



How Immigrants Contribute to Developing Countries' Economies



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Foreword

Developing countries host more than one-third of international migrants in the world. Most immigrants are migrant workers and are employed either formally or more often informally in their countries of destination. Immigration thus plays a key role in the destination countries' economic development. A number of low- and middle-income countries, however, lack evidence and awareness of how immigrants can contribute to different segments of the economies and very few have developed and implemented appropriate policy frameworks. A large informal economy associated with weak labour migration management capacities and a lack of active labour market policies prevent many destination countries from making the most of immigration.

The OECD Development Centre, the International Labour Organization (ILO) and the European Commission have worked together to address these challenging questions. Working across different contexts, the goal of our collaboration is to help developing countries design effective policies for leveraging immigration for positive development outcomes. This includes expanding the evidence base on the contribution of immigration to development, 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 Developing Countries' Economies, is a step forward in assessing the contribution of immigration to development and improving the design of migration and development strategies. It builds on 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 ten low- and middle-income countries – Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand – to present a greater understanding of the different ways immigrants contribute to the economies of their host countries. Different key components of the economy are explored through a combination of quantitative and qualitative methodologies.

The report examines empirically how immigrants affect three key components of the economy: the labour market, economic growth and public finance. It analyses the political and historical context of immigration in each country and suggests ways to enhance the contribution of immigrants in different contexts through appropriate policy responses. The report highlights the fact that the impact of immigration is not straightforward. It depends on the country context and economic conditions, as well as on the characteristics of immigrants. However, any country can maximise the positive impact of immigration by adopting coherent policies aimed to better manage and integrate immigrants so that they can legally invest in and contribute to the economy where they work and live, while staying safe and living fulfilling lives.

The report also provides a basis for dialogue and policy guidance for development practitioners and policy makers who attempt to integrate immigrants into their economy and society for the benefit of both immigrants and native-born citizens. Following the discussion on guidance for actions with

key stakeholders and policy makers to be held in each country, the OECD Development Centre and the ILO look forward to continuing their co-operation with partner countries with a view to enhancing the contribution of immigration for better economic and development outcomes.

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How Immigrants Contribute to Developing Countries' Economies 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 Labour Migration Branch at the ILO. Shinyoung Jeon and Hyeslin 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.

The report is a collective work of the OECD Development Centre and the ILO, both of which provided significant contributions, including valuable comments, advice and feedback on each chapter. The OECD Development Centre team drafted Chapters 1, 2 and 6, while the ILO team drafted Chapters 3 and 4. Chapter 5 was jointly drafted by both teams. Vararat Atisophon, OECD Development Centre, helped with statistical work, while Alexandra Le Cam, OECD Development Centre, and H el ene 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 Communications and Publications Unit, led by Delphine Grandrieux and Henri-Bernard Solignac-Lecomte, turned the draft into a publication. The cover was designed by Aida Buend a at the OECD Development Centre.

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Abbreviations and acronyms

AEC	ASEAN Economic Community
ASEAN	Association of Southeast Asian Nations
AU	African Union
CEPGL	Economic Community of the Great Lakes Region
CGE	Computable General Equilibrium (model)
EAC	East African Community
ECLM	Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination
ECOWAS	Economic Community of West African States
EEU	Eurasian Economic Union
GDP	Gross domestic product
ILMS	International Labour Migration Statistics Database for ASEAN
ILO	International Labour Organization
ILS	International Labour Standards
INADI	National Institute against Discrimination, Xenophobia and Racism in Argentina
MERCOSUR	Southern Common Market (Mercado Común del Sur)
NEET	Young people not in education, employment or training
NSE	Non-standard employment
OECD	Organisation for Economic Co-operation and Development
SADC	Southern African Development Community
SAQA	South African Qualifications Authority
SDGs	Sustainable Development Goals
SICA	Central American Integration System (Sistema de la Integración Centroamericana)
SIGI	Social Institutions and Gender Index
USD	United States dollar
WESA	Women Entrepreneurs Support Association in Kyrgyzstan

Executive summary

With more than one-third of international migrants residing in developing countries, immigration has an increasing weight on the socioeconomic development of low- and middle-income countries. Yet, policy debate on how immigrants affect host countries often relies more on perception than evidence. A more systematic analysis on the economic impact of labour immigration in developing countries will better inform policy makers to formulate policies aiming to make the most of immigration in destination countries.

The project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination (ECLM) – carried out by the OECD Development Centre and the International Labour Organization and co-financed by the European Union – was conceived to provide such analysis. This report synthesises the findings of the project, conducted between 2014 and 2018 in ten partner countries – Argentina, Côte d'Ivoire, Costa Rica, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand –, puts them in the context of global analysis and provides evidence on the impact of labour immigration on the development of host countries, and presents the main policy recommendations.

The contribution of immigrants to developing countries' economies

Using both quantitative and qualitative methods, the analysis in this report focuses on three main dimensions of the economic contribution of immigrants in developing countries: labour markets, economic growth and public finance.

- **Labour markets:** How well immigrants are integrated into the host country's labour market is directly linked with their economic contribution to their destination countries. Immigrants in most partner countries have higher labour force participation and employment rates than native-born workers. However, the quality of jobs immigrants take remains a concern because they often face a lack of decent work.

Does immigration affect – either positively or negatively – the labour market outcomes of native-born workers? The analysis in the ten developing countries shows that the overall impact of immigration is negligible. The results, however, are diverse and highly contextual. This is in line with the majority of research on OECD countries which finds only a small effect.

- **Economic growth:** The estimated contribution of immigrants to gross domestic product (GDP) ranges from about 1% in Ghana to 19% in Côte d'Ivoire, with an average of 7%. The immigrants' contribution to value added exceeds their population share in employment in half of the partner countries. In countries where this is not the case, the differences were small. Overall, immigration is unlikely to depress GDP per capita. The analysis on how immigration affects productivity reveals less clear results. Various research methods were employed across the countries depending on data availability.
- **Public finance:** How do immigrants affect the fiscal balance and the quality of public services in developing countries? Immigrants help increase overall public revenues, but

the increase may not be always sufficient to offset the public expenditures they generate. This is the case for two countries, Kyrgyzstan and Nepal, where the deficit is less than 1% of GDP. In the other seven partner countries for which data are available, the net direct fiscal impact of immigrants is positive but below 1% of GDP. Overall, immigrants' net fiscal contribution is therefore generally positive but limited. This is in line with the available evidence for OECD countries.

How can destination countries enhance the contribution of immigration to development?

While immigration's impact on the ten partner countries' economies is limited, public policies can play a key role in enhancing its contribution to the development of destination countries. In many developing countries, disproportional attention has been paid to policies that maximise the positive impact of emigration rather than immigration. However, excluding immigration from development strategies can represent missed opportunities for host countries. Building on the research findings, the report illustrates five policy priorities for immigration countries to consider:

- **Adapt migration policies to labour market needs.** Developing countries can benefit from implementing migration regulation frameworks that are based on their labour market needs. Facilitating entries and providing more legal pathways to labour migrants will increase the share of immigrants with a regular status and formal employment. This, in turn, can significantly increase immigrants' contribution to a host country's economy. Closely monitoring labour market indicators coupled with developing consultation mechanisms, in particular with the private sector, can further support migration management systems.
- **Leverage the impact of immigration on the economy.** Destination countries should consider policy interventions aiming to i) foster the employability of immigrants, for example, through an extended network of public employment services or training and lifelong learning opportunities to upgrade their skills; ii) encourage their investment by removing the barriers to invest and create businesses; and iii) maximise the fiscal contribution of immigrants through supporting growth of the formal sector or expanding the tax base and contribution payments from the informal one.
- **Protect migrant rights and fight discrimination.** Immigrants' working and living conditions are closely linked with the way they contribute to their host countries' economies. Public authorities as well as employee and employer organisations in destination countries should therefore prioritise protecting the rights of immigrants and preventing all forms of discrimination and racism.
- **Invest in immigrants' integration.** Many developing countries lack comprehensive policies to facilitate the integration of immigrants. This can generate serious problems of social cohesion and reduce immigrants' ability to contribute to the development of their host countries. Various policy measures should be put into use from the moment immigrants arrive. Local authorities can also play an active role.
- **Better monitor the economic impact of immigration.** Adequate public policies and actions can come from better data and evidence. While most partner countries collect useful data to study immigration, these data are often insufficient for a comprehensive analysis. It is important that developing countries invest in improving migration-related data collection as well as analyses of immigration's potential impacts on the economy. The analytical framework employed in this report can provide useful indications in that respect.

Chapter 1

Immigrants' contribution to developing countries' economies: Overview and policy recommendations

This chapter gives an overview of the project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination. The ten countries that participated in the project are Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. The chapter first explains why a better understanding of the economic effects of labour immigration matters for policy makers in developing countries, and how and why the ten partner countries were selected. The chapter then provides details on the different methodological approaches used by the project team and summarises the main findings of the report from a comparative perspective. Finally, the chapter offers policy recommendations to increase immigrants' economic contribution in developing countries.

International migration has become an integral component of the global development agenda. Both the 2015 Addis Ababa Action Agenda and the 2030 Agenda for Sustainable Development acknowledge the positive contribution that migrants make to inclusive growth and sustainable development in countries of origin, transit and destination. They also highlight the need to strengthen international co-operation to ensure safe, orderly and regular migration, with full respect for human rights, regardless of migration status. The Sustainable Development Goals (SDGs) incorporate these concerns through the need to protect the rights of migrant workers, especially women (Target 8.8), adopt well-managed migration policies (Target 10.7) and reduce remittance transfer costs (Target 10.c) (United Nations, 2015a). In addition, the spread of humanitarian refugee crises led the international community to discuss implementing two global compacts: one for safe, orderly and regular migration; the other for refugees (United Nations, 2017 and 2016).

Although these new commitments represent significant milestones towards a more co-ordinated international migration agenda, immigration remains a sensitive issue in most countries. Local populations often believe that immigrants take the jobs of native-born workers, contribute to lowering wages, take advantage of public services, do not pay enough taxes, and threaten social cohesion and security.

The perception that immigrants cost more than they yield is widespread but rarely relies on empirical evidence. In fact, most existing studies show that the economic effects of immigration in the countries of destination, though limited, are usually positive. However, these studies typically focus on high-income OECD countries. Few studies analyse the contribution of immigration in low- and middle-income countries, and those that do usually cover either one specific channel (e.g. labour, trade or productivity) or a single country.¹

The project *Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination* aimed to fill this knowledge gap. It provides empirical evidence – both quantitative and qualitative – on the multiple ways labour immigrants affect the economic development of their countries of destination. The OECD Development Centre and the International Labour Organization (ILO) implemented this four-year project, which the European Union's Thematic Programme on Migration and Asylum co-financed. The project was launched in August 2014 and carried out in partnership with ten low- and middle-income countries: Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand.

This report, together with the corresponding ten country reports, intends to serve as a useful tool for policy makers in the countries included in the project and other developing countries. It offers the latest and most exhaustive research findings that exist on the economic contribution of labour immigration in low- and middle-income countries. It can help policy makers design and implement both immigration and sectoral policies to enhance immigrants' contribution to development. The report also provides methodological guidance to policy makers and researchers interested in assessing immigrant workers' economic contributions.

The report focuses on three of the main channels through which immigrants potentially contribute to the economies of their destination countries: labour markets, economic growth and public finance. After explaining the immigration context in each partner country (Chapter 2), the report discusses how well immigrants are integrated into the labour market (Chapter 3). It then analyses the impact of immigration on the ten partner countries' labour markets (Chapter 4), the different ways immigrants contribute to economic growth (Chapter 5) and how they affect public finance, both as public service users and tax payers (Chapter 6).

The project: Understanding the economic effects of labour immigration in developing countries

Understanding how immigrants contribute to developing countries' economies interests policy makers for many reasons. Immigrants affect not only a country's economic prosperity, but also the well-being of the native-born population as well as social protection systems and other compensatory schemes. Immigrants indeed play a diverse set of roles and exert a variety of influences on the economy of the host country:

- As **workers**, immigrants are part of, but also have an impact on, the labour market; they also alter the country's income distribution and influence domestic investment priorities.
- As **students**, immigrants – or their children – contribute to increasing the stock of human capital and diffusing knowledge.
- As **entrepreneurs and investors**, they create job opportunities and promote innovation and technological change.
- As **consumers**, they contribute to increasing the demand for domestic – and foreign – goods and services, thus affecting the price and production levels, as well as the trade balance.
- As **savers**, they not only send remittances to their countries of origin but also contribute indirectly, through the bank system, to fostering investment in their host countries.
- As **tax payers**, they contribute to the public budget and benefit from public services.

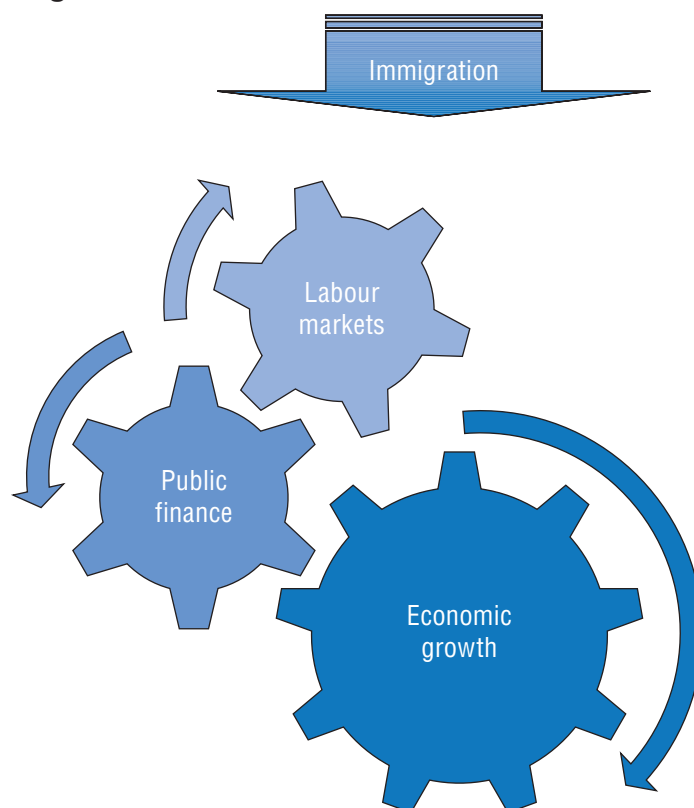
Through these different roles, immigrants can help stimulate economic growth in their countries of destination and thus promote development. Immigrants also contribute to the social and cultural diversity of the communities in which they live, but that aspect goes beyond the scope of this project.

Against this backdrop, the project *Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination* aimed to inform partner countries, as well as other developing countries with similar economic and political contexts, of the different ways immigrants contribute to development. It also attempted to provide policy makers in partner countries with guidance on relevant issues to make the most of immigration in their countries. To do so, the project applied widely accepted methodologies, taking into account the specific challenges that developing countries face. Given that analysis and data on native-born and foreign-born populations tend to be rare and dispersed in these countries, the project team collated relevant data on immigration and helped generate new data, especially through enterprise surveys and sectoral studies. To better understand how immigrants contribute to economic development, the analysis took into account the historical, legal and economic environment in each country.

As a result of these efforts, this report examines empirically how immigrants contribute to their host countries' economies (Figure 1.1). It focuses specifically on:

- labour markets, not only in terms of labour force and human capital, but also employment and wages
- economic growth, in particular production and productivity, at both firm and economy levels
- public finance, including public spending and fiscal contributions.

Figure 1.1. **Immigrants contribute to host countries' economies in several ways**



Partner countries represent a diverse range of regions, income levels and immigration backgrounds

The project was developed in partnership with a balanced mix of ten developing countries (Figure 1.2), which represent different regions, income groups and immigration patterns. With a total amount of 13.7 million immigrants in 2015, the ten partner countries covered about 6% of the international migrant stock (243.7 million) and 16% of all immigrants in low- and middle-income countries (84.8 million) (United Nations, 2015b; see Figure 2.1 in Chapter 2). By region, immigrants in partner countries represented 38% of all immigrants among low- and middle-income countries in Latin America and the Caribbean, 15% in Africa and 12% in Asia.

The project team collaborated closely with a variety of stakeholders. Together, they helped define the priorities that each country faces. The choice of partner countries was based on three main criteria:

1. **The willingness of the relevant authorities in each country to become partners.** Their co-operation was obtained through discussions and formal agreement with the public authorities. Each country was then asked to appoint a national institution as project focal point (Table 1.1).

Figure 1.2. **The project's ten partner countries cover a diversity of regions**Table 1.1. **Each partner country appointed a government focal point**

Country	Government focal point
Argentina	Ministry of Labour, Employment and Social Security
Costa Rica	General Directorate of Migration, Ministry of Interior and Police
Côte d'Ivoire	National Population Office
Dominican Republic	Ministry of Economic Planning and Development
Ghana	Ministry of Employment and Labour Relations
Kyrgyzstan	State Migration Service
Nepal	Ministry of Employment and Labour
Rwanda	Ministry of Public Service and Labour
South Africa	Department of Labour
Thailand	Ministry of Labour

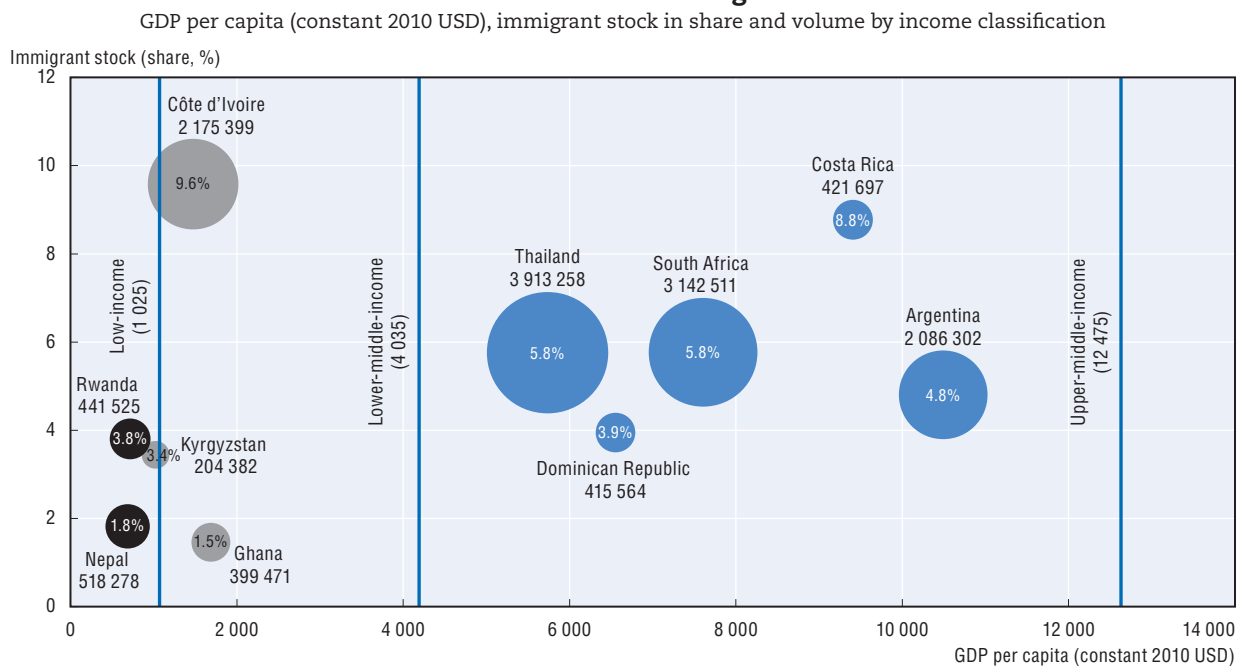
2. A balanced representation of low- and middle-income countries. The World Bank's 2015 country income classification categorised Argentina, Costa Rica, the Dominican Republic, South Africa and Thailand as upper-middle-income countries. Côte d'Ivoire, Ghana and Kyrgyzstan were classified as lower-middle-income countries, and Nepal and Rwanda as low-income countries. By including diverse income groups, the project aimed to explore how different income levels and socio-political conditions influence the ways immigration contributes to economic development.

3. A significant weight of immigrants as a share of the population. To analyse the economic contribution of labour immigration, partner countries needed significant immigration rates. The share of immigrants as a share of the population varied in 2015 from 1.5% in Ghana and 1.8% in Nepal to 8.8% in Costa Rica and 9.6% in Côte d'Ivoire (Figure 1.3).²

Given the project's focus on labour migration, countries where refugees represent more than 50% of all immigrants are not included. Rwanda is the partner country with the highest share of refugees; its registered refugees made up about 16.5% of its immigrant population in 2015 (United Nations, 2015b). In all other countries, refugees represented less than 5% of the immigrant population (4.9% in Costa Rica and 4.6% in Ghana, but only 0.1% in Côte d'Ivoire and the Dominican Republic).

Certain partner countries have counted immigrant populations in the millions or have high shares of immigrants in the total population (Figure 1.3). Two upper-middle-income countries, Thailand and South Africa, had the largest total numbers of immigrants in 2015 (3.9 million and 3.1 million, respectively). Côte d'Ivoire and Costa Rica reported the highest shares of immigrants in the total population (9.6% and 8.8%, respectively). Two low-income countries, Nepal and Rwanda, and two lower-middle-income countries, Ghana and Kyrgyzstan, had the smallest sizes and shares. Between 1995 and 2015, Thailand experienced the greatest growth in volume (4.8 times) of the ten countries, while in Nepal and Kyrgyzstan the number of immigrants declined. In Argentina, South Africa and Thailand, the share of immigrants in the total population increased between 1995 and 2015, but it decreased in the seven other partner countries.

Figure 1.3. **Partner countries represent different levels of gross domestic product, size and share of immigrants**



Note: The size of the circle represents the stock volume of immigrants. The colour of the circle indicates the country's income level: blue = upper-middle-income countries, grey = lower-middle-income countries, black = low-income countries.

Source: United Nations (2015b) and World Bank data (<http://data.worldbank.org/indicator/NY.GDP.PCAP.KD>).

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All immigrants are not workers, but most are. Labour immigration makes up a large portion of total immigration worldwide. The average share of labour immigration at the global level, measured by the labour force participation rate of the immigrant population, is 72.7% (and 63.9% for the non-migrant population) (ILO, 2015a). The labour force participation rates for immigrants in low-income, lower-middle-income and upper-middle-income

countries are 59.4%, 69.7% and 70.7%, respectively (ILO, 2015a). At 64.3%, the average labour force participation rate is lower in the partner countries (excluding Thailand due to data limitations), due to the relatively low participation rates in Kyrgyzstan (47%) and Nepal (41.9%). The labour force participation is high in Côte d'Ivoire (85.5%), South Africa (78.8%) and the Dominican Republic (72.7%).

Reflecting the diversity of income levels and immigration backgrounds, the migration governance systems also vary greatly across the ten partner countries. Immigration policies range from a relatively open regime, such as in Argentina and Costa Rica, to a more restrictive one, such as in Thailand where immigration laws reserve some occupations for Thai workers. Other countries feature different degrees of openness and restriction vis-à-vis immigration. Nepal has an open border policy with India, while Ghana and Rwanda have developed policies that encourage immigration as a means to development. Similarly, South Africa has diversified the origin countries of immigrants due to economic restructuring since the 1990s. Kyrgyzstan has frequently changed the institutions responsible for immigration and undergone many reforms regarding migration.

Similarly, integration policies are diverse and immigrants have various levels of immigrant rights across partner countries. Immigrant workers in all partner countries should have the same rights as native-born workers in terms of equal pay for the same work and equal employment conditions and protections. But, in practice, restrictions sometimes apply. Generally in most partner countries, access to public education, training and public health services is immediately available for regular immigrants. However, there are still limitations for irregular immigrants. Most partner countries guarantee similar economic, social and civil rights to immigrants, but some restrictions may exist, like in Côte d'Ivoire with regard to land rights. Political rights are often limited in most countries. One significant integration measure – access to citizenship through naturalisation – exists in the ten partner countries and requires two to seven years of permanent or temporary residence, depending on the country.

Defining immigrants and labour migrants is not straightforward

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.

Immigrants

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” (United Nations, 1998). An individual who enters the nation for up to three months is not considered as an immigrant, but rather a visitor. Beyond three months, the individual will be termed a short-term immigrant for the next nine months. Only after one year of legal residency in the country the immigrant will be termed a long-term migrant.

In line with this definition, the Population Division of the United Nations' Department of Economic and Social Affairs estimates international migrant stocks by using the country of birth as a reference (United Nations, 2015b). 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 1.2:

- 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**). Reasons can include that 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 1.2. **Understanding the difference between immigrants and foreigners**

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

This report cites administrative data that therefore sometimes refers to foreign citizens. Given potential differences in national definitions, each country report explains in detail the definitions used.

Labour migrants

While labour migration refers to immigration for employment in the destination country as the primary purpose, different ways to measure it exist. There are two major ILO instruments on labour migration and the protection of migrant workers:³ ILO Convention No. 97 (1949) and accompanying Recommendation No. 86; and ILO Convention No. 143 (1975) and accompanying Recommendation No. 151. The latter document states (Article 11) that the term “migrant for employment” means “a person who migrates from one country to another with a view to being employed otherwise than on his own account, and includes any person regularly admitted as a migrant for employment”. According to the UN Convention of 1990, Article 2, the term migrant worker refers to “a 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”.

For statistical purposes, the ILO global and regional estimates of migrant workers define the term “migrant worker” as “all international migrants who are currently employed or are unemployed and seeking employment in their present country of residence” (ILO, 2015a).

Another definition encompasses those who chose work or employment-related opportunities as the primary reason for immigration. Information on the reasons for immigration is not always available, even in high-income countries (OECD/European Union, 2014). However, some partner countries (e.g. Argentina, Costa Rica, the Dominican Republic and Thailand) do have that information.

This report refers to labour immigration by taking those immigrants who are looking for work or are employed from labour force surveys or population censuses. In a broad sense, it also refers to the working-age population (defined either as aged 15 and above, or 15 to 64), knowing that most labour immigrants are drawn from this age group. This definition reflects the fact that labour immigration often drives other types of flows, such as family immigration, but may also itself be partly driven by them (OECD, 2017; OECD/European Union, 2014). Non-labour immigrants by a strict definition, for instance humanitarian migrants and students, may also enter the labour market at some point and contribute to the destination country's economy in similar ways that labour immigrants do.

Citizenship is also an important criterion of labour immigration. For example, the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families refers to the term "migrant worker" as "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" (United Nations, 1990). This report distinguishes between labour immigrants who are citizens and those who are not, where appropriate.

Methodology: How did the project measure and analyse the immigrant contribution?

Analyses of the economic impact of labour immigration in developing countries as well as relevant data are scarce. The different methodologies that this project adopted could therefore be of value to policy makers and researchers wishing to measure the impact themselves. To overcome data paucity and increase the comparability among the ten partner countries, the project team relied on secondary data from national and international sources and collected primary data, in particular through a set of qualitative sector studies. The main methodologies for the analysis and primary data collection are presented below. The analysis covered three components of immigration's impact across the ten countries, yet each country analysis required adjustments to the methodologies (OECD/ILO, 2017a-b and forthcoming a-h).

To develop the methodological framework, the project team first reviewed the existing literature (Böhme and Kups, 2017), held an international expert meeting on 23-24 February 2015 in Paris and organised country-level consultation seminars throughout 2015.⁴ These events also provided the opportunity for raising interest in better understanding the context of immigration and its economic impact at the country level. Furthermore, the events benefited from contributions from national experts with regard to the historical, policy and regulatory environment.

To examine the impact of immigration on the labour force and human capital, the project team used key indicators of the labour market (ILO, 2016), indicators on skills mismatch (ILO, 2014a) as well as a demographic accounting method (OECD/European Union, 2014). The indicators allowed for an analysis of the labour market integration of immigrant workers. The demographic accounting method decomposes changes in the labour force between two periods by age group. The result of this method shows the contribution of new immigrant workers compared to different groups of native-born workers.

The project team also applied the skill cell approach and regression analysis (Borjas, 2003; Card, 2001; Facchini, Mayda and Mendola, 2013). These were necessary given that the level of human capital among immigrant workers determines the presence or degree of the impact on labour market outcomes of native-born workers. This method classifies workers according to skill level by dividing them into groups based on their educational achievement and estimated work experience. It then investigates whether the share of foreign-born workers in each skill group affects the labour market outcomes of native-born workers in that group in the same time period and, in some cases, at sub-national levels. This method is based on the assumption that workers compete with other workers with a similar level of skills.

Regarding the link between immigration and economic growth, the team estimated immigrants' contribution to value added (ILO/OECD/World Bank, 2015). For countries where relevant data were available, they also examined how immigration could affect productivity through contributions to exports (in Costa Rica, the Dominican Republic, Ghana, Kyrgyzstan and Rwanda), firm-level production (in Côte d'Ivoire, Nepal and Rwanda) and entrepreneurship, i.e. business ownership (in all countries). In particular, the project team collaborated with national statistical offices in Côte d'Ivoire and the Dominican Republic on including a module on immigrant workers in the existing surveys of economic activity at the firm level.⁵

In addition, a multisectoral macroeconometric model was used in South Africa and a computable general equilibrium model in Thailand. These models are based on a series of assumptions on how the economy functions. They simulate how gross domestic product (GDP) and its major components react to changed shares of immigration under different scenarios. In contrast to other methodologies used in this report, the analysis based on these two models can be used to provide a long-term perspective of immigration's impact.

In addition to this quantitative analysis, a qualitative approach was used to collect new, complementary data on sectors in selected partner countries. Sector studies, implemented in Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal in collaboration with national research institutes, cover qualitative aspects of the immigrant impact in selected sectors, given the scarce data available at the sector and enterprise levels. The sector studies focused on two selected economic sectors that represent a significant share of immigrant workers in each country. The studies included (i) interviews with formal enterprises, (ii) interviews with key stakeholders and (iii) focus group discussions among both native-born and foreign-born workers. The project team organised training workshops to conduct pilot fieldwork and surveys, and a local research team in the four selected countries participated. Sector studies are important to better understand some of the perspectives of individual native- and foreign-born entrepreneurs and workers on real and perceived impacts of immigration in their workplaces and industries.

Finally, to analyse the fiscal contribution of immigration, the project team employed a static accounting method (Dustmann and Frattini, 2014). The method first estimates immigrant expenditure and revenue shares based on household surveys in each country and then combines them with public budget data on the same expenditures and revenue categories. Thailand was missing due to the lack of a survey that contains information on both the country of birth and the income of respondents.

Two conceptual difficulties in analysing the impact of immigration, particularly in developing countries, are irregular immigration and the informal economy. Official statistics rarely report them. For example, in most partner countries no estimates are available on the size of the irregular immigrant population. Indications either come from those irregular

immigrants that are apprehended and expelled or are obtained retroactively through regularisation campaigns.

Given that a large part of this report's analysis is based on household surveys or population censuses, both irregular immigrants and informal employment are included. However, the accuracy of these data is not guaranteed. Although the legal status of immigrants certainly affects the quality of their labour market integration and by extension their economic impact, the lack of data does not allow for an impact analysis by legal status.

Main findings: How does labour immigration affect partner countries' economies?

This report shows that the impact of labour immigration in developing countries on the native-born population, as well on the economy, varies across demographic and educational groups, sub-national levels, sectors, occupations and personal characteristics. Detailed information and insights on levels of impacts can be useful for designing and implementing better policies.

Immigrants perform relatively better than native-born workers on the labour market, but their working conditions are often poorer

Immigrants' labour market outcomes show how well immigrants are integrated into the host country's labour market and, in turn, how they affect the entire labour market, in particular the outcomes of native-born workers (Chapter 3). Foreign-born workers in most partner countries do not seem to significantly influence the labour market in terms of their size compared to other groups on the labour market. Native-born workers, especially new young entrants, drive most changes in the composition of the labour force. However, in many partner countries the immigrant labour force tends to grow faster than the native-born.

Although labour market outcomes may differ depending on the sub-group and personal characteristics, in general immigrant workers are proportionately more often employed and earn lower wages than native-born workers (Table 1.3). Paid employment is more prevalent among immigrant workers. However, their work is more likely, and increasingly, in lower-quality, low-skilled occupations – such as construction, private household services and trade sectors – than native-born workers' (Table 1.4). This tendency reflects the fact that immigrant workers tend to be less educated than native-born workers, more often underqualified for their jobs, and more prone to take up non-standard employment. Overqualification of foreign-born workers is an issue in medium-skilled occupations.

Immigration has a limited impact on the labour market outcomes of native-born workers

The relationship between the share of immigrant workers and employment of the native-born workers is generally negligible in the partner countries. However, results vary depending on the sub-national scale of the analysis and factors such as years of residence, sex and education. For example, in Kyrgyzstan, Nepal and Thailand the insignificant effects on native-born employment rates at the national level become significantly positive at the sub-national level while in South Africa it becomes significantly negative (Table 1.5). The effects on unemployment, paid employment and vulnerable employment also differ at the sub-national level. The difference between national and sub-national levels can be probably explained by different sub-national characteristics, for example a higher level of urbanisation (in Rwanda) and a large outflow of native-born worker from some provinces (in Kyrgyzstan and Nepal).

Table 1.3. Immigrant workers are proportionately more often employed than native-born workers but work in lower-skilled jobs

Labour market outcomes of foreign-born compared to native-born workers

	Wage/labour income	Employment rate	Unemployment	Employed in low-skilled occupations	Paid employment
Argentina	↓	↓	↓	↑	↓
Costa Rica	↓	↑	○	↑	↑
Côte d'Ivoire	○	↑	↓	↑	↑
Dominican Republic	○	↑	↓	↓	↓
Ghana	↑	↓	○	↑	↑
Kyrgyzstan	↑	↓	↑	↓	↑
Nepal	○	↓	○	↑	↑
Rwanda	↑	↓	↑	↑	↑
South Africa	↓	↑	↓	○	↑
Thailand	N/A	↑	N/A	↑	↑

Note: The sample is restricted to the population aged 15 and over. Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan and South Africa use labour income and the remaining countries use wage. A downward pointing arrow indicates that foreign-born workers have a rate below that of their native-born counterparts, and an upward pointing arrow that is above. ○ = no difference between foreign- and native-born rates. N/A = no data was available.

Source: OECD/ILO, 2017a-b and OECD/ILO forthcoming a-h.

Table 1.4. Immigrant workers are overrepresented in construction, trade, and accommodation and food services

Sectors ranked by the gap of employment shares (foreign-born share minus native-born share, most recent period)

Country/Rank	1	2	3	4	5
Argentina	Private household services	Construction	Wholesale and retail trade	Manufacturing	Accommodation and food service activities
Costa Rica	Private household services	Construction	Agriculture, forestry, fishing and hunting	Accommodation and food service activities	Activities of extraterritorial organisations
Côte d'Ivoire	Wholesale and retail trade	Manufacturing	Other services	Construction	Agriculture, forestry, fishing and hunting
Dominican Republic	Agriculture, forestry, fishing and hunting	Construction	Accommodation and food service activities	-	-
Ghana	Construction	Health and social work	Mining	Wholesale and retail trade	Accommodation and food service activities
Kyrgyzstan	Manufacturing	Other services	Wholesale and retail trade	Transportation and communication	Education
Nepal	Wholesale and retail trade	Manufacturing	Other services	Private household services	Education
Rwanda	Wholesale and retail trade	Public administration and defence	Education	Health and social work	Other services
South Africa	Wholesale and retail trade	Construction	Accommodation and food service activities	Private household services	Agriculture, forestry, fishing and hunting
Thailand	Manufacturing	Construction	Private household services	Electricity, gas and water	Mining

Native-born women seem to be the most negatively affected by the presence of female immigrant workers. This is possibly due to their over-representation in vulnerable and temporary employment and ensuing competition from immigrant workers.

In several countries, the relationship between native-born labour market outcomes and the presence of recently arrived immigrant workers is much stronger than that of all foreign-born workers. Recently arrived immigrant workers are considered as those who have arrived in the past ten years. This suggests that there are noticeable short-term effects, which indeed dissipate over time, as immigrant workers integrate into the labour market. The effects of recently arrived immigrant workers were most pronounced in South Africa.

The effects on native-born wages are also insignificant in the partner countries, with two exceptions. Ghana and Rwanda exhibited strongly positive and negative effects, respectively,

at the sub-national level. In South Africa the effect of newly arrived immigrant workers as well as female immigrants on the wages is positive. Human capital differences only partially explain the wage gaps between native-born and immigrant workers. The wages of immigrant workers are sometimes higher than those of native-born workers. This is the case for example in Ghana and Rwanda. The occupation explains the wage gap only in Costa Rica. Other factors such as language and knowledge of local markets and opportunities may also influence the wage gap.

At the national level, employment rates of native-born workers tend to be lower in the presence of a higher number of foreign-born workers. This effect is not necessarily unfavourable given other impacts. For instance, in Rwanda, a negative impact of immigration on employment rates of native-born workers likely results from labour immigration policies and long-term development planning. The country attracted highly-skilled foreign-born workers to sectors and positions for which there are insufficient qualified native-born workers. Conversely, in Thailand, the statistically positive impact of immigration on native-born paid-employment rates and the negative impact on native-born vulnerable employment suggest that immigrant workers complement the native-born. Immigrants provide native-born workers the opportunity of finding better employment.

Table 1.5. Labour market impacts of immigration are different between the national and sub-national levels

Panel A. National level

	Employment	Unemployment	Paid employment	Vulnerable employment	Wage
Argentina	o	o	N/A	N/A	o
Costa Rica	-	o	N/A	o	o
Côte d'Ivoire	o	o	N/A	N/A	o
Dominican Republic	-	-	N/A	o	o
Ghana	-	o	o	o	o
Kyrgyzstan	o	o	o	o	o
Nepal	o	o	-	+	N/A
Rwanda	-	o	o	o	+
South Africa	o	o	o	o	o
Thailand	o	N/A	+	-	N/A

Panel B. Sub-national level

	Employment	Unemployment	Paid employment	Vulnerable employment	Wage
Argentina	o	o	N/A	N/A	+
Costa Rica	-	o	N/A	o	o
Dominican Republic	-	o	N/A	o	o
Ghana	o	o	o	N/A	+
Kyrgyzstan	+	o	o	o	o
Nepal	+	-	+	-	N/A
Rwanda	o	-	o	o	-
South Africa	-	o	o	o	o
Thailand	+	N/A	o	o	N/A

Note: The sample is restricted to the working-age population (15-64 year olds). The immigration share is equal to the number of immigrants of a given year-education-experience (-province) labour force group over the number in the labour force in the same group. o = no significant effect; - = significant negative effect (shaded in grey), + = significant positive effect (shaded in dark blue). The national wage effect in South Africa in Facchini, Mayda and Mendola (2013) was negative. There were no regressions carried out for Côte d' Ivoire at the sub-national level due to an insufficient number of observations.

