School Assistance Incentive programme (Incentivo a la Asistencia Escolar ILAE), contrasting with 63.7% where the head of the household was native-born. Likewise, 34.1% of households headed by an immigrant knew of the programme *Comer es primero*, contrary to 81.7% of households where the head of household was native-born.

In the current system there is a single public AFP, AFP Reservas, which manages the pension funds of its affiliates and in addition manages the Social Solidarity Fund. The AFP Reservas, as a public AFP and following the mandate of Article 76 of Law 87-01 on the Dominican Social Security System, will also administer the pension funds of the Subsidised and Subsidised Contributory Schemes when they come into force. Even if the solidarity pension in the subsidised scheme has not yet been implemented, two non-contributory pension schemes already exist. The first is a means-tested pension, the Nonagenarios programme, managed by the Public Health and Social Assistance Office and financed by state resources. The second is the Guaranteed Minimum Pension of the Contributory scheme (Pensión minima garantizada), granted to pensioners over 65 whose personal accounts were insufficient to cover the minimum requirements in the contributory regime that is funded by the Social Solidarity Fund.

Table 6.8. The estimated per-capita social security benefits received by immigrants in 2007 were a fraction of those of native-born individuals Estimated social security benefits allocated to native- and foreign-born individuals, 2007

	Estimated public expenditure on health (million DOP)	Share of expenditure	Per-capita public expenditure on social security (DOP)
Native-born	11 633.11	99.7%	1 280
Foreign-born	32.02	0.3%	122
Total	11 665.13		153

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Dirección General de presupuesto (DIGEPRES, 2007).

The ENIGH survey has information on the amounts received in the programme *Nonagenarios* and in national pensions. The estimated share of expenditures is hence equal to the estimated amount of these reported benefits received by immigrants. According to this estimation, the share of expenditure in social expenditure for immigrants is 0.3%, lower than their population share (Table 6.8). This is not surprising given that despite Law 87-01 of the Dominican Social Security System (SDSS), which established that Dominican citizens and legal residents on the national territory have the right to affiliation with the SDSS, many immigrants could not access the system as they only had a temporary

regularisation and not a residence card. In November 2015, the National Council on Social Security (Consejo Nacional de Seguridad Social) reaffirmed the right for all regular immigrants to be in the social security through Resolution 377-15. In 2016, Decree 96-16 further modified the requirements to access the system, allowing immigrants to register more and easier.

Education expenditures (11.1 % of public expenditure)

Access to education in the Dominican Republic has expanded rapidly over the past 30 years, but the country still fails to provide education for the entire population and particularly to move students to complete higher levels of education. In 2007, among the people enrolled, the majority were in public school (79%), while the remaining 21% were in private schools. This varies significantly by level: 39% of students were at the pre-primary level, 15% at the primary level and 24% at the secondary level (OECD, 2008). The government is responsible for funding the public schools, but it provides funding to private institutions too.

To estimate education expenditure for foreign- and native-born individuals, costs per student are assigned based on enrolment information presented in the ENIGH survey. This information is used together with the share of public expenditures provided in the UNESCO database (UNESCO Institute for Statistics, undated), taking into account both public and private institutes and their respective shares of total expenditure. The average cost of underage students is attributed to the head of the household and the spouse, if present. It assumes the average cost of immigrant students and native-born students is the same and that children in the household are the children of the head of the household and the spouse. In this estimation, the per-capita expenditure on education is DOP 1 970 for foreign-born individuals and DOP 3 096 for native-born individuals (Table 6.9). The total expenditure of immigrants is lower than the population share. This is mainly driven by differences in enrolment at the secondary and post-secondary levels. Among children between the ages of 6 and 15, 51.2% of native-born children did not enrol in school, contrasting 73.6% of foreign-born children.