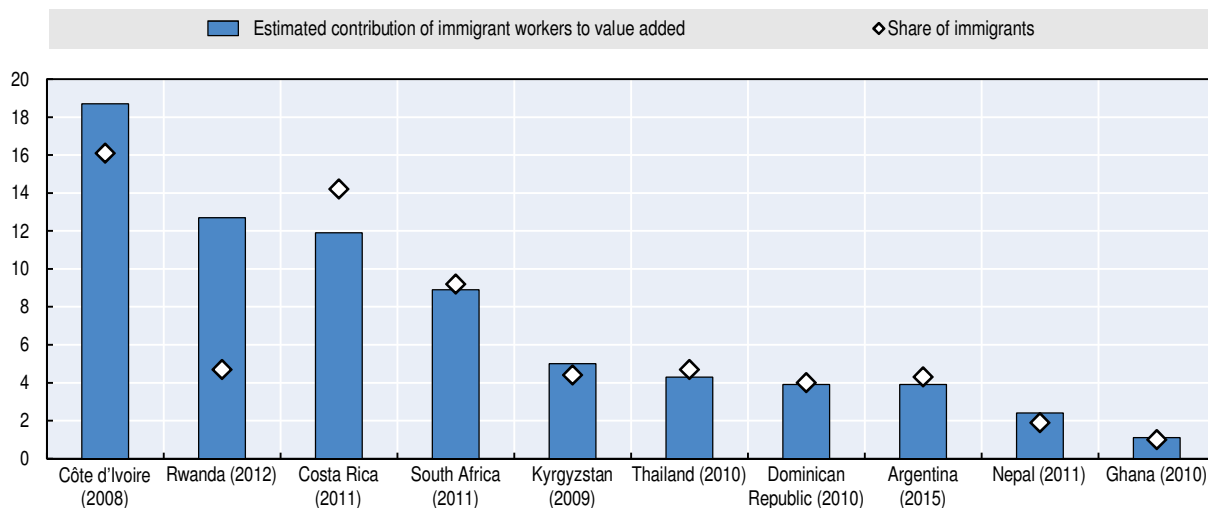
Source: OECD/ILO, 2017a-b and OECD/ILO forthcoming a-h.

Labour immigration is unlikely to result in strong effects on factors closely linked to economic growth

Labour immigration's economic contribution goes beyond potential changes in the labour market outcomes as illustrated above. For instance, immigration can have an impact on the overall income of native-born individuals by affecting labour productivity. Changes in the number and productivity of workers through immigration can determine immigrations' impact on GDP. Immigration typically raises the share of employed individuals in the total population primarily because of the higher concentration of immigrants in the working-age population. This rise leads to growth of the labour force and consequently increases GDP per capita. Human capital measured by years of education is lower for immigrants than native-born workers in all the partner countries except Nepal, Rwanda and South Africa. The differences are small, indicating a modest decrease in average human capital per worker.

Immigrants' contribution to value added is estimated by taking into account the sectoral distributions by foreign- and native-born employment and years of education of workers. The estimation reveals that immigrants' contribution to value added often exceeds their population share in employment (Figure 1.4). Their contribution to GDP ranged from about 1% of GDP in Ghana to almost 19% in Côte d'Ivoire. In Côte d'Ivoire, Kyrgyzstan, Nepal and Rwanda, immigrants' contributions to GDP were higher than their shares in employment, while in the remaining countries they were similar or lower. Overall, it seems unlikely that foreign-born workers depress income per capita.

Figure 1.4. **Immigrants' contribution to value added is often similar to their employment share**
Immigrants estimated share of value added and of the employed



Note: The estimated contribution of foreign-born workers to GDP is calculated as follows: the share of employed individuals that are immigrants in a sector is multiplied by the ratio of years of education of foreign- to-native-born workers employed in the sector and by the value added generated by the sector. These estimates of the value added generated by immigrants in the different sectors are then added up to arrive at the total estimated value added generated by immigrants. The share of this value added in total value added corresponds to the estimated contribution of foreign-born workers to GDP.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; household survey data was used for Argentina and Côte d'Ivoire.

StatLink  <http://dx.doi.org/10.1787/888933648366>

Immigration can affect the productivity of a country through several channels. Immigrants often contribute to sectors where skills shortages are acute. These include both generic and specialised skills, either from emigration or low education levels among

native-born workers. However, some qualitative evidence at the individual, business and sectoral levels shows that employers may perceive recruiting and hiring immigrant workers as a burden. Qualitative evidence from the sector studies also shows that immigrants may contribute to competition, displacement or pressure on the environment but also to knowledge transfer and innovation. The study found no conclusive evidence suggesting a positive or negative effect by immigrants on productivity at enterprise and sector levels, though this may be a result of limited data.

Another channel through which immigration can affect a country's economic growth is entrepreneurship. In the majority of partner countries (Argentina, Costa Rica, Kyrgyzstan, Rwanda, South Africa and Thailand), immigrants are more likely to be employers than are native-born individuals. For Costa Rica, the Dominican Republic and South Africa, a higher share of native-born individuals tends to be employers if they live in an area with a higher concentration of immigrants. In order to develop meaningful policy implications, however, further analysis is necessary. It should examine whether the concentration of immigrants also affects the productivity of businesses owned by native-born individuals.

The direct impact of immigration on public budgets in partner countries is generally small but positive

The direct impact of immigration on public budgets in nine partner countries (Thailand was excluded due to the absence of relevant data) in a recent year is found to be small (Chapter 6). This mirrors the findings in OECD countries (OECD, 2013a). Using a static accounting method, the overall net fiscal contribution of immigrants is estimated to be lower than 1% of GDP, whether the impact is positive or negative (Table 1.6). Under certain assumptions, the per-capita contribution of foreign-born individuals is on average higher than that of native-born individuals in the majority of the studied partner countries. Argentina and Kyrgyzstan are exceptions, mainly due to their higher share of elderly people among immigrants.

Table 1.6. The fiscal contribution of immigrants is generally small but positive

Net fiscal contribution of immigrants

	Argentina	Costa Rica	Côte d'Ivoire	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa
Immigrants (% of population)	4.3	8.9	7.1	2.8	1.0	4.4	4.2	3.6	4.2
Overall contribution (% of GDP)	0.11	0.27	0.67	0.22	0.04	-0.55	-0.12	0.74	0.85
Per capita contribution , compared to native-born individuals	lower	higher	higher	higher	higher	lower	higher	higher	higher

Note: Thailand was omitted due to non-availability of data. Results are based on the marginal cost share scenario. The reported immigrant shares are calculated based on the respective household surveys used to estimate the net fiscal contribution. For Kyrgyzstan, it refers to the adult population only. For the estimation and methodological approaches, see Chapter 6.

Source: Authors' own work based on government budget data and household surveys (see Chapter 6's appendix).

The analysis presents some limitations. For example, it considers only a single year, but the net fiscal contribution of immigrants can vary greatly over time. Immigrants who are older, have lived longer in the host country and seemingly generate higher public expenditures than revenues may have contributed significantly to the economy and to public finance in the past. Also, secondary effects, such as increases in economic growth that boost public revenues, are not taken into account. Finally, the precision of the overall estimates is limited because they are not based on actual tax records.

Several factors can shape the difference in the net fiscal contribution of foreign- and native-born individuals. The first is the structure of taxes and expenditures itself. For example, the estimates presented in Table 1.6 allocate the costs of so-called “pure” public goods to native-born individuals only. These are public goods such as defence and culture whose expenditures are not thought to rise when the population grows. If they account for a sizeable chunk of total expenditures, this favours the net fiscal contribution of the foreign- compared to the native-born population. Under an alternative estimate, the cost of these goods is equally split between all. Under this scenario, the average immigrant in Costa Rica, Côte d’Ivoire and Nepal no longer has a higher net fiscal contribution than the average native-born person.

Another factor is how much immigrants benefit from the social protection system. Once their personal characteristics are taken into account, immigrants in the partner countries are equally or less likely to benefit from pension or social benefit payments than the native-born population. This may partly be due to immigrants’ over-representation in informal employment and in some cases their irregular immigration status. But they may also not have worked a sufficient number of years in the country to be eligible for benefits.

Personal characteristics of native- and foreign-born individuals can also explain the difference in their fiscal contribution. For example, if foreign- and native-born individuals were more similar in terms of their age, the difference in contribution between the two groups would be less pronounced in most partner countries than it currently is (see Figure 6.10 in Chapter 6). If immigrants had the same employment rates as native-born workers, their per-capita contribution would decrease, except in Ghana, Kyrgyzstan and Nepal.

Policy recommendations: How destination countries can enhance the contribution of immigration to development

This report shows that labour migration has a relatively limited impact on the ten partner countries’ economies. This is consistent with the existing literature on the economic contribution of immigration. Significant differences between the ten partner countries and high-income OECD member countries exist in terms of the size of the informal economy, the share of informal employment and the quality of working and living conditions for immigrants. However, the way foreign-born workers contribute to their host countries’ economies is relatively similar.

The effects in terms of labour market outcomes of native-born workers, public finance and economic growth are relatively limited in both groups of countries. This implies that perceptions about a possible negative contribution of immigrants in destination countries are often not justified. But, it also means that most countries do not sufficiently leverage the human capital and expertise brought by immigrants. Yet, immigration is an increasingly important feature of many contemporary labour markets and for many countries it is an essential component of the future of work (ILO, 2015a; OECD, 2016).

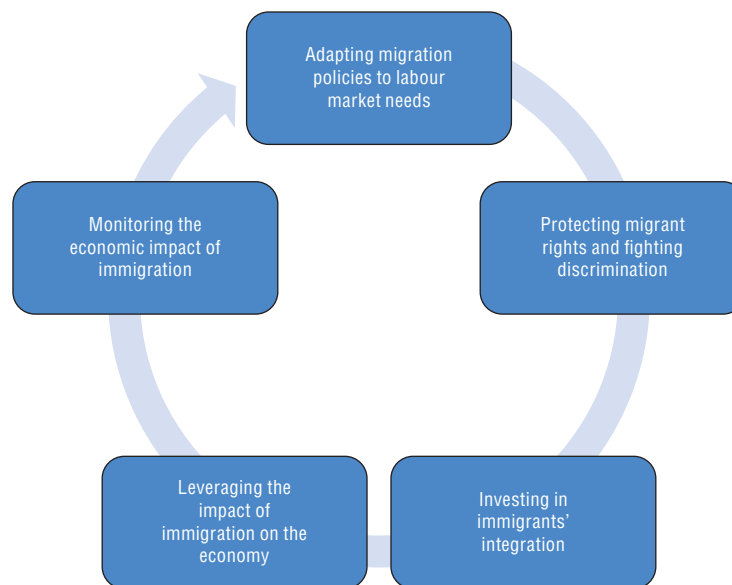
In this respect, public policies can play a key role in enhancing the contribution of immigration to the development of the countries of destination. While many developing countries have adopted policies to maximise the positive impact of emigration, few have comprehensive policies to make the most of immigration. This may in part be due to immigration not being considered a policy priority, as the issue is often new and must compete with many other pressing policy concerns. However, excluding immigration from development strategies usually represents a missed opportunity for countries of destination.

The contribution that immigrants can make to the economy of their host countries depends on a series of factors:

- the socioeconomic characteristics of the immigrants themselves, such as their age, sex, country of origin and skills level
- their working conditions, which are related both to their immigration status and labour rights
- their level of integration into the society, especially the labour market, but also in terms of social protection, education and health services
- the economic environment of the country of destination, which relates to business cycles and long-term growth perspectives
- the policy and institutional environment, which can affect (i) the extent to which immigrants' skills are effectively recognised and used and (ii) whether immigrants can invest and develop new businesses and can contribute to the fiscal system.

Public policies can have direct and indirect effects on all these factors and influence not only the profile of the immigrants who come to the country, but also the way they contribute to the economy and integrate into the society. Building on the current research findings, immigration countries should therefore base their policies on the five priorities shown in Figure 1.5. This is also in coherence with international best practice, such as the recommendations of the *Declaration of the High-level Dialogue on International Migration and Development* (United Nations, 2013) and the “Resolution concerning fair and effective labour migration governance” recently adopted at the International Labour Conference (ILO, 2017a).

Figure 1.5. **Policies to enhance the economic contribution of immigration should hinge on five priorities**



Adapting migration policies to labour market needs

Most developing countries can benefit from immigrants – and this at all levels of the skills distribution. As countries develop and go through a process of economic transformation and diversification, the need for new skills emerges. By enriching the stock of human capital, immigrants can help destination countries that face significant skills shortages to upgrade

their production structures and move up the global value chains (OECD, 2013b). In addition to the needs for medium- and high-skilled workers, the foreign-born labour force can also replace or add to the native-born workforce in the low-skilled segments of the economy. In many countries, investments in education enable populations to work in better and more qualified jobs, but the demand for low-skilled jobs remains. Immigrants with low skills often have jobs that are less attractive to the local labour force, enabling the native-born to move to the most dynamic sectors. However, this process also depends on native-born workers' skills and the skills needed in these sectors.

Immigrants often facilitate transition processes in developing countries. They tend to replace the native-born workers that have moved from rural to urban areas or from lower-skilled to higher-skilled occupations, as well as those who have left the country in search for better opportunities abroad. In ageing economies, immigrants can also help maintain the ratio between active and inactive populations. In addition, they can ensure the sustainability of the pension system, assuming their migration and employment statuses allow them to contribute to that system.

Partner countries, but also other low- and middle-income countries, should therefore aim to develop migration management systems that facilitate labour mobility. They can do so by protecting migrant workers, relying on up-to-date assessments of labour market needs and identifying skills gaps. Such systems need to be designed and implemented in partnership with worker and employer organisations.

Develop migration management systems that facilitate labour mobility

While all countries are sovereign in the way they manage immigration, policies that are overly restrictive tend to be both costly and counterproductive. The more restrictive immigration policies are, the more costly they are to enforce. There are costs for issuing visas, controlling entries, patrolling borders and deporting irregular immigrants. Also, in many developing countries, the restrictive measures are often difficult to enforce. Borders tend to be porous and controls particularly complex to implement in a context marked by strong cultural and family ties across neighbouring countries and by a high degree of informality on the labour market (OECD, 2011a).

Against this backdrop, it would be easier for many developing countries to implement migration regulation frameworks based on labour market needs. It may be more advantageous to be open to foreign-born workers and their families than to spend scarce financial resources on costly and often inefficient border management measures. National security may depend as much on providing decent work opportunities as it does on border control. Facilitating entries and providing more legal pathways to labour migrants would automatically increase the share of immigrants with a regular status. As a result, immigrants would also benefit from more formal employment opportunities and would hence contribute more significantly to the economy of the host country, in particular by paying more taxes.

Along these lines, **Rwanda** adopted a National Migration Policy in 2009. It aims to enhance the country's economic and social development and competitiveness, promote regional integration, and protect the country's security and stability. It gears migration legislation and policy towards attracting foreign investments and needed skills into the country. The policy document deals with permanent and temporary residency and creates paths between them. It also provides indications regarding access to citizenship. This comprehensive policy positions immigration as an integral part of the country's economic development strategy (OECD/ILO, forthcoming g).

Legal pathways should not only target high-skilled immigrants, but also include low- and medium-skilled workers, who contribute significantly to the economies of their host countries. Granting permanent visas to immigrants who have worked or lived for some time in the country is a way to help them circulate more easily between countries. It does not force them to stay in the host country even though they would prefer to go back and settle in their home countries (OECD, 2016).

Likewise, bilateral agreements represent a useful tool for countries of origin and destination. This is particularly the case if they are based on social dialogue and supported by worker and employer organisations. They should foster safe, regular and orderly migration, but also guarantee the protection of migrant workers (ILO, 2017b):

- Visa agreements help reduce the migration costs incurred by labour migrants. The number of visas can, in some cases, be adjusted according to the labour market needs in each country.
- Labour agreements contribute to the adoption of standardised contracts for migrant workers and cover working and salary conditions, as well as a series of other basic rights. Many partner countries have already signed such agreements, even though in some cases not with the main countries of origin.
- Skills recognition agreements, through which migrants can certify their skills and qualifications, foster skills matching on the destination country's labour market.

Agreements between important civil society actors in origin and destination countries can also help strengthen the exchange of information and promote labour mobility. Agreements which aim specifically at protecting the rights of migrant domestic workers can support joint activities of trade unions and domestic workers' organisations in both home and host countries. Such agreements exist in, for instance, **Argentina** and Paraguay, and Lesotho, **South Africa** and Zimbabwe. They provide a space for migrant workers to take a greater role in advocacy efforts while helping communities bridge cultural divides.⁶

While bilateral agreements facilitate labour movements and skills matching, some issues remain to be addressed. In this respect, most bilateral agreements are not aligned with international labour standards.⁷ For example, family reunification, despite being a basic right for all migrants, is still a sensitive issue in many countries (ILO, 2006; OECD, 2016). Signing agreements on pension portability with the main countries of origin of immigrants would also be a way to promote migrants' rights to a decent pension (Holzmann, 2016; ILO, 2015c).

Finally, regional agreements can foster labour migration. They can remove most of the administrative barriers to mobility and ensure effective implementation for a better allocation of human capital at the regional scale. Immigration agreements across countries usually complement regional trade agreements. This is the case for instance for the ASEAN Economic Community (AEC), the Economic Community of West African States (ECOWAS) and the Southern Common Market (MERCOSUR). Yet, in many cases free mobility exists more on paper than in reality, as labour mobility does not always come with equal access to jobs and social protection.

To encourage regional mobility, regional agreements would also need to remove barriers to work at the national level and allow citizens in any countries of the region to benefit from social protection mechanisms. Opening jobs in the public sectors to skilled workers from neighbouring countries would reduce skills gaps and provide better public services in destination countries. For instance, French-speaking ECOWAS countries could benefit from the language skills of immigrants from Ghana and Nigeria to improve learning English in

classrooms. These two countries could also rely on French and Portuguese speakers from neighbouring countries to teach these two languages at school.

Better assess labour market needs

Coherent migration management systems should take into account the short- and long-term needs of the domestic labour market, which reflect broader development goals and population aspirations. Adopting objective indicators can help policy makers identify skills shortages, both at the sectoral and occupational levels (OECD/European Union, 2014). Labour market indicators can include, for instance, changes in the rates of employment, unemployment, unfilled vacancies and wages.

However, it can be difficult for destination countries to assess such needs. First, labour shortages are often related to business cycles. If it takes too long to collect labour market indicators, the information may lose its accuracy. This risk is even higher in developing countries, where data collection can represent a serious challenge. Second, labour market indicators should only be used to indicate the general situation. It is not because a particular sector or occupation does not seem to be short of employees that individual companies are not experiencing difficulties in finding workers with specific skills. Third, labour market indicators can only anticipate short-term needs and might overlook the structural changes in place in the economy.

One way to overcome the limits inherent to labour market indicators is by developing consultation mechanisms with the private sector to align labour immigration with labour market needs. Consultation mechanisms can help reflect on the future needs of the economy. They can bring together representatives from the ministries in charge of, for instance, migration, labour and development planning, industry associations and trade unions. Working jointly with public employment services and private recruitment agencies can also help policy makers better anticipate labour market needs.

An example is the declaration by the Forum of Employment Directors of Central America and the **Dominican Republic** on “Decent Work, Youth Employment and Labour Migration and their Importance in the Region”. The Forum agreed to promote co-ordination to guide the governance of orderly labour migration according to national and international standards. It also aims to intensify efforts to improve social dialogue around employment and labour migration policies.⁸

Overall, migration management systems should rely on labour market indicators and consultation mechanisms to assess labour market needs. But they should also keep some degree of flexibility to address unforeseen needs.

Protecting migrant rights and fighting discrimination

The way immigrants contribute to the economies of their host countries depends a lot on their working and living conditions. In this respect, protecting the rights of immigrants and preventing all forms of discrimination should be a priority for public authorities as well as employee and employer organisations in migrant-receiving countries.

Protect migrant rights

Target 8.8 of the Sustainable Development Goals (SDGs) highlights the need to “[p]rotect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment” (United Nations, 2015a). The respect of migrant rights represents a fundamental goal by

itself, but it also contributes to economic development. If immigrants' socio-economic and political rights are respected, their well-being is higher, as is their capacity to contribute more productively to the economies of their host countries (Kerwin, 2013). Yet, immigrants are often victims of human trafficking and vulnerable employment. Migrant workers also often experience restrictions on the right to freedom of association and collective bargaining (ILO, 2017b). Female migrants might face additional challenges related to limited access to decent work and basic services, especially health care and education, a lack of legal assistance and psychological support, and gender-based violence (UN Joint Migration and Development Initiative, 2017).

Policy makers in immigration countries should adopt mechanisms to address vulnerable employment. It is important that central and local authorities work together to develop specific mechanisms to protect immigrants' rights and fight against the worst forms of vulnerability. Immigrants should be allowed to join trade unions and form associations. In addition, local redress mechanisms, which give immigrants information about rights and procedures, legal support, and assistance in reporting abuses, constitute an efficient way of helping them defend their rights.

Along these lines, the municipality of Upala in **Costa Rica** developed an Inter-institutional and Inter-sectoral Action Mechanism aimed to protect migrants, especially women. It did so in partnership with state institutions and social organisations. The Action Mechanism relies on a local network of volunteer female promoters responsible for guiding women experiencing violence, through legal advice and psychological support. In addition, the House of Women's Rights provides a safe place where victims of violence can find accommodation and benefit from assistance and protection.

Combat discrimination and racism

The high levels of informality in many developing countries increase the risks that immigrants are victims of discrimination in terms of wages, working conditions, housing and land rights. Immigrants tend to be proportionally more affected by poorly paid and hazardous jobs than native-born workers (Chapter 3). The fact that in many cases their migration status is irregular, or at least precarious, makes them even more vulnerable. Linguistic, ethnic and sometimes religious differences typically reinforce discriminations and racism against immigrants.

For such reasons, destination countries need to adopt specific measures to counter xenophobia as well as social and cultural stereotypes that contribute to discrimination against immigrants, including in their jobs (ILO, 2017b). This implies that public authorities better understand what constitutes acts of racism and which discriminatory mechanisms are in place in their countries. While most countries have anti-discrimination legislation, measures to address it actively must also be encouraged. One interesting initiative in this area is the National Institute against Discrimination, Xenophobia and Racism (INADI) in **Argentina**, a governmental agency that produces a map of discriminations.

Policy makers should also start dismantling discriminatory laws, especially as social norms and stereotypes tend to persist over time. The 2015 Addis Ababa Action Agenda (United Nations, 2015c) encourages countries to adopt communication strategies aimed at changing perceptions about immigration and making local populations understand how immigrants contribute to development. The Observatory of Mass Media on Migrants and Refugees in **Costa Rica** thus promotes transparent and reliable information on migration matters. The work with media is important to ensure multi-ethnic and unbiased journalism (OECD, 2011c).

Policy makers should also aim to ensure equal treatment between immigrant and native-born workers by enforcing labour standards (ILO, 2014b). Low-skilled immigrant workers in particular, who are often associated with non-standard employment, lack bargaining power and are relatively easy to replace. They are therefore more likely to suffer from discrimination on the labour market than the native-born.

Basic mechanisms to guarantee that immigrant workers are covered by medical insurance should also be a requirement in destination countries. **Thailand**, for example, has developed a compulsory Migrant Health Insurance Scheme for immigrant workers from Cambodia, Lao People's Democratic Republic and Myanmar. It covers both regular and irregular immigrants, including their dependants, and allows them, on payment of an annual fee, to benefit from health care services.

Specific emphasis should be put on female migrants. They are more likely to suffer from discrimination by being both immigrants and women.

One way to combat discrimination is by extending the coverage of public services to all residents, including immigrants. **Argentina** and **Costa Rica** provide good examples of countries that aim to offer the same education, social protection and health services to all individuals, regardless of their countries of birth, citizenship or even immigration status. Yet, policy makers need to make sure that equal conditions on paper are actually applied in the country. This implies in particular that inspectors can control labour market conditions within companies and that people who feel discriminated against can easily access redress mechanisms to complain about potential abuses.

Investing in immigrants' integration

Although a growing number of developing countries have become countries of destination, most of them lack comprehensive policies to facilitate the integration of immigrants. One reason is that many countries see immigration as a temporary phenomenon. Immigrants are expected to return to their home countries after some time. Yet, as many immigrants decide to settle permanently in their host countries, return rates tend to be relatively low, thus increasing the need for better integration. Another reason for the lack of integration policies is that immigrants in most developing countries come from neighbouring countries. Thus they often share the same language and culture with the citizens from their host countries. This usually facilitates the integration process. However the fact that immigrants come from neighbouring countries does not mean they are always well accepted and that discrimination is not a concern.

A lack of integration can generate serious problems of social cohesion, which in some cases even translates into riots and political turmoil. For example, the 2010-11 conflict in **Côte d'Ivoire** was strongly connected with national identity issues. Poor integration results not only in less social cohesion, but also in the reduced ability of immigrants to contribute to the development of their host societies. For instance, if skilled migrants do not speak the local language, they are less likely to find a job that corresponds to their expertise. Not only does this limit immigrants' ability to integrate into the labour market and socially, but the host society suffers from brain waste, that is, a loss in the human capital that immigrants bring with them. Likewise, the lack of integration, in a context of racism and discrimination, might translate into problems of marginalisation and violence in the society.

By contrast, integration means that the host-country population accepts immigrants in diverse spheres of society, including the labour market, and that immigrants benefit from equal opportunities (OECD/European Union, 2015). As a result, they can contribute better to

the economic development of their host countries not only with their work, but also through their ability to invest, innovate and pay taxes.

Integration starts when immigrants arrive. Providing support to recently settled immigrants is a way to help them understand the administrative and cultural challenges they might face. In this respect, the Migrant Help Desk in Johannesburg, **South Africa**, provides an interesting example of a local initiative oriented towards immigrant integration into the city. Because language is one of the first skills that immigrants need to acquire, another good practice consists in providing free or subsidised language courses to immigrants and their families.

Local authorities, in particular, can play an active role in promoting language learning by hiring teachers and developing courses for foreigners. In **Argentina**, for instance, the 2003 immigration law provides for Spanish language classes and training courses. One challenge, however, arises when immigrants are poorly educated and have difficulties with their own language. This can happen when immigrants are low skilled and live in communities where the opportunities to learn the local language are weak. In such cases, efforts should be even greater. Besides language training, host countries should likely invest in literacy teaching to foster immigrant integration.

Education plays a key role in the integration of not only the first but also the second generation of immigrants. The main challenge for a number of developing countries is to address the financial cost of this investment in human capital, especially when the native-born students themselves lack fundamental education standards. An additional constraint appears when immigrants come from countries where the language is different from the one spoken in the host country. It is, however, vital that host countries invest in quality education for all children, regardless of their migratory status. In parallel, housing policies should aim to avoid concentrating immigrants in the poorest areas (OECD, 2011a). Smart education, housing and urbanisation policies help foster immigrants' economic and social inclusion, but also contribute to the social mobility of second generations.

Finally, from a legal perspective, countries of destination should allow immigrants to gain citizenship after a reasonable period of time spent in the country. Dual citizenship is a way for immigrants to maintain the link with their countries of origin, while becoming full citizens of their host countries (OECD, 2016).

Leveraging the impact of immigration on the economy

The policy environment often explains why immigration has positive effects in some countries but negative one in others. In this respect, policy interventions in destination countries should particularly aim to foster the employability of immigrants, encourage their investments and maximise their fiscal contribution.

Foster the employability of immigrants and native-born workers

In most partner countries, immigrants have employment rates higher than those of the native-born. This is related to the fact that immigrants actually move for labour reasons and are therefore more prone to occupying a job than their native-born counterparts. But being employed does not always mean that immigrants work at their level of skills. Overqualification might be an issue in countries where skilled immigrants do not have the same opportunities as the native-born on the labour market. And even though immigrants use their skills, it is also important to acknowledge and update these skills, in particular through recognition of prior learning systems and lifelong learning.

Labour market policies can help both native-born and immigrant workers find the jobs that best correspond to their skills by developing better labour market information systems. This can be done through an extended network of public employment services, with a clear mandate to work with immigrant workers.⁹ It is particularly important that immigrants have access to public employment services so that they have the same mobility opportunities within their host countries as native-born workers. In this regard, the services of the Youth Employment Agency in **Côte d'Ivoire**, which also delivers labour permits to non-regional immigrants, are open to foreign- and native-born individuals alike. Likewise, in **Thailand**, regional employment centres aim to facilitate the hiring of immigrant workers while providing them employment training. Employment agencies should also help native-born workers affected by the potential competition of immigrants to find new jobs more in line with their qualifications and experience (ILO, 2017c and forthcoming).

Education and skills policies should provide equal access to education and training for all. Children of immigrants and foreign-born students represent an opportunity for destination countries to build human capital, which will contribute to long-term economic development. These young people should therefore benefit from the same conditions as the native-born in terms of access to quality education and transition to work. This implies in particular to expand targeted education programmes, such as scholarships and conditional cash transfers, to immigrant students.

In addition, education and skills policies should aim to increase training and lifelong learning opportunities, help both foreign- and native-born workers upgrade their skills, and give unemployed people access to a broader labour pool, facilitating their re-entry into the labour market. In many developing countries, public employment services often have limited resources and capacities. Training programmes should therefore make their services more easily available to immigrants, who could thus improve their employability and more easily meet the needs of the host country's labour market. They should also address the needs of native-born workers with reconversion problems to help them move towards other occupations and sectors.

Gender-sensitive policies should provide specific protection for female immigrants, for instance women in domestic work or other poorly visible sectors. They should create incentives to help female immigrants study and have access to new and extended employment opportunities. Widely accessible public childcare programmes could also enable more female immigrants to participate in the workforce. Given that immigrants are frequently over-represented among domestic workers, general policy changes that improve the labour rights of all workers in this sector, regardless of their place of birth, can benefit immigrants disproportionately. In **Argentina**, for example, a 2014 law defined rights for domestic workers, such as a maximum number of working hours and paid vacation days.

Encourage immigrants' investments

It should be a priority for most countries to remove the barriers to investment and business creation that immigrants have to cope with. Migrant entrepreneurs face specific business constraints related to linguistic, social and cultural barriers, complex procedures and, in some cases, discriminatory practices (OECD, 2011b). For example, the lack of access to land often prevents immigrants from investing in agricultural activities. Likewise, the conditions for access to credit and investment are not always the same for native-born and immigrant populations.

Countries of destination should aim at promoting and providing incentives for enterprise creation and development (ILO, 2006). That implies simplifying the procedures that make creating a business cumbersome. Complex administrative and bureaucratic procedures tend to curb investment, in particular from immigrants who do not master the host country's language. For this, host countries can develop one-stop shops, following the examples of the **Ghana** Investment Promotion Centre or the *guichet unique* in **Côte d'Ivoire**. One-stop shops can offer specific services targeted at immigrant entrepreneurs, to ease the bureaucratic process associated with business creation and encourage them to invest.

Because the business environment in the host country might differ significantly from that in immigrants' home countries, it can be useful to develop targeted training programmes to strengthen their business skills. These programmes can help immigrants better understand some of their host countries' institutional specificities, such as administrative procedures, financial regulation and labour market rules. Specific programmes for female immigrants aimed to increase their financial and business skills can help empower them, facilitate their integration and enhance their contribution to the development of the host country.

Another priority should be to address the needs of migrant entrepreneurs, in particular in terms of property rights and access to credits. In some countries, land rights cannot be transferred to foreigners, making it difficult for immigrants to invest in agricultural activities. Likewise immigrants tend to face discrimination on the credit market due probably to the fact that financial institutions might consider foreign-born investors as riskier than the native-born. One way to overcome such barriers is through targeted programmes oriented towards business initiatives conceived by migrant entrepreneurs. Programmes aimed to help women access finance could enable female immigrants to develop their own businesses. One example is the Women Entrepreneurs Support Association (WESA) in **Kyrgyzstan**, which provides support to women through free legal consultations about property ownership and land rights.

Another approach is to encourage openness to goods and services from major countries of origin. While doing so, trade agreements should actively merge human rights, including labour rights, with trade considerations. Immigrant entrepreneurs would be able to fully benefit from networks in their countries of origin to successfully set up their businesses and create further linkages with markets there.

Migration policies also play a significant role in the way immigrants invest in their countries of destination. Immigrants with regular status are indeed more prone to invest than irregular migrants. Regularisation procedures for irregular immigrants with a demonstrated record of business and job creation could spur business activities. Likewise, specific admission policies targeted towards would-be entrepreneurs and investors could encourage more foreigners to come and invest in the country (OECD, 2011b).

Maximise the fiscal contribution of immigrants

The fiscal impact of immigration varies across countries, but is limited overall. It may depend on the extent to which immigrants are allowed to access the social safety nets and welfare services, in particular the pension system. The way in which immigration, labour and tax policies interplay also affects the capacity of the fiscal system to turn immigrants into direct tax payers.

Several options to maximise the fiscal contribution of immigrants exist. Because in many developing countries immigrants are often over-represented in informal sectors, destination countries should try to foster the growth of the formal sector, or at least expand the tax

base and contribution payments from the informal one. Governments could also try to align tax incidence with the income and consumption patterns of immigrants. All immigrants, whether they have a regular or irregular status, actually contribute to the public purse of their destination countries through consumption taxes. However, a detailed cost-benefit analysis would probably reveal that changing tax codes for this reason would not pay off.

Other policy measures mentioned above would likely also boost the fiscal contribution of immigration. For example, ensuring that immigrants have a regular immigration status makes it more likely for them to benefit from formal employment opportunities, and hence to pay more taxes.

Monitoring the economic impact of immigration

A lack of data and evidence prevents adequate public policies and actions. While the main objective of this project was to provide empirical evidence on the economic contribution of labour immigration in developing countries, many limitations emerged due to the lack of reliable, time consistent and internationally comparable data. It therefore seems important that developing countries in general and partner countries in particular invest in improving migration-related data collection. They also need to develop the analysis of the different potential impacts of immigration on the economy.

Improve data collection

Most partner countries collect data that are useful for the study of immigration, such as the population census and household, labour force and enterprise surveys. Yet, these data do not always allow a comprehensive view of immigrants, in terms for instance of gender, skills, occupations, income and activity sectors. In some countries, immigration is clearly not a priority and data collection can be incomplete and inconsistent over time. In addition, data are sometimes not comparable from one country to another, since definitions and methods differ. This is also the case in many other developing countries.

Increasing the availability of high-quality, timely and reliable data on migration should therefore be a priority for most low- and middle-income countries, as highlighted by Target 17.18¹⁰ of the SDGs (United Nations, 2015a). This implies in particular to harmonise and integrate immigration data across government institutions and difference sources, and to more systematically include information about citizenship, country of birth, and duration of a migration spell in household and enterprise surveys (ILO, 2015b).

Regular and comprehensive data collection can help better match immigration flows with labour market needs. Systemic, quality data are important to inform both employment and immigration authorities, and provide orientation on migration management, employment services and skills training programmes (ILO, 2015d). In countries where such a migration management system is in place, such data can also help policy makers compile occupation shortage lists and inform them about the way they should set or adjust quotas. The information can also be shared with the governments and recruitment agencies in the main countries of origin, thus allowing them to more effectively match labour supply and demand.

A high level of informality in developing countries' labour markets is also a major factor that prevents collecting accurate and broad data. Not only irregular but also regular immigrants are likely to work in informal sectors. Likewise, assessing the real impact of immigration is more complex when the number of irregular immigrants and their characteristics are unknown. If progress is made in this regard, improving the management of immigration and maximising its positive impact will be possible. For example, the right

balance between regularising irregular workers (*ex-post*) and lifting the limits of regular work visas (*ex-ante*) can be made through more accurate data collection and its analysis.

A number of developing countries have the internal capacities to develop these tools. However, the poorest countries would likely benefit from specific knowledge-sharing platforms and capacity-building support. In this regard, regional co-operation on data collection of both immigration and emigration flows could offer a useful starting point. **Thailand** thus contributes to the International Labour Migration Statistics (ILMS) Database for ASEAN. The ILMS gathers all official government sources of data on the stocks and flows of migrant workers within and outside Southeast Asia. It provides a useful source of quantitative information for evidence-based policy making on labour migration in the region. It also maps the existing data sources that countries collect, including their quality, scope, completeness, comparability and possible weaknesses that can be filled through capacity building. Co-operation on data collection between countries of origin and destination contributes to evidence-based policy making at the national but also regional level.

Develop analysis

Another issue to consider is how the data are used to better understand the specific challenges of immigration in developing countries. Based on the experience gained during the project, these aspects seem to deserve the most attention:

- More data and research are needed to better **assess the relative labour market positions of native-born and immigrant workers**. This concerns complementarities between workers in terms of human capital and skills, and the extent to which immigrant workers fill shortages and contribute to the economy in this way.
- Analysing the **overall contribution of immigration to GDP** requires developing or refining econometric models, including computable general equilibrium models, in such a way that they reflect better the dynamic and long-term interactions between migration and economic growth.
- The **contribution of migrant entrepreneurship to employment creation** is a topic that needs more research, probably through both quantitative and qualitative analysis.
- The **productivity effects of immigration** through various channels should be explored further. Nationally representative enterprise surveys with detailed information on the migration history of business owners and employees can form the basis for this analysis.
- The **direct fiscal impact of immigration** could be analysed more in-depth and accurately with multiple years of data from anonymised tax records linked to information about the country of birth. For certain countries it may be feasible and worthwhile to study not only the current, but also the lifetime net fiscal contribution.

In addition, more analysis could be carried out on specific questions, which have been mentioned, but not developed in this report, both for data and time constraints. One of them is the long-term impact of immigration on the formation of human capital. For instance, how do immigrant children affect the quality of the education system and the performances of native-born students? The evidence for OECD countries is not straightforward and an in-depth analysis of this question in developing countries would certainly be of interest for both academics and policy makers.

Another question of interest relates to the environmental impact of immigration in countries already constrained in terms of natural resources. This topic will be of growing importance in the future and has implications in terms of sustainable development.

The issue of social cohesion is also an important topic that was not directly addressed in this report but should be studied more in-depth. The way immigrants integrate into a society has strong repercussions for social cohesion, which in turn affects the economic growth of the host countries.