Health expenditures (7.9% of public expenditure)

In 2001, Laws 42-01 (General Health Law) and 87-01 (Law on the Dominican Social Security System) approved new health frameworks. Government funds originating from general tax revenues and social contributions finance the public health sector. Social contributions are paid by the employer and the employee when considering wage employment, while self-employed workers can decide to contribute and be part of a subsidised contributory regime. Additionally, there exists a subsidised system for people registered in the SIUBEN⁴ that can access public health without contributing. These resources are managed by a Health Services Administrator (ARS). All workers in the public sector must belong

to a public ARS, while workers in the private sector have the choice. Around 67% of private-sector workers choose a private ARS (Giedion et al., 2010). The Health Services Provider (PSS) to which the individual has access depends on the selected ARS.

Table 6.9. Per-capita education expenditures were estimated to be lower for foreign- than native-born individuals in 2007

Estimated expenditures in education allocated to native- and foreign-born individuals, 2007

	Share of public expenditure	Estimated foreign-born usage share	Estimated total expenditure for native-born (million DOP)	Estimated total expenditure for foreign-born (million DOP)
Pre-primary	4.2%	2.3%	1 232.40	29.01
Primary	58.7%	2.3%	17 233	396.16
Secondary	18.0%	0.6%	5 372.65	33.47
Post-secondary	14.5%	1.4%	4 325.08	59.88
Total (million DOP)	30 034	1.8%	28 163.80	518.52
Per-capita expenditure (DOP)			3 244.80	2 075.88

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), Dirección General de presupuesto (DIGEPRES, 2007) and UNESCO Institute for Statistics (undated).

The public expenditures for foreign- and native-born individuals are estimated by dividing total expenditure on each public PSS from National Health Accounts in 2011 (Ministry of Health, 2012) and imputing it to the people in the survey that attended a public medical institution. It assumes that the expenditure patterns did not change between 2007 and 2011. According to this estimation, the per-capita cost for immigrants was DOP 2 197 and DOP 2 293 for native-born individuals (Table 6.10).

Table 6.10. Estimated per-capita public health expenditures for foreignand native-born individuals were similar in 2007

Estimated expenditures in health allocated to native- and foreign-born individuals, 2007

	Estimated public expenditure on health (million DOP)	Share of expenditure	Public per-capita expenditure on health (DOP)
Native-born	20 848.19	97.3%	2 293
Foreign-born	578.40	2.7%	2 197
Total	21 426.58		2 291

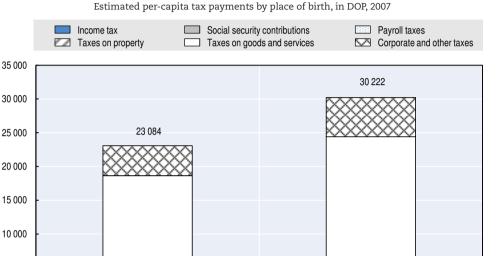
Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), Dirección General de presupuesto (DIGEPRES, 2007) and Ministry of Health (2012).

Immigrants' positive net fiscal contribution in 2007

On average, the contribution made by immigrants in 2007 was lower for income and property taxes, while it was higher in social security contributions and payroll and indirect taxes. Overall, the average contribution is DOP $23\,084^6$

for the native-born and DOP 30 221⁷ for the foreign-born (Figure 6.6). This difference was mainly driven by a higher estimated tax on goods and services payed by immigrants.

Figure 6.6. Immigrants were estimated to make higher fiscal contributions than native-born individuals



Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), and Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015).

Native-born

Public expenditures were on average higher for native-born individuals (DOP 29 042 under the average-cost scenario) than for foreign-born individuals (DOP 25 109) (Figure 6.7). While the levels of expenditure in health were similar, the expenditures in social protection and in education were lower for foreign-born individuals. Under the marginal cost scenario, the estimated expenditures for native-born individuals would be slightly higher (DOP 29 258) and much for lower foreign-born individuals (DOP 17 661).