Notes

1. An OECD Development Centre working paper prepared in the framework of this project reviews the literature on the economic impact of immigration in both high-income and developing countries. It identifies the main channels through which immigrants can contribute to their host countries' economies (Böhme and Kups, 2017).
2. In 2014, when the project started and the partner countries were selected, the United Nations estimated that in 2013 immigrants represented 7.6% of the total population in Ghana and 3% in Nepal, which explains why these two countries were included in the project. After the 2015 revision, the share dropped to 1.5% in Ghana and 1.8% in Nepal (United Nations, 2015b). These discrepancies in the numbers do not change the relevance of the project in these two countries, where immigration is an important issue. Furthermore, to the extent that census data captures irregular migrants, they were included in these estimations.
3. The definition of migrant worker in ILO International Labour Standards (ILS) has its origin in the ILO Constitution (1919), calling for the "...protection of the interests of workers when employed in countries other than their own", although it does not provide a generic legal definition of "worker".
4. More information on these activities is available at www.oecd.org/dev/migration-development/eclm.htm and www.ilo.org/global/topics/labour-migration/projects/WCMS_344706/lang--en/index.htm.
5. Due to delays in the data collection, the report could not include the enterprise survey results for the Dominican Republic.
6. For more information, see www.ilo.org/dyn/migpractice/migmmain.showPractice?p_lang=en&p_practice_id=163.
7. A recent ILO study found that, with reference to covering the provisions in the model agreement annexed to ILO Recommendation No. 86, no agreement incorporated all 27 relevant provisions (ILO, 2017b).
8. For more information, see www.ilo.org/dyn/migpractice/migmmain.showPractice?p_lang=en&p_practice_id=99.
9. In many developing countries, public employment services do not have the mandate to work with migrant workers and often need capacity building to be in a position to do so.
10. Target 17.18 of the SDGs stresses the need to "by 2020, enhance capacity-building support to developing countries, including for least developed countries and small islands developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts".

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Chapter 2

The immigration landscape: Patterns, drivers and policies

This chapter provides an overview of the migration landscape in the ten partner countries of the project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination. It first presents the main migration patterns in each country, in particular by comparing the stocks and flows of both immigrants and emigrants and by showing some of the characteristics of labour migrants – the main focus of this report. The chapter then analyses the drivers of immigration, not only through an economic lens, but also by studying social, political and institutional factors. Finally, it lays out the policy and institutional environment in which immigration evolves. Overall, the chapter provides the basis for the analysis in the following chapters of the report, as patterns, drivers and policy environments influence the way labour immigrants contribute to the economies of their destination countries.

The global stock of international migrants increased by 60% between 1990 (153 million migrants) and 2015 (244 million). Yet, their share of the world population has remained relatively stable since then, at around 3%. While most international immigrants live in high-income countries, developing countries (i.e. low- and middle-income countries) hosted about 35% of the global stock in 2015 (United Nations, 2015).¹

Most immigrants in developing countries come from other developing countries, and those movements have been declining. While 45% of immigrants from developing countries lived in another developing country in 1990, the share dropped to 31% in 2013.² The significant increase in gross domestic product (GDP) per capita in most developing countries over the last two decades has contributed to making migration towards more distant and wealthier economies more affordable for would-be migrants from these countries. Beyond the income differential, significant gaps between high-income and developing countries in a range of well-being dimensions have encouraged migration. These include education, health, security and governance (OECD, 2016).

Even though migrants from low- and middle-income countries have increasingly moved to high-income economies, some developing countries have attracted workers hoping to benefit from better economic opportunities. Among the top 15 countries of destination in 2015 were India (5.2 million immigrants), Ukraine (4.8 million), Thailand (3.9 million) and Pakistan (3.6 million) (United Nations, 2015). Immigrants, including refugees, represented a significant share of the population in a number of developing countries in 2015, in particular Jordan (41%), Lebanon (34%), Kazakhstan (20%) and Gabon (16%). Like in high-income economies, most immigrants in developing countries are working age. In 2015, about 71% of all immigrants living in developing countries (versus 78% in high-income countries) were between the ages of 15 and 64. This additional labour force can potentially contribute to the economies of its host countries.

Against this backdrop, ten diverse countries were selected in the framework of the Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination project: Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. Their diversity is not restricted to geographic location, history or culture, but also encompasses migration patterns, the socioeconomic context and the institutional environment. This report therefore provides a good basis to compare the impacts of labour immigration in developing countries.

A comparative analysis of the economic impact of labour immigration in developing countries requires a comprehensive view of the socioeconomic characteristics of immigrants in each country as well as of the reasons why they have chosen a specific country. The economic and policy environment can also play an important role in the way immigrants contribute to the economies of their host countries. In this respect, both migration and sectoral policies can shape immigration patterns and drivers as well as the potential effects of labour migration on economic development (OECD, 2017a). The jobs immigrants take or the benefits and rights they are allowed to enjoy depend on a wide set of policies and institutions.

Migration patterns in the ten partner countries

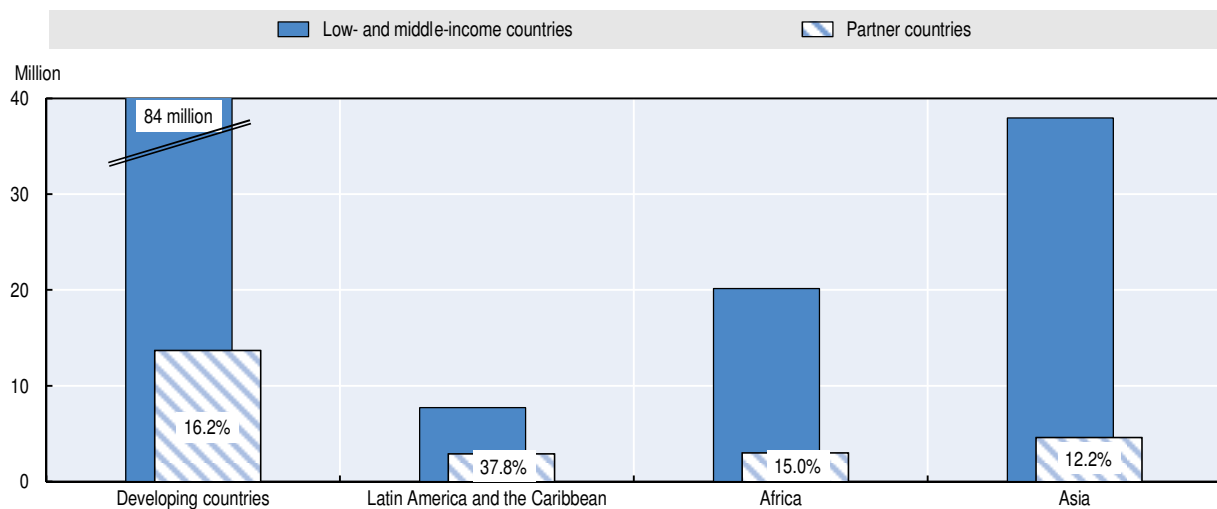
The characteristics and history of immigration vary widely across the project's partner countries. While some – namely, Argentina, Côte d'Ivoire, the Dominican Republic, Ghana, Nepal, South Africa and Thailand – have long histories of immigration and recruitment from abroad, Costa Rica, Kyrgyzstan and Rwanda have only recently experienced significant immigration. Like most developing countries, the partner countries typically receive immigrants from their neighbours. In 2015, six were net immigration countries, as more people entered than left. Among them, Argentina, Côte d'Ivoire, South Africa and Thailand had immigrant populations in the millions, while they totalled a little under 450 000 in Costa Rica and Rwanda respectively. Immigrants in all partner countries have higher shares of working-age individuals and lower age-dependency ratios than the native-born population.

Immigrants in partner countries make up 16% of all immigrants in low- and middle-income countries

The ten partner countries represented about 6% of the international migrant stock and 16% of all immigrants in low- and middle-income countries in 2015, a significant increase from 9.7% in 1990 (United Nations, 2015). By region, they represented 38% of all immigrants among low- and middle-income countries in Latin America and the Caribbean, 15% in Africa and 12% in Asia in 2015 (Figure 2.1).

Figure 2.1. Immigrants in partner countries make up 16% of all immigrants in low- and middle-income countries

Stock in volume (million) and share (%) of each region



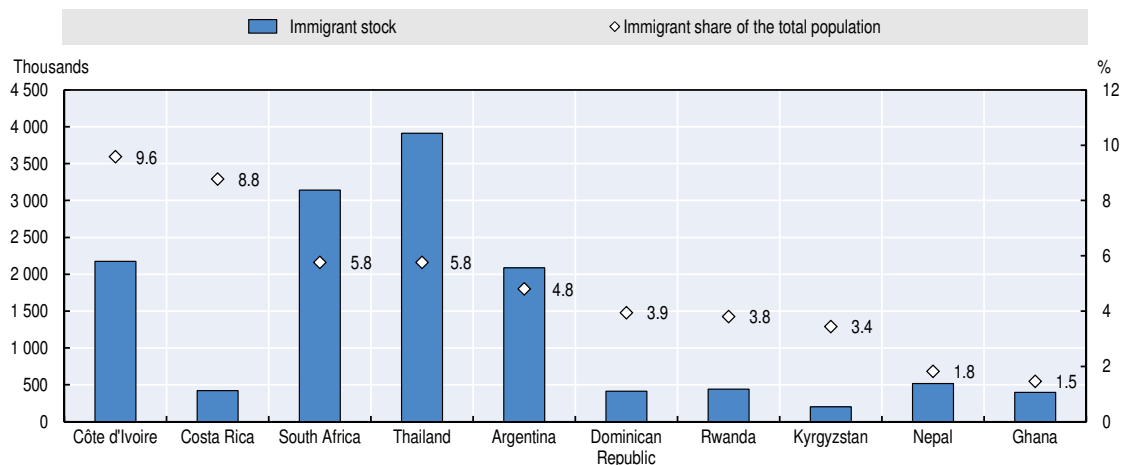
Source: Authors' own work based on United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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Certain partner countries have immigrant populations in the millions or have high shares of immigrants in the total population (see a detailed definition of immigrants in Chapter 1). Thailand (with 3.9 million immigrants) and South Africa (3.1 million) had the largest total number of immigrants among the ten countries in 2015, followed by Côte d'Ivoire (2.2 million) and Argentina (2.1 million) (Figure 2.2). Côte d'Ivoire and Costa Rica reported the highest shares of immigrants of the total population at 9.6% and 8.8% respectively, followed by Thailand and South Africa (both 5.8%) in 2015.

Figure 2.2. **Immigrants' numbers and shares vary across partner countries**

Immigrant stock in volume and share of the total population, 2015



Note: Most estimations are based on the foreign-born populations. Costa Rica, Nepal, Rwanda, South Africa and Thailand also include the number of refugees. The estimation for Côte d'Ivoire is based on the number of foreign citizens that are foreign-born.

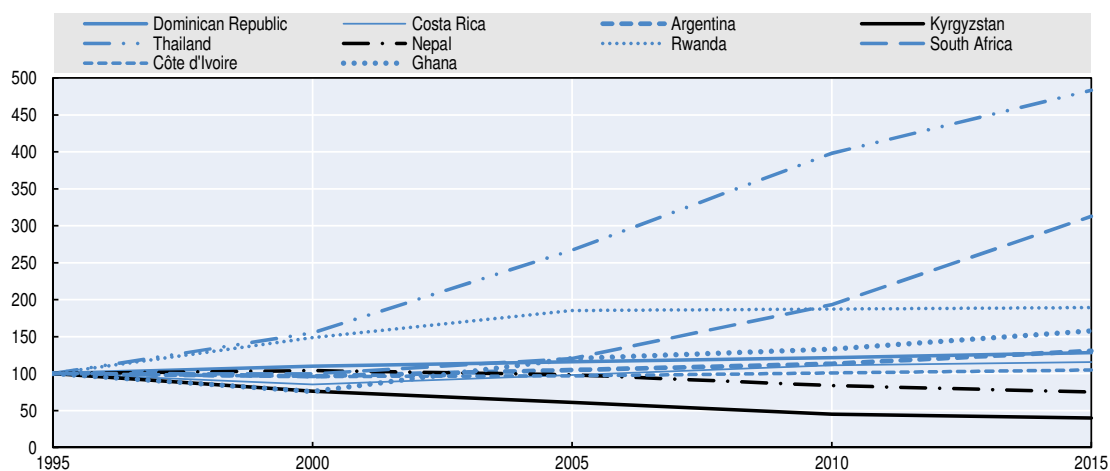
Source: United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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Eight of the ten partner countries saw the volume of immigrant stocks increase between 1995 and 2015. The exceptions are Kyrgyzstan and Nepal (Figure 2.3). On average, the stock of immigrants in partner countries grew 1.7 times. Thailand has seen the greatest growth (4.8 times) of the ten countries. While Thailand had the fourth largest stock of the ten countries in 1995, it grew to the largest in 2015. Thailand's remarkable economic growth in the 1990s attracted many immigrants, especially from Cambodia, the Lao People's Democratic Republic and Myanmar. Rwanda had the smallest stock in 1995, growing to the sixth largest stock of the ten countries in 2015, while Kyrgyzstan's stock shrank from the sixth largest stock to the smallest.

Figure 2.3. **All partner countries except Kyrgyzstan and Nepal have experienced growth in immigration**

Evolution of immigrant stocks in volume (1995 = 100), 1995-2015



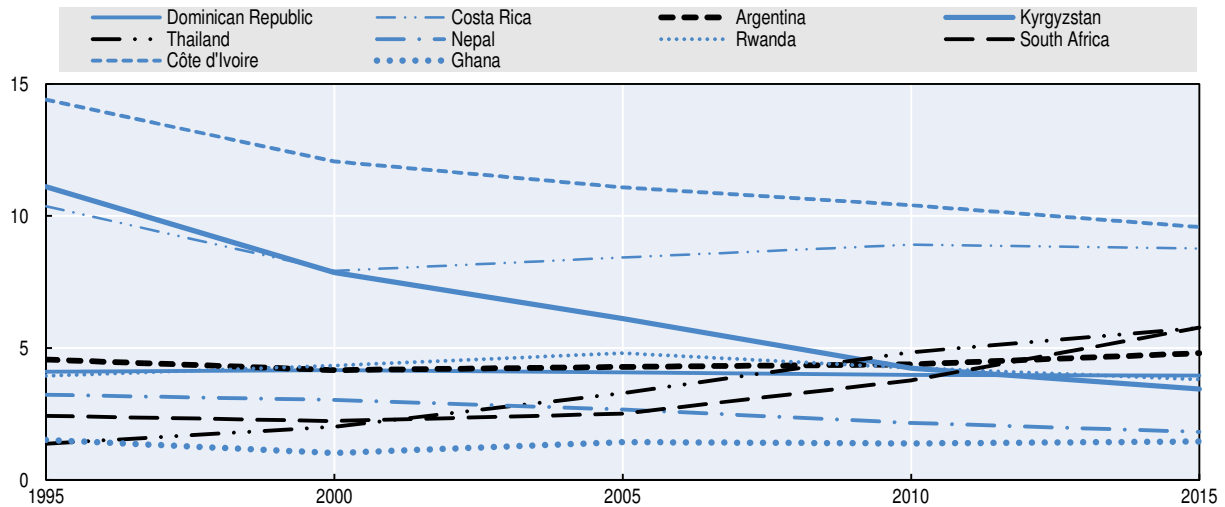
Note: Most estimations are based on the foreign-born populations. Costa Rica, Nepal, Rwanda, South Africa and Thailand also include the number of refugees. The estimation for Côte d'Ivoire is based on the number of foreign citizens that are foreign-born.

Source: Authors' own work based on United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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In contrast to Argentina, South Africa and Thailand, the other seven partner countries experienced a decrease in their shares of immigrant in the total population between 1995 and 2015 (Figure 2.4). The share decreased from 14.4% to 9.6% in Côte d'Ivoire and from 11.1% to 3.4% in Kyrgyzstan, whereas it increased from 1.4% to 5.8% in Thailand and 2.4% to 5.8% in South Africa.

Figure 2.4. **Most partner countries have experienced a decline in their shares of immigrants**
Evolution of immigrant stocks as a share of the total population (%), 1995-2015



Note: Most estimations are based on the foreign-born populations. Costa Rica, Nepal, Rwanda, South Africa and Thailand also include the number of refugees. The estimation for Côte d'Ivoire is based on the number of foreign citizens that are foreign-born. Countries with increased shares of immigration are represented by a black line.

Source: Authors' own work based on United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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Six of the partners were net immigration countries in 2015, two less than in 2013

The levels of immigration and emigration change over time for various reasons. In 2015, Argentina, Costa Rica, Côte d'Ivoire, Rwanda, South Africa and Thailand had more immigrants than emigrants. Conversely, the Dominican Republic, Ghana, Kyrgyzstan and Nepal were net emigration countries (Figure 2.5).

Argentina saw a slight increase in its immigrant share since it adopted an open immigration policy in 2003. In Costa Rica, political instability in neighbouring countries attracted many immigrants. From the colonial period until recently, Côte d'Ivoire experienced major immigration, with the exception of a relatively restrictive immigration policy in the early 1990s. The number of immigrants to Rwanda has also increased considerably since the 1990s, with incoming refugees and returned exiles.³ Rwanda's 2009 immigration policy helps attract high-skilled immigrants as it emphasises skills import as a part of its long-term development strategy. Immigration in South Africa has been characterised by circular migration to some sectors and permanent immigration flows from Europe for political reasons and to address skill shortages. Thailand had become a net immigration country by the early 1990s, mainly due to rapid economic growth.

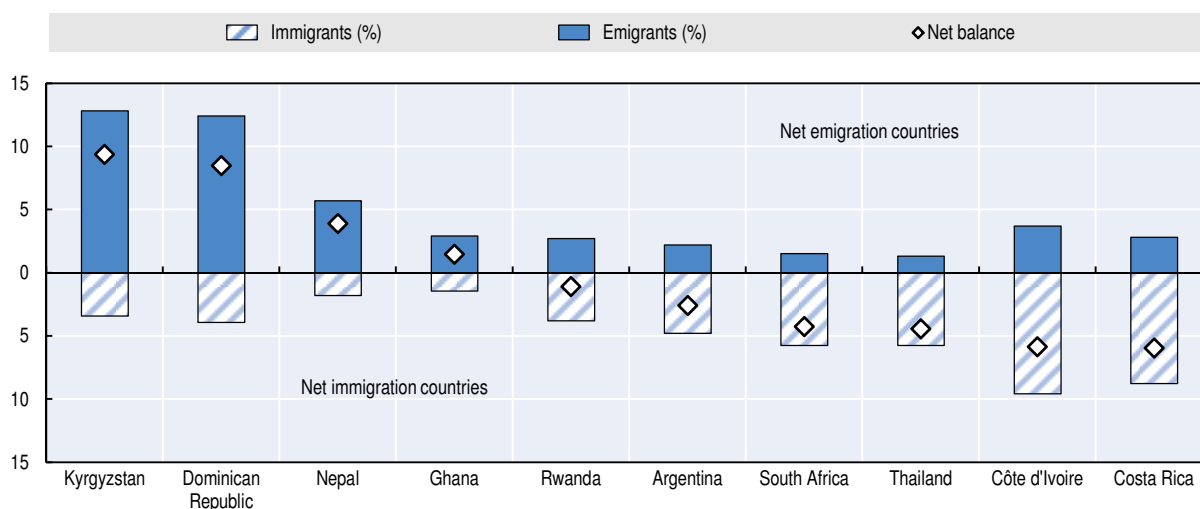
Ghana and Nepal were net immigration countries in 2013 but became net emigration countries in 2015 (World Bank, 2016a). Ghana, after a period of increasing immigrant flows during the 1960s, experienced political and economic downturns that encouraged Ghanaian

workers to migrate to neighbouring countries. Since then, the 1992 Constitution has allowed the country to regain its political stability and has contributed to increased flows of immigrants. Recently, the 2016 National Migration Policy reflected the generally positive attitude towards immigration. Nevertheless, immigration in Ghana is still limited compared to other partner countries. As for Nepal, slow economic growth for the past 25 years has increased emigration, while immigration, mainly from India, has remained steady.

Dominican emigrants, 72% moved to the United States in 2013 (World Bank, 2016a). Kyrgyzstan has experienced significant emigration since independence in 1991, largely due to the drastic socio-economic transformation of the 1990s and better economic opportunities in nearby countries.

Figure 2.5. **Six partner countries were net immigration countries in 2015**

Immigrant and emigrant stocks as a percentage of the population, 2015



Source: Authors' own work based on United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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Between 1995 and 2015, emigration increased in both absolute and relative terms in all partner countries, except Rwanda. The particular situation of Rwanda can be explained by the massive shifts in population that took place in 1994 during the genocide. Nepal saw the largest increase in volume from 0.9 million to 1.6 million (from 4% to 5.7% as a population share), followed by the Dominican Republic from 0.7 million to 1.3 million (from 8.3% to 12.4%) and Argentina from 0.5 million to 0.9 million (1.4% to 2.2%), largely as a result of economic collapse in 2001-02. Immigration is closely linked with emigration as it counteracts the labour and skills loss that emigration causes (OECD, 2017a; OECD, 2014a; Lowell and Findlay, 2001).

Irregular immigrant numbers are sizable, yet difficult to measure

The legal status of immigrants strongly influences the impact they have on their destination countries. However, there is no easy way to measure the number of irregular immigrants, let alone monitor their status. In any country, an immigrant without the proper paperwork is liable for deportation and fines. However, legal channels that restrict immigration at a time of labour market demand for immigrant workers tend to increase the number of irregular immigrants despite the threat of deportation. For example, the lack of any legal route into the labour market for low-skilled immigrant workers in South Africa,

outside of corporate permits, contributed to an increase of irregular immigrant workers (Department of Home Affairs of South Africa, 2016).

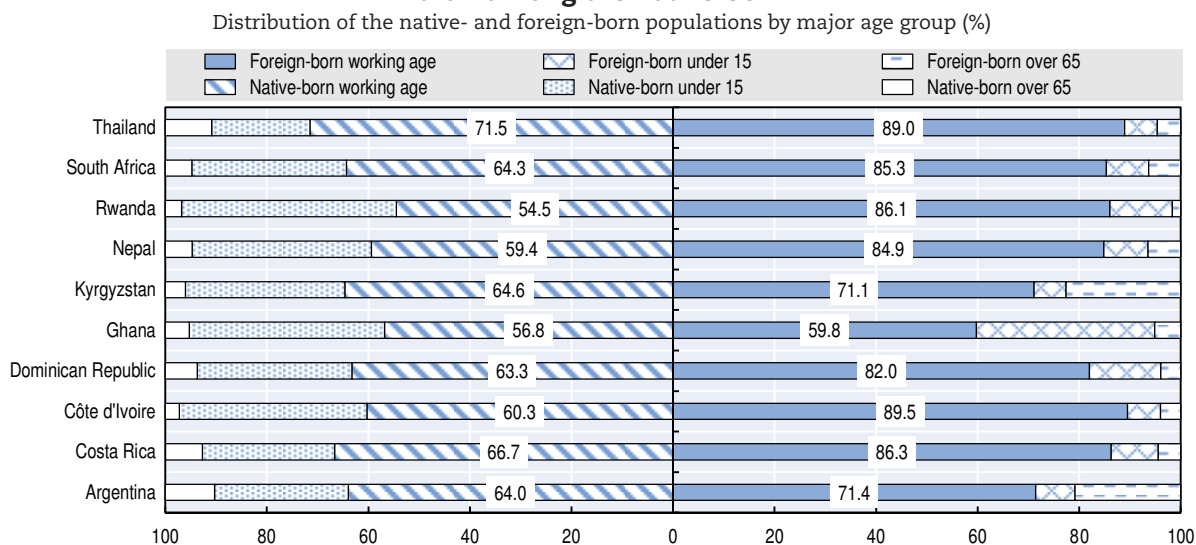
The estimations on irregular immigrants vary across partner countries. In most cases, only indirect estimations such as the number of regularised immigrants or deported foreign nationals are available. For example, a 2014 policy reform in Thailand resulted in registration of 2.6 million immigrants by June 2015. Other countries also had a series of regularisation programmes of different scales, sometimes aiming at different nationalities. This includes 288 000 regularised immigrants in the Dominican Republic in 2014-15. South Africa deported 3.3 million immigrants between 1994 and 2015, and Kyrgyzstan deported 1 116 between 2005 and 2009.

Labour migration makes up a large portion of total immigration

Labour migration (Chapter 1) makes up a large portion of total immigration worldwide. In 2015, the number of migrant workers in the world was around 150.3 million (ILO, 2015). In low- and middle-income countries, the average share of the working-age population (ages 15-64) among immigrants – an approximate indication of labour immigration – was 71% (United Nations, 2015). With an average of 79%, the proportion is even higher in most partner countries. The share of working-age immigrants is significantly higher than the average in some countries like Côte d'Ivoire (89.5%), Thailand (89%), Costa Rica (86.3%) and Rwanda (86.1%), while it is lower in Ghana (59.8%), Kyrgyzstan (71.1%) and Argentina (71.4%).

In all partner countries the share of individuals in this age group is higher among immigrants than among native-born populations (Figure 2.6). The prime-age group (ages 25-54) makes up almost half of immigrants, compared to less than 40% of the native-born population. This age distribution translates into a higher age dependency ratio among the native-born than among the foreign-born population in all partner countries. In Côte d'Ivoire, Nepal and Rwanda, the ratio of working-age individuals to dependents is five to one among immigrants, yet the ratio is five to three among the native-born. In Argentina, Ghana and Kyrgyzstan, the ratios between the two groups are similar.

Figure 2.6. The share of working-age individuals is higher among immigrants than among the native-born



Note: Each population group = 100%. The average share of the working-age population includes population aged 15-64.

Source: Authors' own work based on OECD/ILO, 2017a-b and OECD/ILO forthcoming a-h.

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Drivers of immigration in partner countries

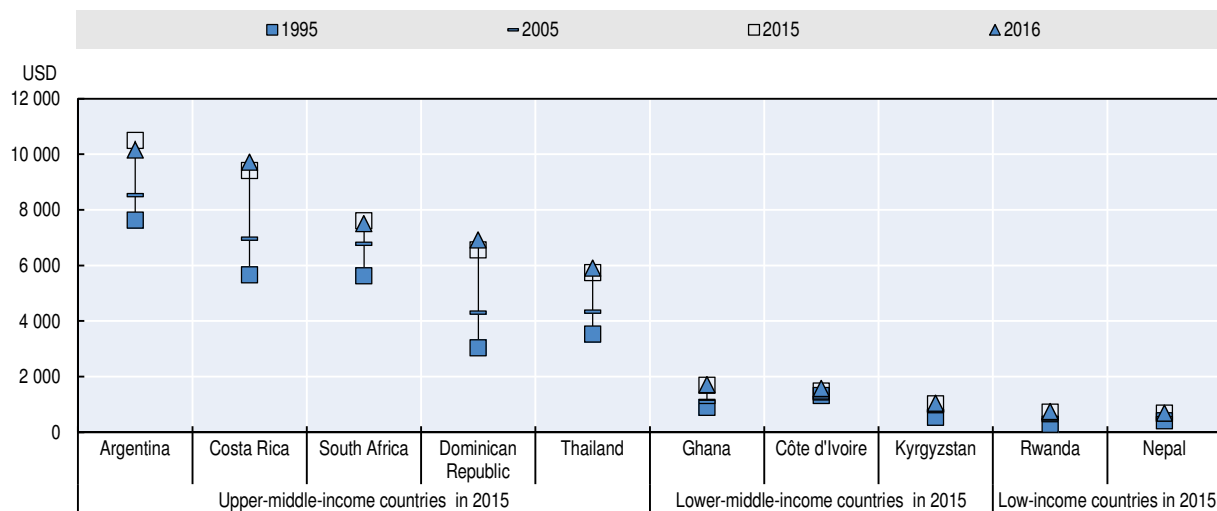
Immigrants choose destination countries based on a series of factors, and these have repercussions on the way immigration contributes to development. One of the main drivers of immigration is the economic benefits immigrants can find in host countries. Specific changes in a country's economic structure, such as transitioning from an economy based on agriculture to one based on industry and services, result in occupational changes and provide immigrants with different opportunities. In most cases in developing countries, sectoral and occupational changes among immigrant workers may be related to a high and increasing degree of informal economy (Chapter 3 of this report; Hassan and Friedrich, 2016).

Non-economic factors, such as geographical proximity between origin and destination countries, political stability and migrant networks, also help immigrants choose their destination countries (OECD, 2016). The decision to migrate can be linked to the search for better social opportunities, especially for female immigrants who may prefer destination countries that promote gender equality and non-discrimination in social institutions (Ferrant and Tuccio, 2015).

The level of economic development varies among partner countries (Figure 2.7). Since 1995, GDP per capita has increased at a fluctuating rate in most partner countries. Between 1995 and 2016, Costa Rica had the largest increase in GDP per capita followed by the Dominican Republic and Argentina. The other two upper-middle-income countries – South Africa and Thailand – also experienced an increase. On the other end of the spectrum, Nepal and Rwanda had the lowest incomes per capita of the ten partner countries. They showed the lowest growth and slowest structural transformation. While Côte d'Ivoire is a lower-middle-income country, its growth in GDP per capita was the lowest among partner countries.

Figure 2.7. **The level of income varies across partner countries**

GDP per capita (constant 2010 USD)



Source: World Bank (2017), World Development Indicators, <https://data.worldbank.org/>.

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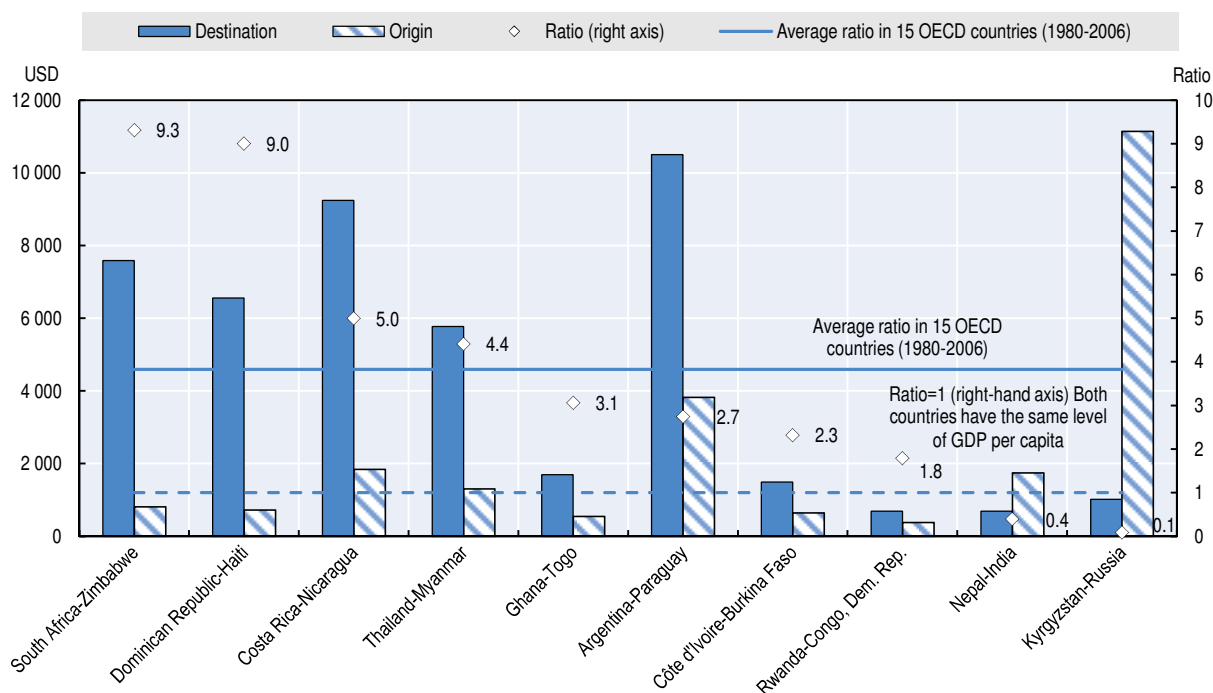
Income gaps between origin and destination countries motivate migration

Higher incomes often attract immigrants to neighbouring countries (Figure 2.8) (OECD, 2016). South Africa has a GDP per capita 9.3 times higher than Zimbabwe, the country of origin of most of its immigrants. The Dominican Republic and Haiti have a similar situation,

with a ratio of 9.0. Costa Rica and Thailand also have higher GDPs per capita than their major countries of origin, with ratios of 5.0 and 4.4 respectively. These are above the average ratio among 15 OECD countries of 3.8. Two net emigration countries, Kyrgyzstan and Nepal, have the lowest ratios.

Figure 2.8. Destination countries have much higher income levels than major countries of origin

GDP per capita (constant 2010 USD) and the ratio between countries of destination and origin, 2015



Source: Authors' own work based on World Bank (2017), *World Development Indicators*, <https://data.worldbank.org/>. The average of the ratio among 15 OECD countries of destination and 120 countries of origin over the period 1980-2006 is from Ortega and Peri (2012), *The effect of income and immigration policies on international migration*, www.nber.org/papers/w18322.pdf.

StatLink  <http://dx.doi.org/10.1787/888933648518>

Structural changes in a country attract different skill sets

Depending on the make-up of the economy and any structural changes under way, immigrants with different sets of skills are attracted to different sectors and occupations. As a country's income grows, the share of the agriculture sector decreases and that of other sectors increases (Timmer, 2009; ILO, 2016). This structural change influences immigration. Among the partners, only the upper-middle-income countries have successfully made this change over the past two decades (Figure 2.9). Nepal and Rwanda are still highly dependent on agriculture, in particular for employment, and as well as Côte d'Ivoire and Ghana to a lesser extent.

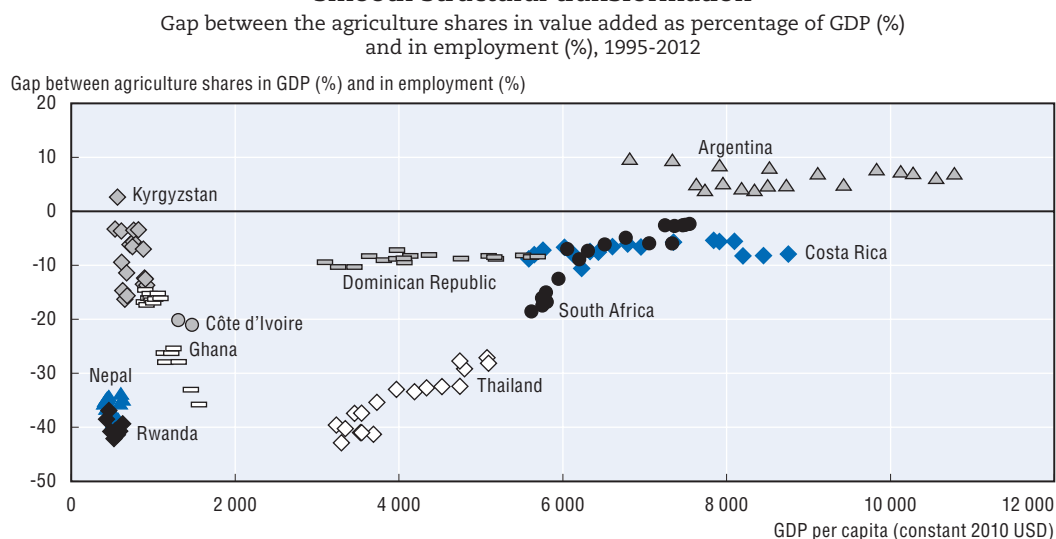
Ghana, Kyrgyzstan, Nepal and Rwanda have seen little structural change as productivity growth in agriculture has stagnated over the past two decades (Figure 2.9). Between 1995 and 2012, these countries exhibited relatively low levels of GDP per capita and its growth (Figure 2.7) along with low shares of immigrants (Figure 2.2). Kyrgyzstan experienced the largest drop in its share of agriculture in GDP (from 44% to 19%) while agriculture's share in employment decreased from 47% to 32%. Rwanda saw the largest gap between shares of

agriculture in GDP and employment (35% versus 75%) in 2012, followed by Ghana (24% and 59%) and Nepal (37% and 71%). Nepal and Rwanda had the highest shares of agriculture in GDP and employment among partner countries, and the gap of these shares in the two countries was almost unchanged. Reflecting this, in Côte d'Ivoire and Nepal, employment in agriculture increased for foreign-born workers, although it decreased considerably for native-born workers.

South Africa and Thailand – having the largest stocks of immigrants among the partner countries – saw impressive agricultural development by reducing the gap between their shares of GDP and employment in agriculture. While Thailand is still struggling with a higher share of employment in agriculture (39% in 2012) compared to the sector's GDP contribution (12% in 2012), agriculture witnessed a large decline in the foreign-born employment share.

Three Latin America countries saw a steady improvement. In particular, Argentina has a small share of agriculture workers (less than 1%) and produces the highest value added in agriculture per worker (in 2015, 23 361 constant 2010 USD) among partner countries. This reflects the fact that its food and agriculture products are the country's largest exports (40% of total exports in 2015; OECD, 2017b).

Figure 2.9. Upper-middle-income partner countries have made a relatively smooth structural transformation



Note: The gaps are calculated by subtracting agriculture's share in employment from its share in GDP.

Source: Authors' own work based on (ILO, 2014a), *Global Employment Trends 2014: Supporting Data Sets* and World Bank (2017), *World Development Indicators*, <https://data.worldbank.org/>. Data on employment shares in Côte d'Ivoire are from Ministère d'État, Ministère de l'Emploi, des Affaires Sociales et de la Formation Professionnelle (2014) and Institut National de la Statistique (2015).

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The industry sector is relatively stable with the gap between its shares in GDP and employment being positive in all countries. In 2012, the sector's share in GDP was the highest in Thailand (37%). Among other partner countries, the sector contributed less than 20% of GDP in Nepal and Rwanda and more than 30% in the upper-middle-income countries, except Costa Rica (24%). Rwanda had one-digit number share of the sector in employment. Thailand showed the highest positive gap between the two shares (37% in GDP and 21% in employment). The gap was the lowest in Kyrgyzstan, Nepal and South Africa.

Most partner countries are service-oriented economies with the service sector contributing more than half of the GDP, except for Côte d'Ivoire, Ghana and Nepal (48% in 2012-13). Costa Rica's service sector exhibits the highest value added as a percentage of GDP (more than 70%), followed by South Africa, the Dominican Republic and Argentina (more than 60%). The service sector hires more workers, both foreign- and native-born, in all partner countries except Argentina and Côte d'Ivoire. In Côte d'Ivoire, the sector hires 20% less foreign-born workers than native-born. In the Dominican Republic, Ghana, Rwanda and South Africa, employment growth in services was considerably greater for foreign-born workers than for native-born workers (Chapter 3).