Overall, the contribution to the public budget was higher for immigrants than for native-born individuals in 2007 (Table 6.11). In both the average cost and marginal cost scenarios, the net fiscal effect was negative for the average native-born individual and positive for the foreign-born. Specifically, it was equal to 3.8% of GDP per capita for the native-born and 2.4% for the foreign-born in the average cost approach. This net effect varies depending on the immigrant's country of origin. In the average cost scenario, the net effect of immigrants from Haiti was estimated to be equal to -1.8% of GDP per capita, negative but less

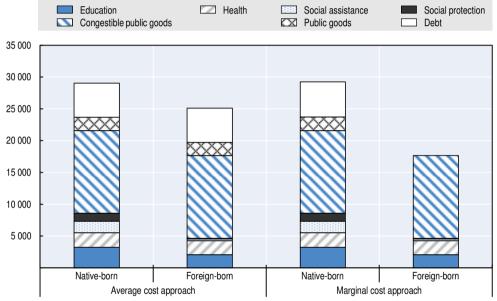
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Foreign-born

negative than the effect of the native-born. On the other hand, the average net effect of European immigrants was 45.1% of GDP per capita. These differences are mainly driven by higher levels of tax payments rather than significant differences in expenditures.

Figure 6.7. The average public expenditures on immigrants was lower than on native-born individuals

Estimated per-capita public expenditures by place of birth, average and marginal cost approach, in DOP, 2007



Source: Authors' calculations based on Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), Dirección General de Presupuesto (DIGEPRES, 2007), UNESCO Institute for statistics (undated) and Ministry of Health (2012).

Table 6.11. Immigrants did not impose a fiscal burden in 2007

Estimated net fiscal contribution of native- and foreign-born individuals, 2007

		Per-capita costs (DOP)			
	Native-born, average costs	Foreign-born, average costs	Native-born, marginal cost	Foreign-born, marginal cost	
Per-capita public expenditures	29 042.45	25 109.18	29 258.13	17 660.92	
Per-capita public revenues	23 084.84	30 221.48	23 084.84	30 221.48	
Per capita net fiscal contribution	- 5 957.61	5 816.96	-6 173.28	17 660.92	
Per capita net fiscal contribution (% GDP per capita)	-3.82%	3.28%	-3.96%	8.06%	

Source: Authors' calculations based on 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ONE, 2007), Revenue Statistics in Latin America and the Caribbean (OECD et al., 2015), Dirección General de presupuesto (DIGEPRES, 2007), UNESCO Institute for Statistics (undated) and Ministry of Health (2012).

These results however, might have changed over time. Since 2007, the composition of the immigrant population has had several transformations. The share of the immigrant population doubled, passing from 2.8% in 2007 to 5.6% in 2017 (ONE, 2018). The relative importance of the Haitian-born population increased at 82.7% of the total foreign-born population in 2017. This represents an increase of 4 percentage points in ten years and is explained mainly by increased flows since 2010, the year of the earthquake in Port-au-Prince (see Chapter 2). The number of immigrants from Venezuela also has increased significantly, passing from 3 400 individuals in 2012 to 25 800 in 2017 (ONE, 2018). The way recent immigrants contribute to and benefit from public services may differ from the immigrants in 2007. The average labour income of foreign-born individuals was higher than the one of the native-born in 2007. This however has reversed over time (See Figure 3.8). Nonetheless, foreign-born individuals seem to lack the access to education, pensions and health benefits compared to native-born in recent years (OECD/CIES-UNEBA, 2017). To establish whether the difference between foreign- and native-born contributions have changed, a similar analysis with more updated data is necessary to take into account all the changes in policies and on the characteristics of foreign- and native born individuals in recent years.

Conclusions

The average net fiscal contribution of immigrants was positive and larger than that of native-born individuals in the Dominican Republic in 2007. Compared to the other partner countries, only in Rwanda and South Africa under the average cost scenario is immigrants' contribution more positive and the difference to that of native-born individuals even larger (OECD/ILO, 2018). A small part of the different contribution can be explained by the different educational achievement and labour force participation rate of immigrants. In contrast, if immigrants had the same average age as native-born individuals, the difference would even be slightly larger (OECD/ILO, 2018).

The results presented here show that, at least based on the 2007 estimation, immigration does not represent a fiscal burden for the Dominican Republic. To establish whether the difference between foreign- and native-born contributions has remained as high in recent years, an equivalent analysis of the ENIGH 2017 would be a good first step. Going further, analysing individual tax records would yield a more accurate estimation of direct tax contributions, provided that the country of birth can be established. Both the ENIGH 2017 and the tax records could also be used to analyse how the welfare and social security contributions of immigrants have evolved over time compared to those of native-born individuals.