A high degree of informality in the labour market can drive immigration

The informal economy and, by extension, informal employment have been major drivers of irregular immigration (Castles, de Haas and Miller, 2014). For example, small firms may seek to avoid labour market regulations such as formal business registrations, formal recruiting and hiring process and associated legal and administrative costs and end up depending on informal channels. Immigrant workers are more likely to engage in the informal sector in some countries, probably because it helps immigrants blend into society, especially when integrating into the destination country is difficult (OECD, 2011; Gagnon and Khoudour-Castéras, 2012). In general, immigrants are more prevalent in informal employment and therefore have a lower level of access to social security benefits than the native-born workers (OECD, 2011).

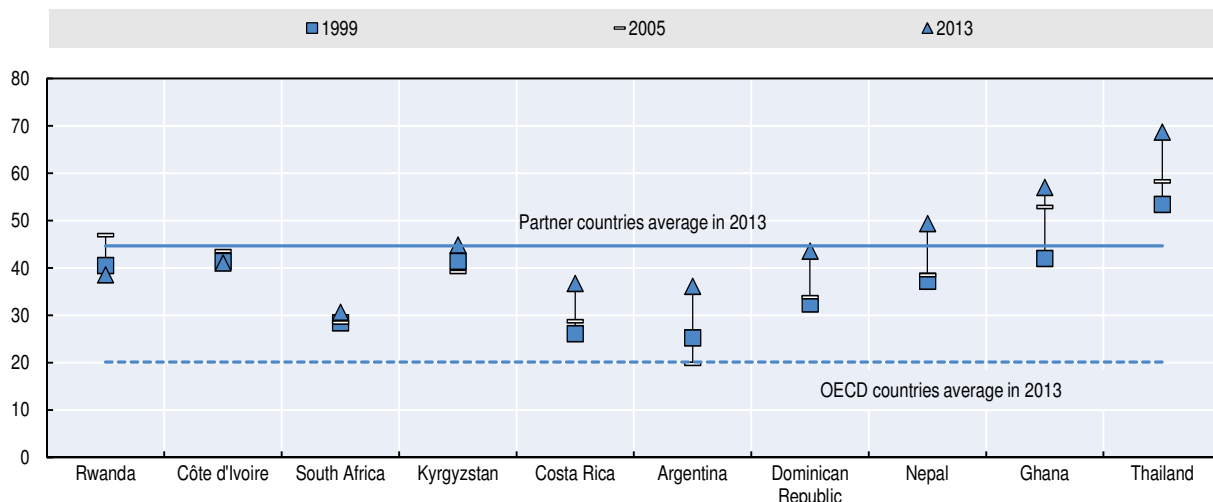
The overall level of informality among partner countries is generally high and increasing. Among partner countries, the informal economy averaged almost 45% of GDP in 2013, up from 37% in 1999 (Figure 2.10). In particular, in Ghana (57%) and Thailand (69%), the informal economy produced more than half of GDP in 2013, had the largest shares among partner countries and grew the most. Only Côte d'Ivoire and Rwanda showed a small decrease in the informal economy. The share of people employed in the informal sector as a percentage of non-agricultural employment varied from 17.8% in South Africa to 69.7% in Côte d'Ivoire according to the international estimation (ILO, 2012). The national estimation of employment in Côte d'Ivoire was even higher at 92% (Institut National de la Statistique, 2015).

Reporting from formal firms confirms partner countries' high degree of informality (Figure 2.11). For example, Ghana has the highest share of firms that are not formally registered when starting operations (23.5%), followed by the Dominican Republic (21.3%). The three Latin American countries, Côte d'Ivoire and Ghana have a high share of firms (over 60%) competing against informal firms; they identified practices of competitors in the informal sector as a major constraint. Firms in these countries also operated for more years without formal registration.

Geographical proximity facilitates immigration

Geographic closeness and socio-cultural similarities – such as ethnicity, languages, social customs and historically existing networks or communities – strengthen ties between countries of destination and origin. For example, the vast majority of immigrants in Nepal are from India, reflecting the long and open border shared by both countries. The 1950 India-Nepal Peace and Friendship Treaty cemented a “special relationship” that grants nationals from either country the ability to live and work in the other as well as enjoy the same economic and educational opportunities as citizens. However, this preferential treatment compared to other nationalities does not specify the legal status of Indians in Nepal.

Figure 2.10. The informal economy accounts for a large part of GDP in partner countries
Size of the informal economy as a percentage of GDP

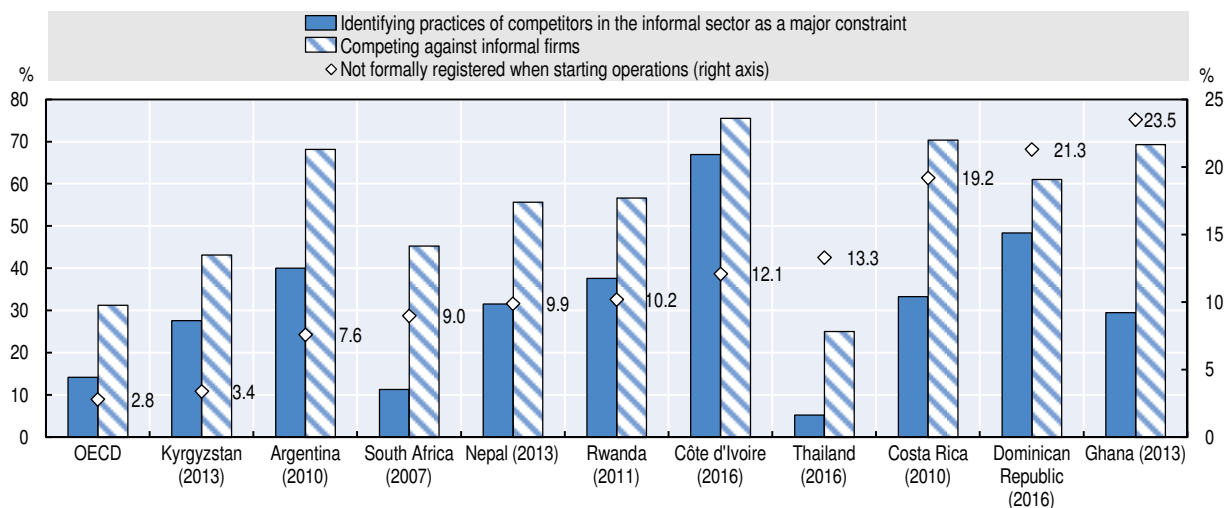


Note: Authors' own work based on Hassan and Friedrich (2016) who estimated the size of the “shadow economy” as a percentage of GDP by using a Multiple Indicators Multiple Causes (MIMIC) model. They defined the shadow economy as “all market-based legal production of goods and services that are deliberately concealed from public authorities” to avoid required payments, standards and procedures. See Hassan and Friedrich (2016) for more details on the MIMIC methodology and assumptions. Countries are sorted by the difference between 1999 and 2013 data.

Source: Hassan and Friedrich (2016), Size and development of the shadow economies of 157 worldwide countries: Updated and new measures from 1999 to 2013, <http://dx.doi.org/10.4172/2375-4389.1000218>.

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Figure 2.11. Partner countries experience a high degree of informality
Percentage of firms, the most recent year



Note: The data refer to formal firms and in most cases include manufacturing firms only. See the source for detailed methodology and country variations. In the figure, countries are ordered according to the percentage of firms not formally registered when starting operations.

Source: World Bank (undated), Enterprise Surveys, <http://www.enterprisesurveys.org/data/exploretopics/informality/>.

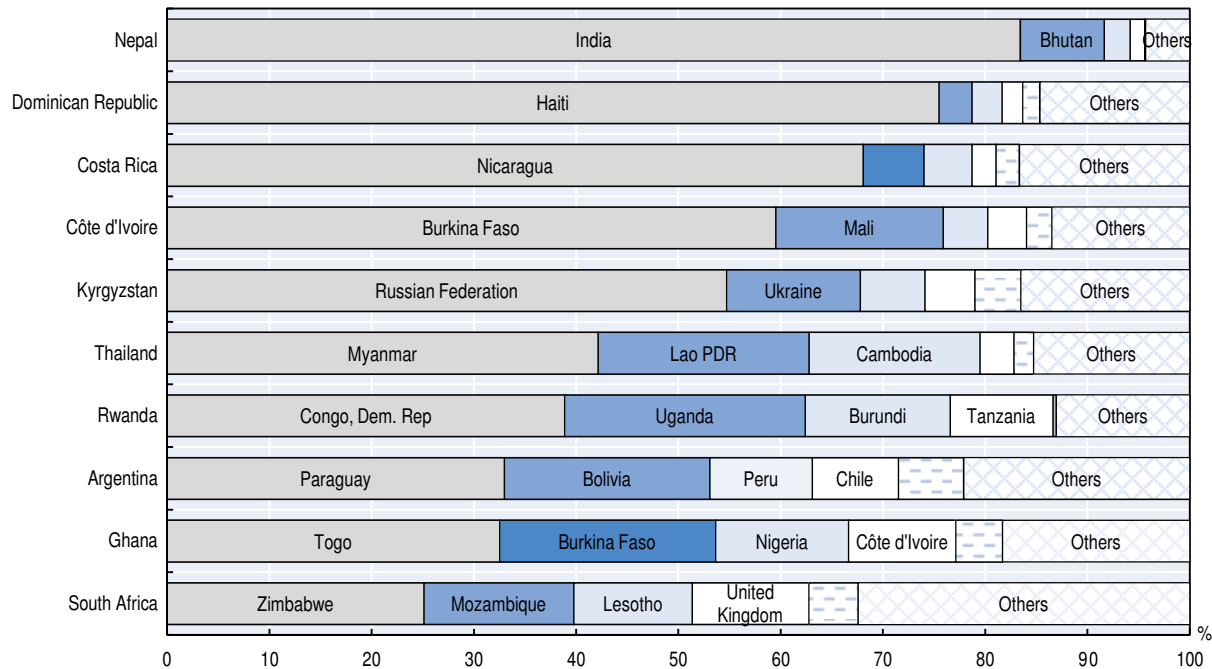
StatLink <http://dx.doi.org/10.1787/888933648575>

Many immigrants come from a single neighbouring country. Costa Rica, Côte d'Ivoire, the Dominican Republic, Kyrgyzstan and Nepal receive more than half of their immigrant population from one country (Figure 2.12). For geopolitical reasons, 83% of

immigrants in Nepal are from India, and 75% in the Dominican Republic come from Haiti. Immigrants from Nicaragua represent 68% of those in Costa Rica, though immigrants are increasingly coming from Colombia. Côte d'Ivoire has two main origin countries: Burkina Faso (59%) and Mali (16%). For historical reasons Kyrgyzstan has a large share of immigrants from Russia (54%), followed by Ukraine (13%) and Kazakhstan (6%). Argentina, Ghana, Rwanda, South Africa and Thailand mainly have immigrants from two to four neighbouring countries.

Figure 2.12. **Many immigrants come from a single neighbouring country**

Share of immigrants by country of origin and by country of destination (%), 2015



Note: Countries are ordered according to the share of immigrants in the main country of origin. Only countries of origin which make up at least 8% of the overall stock of immigrants are named.

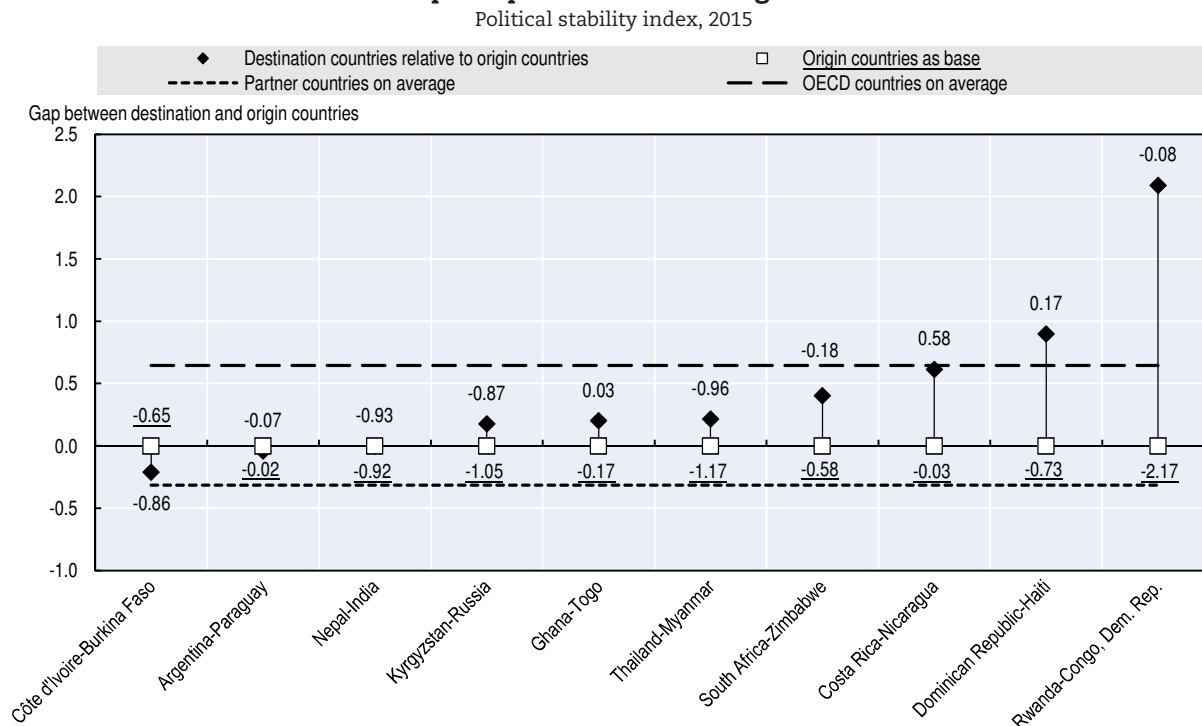
Source: Authors' own work based on (World Bank, 2016a), *Migration and Remittances Factbook 2016*, <https://openknowledge.worldbank.org/bitstream/handle/10986/23743/9781464803192.pdf?sequence=3&isAllowed=y2016>.

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Relatively high political stability also attracts immigrants

Political instability in the home country often drives emigrants to neighbouring countries that are more stable. For example, a civil war in Liberia and a crisis in Côte d'Ivoire resulted in a large number of immigrants entering Ghana. Immigration in Rwanda – much of which was made up of returned exiles – was largely caused by complex and interrelated political crises in the country itself, but also in neighbouring countries such as Burundi and the Democratic Republic of Congo. Most partner countries are more stable than their immigrants' countries of origin (Figure 2.13). However, Nepal has approximately the same level of political stability as its neighbour India (-0.92 and -0.93 respectively). Other exceptions are Argentina and Côte d'Ivoire that show lower levels of political stability than their immigrants' main countries of origin (although the International Country Risk Guide reports that Argentina is more politically stable than Paraguay [The PRS Group, undated]).

Figure 2.13. **Most partner countries are relatively more stable than their immigrants' principal countries of origin**



Note: This index measures the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimates of governance performance range from approximately -2.5 (weak) to 2.5 (strong). Country pairs are sorted based on the difference in index between destination and origin countries.

Source: Authors' own work based on World Bank (2016b), *The Worldwide Governance Indicators*, <https://data.worldbank.org/data-catalog/worldwide-governance-indicators>.

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Lower levels of gender discrimination can motivate immigration

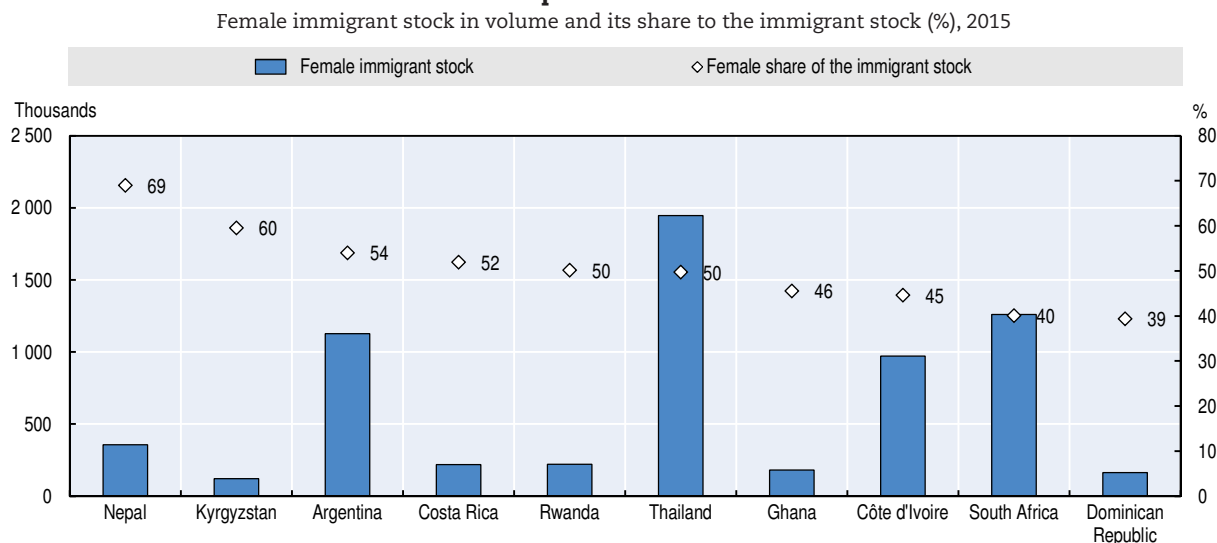
Gender discrimination in social institutions in the countries of origin (OECD, 2016) can explain a higher share of female immigrants in some partner countries (Figure 2.14). Lower levels of discrimination in destination countries motivate women to migrate (Ferrant and Tuccio, 2015). In particular, high-skilled female immigrants are strongly driven by gender equality in the destination countries (Baudassé and Bazillier, 2014), which provide better job prospects and incentives for them. However, discriminatory social institutions in the countries of origin can also limit the possibilities for women to fulfil their migration choices (Ferrant and Tuccio, 2015).

Females represent at least half of the immigrant population in six partner countries: Argentina, Costa Rica, Kyrgyzstan, Nepal, Rwanda and Thailand (Figure 2.14). Females are more likely to migrate for family than work reasons. For example, increasing numbers of Indian-born women move to Nepal due to marriage and the ease of receiving citizenship. In Argentina, women are in the minority (27-28%) among labour immigrants while they are in the majority among family immigrants (Organization of American States, 2015).

Most partner countries have lower levels of gender inequality than their immigrants' major countries of origin. This implies that female immigrants may come to the partner countries searching for better conditions (Figure 2.15). Only two partner countries – Ghana and Nepal – exhibit higher levels of gender discrimination than their immigrants' main

countries of origin (Figure 2.15). On average, partner countries have higher levels of gender inequality than OECD countries covered in the OECD Social Institutions and Gender Index (SIGI).⁴ Three Latin American partner countries (Argentina, Dominican Republic and Costa Rica) are among the countries with the lowest levels of gender discrimination in social institutions out of the 160 countries presented in the SIGI (OECD, 2014b).

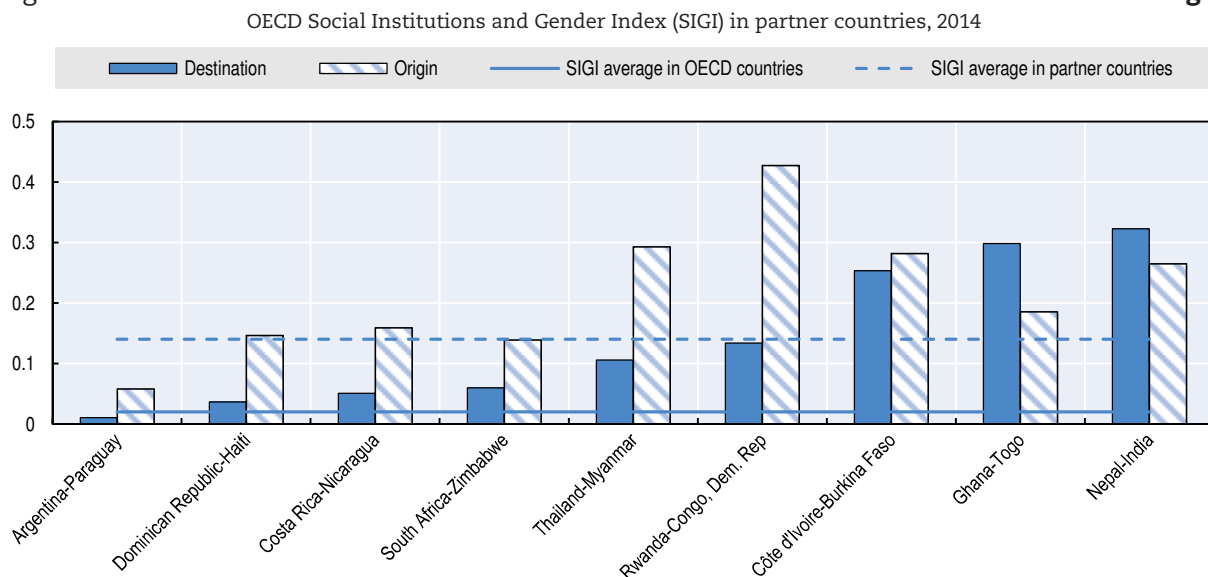
Figure 2.14. **Females represent at least half of the immigrant population in six partner countries**



Source: United Nations (2015), *Trends in International Migrant Stock: The 2015 Revision*, <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>.

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Figure 2.15. **Gender discrimination is lower in destination countries than in countries of origin**



Note: Measures vary from 0 (very low level of discrimination) to 1 (very high level of discrimination). SIGI data are not available for Russia (the major country of origin of Kyrgyz immigrants). OECD countries covered in the SIGI study are Belgium, Czech Republic, France, Italy, Slovenia, Spain and Turkey.

Source: OECD (2014b), *Social Institutions and Gender Index (SIGI): 2014 Synthesis Report*, OECD Publishing, Paris, <https://www.oecd.org/development-gender/BrochureSIGI2015-web.pdf>.

StatLink <http://dx.doi.org/10.1787/888933648651>

Immigration and integration in law and in practice

Creating legal provisions for immigrant workers and putting them into practice are two different challenges. Partner countries have a wide range of immigration and integration policies, from an open immigration regime encompassing all immigrants with equal access to all rights such as in Argentina and Costa Rica, to a more restrictive regime such as in Thailand where laws reserve some occupations for Thai workers. Other countries such as Côte d'Ivoire and Nepal have no clear policy framework for regulating immigrant flows nor integration programmes, yet feature different degrees of openness and restriction vis-à-vis immigration. Immigrants in Côte d'Ivoire enjoy similar rights to native-born citizens, though they are limited in acquiring and owning rural land. Nepal has an open border policy with India. Ghana and Rwanda have developed policies that encourage immigration as a means to development. Similarly, South Africa has diversified the origin countries of its immigrants following economic restructuring in the 1990s.

The current challenges of labour immigration are mostly related to management and co-ordination (Box 2.1). Some partner countries, such as Costa Rica, Kyrgyzstan, South Africa and Thailand, illustrate the challenges that arise from frequently carrying out reforms and changing the institutions responsible for immigration. Such changes and ad-hoc approaches prevent consistent and responsive governance of labour immigration. Moreover, a lack of information on the number of immigrants present in the country, their status and needs makes it difficult to provide them with access to public services and to implement integration policies.

Work visas and permits are not the only channels for labour immigration

Partner countries set requirements and conditions of work through visas or permits of various types and lengths. In South Africa for example, general work visas represented 58% of work-related visa applications (91 000 temporary residence visas), intra-company transfers 18% and corporate work visas 4% over the period 2010-13. In Costa Rica, work permits are issued depending on national demand; immigration law seeks to prevent immigrant workers from displacing the national workforce (National Council of Migration, 2013).

In some countries, laws and policies such as industrial enterprises acts or labour codes include reservations relating to the employment of foreign nationals. In some instances, the employer of an immigrant worker is required to prove that the post cannot be filled by a native-born worker. In other cases, certain occupations are reserved for native-born citizens. For example in Nepal, foreign nationals may only be hired with prior approval from the Department of Labour and for a maximum period of five years, after which time employers have to replace the non-Nepali employee with a Nepali. By contrast, laws in Costa Rica and Côte d'Ivoire provide non-discriminatory principles. Other countries such as Ghana, Kyrgyzstan and Rwanda attract immigrants to enhance skills for innovation and facilitate investment.

Labour immigration quotas

Labour immigration quotas can be used to limit the number of labour immigrants and to direct them to specific occupations or sectors. Argentina, Côte d'Ivoire, Nepal and Rwanda have no specific quotas in place. Some other partner countries have certain forms of quotas. For example, at the firm level, foreign-born workers can represent up to 40% of staff under corporate permits in South Africa, while companies in the Dominican Republic are only allowed to employ immigrant workers up to 20%. In Ghana individual companies have some restrictions on the total number of immigrant employees.

Box 2.1. Improving co-ordination in immigration management

Close co-ordination for labour immigration management between relevant stakeholders such as the labour and interior ministries and employer representatives can improve the impacts of immigration and reduce unnecessary costs. This includes anticipating skills shortages and immigrant needs. However, most partner countries could better manage institutional co-ordination, transparency and clarity in labour immigration.

In **Costa Rica** via the 2012-13 *transitorios* (temporary measures), the General Directorate of Migration and Aliens – an inter-institutional body – announced that immigration offices would accept documents from the Nicaraguan Consulate in Costa Rica. However, the Treasury had not approved the exoneration of document fees that would be waived under the Immigration Department's directive. There was also a lack of co-ordination among banks, the *Caja Costarricense de Seguro Social* (CCSS) and immigration offices. Both enhanced co-ordination among institutions that implement immigration law and lower fees and fines in line with the economic means of most irregular immigrants would help remove the existing contradictions in managing immigrants (Fouratt, 2016).

In **Nepal**, complex co-ordination requirements between government institutions hinder the country in implementing various provisions of admission and integration policies. While the Department of Labour is responsible for overseeing work-related matters, the Department of Immigration is responsible for issues relating to foreign nationals. This makes addressing irregularity difficult. In addition, the Ministry of Home Affairs has made it mandatory for foreigners seeking work in Nepal to present a “character certificate” issued by the Nepal police for renewing visas, in order to monitor immigrant activities and maintain data. This not only places an extra burden on immigrant workers but also involves the police in immigration matters.

In **South Africa**, institutions could improve co-ordination of work permit applications to avoid skills shortages. Regarding the skill-based quota system in force from 2007 to 2011, the main stakeholders – Sector Education and Training Authorities (SETAs), the Department of Labour (DoL), the business sector and organised labour – disagreed over the calculation methodologies and the definitions of skills shortages and of skills gaps per sector. Moreover, the DoL did not have direct access to databases of the Department of Home Affairs (DHA), and the quota was allocated almost entirely at the discretion of the DHA minister. This resulted in significant discrepancies between official estimates of skills shortages and the quota lists issued by the DHA (Erasmus and Breier, 2009). In order to address this issue, a 2016 Green Paper supported strengthening inter-departmental capacity, a points-based system and mechanisms for the transfer of skills. However, the list of critical skills in demand adopted in the 2014 immigration regulations after the repeal of the quota permit in 2011 remains an issue. The reasons for these difficulties include internal organisational problems, as the DHA saw several changes in ministers in the 2000s and as the members of Immigration Advisory Board rarely consult each other or social partners.

Although countries are still struggling to understand immigration and its impacts, reforms and strategies for improvements are underway. For example, in **Costa Rica** work on policy coherence is undertaken by the National Council for Migration, consisting of the General Directorate of Migration and Aliens along with several relevant ministries. The Costa Rican Government is committed to managing immigration flows, ensuring adequate integration of immigrants, and promoting national development through regulation and co-ordination of inter-agency actions on migration through the Integrated Migration Policy 2013-2023 (National Council of Migration, 2013). The **Dominican Republic** has made efforts to manage immigration in a more systematic way, including by clearly defining a national migration policy, supported by the National Institute of Migration (*Instituto Nacional de Migración*). **Ghana's** National Policy on Migration, launched in April 2016, provides for harmonising internal, regional and international migration policies with international treaties and conventions as well as with domestic policy initiatives relating to migration, labour transfer and development. In **Nepal**, based on the 2015 National Employment Policy, the Department of Immigration set up an integrated database system to meet international standards, establishing better mechanisms for co-ordination across government agencies, simplifying laws, regulations and procedures, and developing the department's institutional capacity. Similar efforts are underway in **Côte d'Ivoire**.

The Dominican Republic, Ghana, Kyrgyzstan and Thailand set immigrant labour quotas according to the situation of the local labour market. In the Dominican Republic, the National Migration Council (*Consejo Nacional de Migración*) sets annual quotas for temporary workers based on consultations with agricultural stakeholders, the private sector and labour unions for unmet demands for skilled labour (Migration Law 285-04). The Ghana Immigration Quota Committee, administered by the Ministry of Interior and consisting of representatives from eight other government services, has streamlined its operations by having other organisations approve certain work permit decisions based on the amount of investment of the company requesting foreign-born workers. The Committee granted 38 411 residence permits in 2015 (Ghana Immigration Service, 2015). In Kyrgyzstan, quotas for immigrant workers are around 12 000-14 000 each year. This quota, usually left unmet, is mostly filled by Chinese workers. The Thailand permanent residential permit quota was set at 100 individuals of each nationality in 2016.

Requirements to obtain work visas and permits, and restrictions to employment

Most countries impose certain conditions to obtain a work visa and permit, but in some cases no requirements are necessary. None of the partner countries have restrictions in terms of age, gender or marital status in the work permit application processes, other than some limitations on minors. Similarly, none of the partner countries require language or cultural tests, although certain tests can be required for student visas or naturalisation applications, for example in Ghana. The Rwanda Development Board checks qualifications but it is unclear what tests are implemented for investors and skilled workers visas. Such legal immigration processes are often expensive and take months, so immigrants may seek informal channels which are cheaper and faster.

In countries with an open-door policy such as Argentina, it is possible to look for a job on a tourist visa (mostly free on arrival for 90 days) then go to the immigration department with a letter from their employer and a certificate of good conduct from their country of origin.⁵ Similarly in Nepal, immigrants obtain labour permits from the District Labour Office through their employers and residential visas from the Ministry of Home Affairs on the recommendation of the Department of Labour. Indian citizens are afforded special privileges in Nepal in terms of residence, property ownership and employment on par with Nepali citizen, without any visa or permit, which makes tracking more difficult.

In the Dominican Republic, workers can freely change employers within a specific sector, occupation or region. In Thailand, immigrant employment is tied to a specific employer; while the change of employer is possible, it requires a new work permit application. Both countries have a *de jure* (but not *de facto*) right to redress if the terms of an employment contract have been violated by an employer.⁶

In South Africa, with the exception of those with critical skills and permanent residence or specific cases approved by the Department of Home Affairs, immigrant workers are not allowed to change jobs; permits are tied to a specific job and employer. For specific large scale labour needs, corporate permits are required for employers of foreign-born staff.

Most countries provide generous visa arrangements and incentives for investors. Examples are open admission and entry and exit of foreign investments including regulatory, fiscal and non-fiscal incentives in most sectors.

The role of trade unions and union participation by immigrants

In most partner countries, immigrants have limited rights, and trade unions have little or no role in the work permit application processes. Costa Rica's constitution prohibits

foreigners from exercising leadership or authority in trade unions. In Nepal, foreign-born workers do not have the right to found an association or participate as members with voting rights. In the Dominican Republic, immigrant workers have the right to join or found a trade union, but in practice must have regular immigration status and a Dominican identity card to do so. As a consequence, rates of union affiliation are low in this country. In Kyrgyzstan, trade unions play a role, though somewhat weak, in protecting immigrant workers and their rights. In Thailand, immigrants have no rights regarding trade unions, reflecting strong opinions against non-Thais joining unions (Martin, 2007).

However, in countries where strong collective agreements and wide union coverage are present, trade unions often significantly help manage immigrant workers. In South Africa, for example, labour legislation and collective bargaining conditions apply fully to all workers regardless of their nationality or immigration status. The Commission for Conciliation, Mediation and Arbitration, the national tripartite dispute mechanism, is entitled to deal with disputes brought forward by immigrant workers, including irregular immigrants.

Regulation and regularisation processes for irregular workers

Most partner countries require employers to verify the legal status of prospective employees. Any violation is subject to sanctions. In Costa Rica, for example, the 1993 immigration law provides for sanctions such as imprisonment or fines. Although Ghana does not require verification of the status of prospective employees, non-compliance with immigration rules relating to employment is punishable. Kyrgyzstan and South Africa poorly enforce their sanctions. The absence of work permits in Kyrgyzstan ostensibly leads to judicial recover of incomes gained out of economic activities to the state budget, a deprived right to carry out the activities, and administrative punishment.

Regarding regularisation, several partner countries have granted amnesties or enacted similar processes. The Dominican Republic implemented a one-time National Regularisation Plan in 2014-15, regularising 288 466 immigrants, although the majority had temporary status that does not completely correspond with available categories in the Migration Law (OBMICA, 2015). In post-apartheid South Africa, three amnesties took place. The country granted permanent residency to 51 504 mineworkers in 1995, 124 073 Southern African Development Community (SADC) nationals in 1996 and 82 689 Mozambicans in 1999-2000. In addition, Zimbabweans were regularised through special dispensations in 2009-10 and Basotho in 2016 (Budlender, 2013). However, as part of the management of irregular workers, South Africa deported 3.3 million immigrants between 1994 and 2015. Thailand frequently applies temporary measures⁷ in addition to two nationality verifications and memoranda of understanding. The 2013 round of nationality verification regularised almost 900 000 irregular immigrants from Cambodia, the Lao People's Democratic Republic and Myanmar (Huguet, 2014).

Regularisation programmes help maximise economic impacts of immigrants to the extent that they discourage irregular immigration. Regular immigrants pay taxes, can start a business, contribute to the formal rather than the informal sector, better match their job and qualifications, and enjoy higher incomes (Kaushal, 2006). Such benefits lead to better integration outcomes, increased consumption and further positive economic impulses. Amnesties seem to have improved the labour market outcomes of skilled immigrants that previously had an irregular status (Kaushal, 2006).

Immigrants have rights and access to public services, yet concrete integration policies are needed

Integration policies, including sectoral policies, aim to increase the economic mobility and social inclusion of immigrants. National laws often forbid discrimination against immigrants or do not distinguish between immigrants and native-born citizens. However, without specific integration policies and their effective implementation, immigrants may lack access to public services or rights, preventing their integration into society. Immigrants have various levels of access to public services across partner countries (Table 2.1), but the level of actual benefits is not always clear.

Table 2.1. Immigrants have different levels of access to public services in destination countries

	Not available	Available only to citizens	Available to regular immigrants	Available to all immigrants, including irregular immigrants	No mention or insufficient information
EMPLOYMENT AND PENSION	Public employment	Côte d'Ivoire	Nepal, South Africa	Argentina, Costa Rica, Dominican Republic, Ghana, Kyrgyzstan, Thailand	Rwanda
	Unemployment benefits	Côte d'Ivoire	Nepal	Argentina, Kyrgyzstan, South Africa, Thailand	Costa Rica, Dominican Republic, Ghana, Rwanda
	Pension scheme		Dominican Republic, Nepal	Argentina, Costa Rica, Côte d'Ivoire, Ghana, Kyrgyzstan, South Africa, Thailand	Rwanda
	Public housing	Côte d'Ivoire, Kyrgyzstan, Thailand	Nepal, South Africa	Argentina, Costa Rica, Dominican Republic	Rwanda, Ghana
	Family allowance	Thailand	Dominican Republic, Nepal	Argentina, Costa Rica, Côte d'Ivoire, South Africa	Ghana, Kyrgyzstan, Rwanda
EDUCATION	Primary public education		Kyrgyzstan, Nepal	Argentina, Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, Rwanda, South Africa, Thailand	
	Secondary public education		Kyrgyzstan, Nepal	Argentina, Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, Rwanda, South Africa, Thailand	
	Public educational institutions and services			Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, Thailand	Argentina, South Africa
	Tertiary public education			Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa, Thailand	Argentina
HEALTH	Non-emergency health care		Costa Rica, Kyrgyzstan, Nepal, Thailand	Argentina, Côte d'Ivoire, Dominican Republic, Ghana, South Africa	Rwanda
	Public preventive health care		Kyrgyzstan, Nepal, Thailand	Argentina, Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, South Africa	Rwanda
	Public emergency health care		Nepal, Thailand	Argentina, Costa Rica, Dominican Republic, Ghana, Kyrgyzstan, South Africa	Ghana, Rwanda
	Health insurance		Costa Rica, Côte d'Ivoire, Ghana	Thailand (optional for irregular immigrants)	Rwanda

Note: The project team consulted with country experts on access to public services in destination countries. In many cases the experts were able to provide information on a range of public services but in other cases no information was available. The names and institutions of the expert contributors are acknowledged in each country report.

Source: Each country's index of access to public services is based on an evaluation by country experts.

Access to employment and pension benefits

Immigrant workers in all partner countries have the same rights as local workers in terms of equal pay for the same work, and equal employment conditions and protections, yet in some cases are bound by regulations and restrictions. Most labour market benefits, including pension and unemployment benefits, are only extended to regular immigrants. Regulations concerning access to education and health are less strict (Table 2.1). In Côte d'Ivoire (and similarly in Costa Rica), the 2015 Labour Code stipulates a non-discriminatory principle regarding remuneration and protection of labour rights. In Nepal, immigrants are limited in how they use their salaries; they can only send up to 75% of it to their countries of origin.

Access to public education and training

Education and training including language instruction help immigrants integrate. In general among partner countries, access to public education and training is immediately available for regular immigrants, although there are limitations. In Argentina and Costa Rica, language integration is often not an issue because most immigrants already speak Spanish. Yet native-born students who do not speak the language of assessment also represent a sizeable proportion of the student population in partner countries. In Thailand for example, these students constitute over 40% of the student population (OECD, 2013). In the Dominican Republic, conflicting policy documents often lead to confusion over access to and benefits from public education and training among immigrant students. In Nepal, a study visa is granted to foreign-born citizens, and their family members, if they come to study, teach or conduct research in any educational institution (1994 Immigration Regulation). However, obtaining such a study visa requires a significant yearly income.

Skills and qualification recognition

A lack of skills and qualification recognition among immigrants prevents their full integration. Partner countries have instruments to recognise foreign qualification, but these are not used systematically. Immigrants are often overqualified or underqualified for their jobs especially when no mechanism for recognising foreign qualifications is accessible. In Argentina, current bilateral and multilateral skills recognition agreements tend to be restricted either to the academic sector or to primary and secondary education (Molina, 2013). In the Dominican Republic, foreign degrees or diplomas are generally accepted by employers. Technical workers with permanent residence may seek formal accreditation of their competencies or validation of degrees and/or certificates through the national training institute (ILO, 2014b). In South Africa, most foreign degrees and diplomas are recognised through the South African Qualifications Authority (SAQA); for certain professions and occupations, critical skills visas or permanent residence permit applicants are referred to professional associations recognised by the Department of Home Affairs.

Côte d'Ivoire, Ghana and Nepal have similar processes of foreign degree accreditation. In Côte d'Ivoire, the *Direction des Examens et Concours* generally authenticates foreign qualifications, while the Ministry of Higher Education and Scientific Research covers higher education levels. As a member of the Bologna Process, the country recognises diplomas awarded in compliance with the Process. In Ghana, the National Accreditation Board evaluates foreign degrees and issues individual letters regarding their local equivalence, charging fees for the respective services. In Nepal, the Recognition and Equivalency Determination Committee determines criteria for equivalence (2002 Education Rules).

Access to public health services

Most partner countries immediately grant access to public health services to immigrants. Irregular immigrants in Costa Rica, Kyrgyzstan, Nepal and Thailand have no access to non-emergency health care, although Costa Rica and Kyrgyzstan provide access to other types of public health care. In the Dominican Republic, access to health services may not be readily available, especially for those without health insurance (84% according to the 2012 National Immigrants Survey).⁸

Nepal and Thailand have limited provisions regarding immigrant access to health services: they only cover regular workers. In Nepal, none of the policies explicitly mention whether foreigners barred from benefits or if policy provisions are restricted to Nepalese only. In Thailand, immigrants registered via the nationality verification or memorandum of understanding process can benefit from the social security system. It offers more comprehensive coverage than the Compulsory Migrant Health Insurance Scheme (IOM, 2014). But immigrants working in certain sectors are not eligible and not all immigrants take advantage of this system (WHO, 2012).

In Côte d'Ivoire, as in Ghana, the Dominican Republic and South Africa, immigrant workers have extensive access to health care, including universal health insurance (Table 2.1). A 2014 decree creating the *Caisse Nationale d'Assurance Maladie* grants this insurance to all residents in Côte d'Ivoire, including both regular and irregular immigrants.

Civil, economic, social and political rights

In general, partner countries guarantee similar civil, economic and social rights to immigrants. Immigrants have the same civil rights as citizens such as equal treatment and protection before criminal courts and tribunals, family reunification, and legal remedies and redress in case of withdrawal or non-renewal of a residence permit or in case of a deportation order. However, in Kyrgyzstan immigrant rights to remedies and redress extend only to those who have a residence permit. In the Dominican Republic and Thailand, immigrant rights are not fully enforced. Failure to respect due process is frequently reported in the Dominican Republic (Amnesty International, 2016). In Thailand, the 1998 Labour Protection Act is weakly enforced and immigrants find no avenue to complain against violations of the law (IOM and ARCM, 2013). Ghana has some restrictions in the economic rights of immigrants: for example, the 1992 Constitution barred immigrants from acquiring land permanently (1992 Constitution, Article 296).

Regarding political rights, most partner countries do not allow immigrants to vote in any elections or run for office. The exception is Argentina where immigrants can run in local and regional elections after a certain amount of time in the country.

Access to citizenship

Naturalisation is one of the key policies that facilitate the integration of immigrants. It can affect the degree to which immigrants identify with their host society and, in turn, how much they wish to contribute to civil life. Immigrants who come from countries that allow dual citizenship rights opt more frequently for naturalisation (Mazzolari, 2009). A naturalisation policy can reflect whether a country's immigration policies are open or restrictive. In Ghana, for example, policies changed from permissive to closed and back to permissive, allowing immigrants citizenship other than Ghanaian.

Laws and practices regarding the acquisition of citizenship and dual citizenship are complex and depend on the host country's relationship with other countries. In general, citizenship acquired by naturalisation requires a number of years of permanent or temporary

residence, ranging from two years in Argentina, three years in Costa Rica, five years in Côte d'Ivoire, Ghana, Kyrgyzstan, Nepal,⁹ Rwanda and South Africa, and seven years in the Dominican Republic. Dual citizenship is allowed in Ghana and Kyrgyzstan and partially in South Africa (where immigrants face the possible loss of citizenship if another citizenship is acquired voluntarily).

Concerning the second generation, most partner countries apply the principles of *jus sanguinis*.¹⁰ In Côte d'Ivoire, the 1972 Act amending the 1961 Law on the Nationality Code removed the possibility for the children of immigrants born in Côte d'Ivoire to acquire Ivorian nationality. A special provision on naturalisation in 2005 and the 2013 law on the acquisition of Ivorian nationality allowed counter cases; however, only 50 000 certificates of nationality (one tenth of estimated cases concerned) were issued between 2014 and 2016. In Nepal, naturalisation tends to be at the state's discretion rather than a right in itself. Moreover its 2015 Constitution has barred naturalised citizens from appointments to the upper echelons of political authority. The current provisions relating to citizenship in the 2015 Constitution discriminate against women.

International legal instruments can contribute to better immigration management and integration

Bilateral agreements

Bilateral agreements are among the most effective measures regarding labour immigration governance, especially as they ensure social benefits for immigrants on their return to their origin countries (Holzmann, Koettl and Chernetsky, 2005; Holzmann, 2016). In some countries, immigrants enjoy visible benefits through bilateral agreements and related issues, while other countries do not implement the agreements.

The majority of migration-related bilateral agreements in partner countries relate to their role as countries of origin. Argentina made bilateral agreements with Chile (Convention on Temporary and Seasonal Workers) and Brazil (Sao Borja Treaty) and multilateral agreements with the Common Market of South America (MERCOSUR) members or associated countries.

Costa Rica, Kyrgyzstan, South Africa and Thailand have certain agreements as countries of destination. In Kyrgyzstan, a 2009 agreement with Kazakhstan on the procedure for self-employment of nationals allows Kazak citizens (only regular immigrants) to temporarily carry out individual entrepreneurial activities without establishing a legal entity in Kyrgyzstan. Other bilateral agreements between these two countries cover (i) labour activities and the social protection of immigrant workers in agricultural work in border areas (2002) and (ii) labour activities and the protection of the rights of temporary immigrant workers (2006). South Africa signed agreements in the 1990s to import skilled labour, such as medical doctors from Cuba and Tunisia.

Regional co-operation

Regional co-operation can promote intra-regional mobility and improve the integration of immigrants. Regional economic communities such as the Economic Community of West African States (ECOWAS), East African Community (EAC), Southern African Development Community (SADC), MERCOSUR and Association of Southeast Asian Nations (ASEAN) are working on frameworks that improve regional labour mobility. Often, the recognition of skills is a key priority. Most partner countries are members of a regional economic community (Table 2.2).

Table 2.2. **Partner countries co-operate with countries in their region on labour migration**

Institution	Country	Regional policy framework
ASEAN (Association of Southeast Asian Nations)	Thailand	The 2007 ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers promotes employment protection and access to decent working conditions for immigrant workers, excluding irregular immigrant workers. However implementation has stalled since 2009 due to the reluctance of the four states, including Thailand, which saw a large influx of immigrant workers (Philippines Institute of Development Studies, 2012). Nevertheless, in practice member countries can still impose significant restrictions on the free movement of labour and on domestic laws.
EEU (Eurasian Economic Union)	Kyrgyzstan	The 2015 Treaty of EEU governs labour migration in member states. Immigrant workers of the EEU member states do not need a permit to engage in labour activities in Kyrgyzstan. They are eligible for the same treatment of social security, and currently treaties on mandatory payment of pension contributions and on the portability of pension benefits are being drafted (Eurasian Economic Commission, 2016). Pursuant to the EEU Treaty, Kyrgyzstan recognises diplomas and other education certificates issued in the member states without a recognition procedure. Regulated professions (teachers, lawyers, medical and pharmaceutical personnel) are not included under this provision.
SICA (<i>Sistema de la Integración Centroamericana</i> or Central American Integration System)	Costa Rica and the Dominican Republic	SICA created the Central American Commission of Migration Directors (<i>Comisión Centroamericana de Directores y Directoras de Migración</i>) in the framework of the Central American Economic Action Plan. This body is in charge of managing and improving regional measures on migration systems as well as integration process (Olmos Giupponi, 2017). It contributed to “obtaining and processing migration information, training officials of the Migration Directorates of member countries”, harmonising entry requirements for immigrants, and fighting against migrant smuggling and human trafficking (IOM website). ¹¹ Its action plan focuses on migration policies and management, human rights and development. Despite the principal of free circulation, immigrants from SICA member states are required to have valid visa to enter Costa Rica (Roberto Perez, 2013).
MERCOSUR (<i>Mercado Común del Sur</i> or Common Market of South America)	Argentina	The 2002 Free Movement and Residence Agreement grants MERCOSUR citizens an automatic visa and a work permit with certain conditions and helps regularise unauthorised immigrants (Jachimowicz, 2006). In addition, several agreements have been signed in terms of integration to facilitate immigration in this intraregional bloc. However, despite these advances among the MERCOSUR member states, immigration rates and the inclusion of immigrants in the destination countries remain limited (Siciliano, 2013).
ECOWAS (Economic Community of West African States)	Côte d'Ivoire Ghana	The 1979 ECOWAS Protocol relating to the Free Movement of Persons, the Right of Residence and Establishment and its supplementary protocols set the legal framework on migration within West Africa. The 2008 ECOWAS Common Approach on Migration is the most recent framework, but legal instruments have only partially been implemented; the different levels of economic development, inadequate infrastructure and differences in migration and customs laws and currencies hamper regional mobility integration (ICMPD and IOM, 2015). Since 2007, ECOWAS member states' nationals are requested to not hold a stay or residence permit to reside in Côte d'Ivoire (Konan, 2009).
EAC (East African Community) CEPGL (Economic Community of the Great Lakes Region)	Rwanda	EAC members have the right of establishment and work in Rwanda. The 2010 EAC Common Market Protocol strengthened the free movement of labour and capital and harmonised domestic laws accordingly. As a result, an increasing number of skilled experts target Rwanda's emerging economy. As the Democratic Republic of the Congo is one of the CEPGL's three members, its citizens are visa exempt for stays in Rwanda of less than 90 days. EAC citizens do not need to undergo an examination or evaluation of qualification papers in certain sectors.
AU (African Union)	Côte d'Ivoire Ghana Rwanda South Africa	The AU adopted the Migration Policy Framework for Africa (2006), the Joint European Union-AU Declaration on Migration and Development (2006) and the Joint Labour Migration Programme (2015).
SADC (Southern African Development Community)	South Africa	South Africa supported the adoption of the Protocol on the Facilitation of Movement of Persons in 2005. Although this protocol has not yet entered into force, ¹² the right of establishment and settlement of other SADC nationals remain part of national immigration regulations of each member state. The SADC adopted a standard migration module for harmonising labour force surveys, through the Action Plan on Labour Migration for 2013-2015, renewed until 2019. It also adopted the 2014 SADC Labour Migration Policy Framework and the Protocol on Employment and Labour promoting the protection of migrant workers. However, none of these are binding instruments.

International conventions

Not all partner countries have ratified the international conventions related to international migration. Nepal and Thailand in particular appear non-committed to international institutions in the area of migration (Table 2.3). Kyrgyzstan is the only partner country to have ratified an international convention on migrant labour. Argentina, Costa Rica, the Dominican Republic and South Africa have ratified the Convention on Domestic Workers

2011 (C189), but these countries remain weak in terms of concrete protection measures for immigrant domestic workers.

International conventions play an important role in protecting the rights of immigrant workers. They facilitate immigrants' integration into the labour market and thus maximise their economic contribution in the destination country.

Table 2.3. **Not all partner countries have ratified the international conventions on migration**

Ratification of major legal instruments related to international migration

	ILO C097 on Migration for Employment (1949)	ILO C143 on Migrant Workers (1975)	International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990)	C189 – Domestic Workers Convention (2011, entry into force 2013)
Ratified	Kyrgyzstan		Argentina, Ghana, Kyrgyzstan, Rwanda	Argentina, Costa Rica, Dominican Republic, South Africa
Submitted, not yet ratified	Argentina, Costa Rica, Dominican Republic, South Africa, Thailand	Argentina, Costa Rica, Côte d'Ivoire, Dominican Republic, Ghana, Nepal, Rwanda, Thailand		

Source: ILO (undated), Normlex database for the ILO conventions, <http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:1:0::NO.> and OHCHR (undated), *Status of Ratification Interactive Dashboard*, <http://indicators.ohchr.org/>.

Conclusions and remaining challenges

This chapter described how the various immigration patterns, drivers of immigration and policy environments among the ten partner countries contribute to how immigrants and their families integrate into both the labour market and society as a whole. The comparative analysis highlighted the importance of labour immigration and its major drivers, including income differentials, different skills set requirements due to structural changes and the economies' high degree of informality. Different immigration flows and their historical drivers have shaped the policy and institutional provisions relevant to immigration, and in turn those provisions are reshaping the flows and drivers of immigration. This interaction ultimately influences the ways immigrants impact the economies of destination countries.

The analysis in this chapter suggests that responsive and consistent governance of immigration, together with well-coordinated implementing bodies, can maximise the positive impacts of immigration. This is especially the case when governance accommodates the economic changes underway in a country in coherence with its stated development goals. Existing immigration systems and integration policies need to be constantly adjusted to changing economic and demographic conditions (OECD, 2015). This is particularly important for developing countries that are undergoing economic and demographic transitions. Unfortunately, many of the partner countries still lack both a comprehensive national immigration policy that is coherent with other policies, in particular labour policies, and harmonisation between their national immigration policies and the regional integration process.

The following chapter will take a closer look at the labour market outcomes of native- and foreign-born workers. It will show how well foreign-born workers are integrated into the destination countries' labour markets compared to native-born workers. The presence of foreign-born workers changes the shape of labour markets and influences the choices and outcomes of native-born workers, which affect the way immigrants contribute to destination countries.

Notes

1. This estimation is based on the United Nations' 2015 international migrant stock at mid-year by country (United Nations, 2015) and the World Bank's 2015 country classification by income level. United Nations (2015) reports 29% using the 2014 classification. The difference comes from the change of classification between 2014 and 2015. For example, Argentina, Russia and Venezuela became upper-middle-income countries in 2015 while they were high-income countries in 2014.
2. This means that 55% of immigrants from developing countries were living in a high-income country in 1990 and 69% in 2013. These estimations are based on the World Bank data on Global Bilateral Migration 1990 and 2013, using World Bank's country classification by income level in 1990 and 2013 respectively.
3. Strictly speaking returned exiles are not international immigrants, but their reintegration into the Rwandan society has posed challenges similar to the integration of international immigrants into national labour markets. They also brought skills back into the country.
4. The SIGI measures countries' performance on gender inequality related to social institutions. It is composed of five sub-indices: discriminatory family code, restricted physical integrity, son bias, restricted resources and assets, and restricted civil liberties. The index assesses laws, social norms and practices that prevent women from having same access to justice, empowerment opportunities and resources as men (OECD, 2014b).
5. <https://www.theguardian.com/world/2011/dec/22/argentina-open-doors-migrants-settle>.
6. By law, workers have the right to redress if there is any violation in their employment contract but this is not enforced in practice.
7. Thailand extended the work permits of registered immigrant workers whose term expired in 2007 or 2008. The amnesty policy was continued in 2011-14 mostly for immigrants from Cambodia, the Lao People's Democratic Republic and Myanmar.
8. <http://countryoffice.unfpa.org/dominicanrepublic/drive/AnalisisSaludPoblacionExtranjera.pdf>.
9. "Nepalese origin" (without a clear definition) and "ability to speak and write Nepali" were made pre-requisites for acquiring citizenship during the reign of absolute monarchy in Nepal (1960-90). Specifically, Clause (a) of Article 8, Section 2 of the 1962 Constitution requires 2 years of residence for a person of "Nepali origin" and a minimum 12 years of residence for a person of "non-Nepali origin". Oral and written skills in the Nepali language were made mandatory for a person to acquire citizenship.
10. *Jus sanguinis* in this case refers to citizenship granted by descent rather than by being born in the country's territory (*jus soli*).
11. <http://rosanjose.iom.int/site/es/oim-y-ocam>
12. Only Botswana, Namibia, South Africa, and Mozambique have ratified the Protocol.

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Chapter 3

Immigrant integration: Labour market outcomes and human capital

This chapter first reviews indicators on the volume of employment of immigrants in the ten partner countries of the project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination. It then turns to indicators on the nature and quality of employment. The focus is on sectoral and occupational change for both native-born and foreign-born workers. The chapter also examines occupational change based on a demographic decomposition method which allows for various comparisons including those between immigrant workers and native-born entrants to the labour market. Finally, the chapter compares the educational attainment of the native-born and the foreign-born and looks into mismatches between jobs and skills.

The volume and quality of foreign-born employment largely determine the economic contribution of immigrant workers according to the project *Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination*. An immigrant is defined as someone who was born abroad and is currently living in the country of destination (see Chapter 1).

Five of the ten partner countries are classified as upper-middle-income countries (Argentina, Costa Rica, Dominican Republic, South Africa and Thailand), three are lower-middle-income countries (Côte d'Ivoire, Ghana, and Kyrgyzstan) and the remaining two belong to the low-income group (Nepal and Rwanda). Self-employment is more widespread among these countries than high-income countries, and employment in agriculture often accounts for a large share of the workforce. Most of the partner countries have undergone important structural changes in the past 10-15 years, which affect the employment of both native-born and foreign-born workers.

To assess the labour market integration of immigrants in the dynamic context of structural change, this chapter reviews a series of key labour market indicators (ILO, 2016a).¹ The chapter compares outcomes of the foreign-born with those of the native-born, and labour market outcomes of the latter are thus implicitly adopted as the benchmark (OECD/European Union, 2015). In this way, the chapter also sets the stage for the subsequent chapters in this report on the employment impact of immigration (Chapter 4) and the linkages between immigration and economic growth (Chapter 5) and public finance (Chapter 6).

Foreign-born workers, and in particular young workers, often are well-integrated into the partner countries in terms of employment rates. In half the partner countries, foreign-born workers are relatively young and help counter ageing of the workforce to the extent that they constitute a considerable share of the workforce. Nevertheless, the numbers of immigrant workers are low enough in most partner countries for native-born new young entrants to the labour force to drive labour market changes.

At the same time, sectors and occupations of foreign-born workers are usually associated with low quality employment. For example, immigrant workers have a strong presence in low-skill occupations in most partner countries and are typically overrepresented in construction and in accommodation and food service activities. Low levels of education among immigrant workers often result in low-skill employment. A mismatch between skills and jobs is an additional risk for immigrant workers particularly in medium-skill occupations.

The findings in this chapter suggest that the quality of work performed by immigrants and their access to jobs should be of concern to policy makers. Diversifying the sectors immigrants work in and the occupations themselves could improve the quality. Training immigrant workers and reducing mismatches between skills and jobs are other solutions. Equally important is to ensure that unions and other organisations adequately represent migrant workers. In addition, female immigrant workers often face challenges with regard not only to the quality of employment but also to access to employment.

Overall labour force growth

Population growth is an important determinant of the size of the labour force. Among the partner countries, population growth was highest in two of the sub-Saharan African countries, Ghana and Rwanda, at an annual rate of 2.7%. It was lowest in Argentina and Thailand, at 1.0 and 0.7%, respectively. These rates apply to the periods listed in Table 3.1, and most of the analysis in this chapter focuses on these periods.²

Average annual growth rates of the foreign-born labour force exceeded those of the native-born labour force in most of the partner countries. The exceptions were Côte d'Ivoire, Kyrgyzstan and Nepal. Thailand experienced the highest growth rate (29.1%) as the foreign-born labour force increased from 144 000 people in 2000 to 1.8 million in 2010. The foreign-born labour force reached 1.6 million in South Africa in 2011, over 1 million in Côte d'Ivoire in 2008 and 0.9 million in Argentina in 2010. The number of foreign-born workers in each of the remaining countries did not exceed a quarter of million around 2010. The foreign-born population accounted for less than 5% of the population in all countries except Costa Rica and Côte d'Ivoire. Kyrgyzstan and Nepal experienced annual declines in the foreign-born labour force due to declining foreign-born labour force participation rates.

The increase in the immigrant labour force affected the growth rates of the native-born labour force and the overall labour force in the partner countries differently. In the Dominican Republic, South Africa and Thailand, the growth rates of the native-born labour force rose significantly. In Argentina, Nepal and Rwanda, the native-born rates equalled those of the total labour force, indicating a limited influence by immigrants. In the remaining countries, the difference between the growth rates of the native-born and overall labour forces was small (0.2 percentage points or less in Costa Rica and Ghana) or negative (in Côte d'Ivoire and Kyrgyzstan).

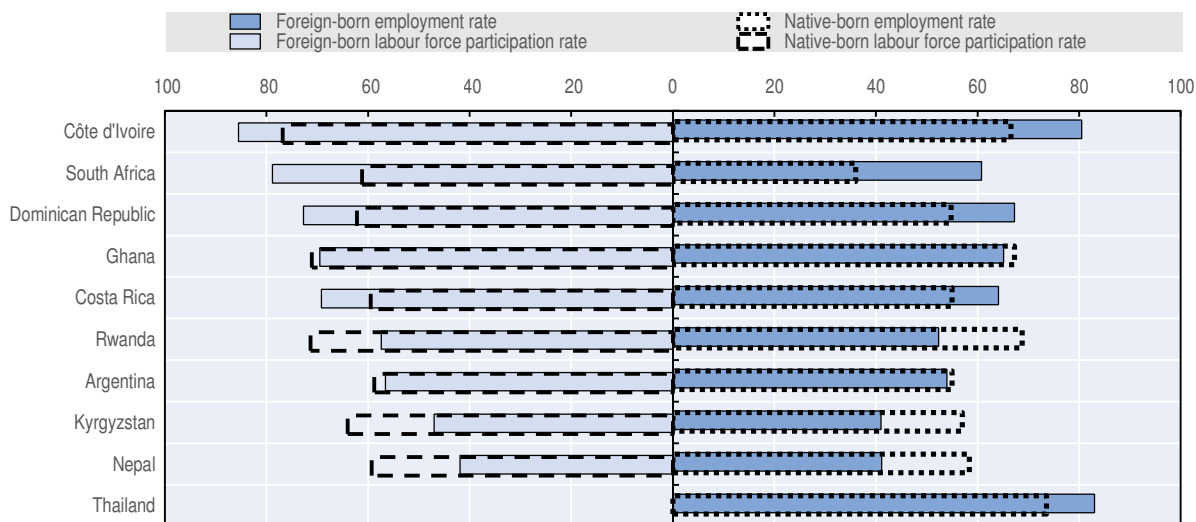
Immigrant workers often have access to employment

Immigrant workers are often well-integrated into labour markets in terms of labour force participation and employment and unemployment rates. The employment rate for the foreign-born population exceeds the rate for the native-born in five of the partner countries (Costa Rica, Côte d'Ivoire, Dominican Republic, South Africa and Thailand), and the difference between the rates is minimal in two others (Argentina and Ghana) (Figure 3.1). However, in Kyrgyzstan, Nepal and Rwanda, employment rates are considerably lower for foreign-born workers, and labour force participation rates follow the same pattern. The relatively high employment rates of foreign-born workers in most partner countries contrast with relatively low rates in many high-income countries.³ Relatively high employment rates of the native-born in some countries, including Nepal and Rwanda, may be due to the low incomes per capita and a dominant role of agricultural employment.

Employment rates in all partner countries are lower for women than for men, and in some countries the rates differ according to whether they are foreign- or native-born (Figure 3.2). For example, in Ghana and Nepal foreign-born women have a much lower employment rate than native-born women, while the opposite is true for men in Nepal and to some extent in Ghana. The difference between female foreign-born and native-born employment rates is negligible in Côte d'Ivoire and the Dominican Republic, while there are large differences in the corresponding male employment rates in these countries.

Figure 3.1. **Foreign-born workers' employment and participation rates often exceed those of the native-born**

Labour force participation rate and employment-to-population ratio for foreign-born and native-born workers, most recent time period (%)



Note: No labour force participation data are available for Thailand. For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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Table 3.1. **Immigrant labour force growth usually exceeds native-born labour force growth**

Annual growth rates of the population and labour force by place of birth

	Time periods	Foreign-born population (latest year, %)	Annual population growth (%)	Annual labour force growth (%)		
				All	Native-born	Foreign-born
Kyrgyzstan	1999-2009	4.5	1.7	1.9	2.4	-5.2
Nepal	2001-11	1.9	1.5	0.9	0.9	-2.7
Côte d'Ivoire	1995-2008	7.1	2.6	4.1	4.5	1.7
Costa Rica	2000-11	9.1	1.1	2.3	2.1	3.4
Argentina	2005-15	4.4	1.0	2.9	2.9	3.5
Rwanda	2002-12	3.1	2.7	2.4	2.4	3.6
Ghana	2000-10	1.3	2.7	2.7	2.6	8.5
South Africa	2001-11	4.2	1.8	2.4	1.9	8.9
Dominican Republic	2002-10	4.2	2.1	0.2	-0.4	16.7
Thailand	2000-10	3.8	0.7	1.5	1.0	29.1

Note: Labour force data for Thailand are not available and therefore refer to employment only.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

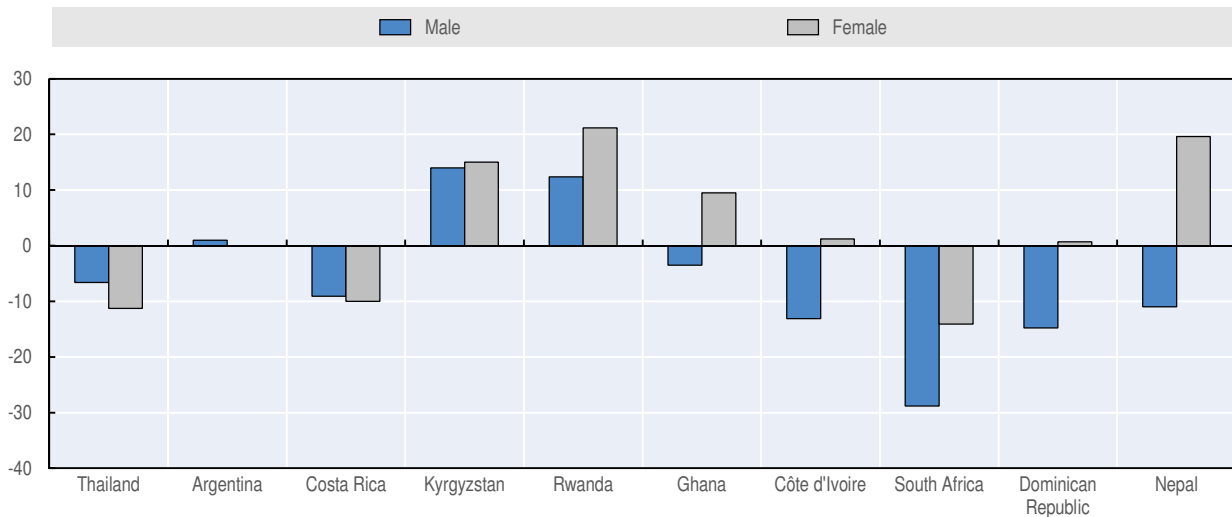
Unemployment rates are often relatively favourable for foreign-born workers. The rate is higher for native-born workers in four partner countries (Argentina, Côte d'Ivoire, Dominican Republic and South Africa), while differences between the two groups are small in Ghana and Nepal (Figure 3.3). In Costa Rica, the two unemployment rates were the same (7.5%). South Africa demonstrated the highest unemployment rates for both the native-born (41.1%) and the foreign-born (22.8%) and also showed the largest difference between the two rates.

Several factors can help explain the integration of immigrant workers in terms of employment and unemployment rates. For example, part of foreign-born employment is pre-arranged, temporary or seasonal, and workers do not stay in the countries of destination

beyond the planned end-date. More limited access to or eligibility for social protection including unemployment benefits may also play a role (see Chapter 2). Yet another reason is that groups of immigrant workers are able to tap into networks of people from a particular country of origin, which increases the likelihood of finding employment (see e.g. OECD/ILO (forthcoming a)).

Figure 3.2. **Male foreign-born employment rates are more likely to exceed native-born employment rates than are female rates**

Differences in male and female employment rates by place of birth (native-born rate minus foreign-born rate, percentage points, most recent period)



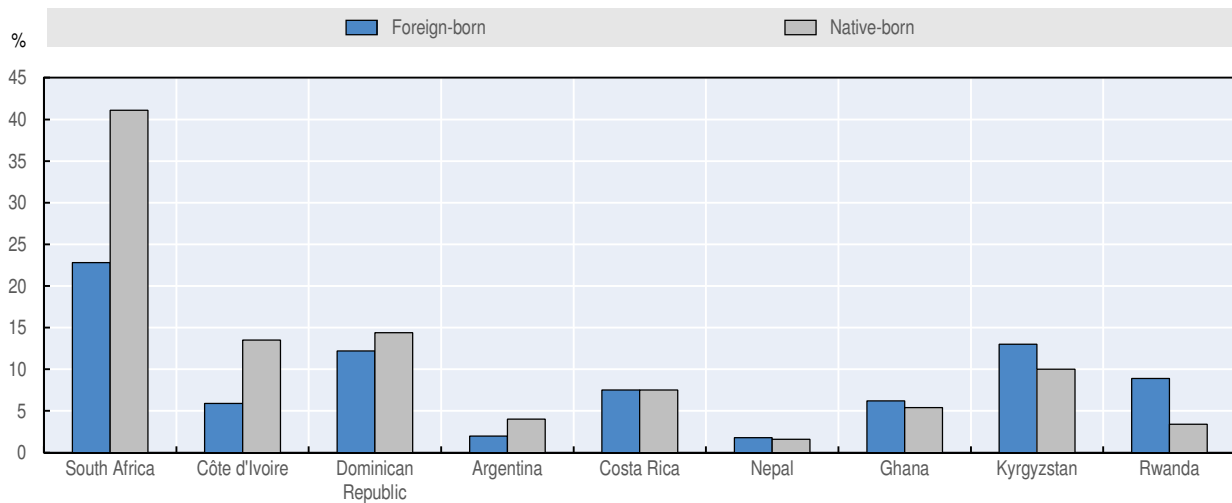
Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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Figure 3.3. **Immigrant unemployment rates are close to or below native-born rates in most countries**

Unemployment rate, by place of birth (%), most recent period)



Note: No unemployment data are available for Thailand. For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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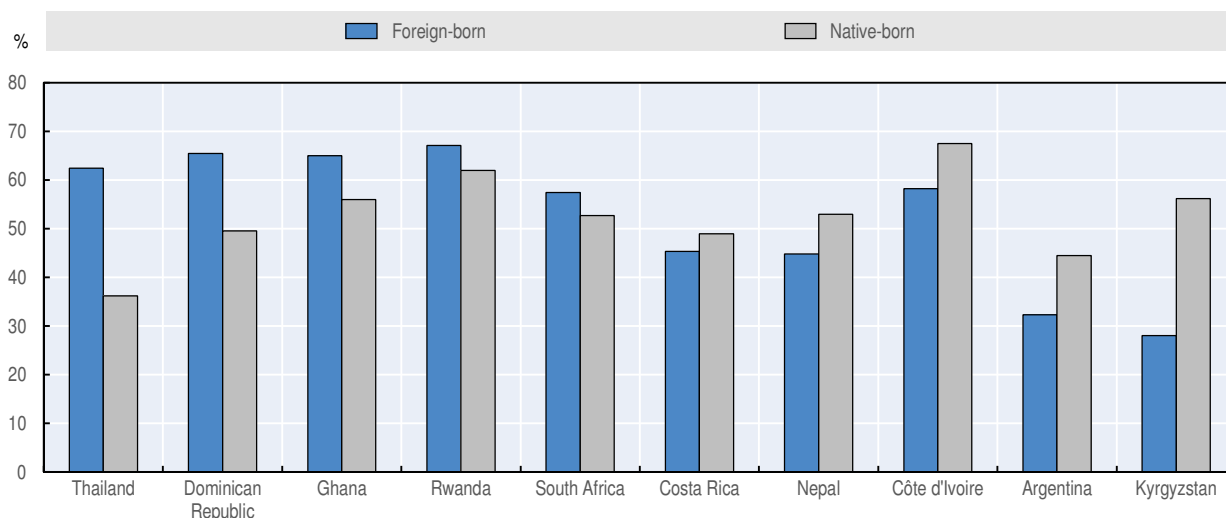
Immigrants could play a role in countering ageing of the labour force in some countries

The total dependency ratio of all countries decreased by 5 to 18 percentage points over the periods indicated in Table 3.1. This ratio is defined as the ratio of people younger than 15 or older than 64 to the population aged 15-64. The decline is largely due to a decreasing share of people aged less than 15 in the population: the child dependency ratio decreased by 6 to 15 percentage points depending on the country. The old-age dependency ratio, on the other hand, remained the same or increased by up to 4 percentage points in all countries except Ghana and Kyrgyzstan, where it fell. Nevertheless, the increase in the old-age dependency ratio did not offset the decline in the child dependency ratio.

Immigration could help counter population ageing and ensure a steady supply of younger workers. According to the United Nations Statistical Department, the total dependency ratio is forecasted to decline within the next 50 years in 5 of the 10 partner countries. However, an increase is expected in Argentina, Costa Rica, the Dominican Republic and Thailand.⁴ In the latter two countries, the share of the foreign-born population aged 15-34 is already relatively large. The same is true in an additional three partner countries that are expecting a decline in their dependency ratios (Ghana, Rwanda and South Africa, see Figure 3.4).

Figure 3.4. Immigrant workers are relatively young in half of the partner countries

Share of the population aged 15-34 in the population of working age (15 and above), by place of birth (% , most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

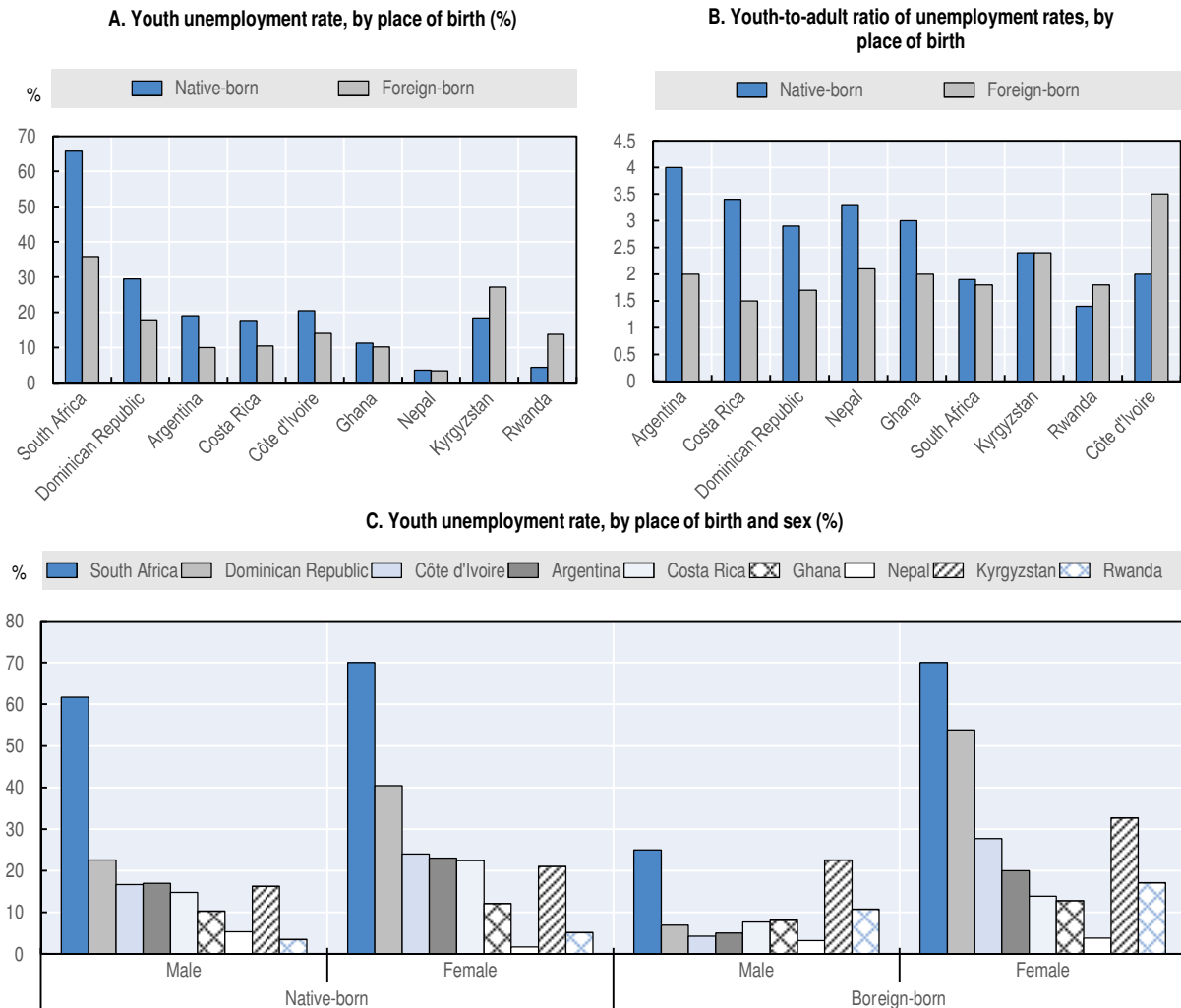
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Youth unemployment is less prevalent among immigrant workers

Youth unemployment is a major concern in most countries around the world. But in the partner countries, it seems less prevalent among immigrant workers than among native-born workers. This again points to labour market integration in terms of access to employment in the partner countries. Only in Kyrgyzstan and Rwanda is the unemployment rate higher for foreign-born youth than for native-born youth (Figure 3.5A). In South Africa, even though levels of youth unemployment are extremely high for all groups of workers, the difference

of unemployment rates between native-born youth (66%) and foreign-born youth (36%) is large as well. Differences between these two groups are not the same for men and women. Although in most countries the male youth unemployment rate is higher for native-born workers, the opposite pattern is seen for female youth (Figure 3.5C). Only in Argentina and Costa Rica are the youth unemployment rates for female native-born workers higher than the rates for female foreign-born workers.