The above estimates suggest that, likely due to a lack of knowledge and less access, the per-capita social protection benefits received by foreign-born

individuals were lower than those of native-born individuals. For some groups of immigrants, this may be associated with higher risks of poverty. It is therefore worthwhile to monitor the situation and, if necessary and feasible, to intervene.

Notes

- Estimated by taking the consumption expenditure of goods and services taxed by the
 tax on transfers too industrialised goods and services (Impuesto a la Transferencia de
 Bienes Industrializados y Servicios ITBIS) from the central government, decentralised
 and autonomous sector, which has not paid administrative taxes, as well as the
 exemptions granted to companies that build state works (DGII, 2015).
- Social expenditure includes direct transfers, contributory and non-contributory pensions, and expenditures on education and health. Government expenditure in public housing and its associated urban development expenses, which are highly subsidised, are not included in this approach.
- 3. The data did not allow differentiating between public or private Pension Fund Administrators. Yet, 95% of the total collection on social contributions is managed privately (IADB/CIAT, 2014). This section therefore focuses only on the solidarity fund.
- 4. The SIUBEN (Sistema único de beneficiarios) is a division of the social cabinet that identifies and registers families in poverty through the SIUBEN census. It is the database used by social institutions and organisations to plan and invest resources.
- 5. This includes hospitals of the SESPAS (Ministery of Health), of the Dominican Institute of Social Security (Instituto Dominicano de Seguridad Social IDSS) and military hospitals.
- 6. This corresponds to USD 700 in 2007 (average exchange rate in 2007 is USD 1: DOP 33).
- 7. Around USD 915 (2007 USD).

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ANNEX 6.A1

Methodology

The methodology in this chapter follows the one of Dustmann and Frattini (2014) in their analysis of the direct fiscal impact of immigration in the United Kingdom. The estimations rely on several data sources, mainly the 2007 Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) (ONE, 2007), public revenues from the OECD Development Centre (OECD et al., 2015) and the National Budget of 2007 (DIGEPRES, 2007). Information on tax rules is taken from the National Directory of Internal Taxes (DGII, 2017a-e and 2012).

The 2007 ENIGH is the latest income and expenditure survey. In this survey the share of immigrants is lower than in the census of 2010 (2.81% and 4.19% respectively) (Table 6.A1.1). This difference is likely due to immigrants from Haiti, as the National Immigrants Survey 2012 finds that 39.1% of Haitians declared having migrated between 2010 and 2012.

Table 6.A1.1. Comparison of characteristics of the native- and foreign-born population in the Dominican Republic's 2010 Population Census and the 2007 ENIGH survey

	2010	2010 census		ENIGH 2007 survey	
	Native-born	Foreign-born	Native-born	Foreign-born	
Total	9 049 490	395 791	9 094 429	263 243	
Population share (%)	95.81%	4.19%	97.19%	2.81%	
Share women (%)	50.3%	39.4	50.5%	39.7%	

Source: Author's calculations based on ONE (2012), IX Censo Nacional de Población y Vivienda 2010 and ONE (2007), Encuesta Nacional de Ingresos y Gastos de los Hogares.

How Immigrants Contribute to the Dominican Republic's Economy

A better understanding of the way immigrants affect the economy in the Dominican Republic can help policy makers make the most of immigration. This report finds that the immigration in the Dominican Republic has a varying but limited economic impact. Immigrants seem to displace native-born workers in the labour market by increasing competition, but no effects were found on the labour income of the native-born population. The estimated share of value added generated by immigrants is close to their share of the population. At the same time, immigrants make a positive contribution to the government budget as they pay more in direct taxes and benefit less from public expenditure than the native-born population. Policies aiming to facilitate the integration of immigrants and a better inclusion of immigration into different sectoral policies would further enhance the economic contribution of immigrants in the Dominican Republic.

How Immigrants Contribute to the Dominican Republic'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.

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