Figure 3.5. **Youth unemployment rates are often lower for foreign-born workers, but not for female youth**



Note: No unemployment data are available for Thailand. For time periods, see Table 3.1. Figures 3.5.A-C are based on the most recent time period for which data was available.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

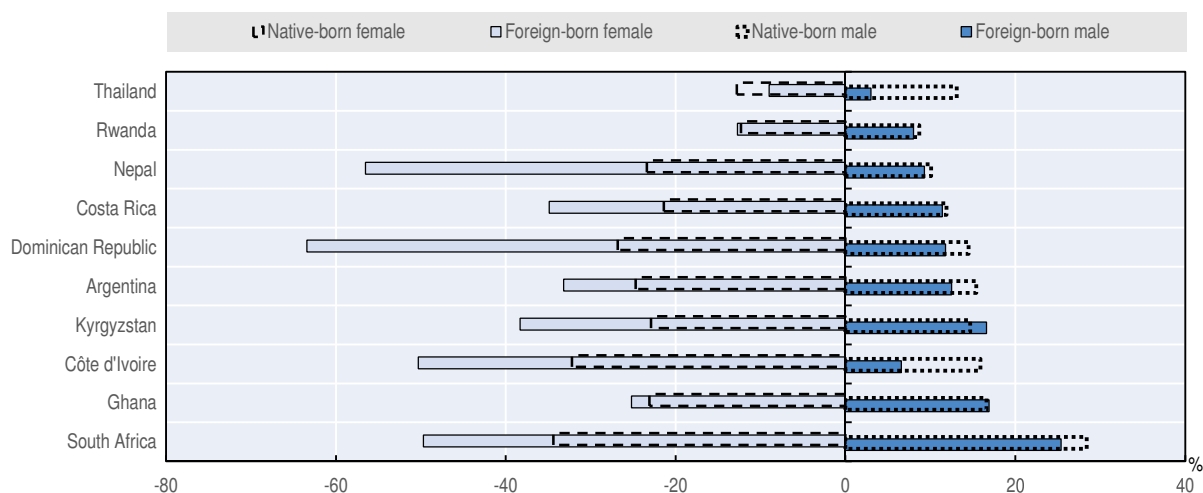
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In addition, the lower youth-to-adult ratio of youth unemployment rates for the foreign-born suggests that foreign-born youth have a relatively favourable labour market position in comparison with native-born youth in most countries (Figure 3.5B). However, this ratio does not take the quality of employment into account, and both native-born and foreign-born youth are at a disadvantage in the labour market compared to adults.

Considering the common activities of youth – work or study – it is worthwhile to look at the share of young people not in education, employment or training (NEET). In most countries, the share is higher for native-born males in comparison with immigrant males, but the opposite is true for females (Figure 3.6). A lower unemployment rate among immigrants can be expected because many migrate to the partner countries in search of employment or arrange employment prior to departure. Lower family incomes or barriers to schooling, for example in terms of language skills, may also force young immigrants to work. Added emphasis should be placed on integrating females, as they tend to occupy more disadvantaged positions, in terms of a number of key labour market indicators, in most partner countries.

Figure 3.6. Rates of young foreign-born males not in education, employment or training are low but not those of foreign-born females

NEET rates, by place of birth and sex (% , most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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Deficits in decent work

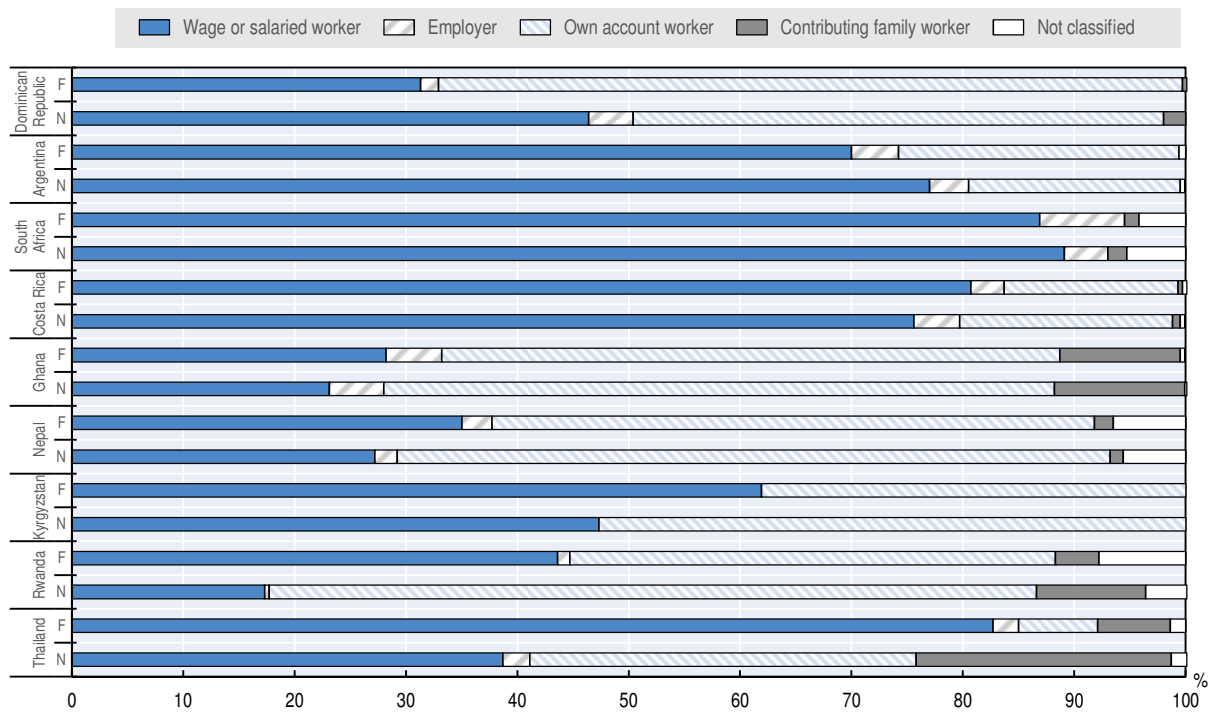
Even though immigrant workers seem to be well-integrated in terms of access to employment, integration in terms of employment quality is usually more challenging. Immigrants often face a lack of decent work. This section examines a number of indicators that are important to identify such deficits.

A widely used method to assess the quality of jobs is to consider the evolution of vulnerable and non-vulnerable employment, which is a distinction based on the classification by status in employment. Vulnerable employment consists of the sum of own-account workers and contributing family workers. These workers are less likely to have formal work arrangements. Particularly in low-income countries, and in the absence of social protection, own-account work often serves as a last resort (ILO, 2016b; Sparreboom and Albee, 2011). Nevertheless, non-vulnerable employment may also fall short of decent work if, for example, an important part of wage employment is casual, informal or of limited duration. Deficits in decent work may also be due to poorly enforced labour standards or employment associated with insecurity, which is often the case with non-standard employment (Box 3.1).

Wage employment is prevalent among immigrant workers but the quality varies

Perhaps surprisingly, in most partner countries vulnerable employment rates for native-born workers exceed those for their foreign-born counterparts in the most recent period. This is due to a relatively high level of wage employment among foreign-born workers (Figure 3.7). In Rwanda and Thailand, the differences in the share of wage employment between the two groups amount to 26 and 44 percentage points, respectively. Exceptions are Argentina and the Dominican Republic, where own account work is relatively prevalent among foreign-born workers. South Africa has the highest rate of wage employment for both native- and foreign-born workers (89.1% and 86.9%, respectively). The lowest rates of wage employment for native-born workers are found in Ghana (23.1%) and Rwanda (17.3%), while the commensurate rates for foreign-born workers in these countries are 28.2% and 43.6%, respectively. In most countries, vulnerable employment decreased over the period under consideration, and foreign-born workers usually benefited to a greater extent than native-born workers (Figure 3.8). One reason for this pattern is the lower dependency of foreign-born workers on employment in agriculture, as will be shown in the next sub-section below.

Figure 3.7. **Wage employment is more prevalent among immigrant workers**
Status in employment by place of birth (% , most recent period)



Note: F = foreign-born; N = native-born. The share of employers in South Africa includes own account workers. For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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The prevalence of wage employment among the foreign-born reflects several factors. These include arrangements for migrant work such as bilateral agreements (e.g. in Thailand), seasonal wage work among migrant workers in border areas (e.g. in Ghana, South Africa and Thailand) and restrictions on the establishment of enterprises by immigrant workers

(e.g. in Ghana). Nevertheless, the share of employers is relatively high for foreign-born workers in about half of the partner countries, pointing to significant contributions by immigrants to entrepreneurship, in particular in Argentina, Nepal and Rwanda. It therefore appears that own-account work and contributing family work serve less as employment of last resort for foreign-born workers than is often seen, particularly in low-income economies (Sparreboom and Albee, 2011). Only in Nepal is the share of contributing family workers among the foreign-born (marginally) higher than among native-born workers.

Nevertheless, foreign-born workers frequently earn lower wages and have poorer working conditions. For example, foreign-born workers face wage penalties in countries such as Argentina and South Africa (see Chapter 4). Immigrants may also suffer from their concentration in particular sectors and occupations as discussed below.

Figure 3.8. **Immigrant workers benefit from a decrease in vulnerable employment in most partner countries**



Note: Time periods correspond to those in Table 3.1 except for Argentina (2010-15).

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

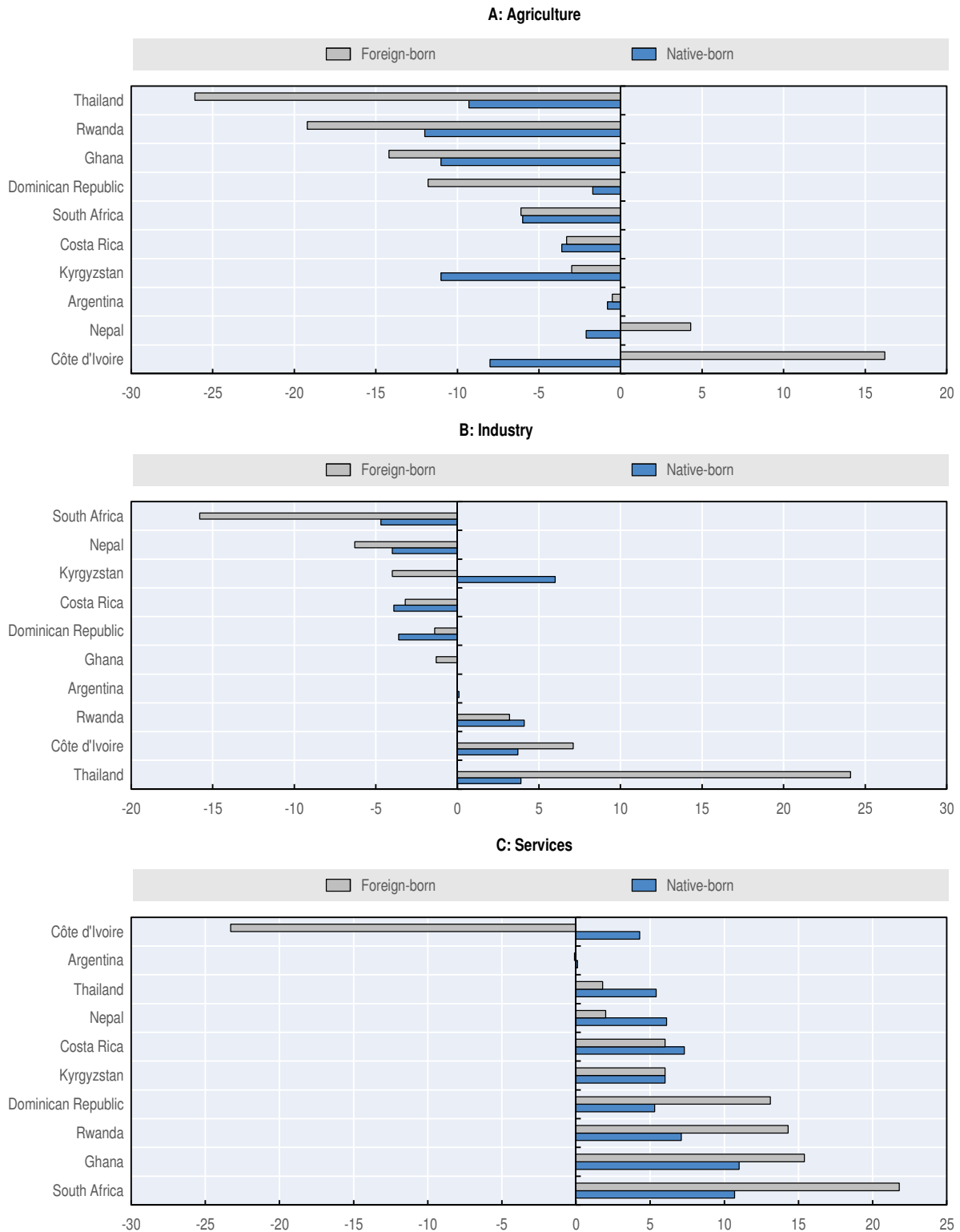
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Immigrants increasingly work in the service sector

The standard development discourse suggests that, with economic growth, the vulnerable employment rate declines and own-account work in traditional, subsistence agriculture gives way to wage employment in industry and services (ILO, 2016a). Agriculture has indeed become less important for both native-born workers and foreign-born workers in all partner countries except Côte d'Ivoire and Nepal (Figure 3.9A). In these countries, employment in agriculture increased for foreign-born workers, although it decreased for native-born workers, considerably so in Côte d'Ivoire. Employment in industry rose in several countries (Figure 3.9B).

Employment in services increased for native-born workers in all countries and for foreign-born workers in all except Argentina and Côte d'Ivoire (Figure 3.9C). In four countries – the Dominican Republic, Ghana, Rwanda and South Africa –, growth in services was considerably greater for foreign-born workers than for native-born workers. In another two – Argentina and Kyrgyzstan –, there was little difference between the two groups, implying a growing role of employment in services for foreign-born workers.

Figure 3.9. Employment in services has increased, in particular for immigrant workers
 Changes in broad sectoral employment shares (percentage points)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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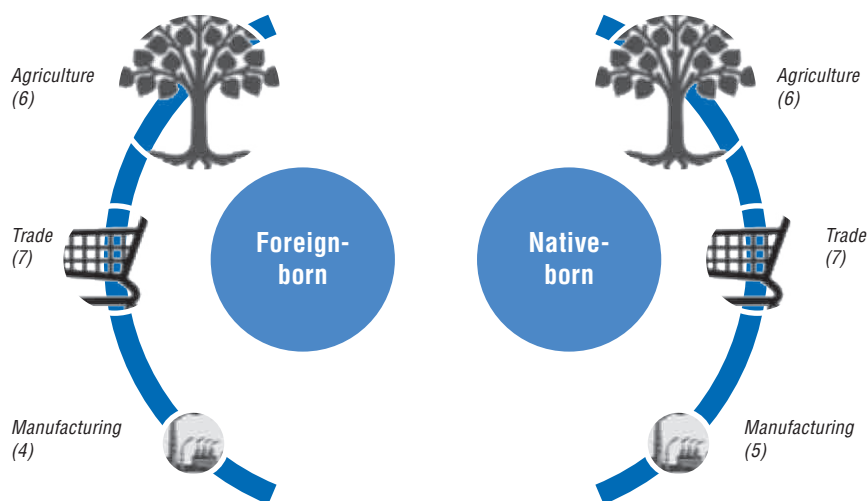
The reasons for the relative importance of employment in services for foreign-born workers are likely to be country-specific. In Rwanda, for example, foreign-born workers are highly-educated and are in demand in the expanding services sector (OECD/ILO, forthcoming d). In Ghana, the services sector has been showing strong growth and for this reason attracted immigrant workers. This contrasts with Argentina, where the economy has demonstrated less structural change and immigration has probably been linked to a lesser extent to growth in particular sectors (OECD/ILO, forthcoming a and b).

Although agriculture is becoming less important, it employs the largest number of workers in most partner countries (Figure 3.10 and Annex 3.A3). In Côte d'Ivoire, Ghana, Kyrgyzstan, Nepal and Rwanda, both foreign- and native-born workers are primarily employed in this sector. In these countries, agriculture employs 42% to 61% of native-born workers, while this share ranges from 31% to 48% for the foreign-born.

In the remaining partner countries, agriculture is less dominant as a source of employment. In Argentina, the largest shares of both native-born and foreign-born workers are in wholesale and retail trade. In Costa Rica, the Dominican Republic, South Africa and Thailand, the largest sectors differ between native-born workers (trade, trade, private household services and agriculture, respectively) and foreign-born workers (private household services, agriculture, trade and manufacturing, respectively).

Figure 3.10. Among the majority of countries, the largest share of foreign- and native-born workers are employed in agriculture

The three largest sectors of employment, by place of birth (most recent period)



Note: The numbers in the figure represent the number of partner countries concerned. For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

Foreign-born workers are often employed in sectors prone to non-standard employment

Globally, immigrant workers are more likely to be employed in certain sectors such as construction, seasonal agricultural work, private household services, hotel and restaurant services, and the cleaning sector (ILO, 2016c). Indeed, the private household service sector featured in the top five sectors having the largest gap in the employment shares

of foreign-born workers compared with native-born workers in six of the ten partner countries. The same was true for trade and construction in seven and six countries, respectively (Table 3.2). These are also sectors with a high incidence of non-standard employment (ILO, 2016c).

Non-standard employment differs from standard employment in one or more arrangements, such as the time periods or number of parties involved. Non-standard employment is often associated with insecurity, for example if it is casual or temporary, including temporary agency work, or is involuntarily limited in hours (part-time). One reason why many immigrants are subject to non-standard employment is their initial recruitment by international temporary employment agencies. Such agencies play a prominent role in arranging employment for immigrants in, for example, South Africa and Thailand (OECD/ILO, 2017b and forthcoming e). Other reasons are the lack of language skills and the lack of social and professional networks which prevents immigrants from identifying standard jobs that are available (ILO, 2016c). Box 3.1 illustrates the prevalence of non-standard employment in the partner countries.

Table 3.2. Immigrant workers have a strong presence in construction, trade and private household services

Sectors in which immigrants are overrepresented (most recent period)

Argentina	Costa Rica	Côte d'Ivoire	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Private household services	Private household services	Wholesale and retail trade	Agriculture, forestry, fishing and hunting	Wholesale and retail trade	Manufacturing	Wholesale and retail trade	Wholesale and retail trade	Wholesale and retail trade	Manufacturing
Construction	Agriculture, forestry, fishing and hunting	Manufacturing	Construction	Other services	Other services	Manufacturing	Public administration and defence	Construction	Private household services
Wholesale and retail trade	Accommodation and food service activities	Other services	Accommodation and food service activities	Private household services	Wholesale and retail trade	Other services	Education	Accommodation and food service activities	Construction
Manufacturing	Construction	Construction	-	Real estate	Transportation and communication	Private household services	Health and social work	Private household services	Electricity, gas and water
Accommodation and food service activities	Mining	Agriculture, forestry, fishing and hunting	-	Mining	Education	Education	Other services	Agriculture, forestry, fishing and hunting	Mining

Note: The table shows those sectors for which the difference between the share of the sector in all foreign-born employment and the share of the sector in all native-born employment is greatest. For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a-b and forthcoming a-h).

Native- and foreign-born populations often work in different sectors. One way to summarise differences in their sectoral distributions is to calculate the index of dissimilarity based on differences in their respective employment shares (see Annex 3.A1 for methodological details). This also determines the relative concentration of foreign-born workers in particular sectors. Full segregation between native- and foreign-born workers would result in an index of 1 (or 100%), while a value of 0 (or 0%) would indicate no difference in sectoral distributions of native- and foreign-born workers.

Box 3.1. Non-standard and informal employment of immigrant workers in partner countries

Non-standard employment (NSE) can be defined as employment that deviates in one or more employment arrangements from work that is "... full time, indefinite, as well as part of a subordinate relationship between an employee and an employer" (ILO, 2016c, p. xxi). NSE includes, for example, seasonal, temporary or casual work and part-time work. NSE has become increasingly common in both high-income and developing economies, due to factors associated with globalisation and technological advances, as well as social change (e.g. increased female labour force participation). NSE poses risks for workers and firms, in particular if it is non-voluntary. Workers risk less employment security, less income security, and limited access to representation and social security.

Migrant workers are more likely than other workers to be in NSE. One reason is the fact that a certain proportion of immigrant workers is undocumented in all countries, and this status prevents access to standard jobs on equal footing with native-born workers. Although solid numbers are difficult to find, the numbers of people seeking to regularise their legal status in South Africa and Thailand since 2000 demonstrates that such barriers are significant (see Chapter 2 and OECD/ILO 2017b and forthcoming e).

Cross border employment in Ghana, South Africa and Thailand, which is often seasonal, is another example of NSE. Due to the seasonal character of migration in Thailand, foreign-born workers can often not afford to officially register as immigrant workers if this involves costs (Rukumnuaykit, 2009). Furthermore, non-standard immigrant work arranged through brokers, without a direct relationship between workers and employers, has reportedly been linked to labour exploitation in Thailand (Vasuprasat, 2016).

Labour force survey information in South Africa for 2012 shows that in sectors important for immigrant workers such as construction and trade (see Table 3.2), the proportion of workers with verbal contracts is much higher for foreign-born workers than for native workers. In both sectors, around half of immigrant workers have only a verbal contract (52% in construction and 49% in trade, respectively), compared with 31% of native-born workers in construction and 15% in trade (Statistics South Africa, 2012). Furthermore, in both sectors, union membership is much lower for foreign-born workers than for native-born workers.

In Ghana, at the national level close to 7% of native-born workers had a verbal contract or no contract in 2012, compared to almost 9% of foreign-born workers (GSS, 2013). In the construction sector, which is also important for immigrant workers in Ghana, these percentages are higher for both native-born and foreign-born workers. Foreign-born workers in both low-skill and high-skill occupations are at a particular disadvantage. However, medium-skill occupations show the opposite pattern, with a relatively high percentage of verbal contracts for native-born workers. Similarly, according to labour force survey information for 2008 in Nepal, more than one in five native-born workers had a permanent contract, compared to less than one in ten foreign-born workers.

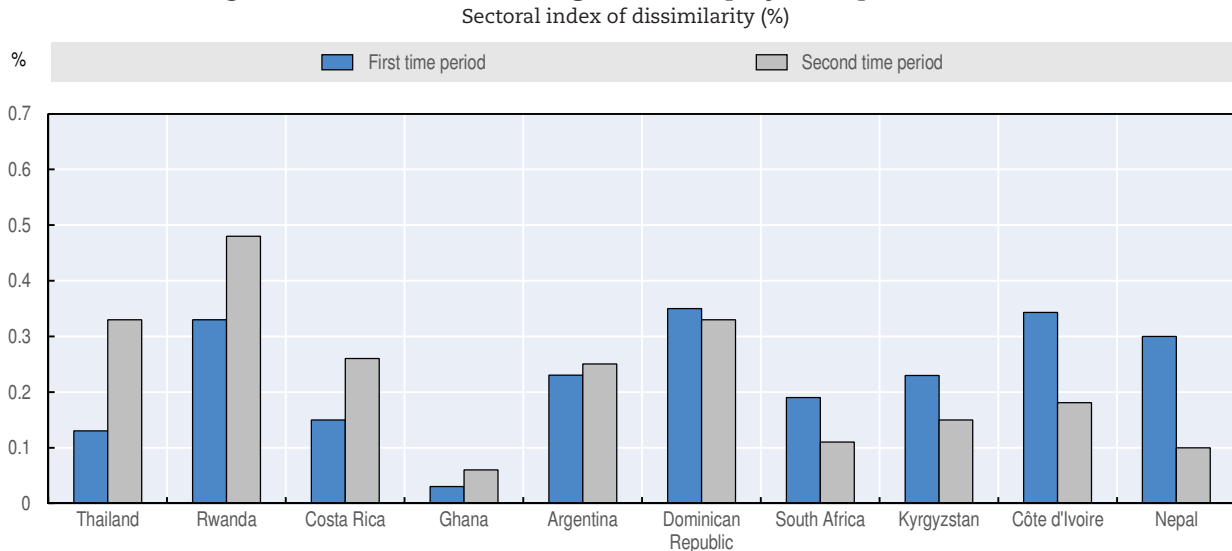
There are overlaps between NSE and informal employment (see ILO, 2016c). According to the guidelines on measuring informal employment adopted by the 17th International Conference of Labour Statisticians in 2003, informal employment includes: (1) own-account workers and employers in their own informal sector enterprises; (2) contributing family workers; (3) members of informal producers' co-operatives; and (4) employees holding informal jobs (ILO, 2003). The guidelines state that "employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.)".

Available data on immigrant workers in the partner countries, which are mostly based on population censuses, suggest that categories (1), (2) and (3) are not necessarily more important for immigrant workers than for native-born workers (see Figure 3.7). But the data generally do not allow for a comparison between native-born and foreign-born workers with regard to informal employment under (4). Estimates of informal employment in Argentina and Côte d'Ivoire show a higher rate of informal employment among immigrants than among native workers (OECD/ILO, forthcoming a and f).

Sectoral dissimilarity in the most recent period was at least 25% in five countries (Argentina, Costa Rica, Dominican Republic, Rwanda and Thailand) and increased in four of them in the periods listed in Table 3.1 (see Figure 3.11). The increase in Thailand, for example, was to an important extent driven by overrepresentation of immigrant workers in manufacturing and the relatively low proportion in agriculture. Whereas in 2000 foreign-born workers accounted for around 1% of all workers in manufacturing in Thailand, in 2010 they represented close to 13%. Manufacturing accounted for more than a third of foreign-born employment (37%), compared with a share of 12% of Thai-born employment in the most recent period.

Côte d'Ivoire, the Dominican Republic, Kyrgyzstan, Nepal and South Africa experienced a decrease in sectoral dissimilarity, and in Ghana it remained at a low level. The increase in foreign-born agricultural employment in Nepal noted before, together with a decrease in foreign-born employment in manufacturing, accounted for much of the decrease in dissimilarity in this country.

Figure 3.11. **Native- and foreign-born employment patterns differ**



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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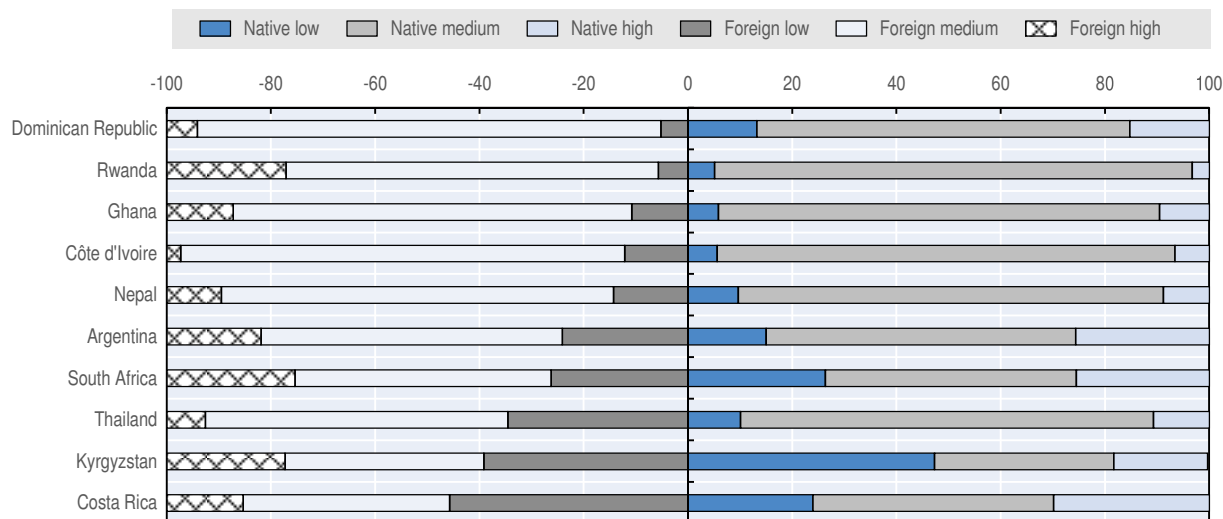
Occupational change

Occupational statistics provide the information on the tasks and duties performed by workers which serves to identify changes in the skills needs in the labour force. Following ILO (2014), this chapter distinguishes between low-skill occupations (e.g. farm labourers), medium-skill occupations (e.g. service workers) and high-skill occupations (e.g. professionals).⁵ The relative importance of these three groups differs across the partner countries, reflecting factors such as the structure of the economy and labour market. The share of low-skill occupations is low in native-born employment in Côte d'Ivoire, Ghana, Nepal and Rwanda, and only in Kyrgyzstan and South Africa does it account for more than a quarter of the employed. Medium-skill occupations account for the large majority of native-born workers in all partner countries except Costa Rica, Kyrgyzstan and South Africa.

In Côte d'Ivoire, Ghana, Nepal and Rwanda, the share of high-skill occupations in native-born employment is below 10%. However, high-skill occupations account for more than a quarter of workers in Argentina, Costa Rica and South Africa (Figure 3.12).

Figure 3.12. Foreign-born workers are often overrepresented in low-skill occupations

Employment shares by place of birth and occupational skill level (% , most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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The native-born distribution is usually quite different from the foreign-born. In particular, in comparison with the native-born, foreign-born workers are overrepresented in low-skill occupations in most of the partner countries (see Figure 3.12). The exceptions are the Dominican Republic, Kyrgyzstan and South Africa. Costa Rica and Thailand show the largest gaps in the shares of employment in low-skill occupations between two groups of workers. In Thailand the difference is almost 25 percentage points: almost 35% of foreign-born workers are in low-skill occupations, compared with 10% of native-born workers.

Foreign-born workers in high-skill occupations are overrepresented in Ghana, Kyrgyzstan, Nepal and Rwanda. In Rwanda, high-skill occupations account for 23% of foreign-born workers, compared to 3% of native-born workers.

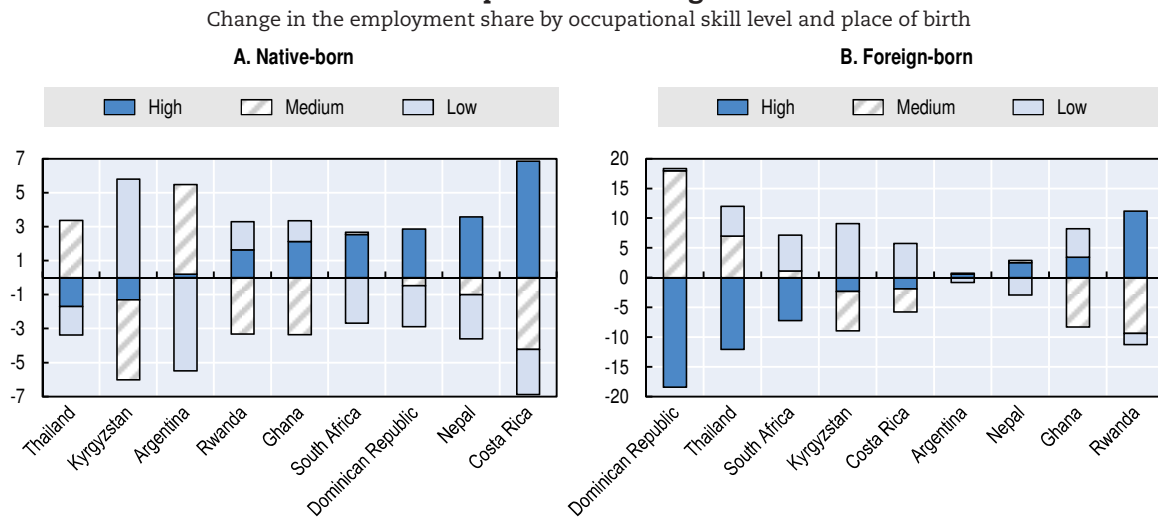
Globally, the share of high-skill occupations tends to increase, driven by several factors including globalisation, technological change and policy choices (ILO, 2015a). Partner countries mostly follow the same pattern, with the exceptions of Kyrgyzstan and Thailand (see Figure 3.13A). At the same time, the share of low-skill occupations in native-born employment declined in all countries except Ghana, Kyrgyzstan and Rwanda. By contrast, the share in foreign-born employment increased in six out of nine countries, and the share of high-skill occupations decreased in five countries (Figure 3.13B).

Immigrant workers play a limited role in facilitating occupational change in most countries

This subsection examines how the employment in different occupational groups is evolving over time and the contribution of immigrants to this evolution. The analysis suggests that the entry of young workers into the labour market largely drives employment growth

in partner countries. It also demonstrates that immigrant workers are overrepresented in occupational groups that are not dynamic or declining over time.

Figure 3.13. **In contrast to native-born workers, foreign-born workers' shares in low-skill occupations tend to grow**



Note: The change in the employment share by occupational skill level and place of birth could not be computed for Côte d'Ivoire due to data limitations.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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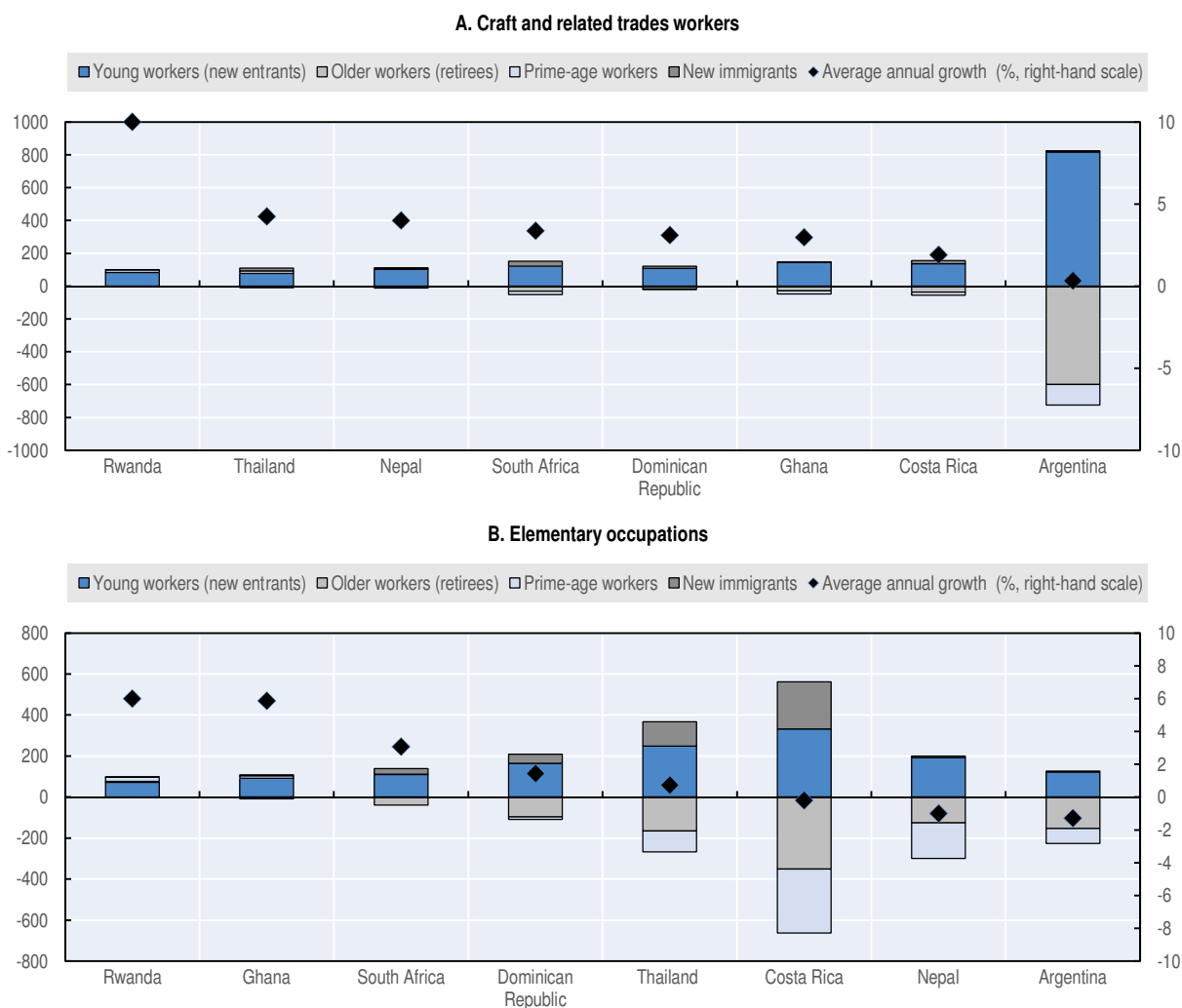
The analysis is based on a demographic accounting framework, which decomposes the net occupational change over the periods listed in Table 3.1 into contributions from young workers (new entrants), new immigrants (i.e. immigrants who have been in the country for less than ten years⁶), prime-age workers and older workers (retirees). These age-related components of the net change are estimated by comparing the situation of so-called “pseudo age cohorts” between two periods (see Annex 3.A2 for methodological details). First, the analysis focuses on two particular major occupational groups. They are the groups where the difference between the numbers of new entrants to the labour force and the numbers of new immigrants is smallest. Second, it looks at the number of growing occupational groups with a relatively large share of new immigrants.

The two occupational groups with the smallest difference between new entrants and new immigrants are craft workers (such as workers in building, metal or electrical trades) and workers in elementary occupations (such as cleaners and agricultural labourers). For these groups, employment growth was positive in all countries except Argentina. For both Costa Rica and Nepal, employment growth was negative for elementary occupations and positive only for craft and related trades workers (Figure 3.14A and B). New immigrants contribute considerably to the employment growth of these occupations in several countries. For example, new immigrants contributed about half as much as new entrants to the growth of elementary occupations in Thailand, and a quarter as much as new entrants in the Dominican Republic. Nevertheless, even in these two groups employment growth in all countries is driven mostly by the entry of young workers and the role of immigrant workers is limited.

In most partner countries, the number of growing occupational groups in which new immigrants are more strongly represented than new young entrants to employment is small (Figure 3.15). Argentina, Costa Rica, the Dominican Republic, Nepal and South Africa had only one growing occupational group with relatively strong inflows of new immigrants, while Thailand had two. Ghana had four such groups, while Rwanda had five. Across all occupations, Rwanda also had the largest difference between the share of new immigrants in growing occupations and the commensurate share of new young entrants (46.7 percentage points, see Annex 3.A3). In contrast, new immigrants in the Dominican Republic and South Africa were far more likely to enter into declining occupations than new young entrants.

Figure 3.14. **Most of the occupational growth is due to young workers**

Demographic components of net occupational change in selected occupations (%)



Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

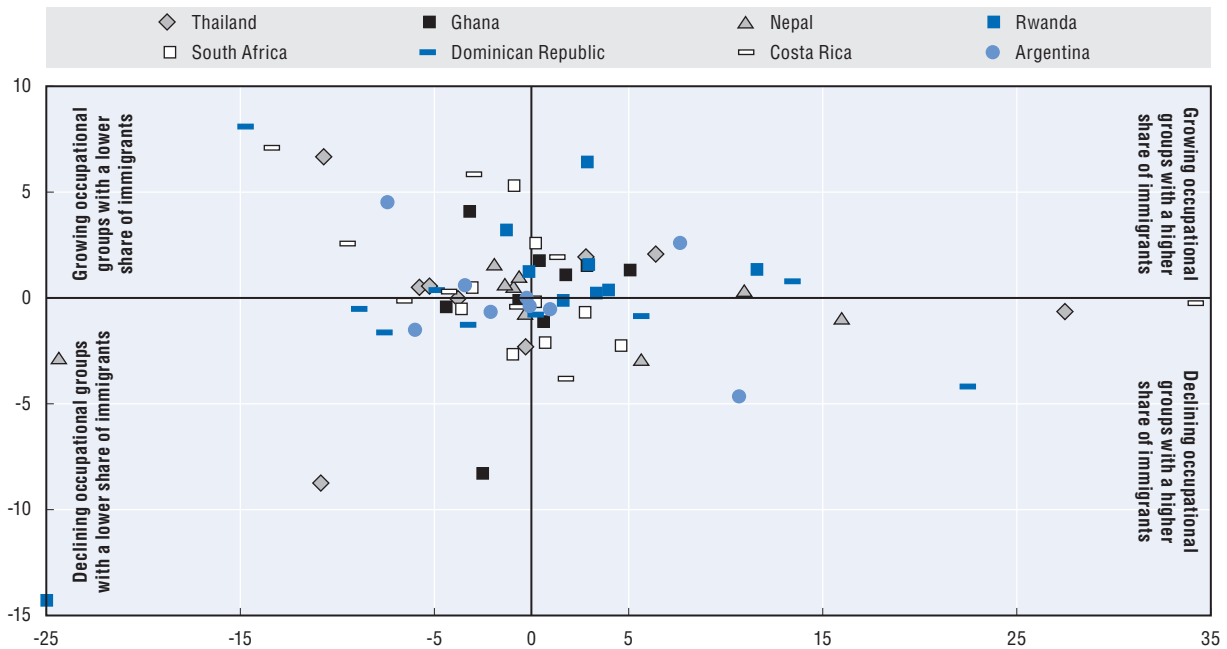
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As occupational groups evolve in partner countries, it appears that immigrants remain in the same occupations and do not move to those where new entrants are moving. In most partner countries, neither the development of the occupational distribution of foreign-born workers, nor the inflow of new immigrants into the labour force, accords with the occupational

development of the native-born workforce. Differences between the two groups reflect at least to some extent complementarities between the native- and foreign-born workforces, but at the same time may reinforce segmentation of the labour market over time.

Figure 3.15. **Occupational patterns differ between new immigrants and new entrants to employment**

Entry of new immigrants in comparison with new entrants to employment into growing and declining occupational groups, by country (percentage points [horizontal axis] and annual growth rates in per cent [vertical axis])



Note: For each of the nine major occupational groups (ILO, 2016a), the figure shows the difference in the share of new immigrants minus the share of new entrants on the horizontal axis, while the change in the employment share over a ten-year period is represented on the vertical axis. A positive difference in shares on the horizontal axis means that proportionally more new immigrants entered the group.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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This segmentation may be unfavourable given that immigrant workers are more likely to be concentrated in low-skill occupations. These low-skilled workers are relatively easily replaced, strongly associated with non-standard employment and typically deprived of bargaining power (ILO, 2015b). The large share of foreign-born workers in low-skill occupations is a particular concern in Costa Rica, Kyrgyzstan and Thailand.

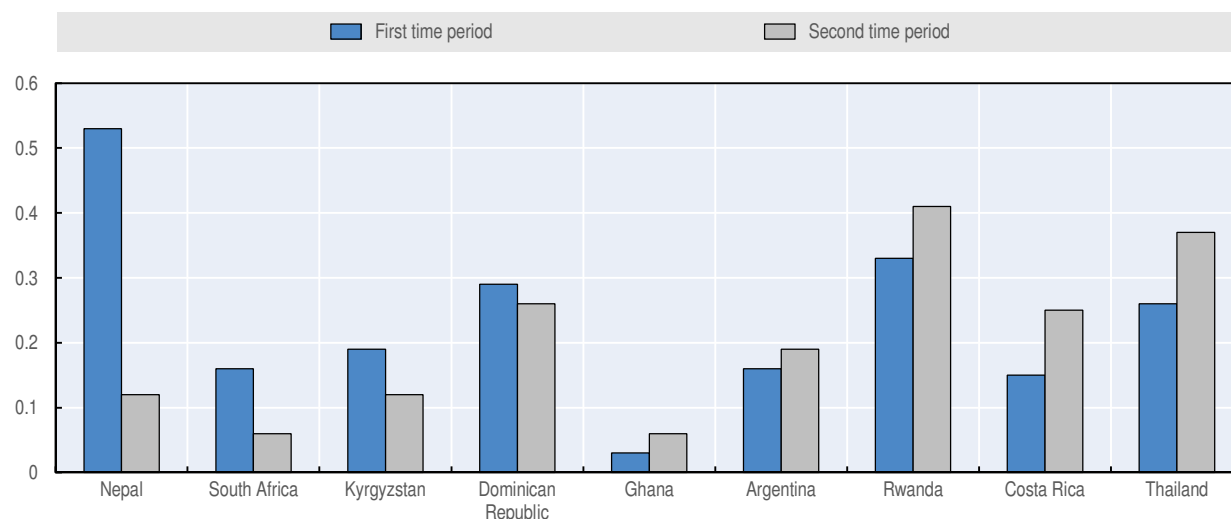
Occupational differences measured by the dissimilarity index are relatively high in Rwanda and Thailand in the most recent period (Figure 3.16), albeit for different reasons. In Rwanda, high-skill occupations are important for foreign-born employment, while in Thailand many foreign-born workers are in low-skill occupations. In Costa Rica, the Dominican Republic, Rwanda and Thailand the index exceeded 20%. Five countries experienced an increase in occupational differences between the periods under consideration. The largest decline was seen in Nepal (Figure 3.16).

In summary, the two major occupational groups where the difference between the numbers of new entrants to the labour force and the numbers of new immigrants is smallest are crafts and elementary occupations. Both of these are growing occupational groups in most partner countries. Similarly, taking all countries together, there are few growing

occupational groups in which new immigrants are relatively strongly represented compared to new young entrants. Finally, the differences between distributions of foreign- and native-born workers across occupational groups increased in most partner countries, though some convergence was also seen.

Figure 3.16. Occupational differences between foreign- and native-born workers are greatest in Rwanda and Thailand

Occupational dissimilarity index, 1st and 2nd period



Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a-b and forthcoming a-h).

StatLink  <http://dx.doi.org/10.1787/888933648936>

Educational attainment

Education and skills of workers influence the patterns of occupational change discussed in the previous section, both for foreign- and native-born workers. This section examines the development of levels of education among foreign-born workers in comparison with native-born workers in the context of changing labour market needs.

Around 2000, on average 45% of workers in partner countries (excluding Côte d'Ivoire) had completed at least a secondary education. In the most recent period (see Table 3.1), this number had increased to 55%. The proportion was lowest in Rwanda, at 12%, and less than 3% had obtained a tertiary education. In Kyrgyzstan and South Africa, on the other hand, more than 80% of workers had obtained at least a secondary education (Figure 3.17).

Overqualification is low in comparison with underqualification

The pattern of educational attainments suggests that the foreign-born workforce is less educated than the native-born workforce in most partner countries, which helps explain the relatively high share of immigrant workers in low-skill occupations. The proportion of foreign-born workers with less than a primary education is relatively high in eight countries, and the share with a secondary education is low in six countries. Furthermore, the number of countries with relatively high shares of primary educated workers is the same as the number with relatively low shares. There are slightly more countries in which the proportion of workers with at least a secondary education is lower for the foreign-born. But in six out of the ten countries the share of tertiary educated workers is higher (Kyrgyzstan, Ghana, Nepal, Rwanda, South Africa and Thailand; see Figures 3.17 and 3.18).

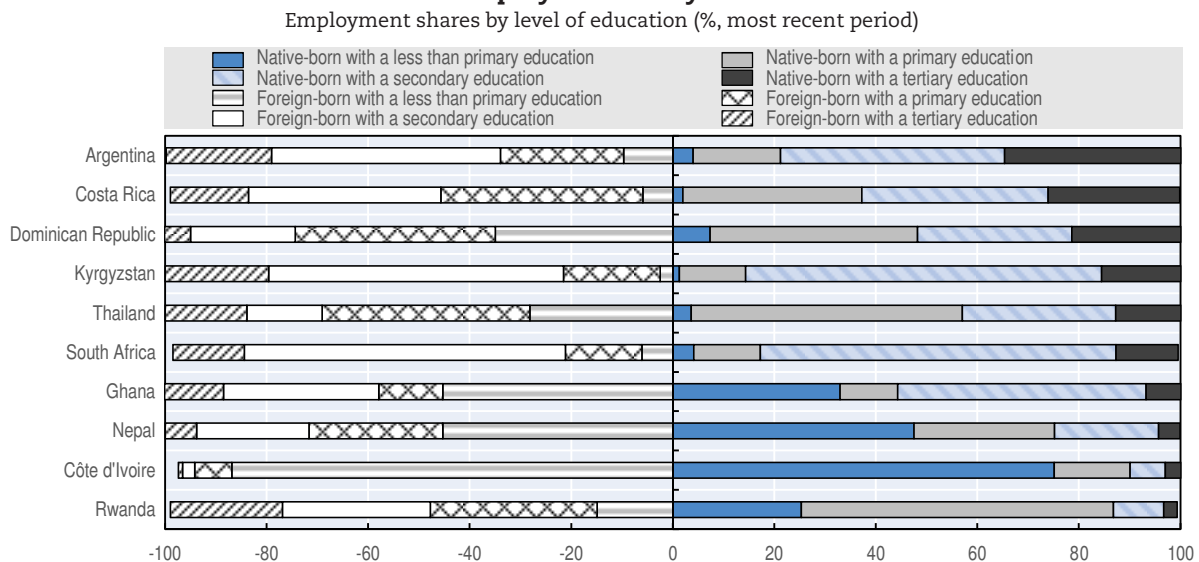
Another reason for the high shares of immigrant workers in low-skill occupations might be a mismatch between their levels of education and their occupations. This is a common type of skills mismatch, and immigrant workers are often found to be at risk in high-income countries (Sparreboom and Tarvid, 2017).⁷ If levels of education of workers do not match the jobs they perform, this mismatch imposes costs on individuals and enterprises. For example, rates of return to education are lower for overeducated workers, and enterprise productivity may suffer or turnover among staff may increase due to skills mismatches among workers.

Based on the normative measure which matches occupations and levels of education (ILO, 2014),⁸ the proportion of overqualified workers in partner countries ranges from 1% to 47%, while underqualification ranges from 12% to 91% (Table 3.3). This means that a considerable proportion of workers have obtained levels of education which are either higher or lower than the skill requirements for their jobs. The relatively high levels of underqualification in comparison with overqualification are to an important extent due to the low levels of education in most partner countries.

Except in the countries with levels of overqualification below 5% (Côte d'Ivoire, Nepal and Rwanda), levels of overqualification are higher for women in all countries and on average exceed the level for men by 3 to 4 percentage points. The average rate of underqualification is lower for women in four countries. Relatively high levels of overqualification and low levels of underqualification for women suggest that men tend to obtain higher-level positions than women with the same level of education. This corresponds to patterns found in high-income countries (Sparreboom and Tarvid, 2017).

However, this is not true for most partner countries with regard to underqualification, which is higher for women in six countries. The relatively large share of underqualified women in agriculture is likely to explain part of this pattern.

Figure 3.17. **Workers with a primary education or less account for large shares of the employed in many countries**



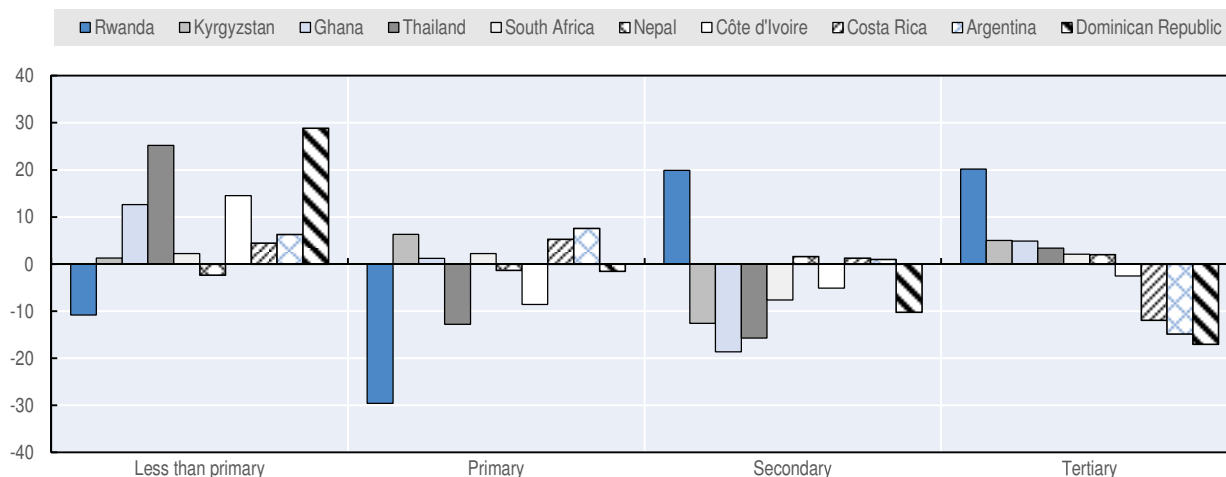
Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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Figure 3.18. Foreign-born workers tend to be less educated than native-born workers but also have a strong presence among the tertiary educated

Differences in employment shares by level of education (foreign-born share minus native-born share, percentage points, most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h).

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Table 3.3. Overqualification is low in comparison with underqualification

Incidence of overqualification and underqualification (percentage of employed population, most recent period)

Country	Overqualification			Underqualification		
	All	Men	Women	All	Men	Women
Argentina	24.1	19.2	30.8	37.8	46.7	25.6
Costa Rica	15.1	12.2	19.7	28.5	34.7	18.8
Côte d'Ivoire	1.8	2.4	0.9	90.8	87.4	95.5
Dominican Republic	13.9	11.4	18.4	37.7	44.6	25.4
Ghana	5.5	5.4	5.6	47.6	40.9	54.0
Kyrgyzstan	46.9	45.5	48.8	11.8	11.5	12.3
Nepal	2.3	3.3	1.1	77.8	71.5	86.1
Rwanda	1.0	1.3	0.7	86.0	82.2	89.5
South Africa	22.4	18.1	27.8	27.6	29.1	25.6
Thailand	8.4	7.8	8.9	54.1	53.3	54.9
Average	14.1	12.7	16.3	50.0	50.2	48.8

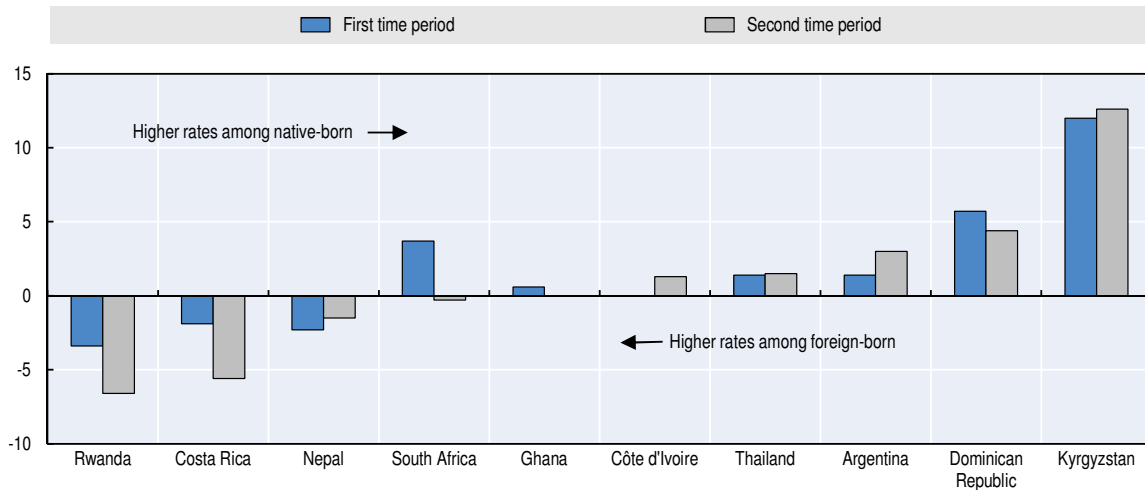
Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h); for Kyrgyzstan the *Life in Kyrgyzstan* data (IZA, 2016) was used.

In the most recent period, foreign-born workers were more likely to be overqualified in Costa Rica, Nepal, Rwanda and South Africa, but less so in Argentina, Côte d'Ivoire, the Dominican Republic, Kyrgyzstan and Thailand (Figure 3.19). At first sight there does not appear to be a consistent pattern of overqualification among the foreign-born, and differences between foreign- and native-born workers seem to be country-specific. Disaggregation by level of skill of the occupations seems to point in the same direction. In almost all countries the overqualification rate for workers in low-skill occupations exceeds the rate in medium-skill occupations, but the pattern is similar for foreign-born and native-born workers (Figure 3.20).

Figure 3.19. **Overqualification is not necessarily greater for immigrant workers at the national level**

Differences in rates of overqualification, by time period (native-born share minus foreign-born share, percentage points)



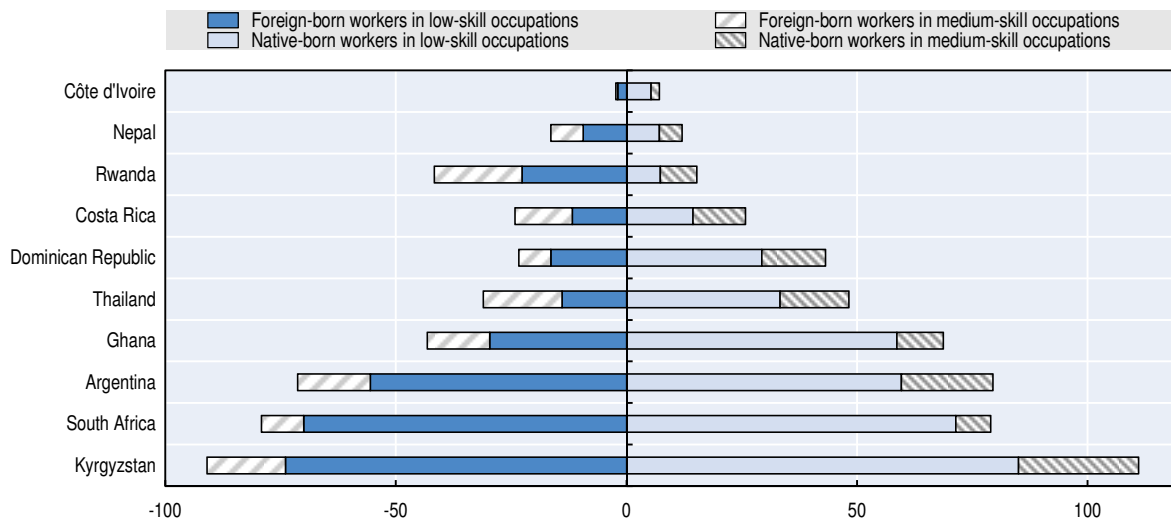
Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h); for Kyrgyzstan the *Life in Kyrgyzstan* data (IZA, 2016) was used for the second time period.

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Figure 3.20. **Overqualification is usually higher in low-skill occupations, but less so for foreign-born workers**

Rates of overqualification by place of birth and occupational skill level (% , most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h); for Kyrgyzstan the *Life in Kyrgyzstan* data (IZA, 2016) was used for the second time period.

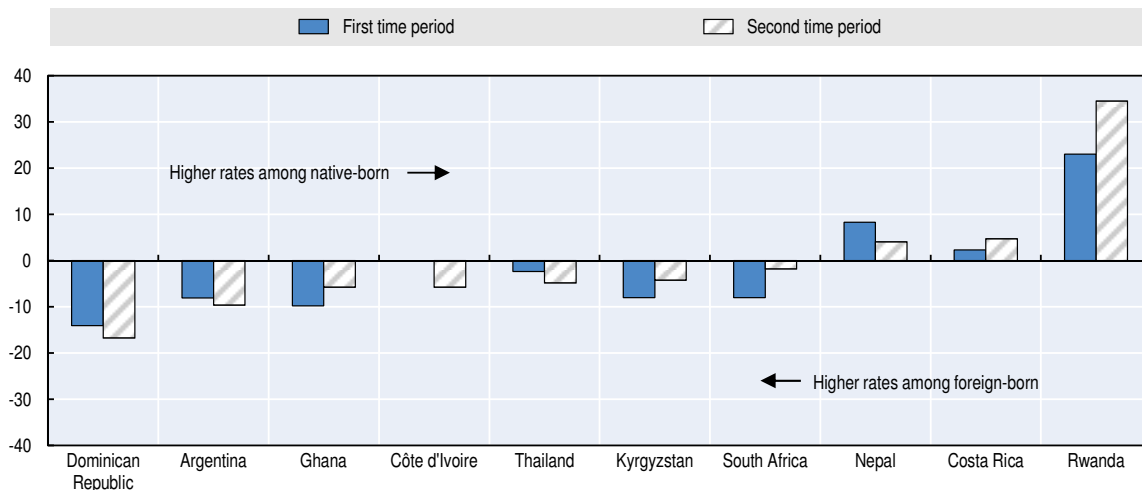
StatLink <http://dx.doi.org/10.1787/888933649012>

In relative terms, overqualification of foreign-born workers seems more of an issue for medium- than low-skill occupations. Overqualification rates of workers in elementary occupations are lower for immigrant workers than for native-born workers in most of the partner countries. One reason is likely that some low-skill jobs are not attractive for native-born workers, and employers are less demanding in terms of formal qualifications. On the other hand, the overqualification rate in medium-skill occupations for foreign born workers

surpasses the rate for native-born workers in six countries (the exceptions are Argentina, Côte d'Ivoire, the Dominican Republic and Kyrgyzstan).

The pattern of underqualification seems clearer than that of overqualification. The rate of underqualification is higher for foreign-born workers in seven of the partner countries (Figure 3.21). Similar to the relatively low rate of overqualification of workers in elementary occupations, the high rate of underqualification of immigrant workers in these occupations may be indicative of dirty, demeaning and dangerous jobs (Figure 3.22).

Figure 3.21. Underqualification rates are higher for foreign-born workers in most partner countries
Differences in rates of underqualification, by time period (native-born rate minus foreign-born rate, percentage points)

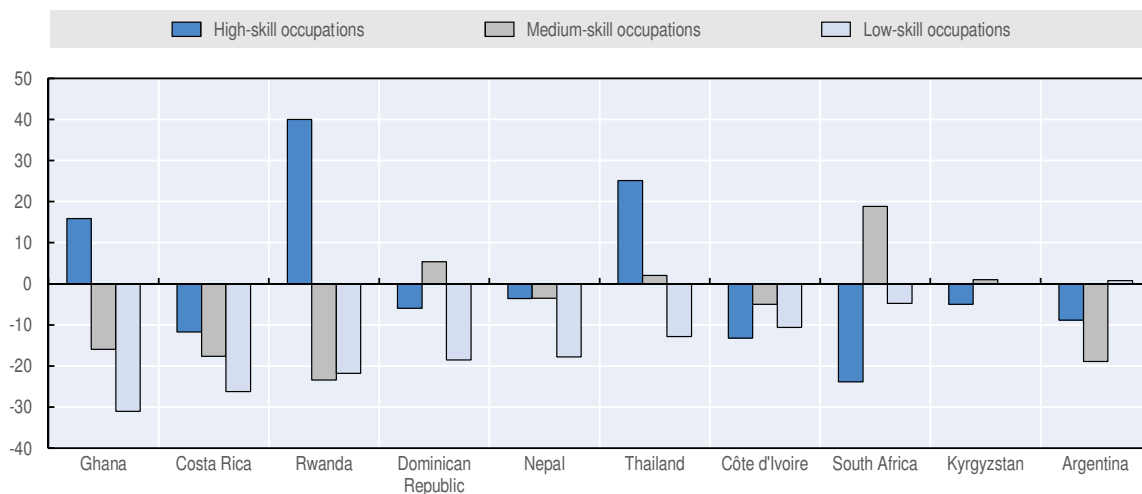


Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a and b and forthcoming a-h); for Kyrgyzstan the *Life in Kyrgyzstan* data (IZA, 2016) was used for the second time period.
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Figure 3.22. Underqualification rates are almost always higher for immigrant workers in elementary occupations

Differences in underqualification rates between native- and foreign-born, by skill level of occupation (native-born rate minus foreign-born rate, percentage points, most recent period)



Note: For time periods, see Table 3.1.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices (see OECD/ILO 2017a-b and forthcoming a-h); for Kyrgyzstan the *Life in Kyrgyzstan* data (IZA, 2016) was used for the second time period.
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Conclusions and policy implications

The review of certain key labour market indicators in this chapter suggests that integration of immigrant workers in terms of the volume of employment is less a concern for policy makers than integration in terms of quality of work. In most partner countries, foreign-born workers have relatively higher employment rates, usually driven by male rates. However, in some countries females face a double challenge: apart from the shortfall in employment in comparison with males, there is also a shortfall in comparison with native-born females. This is particularly relevant for young foreign-born females, who are more likely than other groups to be unemployed or not in education, employment or training.

The overall picture is less favourable with regard to the quality of employment. Immigrant workers are more often at risk of not finding decent work. This is largely due to a high incidence of non-standard employment, the relative concentration of immigrant workers in certain sectors and occupations in most countries, and greater exposure to informal employment and wage penalties in some countries. In turn, the high incidence of non-standard employment may be explained by a range of factors. These include the undocumented status of some immigrants, the incidence of temporary or agency work, a lack of recognition of qualifications, language barriers and lower human capital, but also outright discrimination.

Diversifying immigrant work in terms of sectors and occupations could help improve the quality of work. Immigrant workers are typically overrepresented in sectors prone to low-quality work (i.e. construction and trade) and in occupations that are vulnerable to exploitation such as low-skill work.

Ensuring equal treatment of immigrant workers is essential. This can be done by enforcing labour standards, by ensuring adequate representation of migrant workers, in particular in trade unions, and by fighting discrimination. Many migrant workers are in a difficult position to make their voices heard, for example due to their irregular status or to the temporary or seasonal nature of their work. Additional pathways for legal immigration are also important to decrease irregularity and non-standard employment for migrants.

Reducing the mismatch between skills and jobs is another way to widen sectoral and occupational choices of immigrant workers. Improving mechanisms for skills recognition and investing in skills development are two solutions.

Assessing the full extent of decent work deficits is hampered by data gaps. In many countries, comparable data sources are limited to population censuses. Other data collection exercises are needed to consistently capture information on immigrant workers. In several countries, for example South Africa and Thailand, an additional question on nationality or citizenship in the regular labour force survey would greatly expand the information base on immigrant workers.

Notes

1. The selection of indicators is limited by the sources of labour market data available in the partner countries for both the native-born and the foreign-born. For most countries, the population census constitutes the main source.
2. For most countries, the periods listed in Table 3.1 are determined by the years for which population census data are available. Argentina is partially based on survey data from urban areas only.
3. For example, in the European OECD countries the average employment rate of the foreign-born population was 62.1% in 2015, compared to 65.1% for the native-born population. However, in the United States the employment rate for foreign-born workers (67.5%) was just above the rate for the native-born (67.2%) (OECD, 2016).

4. The number cited in the text corresponds to the medium variant scenario in UN (2016).
5. High-skill occupations consist of these major groups: (1) legislators, senior officials and managers; (2) professionals; and (3) technicians and associate professionals. Medium-skill occupations consist of these major groups: (4) clerks; (5) service workers and shop and market sales workers; (6) skilled agricultural and fishery workers; (7) craft and related trades workers; and (8) plant and machine operators and assemblers. Low-skill occupations are defined as one major group: (9) elementary occupations.
6. For both Argentina and Thailand, the specified time period was five years instead of ten.
7. Other types of skills mismatch include mismatch by level of education, by field of study, by years of on-the-job training/ or work experience, of job-specific/technical skills, of basic skills, and of transversal/core/soft/portable skills (ILO, 2017).
8. The normative measure of skills mismatch is based on the International Standard Classification of Occupations (ISCO-88 or ISCO-08). The method first divides major occupational groups into three groups. It then assigns a level of education to each group in accordance with the International Standard Classification of Education (ISCED-97). Workers in a particular group who have the assigned level of education are considered well-matched, while those who have a higher or lower level of education are considered overeducated or undereducated. For example, a graduate from a medical university working as a clerk is overeducated, while a secondary school graduate performing the duties of a medical doctor is undereducated (see ILO, 2014).

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ANNEX 3.A1

Methodology to assess sectoral and occupational employment patterns

The similarity of sectoral employment patterns between native-born and foreign-born workers can be assessed using an index of dissimilarity. The index represents the proportion of a group, either native- or foreign-born, that would need to move in order to create an equal distribution. The index is calculated based on the following equation:

$$\text{Dissimilarity (D)} = \frac{1}{2} \sum_{i=1}^s \left| \frac{n_i}{N_T} - \frac{f_i}{F_T} \right|$$

where n_i is the number of native-born workers per sector, N_T is the total number of native-born workers across all sectors, f_i is the number of foreign-born workers per sector, F_T is the total number of foreign-born workers across all sectors and s is the number of sectors.

Full segregation between native- and foreign-born workers would result in an index of 1 (or 100%), while a value of 0 (or 0%) would indicate that there is no difference in sectoral distributions of native- and foreign-born workers.

The same index can be applied to occupational and other distributions.

ANNEX 3.A2

Methodology of demographic decomposition

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

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

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

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

E = non-immigrant entrants over the period

I = new immigrants who arrived over the period

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

R = non-immigrant retirees over the period

This equation shows that total change over the period equals inflows minus outflows, while deaths and emigration are included implicitly. The table below summarises how these components are obtained based on data on the labour force from the 2000 and 2010 population censuses.

Table 3.A2.1. **Definition of components for the demographic accounting decomposition**

(1) = (2)-(3)	(2) 2010 population census	(3) 2000 population census
Non-immigrant entrants (E)	LF (aged 15-34 excluding foreign-born without long-term residence)	LF (aged 15-24)
Retirees (-R)	LF (aged 55+ excluding foreign-born without long-term residence)	LF (aged 45+)
Change in the prime-age group ($\Delta(PA)$)	LF (aged 35-54 excluding foreign-born without long-term residence)	LF (aged 25-44)
New immigrants (I)	LF (foreign-born without long-term residence aged 15+)	0
Total change :	LF (aged 15+)	LF (aged 15+)
$\Delta(T) = E + I + \Delta(PA) - R$		

Note: LF = labour force.

Non-immigrant entrants to the labour market are calculated by subtracting the labour force aged 15-24 in 2000 from the labour force aged 15-34 in 2010. This assumes that all persons aged 15-24 who were part of the labour force in 2000 are still in the labour force ten years later (when they were aged 25-34). Similarly, retirees are those in the labour force

who were aged 45 and above in 2000 minus those aged 55 and above in 2010 (temporary withdrawals and re-entries prior to definitive retirement are implicitly netted out). The change in the size of the prime-age group equals the labour force aged 35-54 in 2010 minus the labour force aged 25-44 in 2000. Finally, the number of new immigrants is calculated as immigrants with a duration of residence of less than ten years (with the exception of Argentina and Thailand, in which the duration of residence used was less than five years due to data limitations), and such immigrants are excluded from the other components to avoid double counting. As can be verified from the table, these four components add up to the labour force in both 2000 and 2010.

The same methodology can be used to decompose sub-groups of the labour force (such as the employed, educational and occupational groups).

ANNEX 3.A3

Additional tables

Table 3.A3.1. The three largest sectors of employment, by place of birth (% , most recent period)

	Largest share		2nd largest share		3rd largest share	
	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born
Rwanda (2012)	Agriculture (35.5)	Agriculture (76.4)	Trade (12.7)	Trade (4.7)	Public administration (7.9)	Construction (3.4)
Thailand (2010)	Manufacturing (36.5)	Agriculture (47.4)	Agriculture (24.8)	Trade (13.1)	Trade (12.1)	Manufacturing (12.0)
South Africa (2011)	Trade (13.3)	Private household services (11.4)	Private household services (12.4)	Trade (10.3)	Construction (10.8)	Manufacturing (9.9)
Nepal (2011)	Agriculture (37.9)	Agriculture (61.4)	Trade (19.0)	Trade (7.5)	Manufacturing (12.2)	Manufacturing (5.5)
Ghana (2010)	Agriculture (34.4)	Agriculture (42.1)	Trade (26.1)	Trade (18.7)	Manufacturing (10.2)	Manufacturing (10.7)
Argentina (2015)	Trade (19.2)	Trade (16.9)	Construction (17.9)	Manufacturing (13.1)	Private household services (16.6)	Public administration (9.5)
Kyrgyzstan (2009)	Agriculture (31.4)	Agriculture (45.7)	Trade (15.4)	Trade (13.2)	Manufacturing (8.9)	Construction (7.4)
Côte d'Ivoire (2008)	Agriculture (48.0)	Agriculture (47.9)	Trade (24.4)	Trade (16.4)	Manufacturing (7.8)	Manufacturing (6.3)
Dominican Republic (2010)	Agriculture (34.1)	Trade (21.5)	Trade (19.2)	Manufacturing (11.7)	Construction (15.4)	Agriculture (11.0)
Costa Rica (2011)	Private household services (16.8)	Trade (20.3)	Trade (15.9)	Manufacturing (12.1)	Agriculture (15.9)	Agriculture (10.9)

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; labour force survey data was used for Argentina.

Table 3.A3.2. Employment shares in growing and declining occupations by demographic groups

	Share of all new immigrant entries				New immigrant share of all new entries		
	In growing occupations	In declining occupations	Difference	Difference for new young entrants	In growing occupations	In declining occupations	Difference
	A	B	C	D	E	F	G
	Percentage		Percentage points		Percentage		Percentage points
Rwanda	69.1	30.9	38.2	-8.5	1.9	0.9	1.1
Nepal	59.3	40.8	18.5	68.3	1.5	1.0	0.5
Thailand	50.6	49.5	1.1	33.7	5.0	4.9	0.1
Ghana	50.3	49.7	0.6	-13.2	1.2	1.2	0.0
Argentina	47.6	52.4	-4.7	2.2	0.7	0.7	-0.1
Dominican Republic	36.8	63.2	-26.4	-12.4	2.9	4.9	-2.1
Costa Rica	32.6	67.4	-34.8	16.2	2.6	5.4	-2.8
South Africa	36.1	63.9	-27.8	-20.4	5.6	10.0	-4.3

Note: All entries include new immigrants, new young entrants, and the net occupational change of prime-aged individuals and retirees if positive. Calculations for Côte d'Ivoire and Kyrgyzstan were not possible due to data limitations.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; labour force survey data was used for Argentina.

Chapter 4

Labour market impact of immigration

This chapter first provides a general overview of research on the labour market impact of immigration in the ten partner countries of the project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination. It describes selected labour market outcomes affecting the native-born populations. To analyse the effects of foreign-born workers on native-born workers' wages and labour market outcomes, the chapter looks at the simple relationship between shares of foreign-born workers and employment-to-population ratios of native-born workers. This is followed by a more detailed analysis which controls for differences between workers in terms of education, experience and time. Finally, the chapter suggests policy implications and future research.

How does the presence of foreign-born workers affect the employment opportunities and other labour market outcomes of native-born workers? This question has been and continues to be the subject of much policy and academic discussion. As seen in Chapter 3, foreign-born workers have different labour market outcomes than the native-born. At the national level, foreign-born workers are often more active in the labour market and are employed more often than native-born workers. They are also more prevalent in wage employment though frequently in low-skill occupations.

There exist considerable studies on impacts of labour immigration in high-income economies. These studies report both positive and negative effects on the employment and wages of native-born workers (Borjas, 2003; Card, 2001; Friedberg and Hunt, 1995; Hanson, 2008; Kerr and Kerr, 2011). Where these effects do exist, whether positive or negative, they are usually small. However, it is often found that impacts of immigration on labour market outcomes are not distributed evenly across all workers and tend to be strongest in those areas, occupations and sectors where native- and foreign-born workers are most similar. Research on impacts in low- and middle-income countries is relatively scarce, though it does suggest similar, and even smaller, effects (Böhme and Kups, 2017).

To explore immigration's impact on local workers in low- and middle-income countries, this chapter combines and compares findings from analyses performed for each of the ten partner countries. They are Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. The chapter intends to identify whether the presence of foreign-born workers on labour markets has adverse impacts on native-born workers with similar characteristics (see Becker, 1975; Mincer, 1974).

Evidence across most of the ten partner countries suggests that foreign-born workers have a limited impact on the labour market outcomes of the native-born. As with research in high-income economies, where impacts exist, they are diverse and highly contextual. At the national level, the presence of foreign-born workers can reduce employment-to-population ratios of native-born workers, but this effect remains small. Effects at the regional level tend to be slightly more positive, implying that regions within a country experience considerably more or considerably less labour immigration.

Native-born women seem to be particularly affected by the presence of foreign-born women. This could suggest that many women in the ten partner countries occupy the same kinds of jobs as foreign-born workers, with whom they compete for those jobs.

Finally, impacts of the most recently arrived foreign-born workers tend to be much greater than those of all foreign-born workers. This implies that there are significant short-term effects which might indeed dissipate over time, as these workers integrate into the labour market.

Employment and wage gaps in partner countries

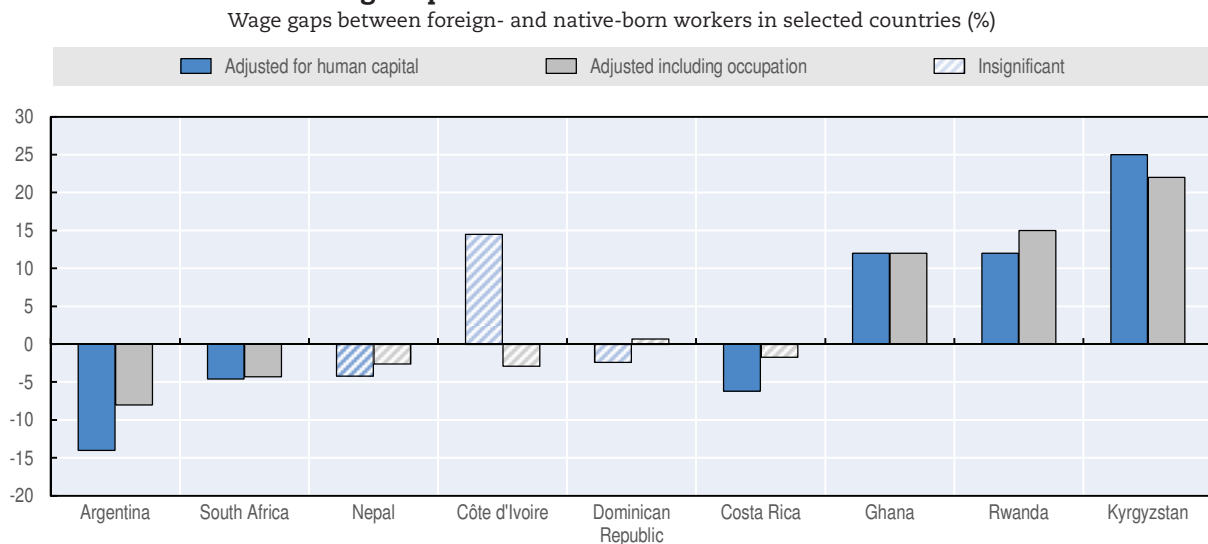
Native-born and foreign-born workers can differ greatly in terms of their labour market outcomes and integration. Six of the ten partner countries foreign-born workers exhibit higher participation rates and employment-to-population ratios. However, in Argentina, Kyrgyzstan, Nepal and Rwanda the reverse is true, as illustrated in Chapter 3 (Figure 3.1). Foreign-born workers also tend to be overrepresented in wage employment compared to their native-born counterparts.

Human capital differences only partially explain immigrant wage gaps

Wage or labour income differences¹ between native-born and foreign-born workers vary significantly between countries.² While average wages of foreign-born workers are lower than those of native-born workers in Argentina and South Africa, this is not the case in other countries (Figure 4.1). In fact, in Ghana, Kyrgyzstan and Rwanda, average wages are higher for foreign-born workers than for native-born workers.

It is possible that foreign-born workers are overrepresented in particular occupational groups, meaning that the observed wage differences might be due to differences in average occupational wages. Estimates adjusted to account for occupations indeed reduce wage gaps in most countries, but not enough to make them disappear entirely. The only exception is Costa Rica, where the 5% wage gap between foreign- and native-born workers disappears when accounting for occupation. This suggests that wage differences there are to some extent the result of differences in occupational distributions of the two groups. However, in Côte d'Ivoire, the Dominican Republic and Nepal wages do not differ significantly between native- and foreign-born workers even when not accounting for occupations.

Figure 4.1. **Considerable wage gaps between foreign- and native-born workers remain after controlling for personal and labour market characteristics**



Note: "Adjusted for human capital" refers to wage estimates controlling for age, education, time and area effects (Kyrgyzstan does not include area effects). A positive wage gap indicates the percentage by which the wages of foreign-born workers exceed those of the native-born. Insignificant differences are indicated by a broken pattern. Argentina, Kyrgyzstan and South Africa reported total income instead of wages. Thai sources report neither wages nor income.

Source: Authors' own work based on population census and household survey data from the Minnesota Population Center (2017) or national statistical offices.

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Although wage differences between foreign-born and native-born workers persist even after controlling for a number of personal characteristics, they tend to be small in comparison with differences due to, for instance, educational achievement. For most partner countries, completing secondary and tertiary education levels can double or even triple wages respectively, when compared to not having completed primary education.

Language skills have been shown to be an important determinant of wages. In Rwanda, a foreign-born worker who speaks English earns the same average wages as a native-born worker with a similar level of skill, while one who does not speak English earns significantly less than a comparable native-born worker who does not speak English. Similarly, Russian language skills might well explain some of the wage gaps between foreign-born and native-born workers in Kyrgyzstan.³ In Argentina, on the other hand, where most foreign-born workers come from other Spanish-speaking countries, it is likely that a lack of formal language skills do not have as strong an impact on wage differences as in other countries.

Wage gaps that remain after accounting for personal and labour market characteristics may be due to other unobserved personal characteristics or some form of discrimination. Knowledge of local markets and opportunities might differ between native- and foreign-born workers and have an impact on wage gaps. Foreign-born workers may receive lower wages due to some form of discrimination or because destination countries do not recognise foreign qualifications. Finally, wage differences might result from foreign-born workers' willingness to accept jobs for lower wages if the jobs provide them with other benefits.

Educational achievement and work experience are used to approximate an individual's skills

Employment impacts of immigration interest policymakers due to the potential effects on the well-being of the resident population and on social protection systems. The employment impacts of immigration refers to the extent to which the presence of foreign-born workers in the labour market affects the chances of native-born workers to find jobs or lose ones they have. Immigrants are often blamed for lowering wages, affecting local employment and negatively affecting the skills distribution of the local labour force (the sub-group of skilled immigrants, on the other hand, receive credit for spurring innovation and the growth of certain sectors) (Hanson, 2008). Further, immigrant impacts on the labour market, particularly on unemployment rates, could have potential fiscal consequences at regional and national levels, aside from affecting individuals (Kerr and Kerr, 2011). This could be of particular concern in developing countries.

One of the biggest issues for foreign-born workers themselves with regard to social protection systems in countries of destination is the lack of inclusion and portability across borders. If foreign-born workers have an impact on native-born employment outcomes this might further strain an already weak social protection systems in developing countries. It is therefore important to examine labour market impacts beyond purely wage effects.

Using the **skill cell approach**, these impacts are examined by grouping a country's working-age population according to comparable levels of skills (Annex 4.A1). These skill levels are not measurable directly. Rather, the working-age population of each country is divided into groups based on 4 levels of educational achievement and 8 levels of years of experience for a total of 32 individual skill groups (Table 4.1). Labour market outcomes and foreign-born shares of the labour force are compared within each skill group, based on the assumption that foreign-born and native-born workers in the same skill group are similar and hence compete in the labour market mostly with one another (and not with workers in another skill group).

Table 4.1. **Illustration of national-level skill cells**

Experience	No education or some primary education	Primary or some secondary education	Secondary education	Tertiary or higher education
0-5 years				
6-10 years				
11-15 years				
16-20 years				
21-25 years				
26-30 years				
31-35 years				
36-40 years				

Note: Dividing the employed population by level of education and years of work experience results in 32 separate groups of workers with relatively comparable skills according to human capital theory.

Labour market outcomes of native-born workers vary most among the lowest educated workers

Overall employment-to-population ratios of native-born workers range between 36.0% in South Africa to 73.6% in Thailand (see Chapter 3, Figure 3.1). Here, employment-to-population ratios are further divided by education and experience levels to provide a more nuanced view of employment across the skill spectrum.

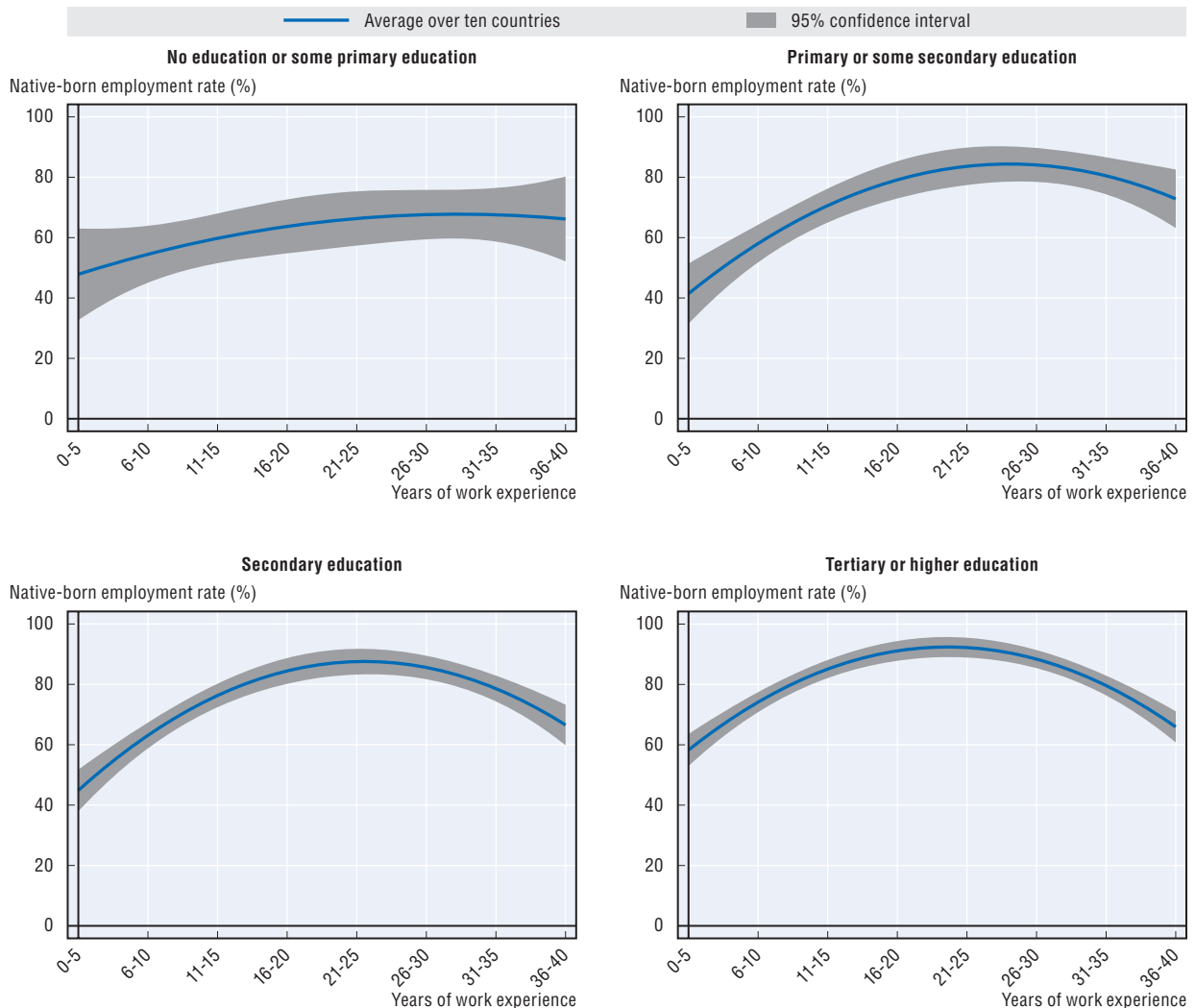
In most partner countries, employment-to-population ratios of native-born workers tend to rise with educational level, while they decline at the extremes of the experience range. Workers with few or many years of experience tend to be less frequently employed than workers in the middle of the range (Figure 4.2). This is likely for two reasons. First, workers early in their careers may be cyclically unemployed as they look for the right job or continue their education, particularly in the higher education categories. Second, more experienced workers may start retiring, in some cases before they leave the working-age population (particularly those with higher levels of education).

Employment-to-population ratios of workers with tertiary or higher levels of education tend to be more similar across experience levels, while the spread is much wider at lower levels of education. This illustrates both differing levels of educational achievement between countries and reliance on employment of low-skilled workers. Workers in Costa Rica and South Africa with less than a primary level of education experience particularly low employment-to-population ratios.⁴

Unemployment rates of native-born workers vary much more than employment-to-population rates between the partner countries, from 1.6% in Nepal to 41.1% in South Africa (Chapter 3, Figure 3.3). In South Africa, the difference in unemployment rates between skill levels is particularly large, ranging from over 80% for a worker with no education or experience to around 4% for a tertiary educated, prime-age worker. In almost all partner countries unemployment rates differ slightly according to level of education. However, they most often fall with levels of experience (Figure 4.3), as is the case in Costa Rica, Côte d'Ivoire, the Dominican Republic, South Africa and to a lesser extent Argentina. This suggests, particularly for those workers with secondary and lower levels of education, that employers in those countries value on-the-job training and experience. This is notable given the potential downgrading of foreign-born workers' skills by employers who value those workers' origin country experience less than destination country experience.

Figure 4.2. **Employment-to-population ratios among native-born workers converge across countries at higher levels of education**

Estimated average native-born employment-to-population ratios by experience and education levels in ten partner countries



Note: Thailand reports rates as a share of the working-age population.

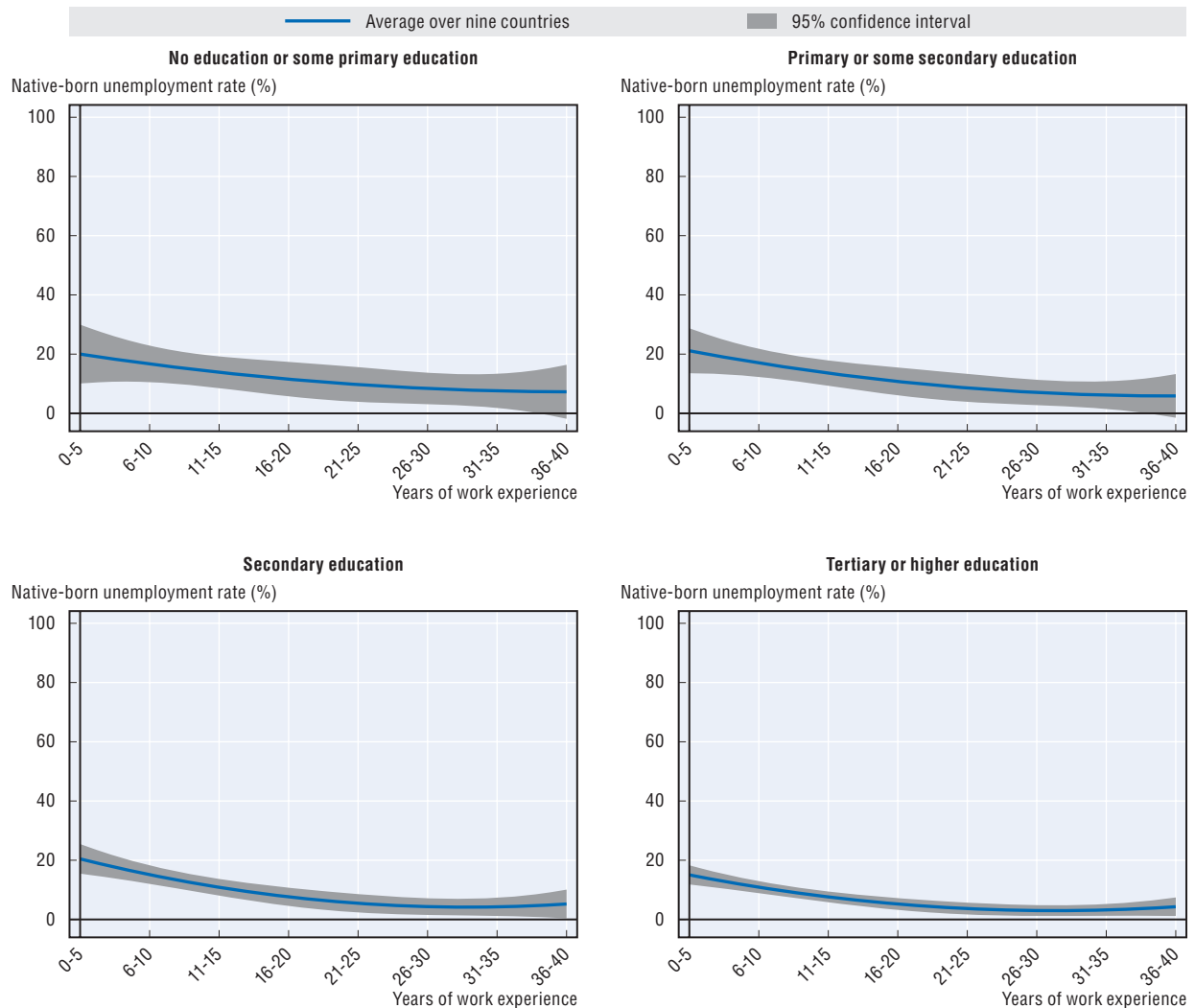
Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.
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Shares of foreign-born workers in the labour force of the partner countries also differ, both on average and across the skill spectrum. Shares vary from 1.6% in Ghana to 12.5% in Costa Rica. Foreign-born workers are most numerous among workers with less than a primary level of education (Figure 4.4). This is particularly the case in Costa Rica, Côte d'Ivoire, the Dominican Republic and Thailand, while Costa Rica and Rwanda have large shares of foreign-born workers with tertiary levels of education as well. In almost all other countries, shares of foreign-born workers increase slightly among workers with the most years of work experience, possibly reflecting the relatively large presence of older cohorts of foreign-born workers. Costa Rica, the Dominican Republic, Thailand and to a lesser extent Kyrgyzstan have a large share of foreign-born workers with no education but with

10-30 years of experience. This suggests that foreign-born workers are more likely to find low-skilled employment in these countries.

Figure 4.3. **Unemployment rates among native-born workers are highest for workers with little work experience**

Native-born unemployment rate by experience and education levels per country



Note: Thailand does not report unemployment rates in the most recent census wave.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

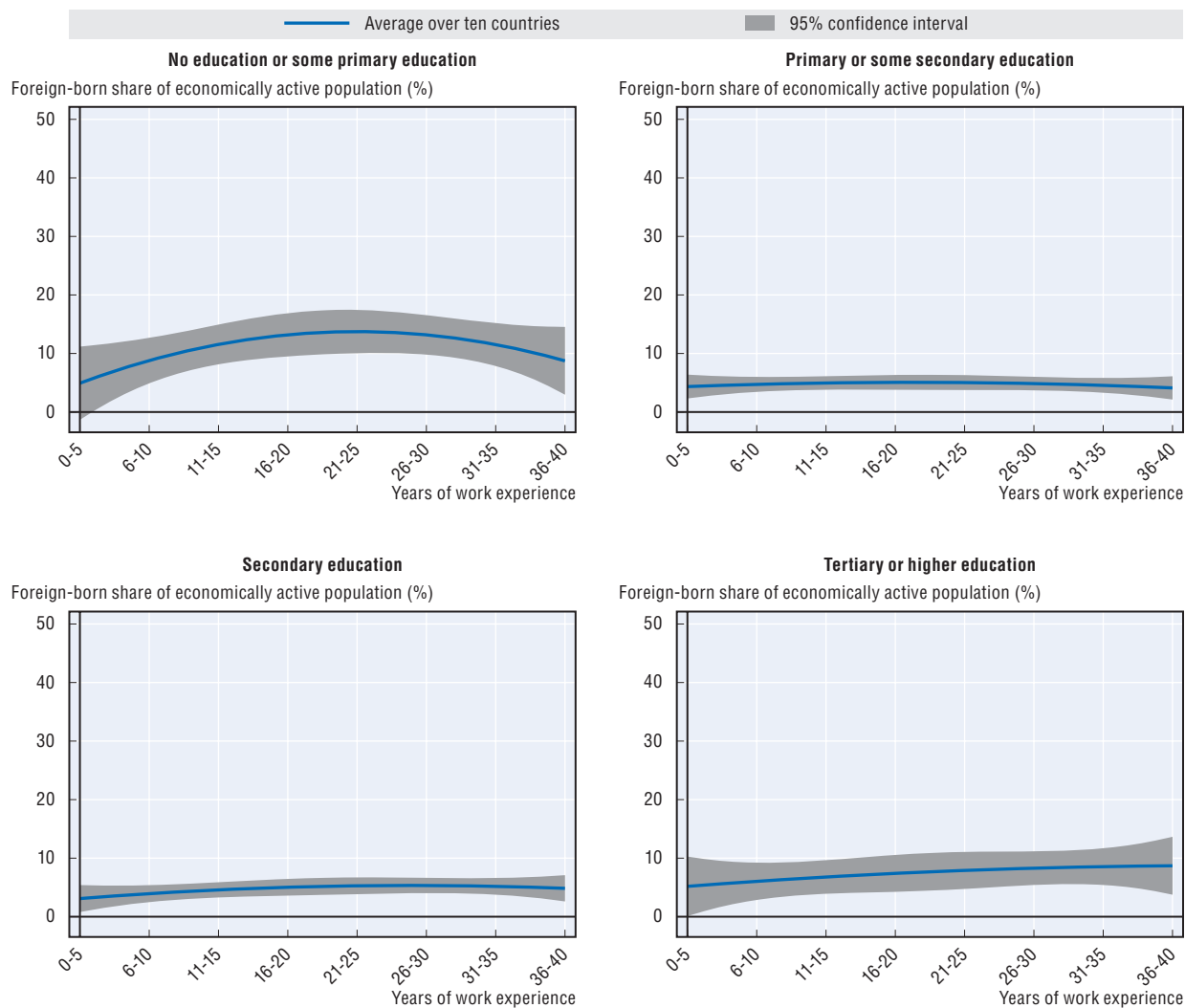
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Foreign-born workers might differ from native-born workers in unobservable ways that influence wages and other labour market outcomes. These include having skills which are more highly remunerated than local workers, facing barriers due to lacking language skills, having certifications or skills which are not recognised in the country of destination, or simply being more motivated to find work or at the workplace (given that they were motivated enough to migrate in the first place) than similarly skilled native-born workers. Foreign-born workers might also have different opportunities or preferences for finding work than native-born workers, which may be difficult to adequately measure. It is equally difficult to

determine the extent to which the factors which influence wages and other labour market outcomes of foreign-born workers also influence those of native-born workers. To this end, the relationship between the share of foreign-born workers in a skill cell and a particular labour market outcome is explored here.


Figure 4.4. **Foreign-born workers tend to be most prevalent among low-educated workers**

Foreign-born share of economically active workers by experience and education levels per country



Note: Thailand reports rates as a share of the working-age population.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

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The labour market impacts of immigration

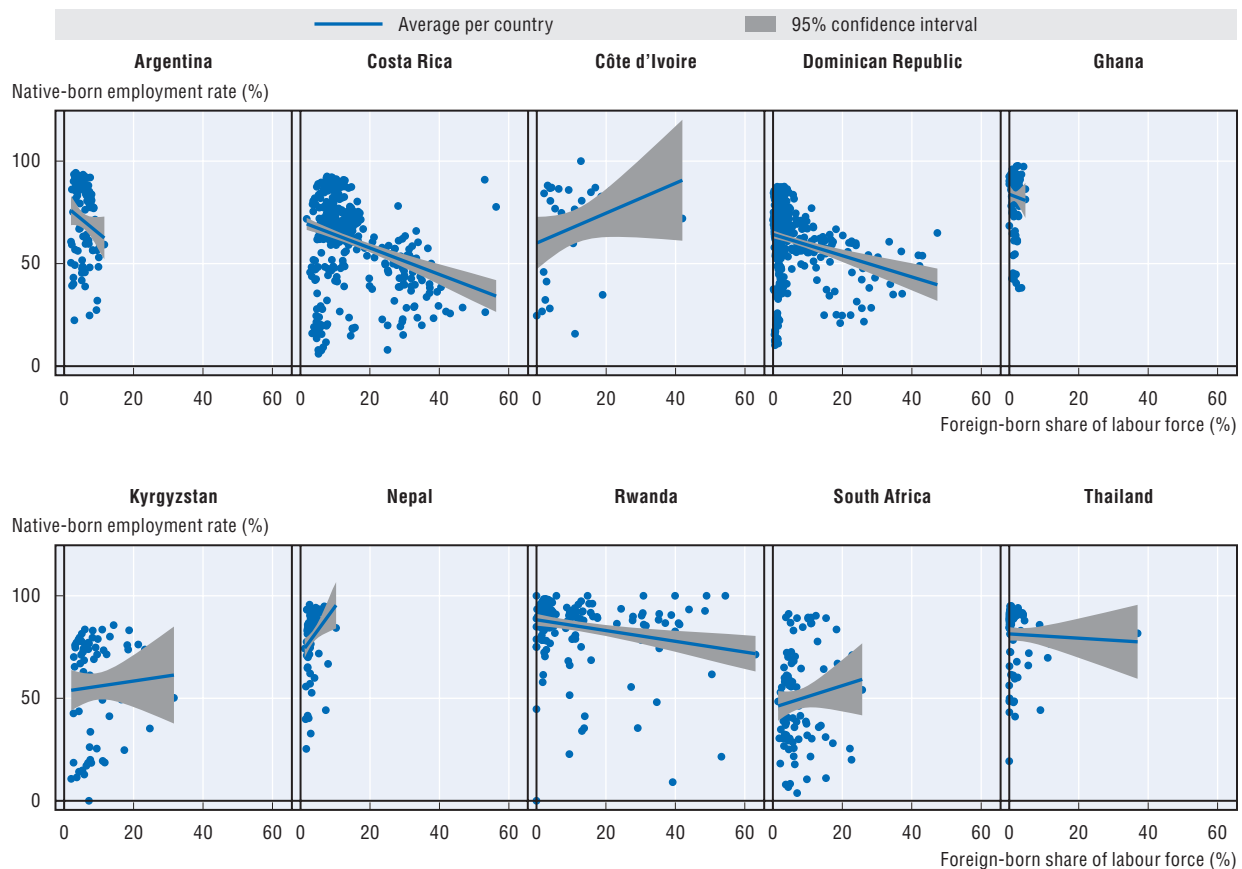
Effects of immigration on native-born labour market outcomes at the national level tend to be weak

The relationships between the shares of foreign-born workers and employment-to-population ratios of native-born workers vary greatly between countries. But where statistically significant correlations exist, the differences are relatively weak. In Costa Rica,

the Dominican Republic and Rwanda, there is a significant inverse relationship – as the share of foreign-born workers rises, the employment-to-population ratios of the share of native-born workers falls. While in Côte d'Ivoire, in the presence of foreign-born workers, that employment-to-population ratio rises (Figure 4.5).

Figure 4.5. The correlation between foreign-born shares and native-born employment rates differs strongly between countries

Change in foreign-born worker concentration and native-born employment rate per country, all available years of data



Note: Thailand reports rates as a share of the working-age population. R^2 values: Argentina, 0.175; Costa Rica, 0.109; Côte d'Ivoire, 0.175; Dominican Republic, 0.069; Ghana, 0.096; Kyrgyzstan, 0.004; Nepal, 0.136; Rwanda, 0.097; South Africa, 0.056; Thailand, 0.015.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

StatLink  <http://dx.doi.org/10.1787/888933649145>

Nonetheless, when controlling for differences over time, the share of foreign-born workers in a skill cell explains between 0.5% and 17.5% of the variance in employment-to-population ratios of native-born workers at the national level.⁵ To account for differences due to educational achievement, work experience and changes over time, regression analyses were done for each country. The results are presented in Tables 4.2-4.4.

In many partner countries, the foreign-born share and native-born labour market outcomes do not seem to be strongly related at the national level. In Costa Rica, the Dominican Republic, Ghana and Rwanda, a higher share of foreign-born workers in a skill cell is associated with a statistically significant reduction in the employment-to-population ratio of native-born workers in that cell (Table 4.2).⁶ Only in the Dominican Republic is

this effect on employment-to-population ratios accompanied by a decrease in native-born unemployment rates.

In Nepal and Thailand, the presence of more foreign-born workers leads to shifts in the distribution of employment status. In Nepal, native-born workers seem to move out of paid employment⁷ and into vulnerable employment⁸ in the presence of immigrants. This could be due to the large outflows of skilled Nepal-born workers, lowering the overall skills of native-born workers left in the country, and who tend to be more susceptible to vulnerable employment, particularly in the face of (often) more qualified foreign-born workers. This is particularly the case in the manufacturing and trade sectors (OECD/ILO, forthcoming c). The reverse takes place in Thailand, where Thai-born workers move out of vulnerable employment and into paid employment in the presence of more foreign-born workers.

Table 4.2. National-level labour market impacts of immigration differ greatly between countries

Summary of national level regression results of native-born workers' labour market outcomes and foreign-born share per country

Labour market outcomes	Argentina	Costa Rica	Côte d'Ivoire	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Employment-to-population ratio of native-born workers	0	-	0	-	-	0	0	-	0	0
Unemployment rate of native-born workers	0	0	0	-	0	0	0	0	0	
Paid employment rate of native-born workers					0	0	-	0	0	+
Vulnerable employment rate of native-born workers		0		0	0	0	+	0	0	-
Wages of native-born workers	0	0	0	0	0	0		+	0	

Note: The table reports the sign of the immigrants' share variables from regressions where the dependent variable is the mean native-born labour market outcome for an education*experience group at a particular point in time. 0 = no significant effect; + = a significant positive effect; - = a significant negative effect.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices. See Annex 4.A1.

Finally, only in Rwanda are wages of native-born workers significantly higher in the presence of foreign-born workers. This might result from two factors. First, foreign-born workers are strongly overrepresented in non-vulnerable, highly remunerated occupations. Second, possibly by policy design, they largely complement native-born workers in those occupations.

The impact of immigration on native-born labour market outcomes varies by geographic location

Previous research has shown that immigration effects at regional levels may be biased. Some biases may result (i) from native-born workers' endogenous choice to relocate to a different region in the face of possible competition from foreign-born workers and (ii) from immigrants' preferences for specific (i.e. economically stronger) locations (Hatton, 2014). Both biases can lead to reduced estimates of effect sizes, in turn leading to an underestimation of immigration's true impact on labour market outcomes of native-born workers (Annex 4.A1, and Bodvarsson and van den Berg, 2013). Nonetheless, large regional differences make it necessary to explore potential regional level effects next to national ones. This is particularly the case in developing countries where most foreign-born workers and most decent jobs are concentrated in one or a few urban agglomerations.

Results produced from the skill cell approach depend heavily on the specifications of the sample and model. This is evidenced by the fact that findings in partner countries at the regional level do not lend themselves easily to a single interpretation (especially not one in line with national level results; see Annex 4.A1). For instance, in Rwanda, contrary to national level results, a higher share of foreign-born workers at the regional level appears to reduce the unemployment rates of the native-born but also to reduce their wages. The wage effect might be expected given the substantial rate of urbanisation in Rwanda in recent years and the concentration of foreign-born workers in a few urban centres. In Nepal and Kyrgyzstan, on the other hand, large numbers of native-born workers are emigrating, and foreign-born workers seem to be effectively filling the positions left vacant.⁹

However, regional results in Kyrgyzstan, Nepal and Thailand suggest an overall positive impact of foreign-born workers on the employment-to-population ratio of native-born workers. In Nepal, this is paired with an increase in paid employment and a decrease in vulnerable employment for native-born workers. In Thailand, on the other hand, the effect on paid employment disappears when including regions, suggesting that paid employment varies by region, but within regions does not differ between native-born and foreign-born workers.

There are also instances where disaggregating effects by region uncover negative trends. In South Africa the impact on employment at regional level becomes significant and negative, suggesting that there are certain regions in which the presence of foreign-born workers does go hand in hand with lower employment rates of native-born workers, despite such an effect not existing at the national level. It is likely the case that regions bordering neighbouring countries are more strongly affected by the presence of migrants than regions further away from the border. A higher share of immigrants per region in Argentina and Ghana is associated with an increase in the wages of native-born workers while in Costa Rica the reverse is true. In Argentina and Ghana, most migrants concentrate in economic and urban centres of the country, where their presence might compliment that of native workers leading to higher native-born wages, while in Costa Rica, many immigrants likely substitute native-born workers in the seasonal harvests along the northern border (OECD/ILO, forthcoming a, b and c).

Table 4.3. Regional-level labour market impacts of immigration vary significantly between countries

Summary of regional level regression results of native-born workers' labour market outcomes and foreign-born share per country

Labour market outcomes	Argentina	Costa Rica	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Employment rate of native-born workers	0	-	-	0	+	+	0	-	+
Unemployment rate of native-born workers	0	0	0	0	0	-	-	0	
Paid employment rate of native-born workers				0	0	+	0	0	0
Vulnerable employment rate of native-born workers		0	0		0	-	0	0	0
Wages of native-born workers	+	0	0	+	0		-	0	

Note: The table reports the sign of the immigrants' share variables from regressions where the dependent variable is the mean native-born labour market outcome for an education*experience group at a particular point in time. 0 = no significant effect; + = a significant positive effect; - = a significant negative effect. Regressions could not be run at the regional level for Côte d'Ivoire.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices. See Annex 4.A1.

Regional effects, if any, tend to be slightly less negative than national effects (Table 4.3).¹⁰ This is in line with other studies based on regional analyses (Borjas, Freeman and Katz, 1996). However, native-born workers in many partner countries might be less likely to relocate in

response to the presence of foreign-born workers than in most developed countries (Fields, 2010). Given that developing countries generally have few economic centres, native-born workers also might not have much choice in where to find the most stable and productive employment. Nonetheless, without a strong instrumental variable with which to test the validity of this assumption, regional results must be interpreted cautiously.

Impacts of foreign-born workers depend on gender and on time of arrival in destination countries

While geographical differences can account for some of the labour market effects of immigration found using the skill cell approach, effects can also change over time. The skill cell approach does control for changes over time, but it cannot differentiate clearly between short- and long-term effects. Nor can it distinguish more diverse labour market responses to a change in the share of foreign-born workers, such as native-born workers temporarily leaving the labour market only to return later, or the integration of foreign-born workers into local communities and labour markets, which will only gradually, over time, disappear from the data.

A simple approach to distinguishing between short- and longer-term labour market impacts is to look at the effects of newly arrived foreign-born workers as a distinct group from other foreign-born workers. Studies from the European Union and the United States find that, as immigrants spend more time in the destination country, their wage gaps decrease and their labour market integration improves (see Kerr and Kerr, 2011, for a discussion on immigrants' earnings and labour market assimilation; see Dustmann and van Soest, 2002, and Chiswick and Miller, 2002, on local language skills determining labour market integration).

Aside from affecting native-born workers in the same skill cell, foreign-born workers can also increase the labour supply of those in other skill cells. This can happen when, for instance, native-born employees hire foreign-born workers to perform activities they previously did themselves, such as many domestic and childcare tasks. Researchers have for instance found that women enter the labour market more frequently in the presence of low-skilled foreign-born workers (Barone and Mocetti, 2011).

Regressions run separately for men and women might therefore show more positive effects on the employment-to-population ratios of native-born women than those of native-born men. However, results largely show the opposite trend (Annex Table 4.A3.4). The presence of foreign-born women tends to lower the employment rates of similarly skilled native-born women, while this is not the case for men (Annex Table 4.A3.4). This could be due to the fact that women are overrepresented in low-quality and/or temporary jobs, and hence compete more often with low-skilled foreign-born workers. Notable exceptions are Costa Rica, Nepal and South Africa. In Costa Rica, native-born men's unemployment rates increase in the presence of foreign-born men. In Nepal, native-born women's participation in paid employment increases in the presence of foreign-born women. In South Africa, native-born women's wages are considerably higher in the presence of foreign-born women.

The country study of Argentina looks further at the issue of women's employment. It finds that low-skilled women in particular find more employment in the presence of more foreign-born women from origin countries with high care-occupation concentrations among women workers. This suggests that foreign-born women who work in the care sector provide Argentine women the opportunity to look for better work opportunities themselves (OECD/ILO, forthcoming a).

In most partner countries, recently arrived foreign-born workers are more likely to be active in the labour market. The average age of foreign-born workers who arrived in the country within the past ten years is lower than that of all foreign-born economically

active workers. The impact of those recently arrived foreign-born workers on labour market outcomes of native-born workers (Table 4.4) is generally stronger than that of all foreign-born workers.

Table 4.4. Impacts of newly-arrived foreign-born workers tend to be slightly stronger than those of all foreign-born workers

Summary of regression results of resident workers' labour market outcomes and new foreign-born workers share per country

Labour market outcomes	Argentina	Ghana	Nepal	Rwanda	South Africa	Thailand
Employment rate of native-born workers	0	0	-	-	+	0
Unemployment rate of native-born workers	0	0	0	+	-	
Paid employment rate of native-born workers		-	0	0	0	+
Vulnerable employment rate of native-born workers			0	0	-	-
Wages of native-born workers	0	0		0	+	

Note: The table reports the sign of the immigrants' share variables from regressions where the dependent variable is the mean native-born labour market outcome for an education*experience group at a particular point in time. 0 = no significant effect; + = a significant positive effect; - = a significant negative effect.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices. See Annex 4.A1.

An increase in the share of recently arrived foreign-born workers is associated with a significant decrease in employment-to-population ratios in Nepal and Rwanda. In Rwanda, this negative effect on employment is paired with a rise in unemployment. Specifically, an increase in the share of more recent foreign-born workers not only reduces the number of Rwandan-born workers finding a job, it also increases the share of unemployed Rwandan-born workers.

Due to their relative inexperience and lack of integration into the labour market, newly arrived immigrants may be more likely to find jobs with unfavourable working conditions until their skills improve compared to native-born workers and to more settled foreign-born workers. In South Africa, where no effects were found at the national level when considering all workers, a decidedly different picture emerges when looking at only the most recently arrived immigrants. The presence of these workers not only increases employment and decreases unemployment, it also reduces vulnerable employment and raises wages of native-born workers. Similarly, in Thailand, the effect of new foreign-born workers on the paid employment rate of native-born workers is much stronger than the effect of all foreign-born workers taken together. In Ghana, recently arrived foreign-born workers reduce the share of paid employment among native-born workers.

In Nepal and Rwanda, foreign-born workers tend to be relatively well-educated, particularly among the most recently arrived, suggesting that they might indeed be more successful than native-born workers. There also seem to be considerable shifts in employment status in the presence of more recently arrived immigrants. This illustrates once again that the most important impacts of foreign-born workers entering labour markets are likely to affect employment status and quality of employment more than employment numbers in destination countries.

Taken together, these results suggest that, particularly over a ten-year period, the labour market impact of foreign-born workers will diminish over time. Hence, immigrants' long-term integration and growth effects, as will be discussed in Chapter 5, could easily overshadow the short-term labour and wage impacts described here. That chapter looks in more detail at capturing the economic effects of immigration in a broader sense, including some dynamic effects.

Conclusions and policy implications

The economic impact of immigration is an evolving field of research that is highly relevant for policy choices. Existing empirical studies on impacts of immigration in developing countries are rare and can be difficult to implement cross-nationally given the scarcity of comparable, sufficiently-detailed and nationally-representative data (Ratha and Shaw, 2007). This report represents one of the first attempts to understand these impacts in developing countries in a comparative framework. Drawing conclusions and discussing policy consequences based on the findings in this chapter require caution, as appropriate policy responses depend heavily on local contexts and circumstances.

The impact of immigration on native-born labour market outcomes is diverse and highly contextual. Effects on employment at the national level, where they exist, are negative, meaning that in those countries, as the share of foreign-born workers increases, the employment rate of native-born workers decreases. However, those effects are not universal, moreover, they are not necessarily unfavourable when taken together with other impacts, just as a positive impact is not always unequivocally good. For instance, in Rwanda, a negative impact of immigration on employment-to-population ratios of native-born workers is likely the result of labour migration policies and long-term development planning. This suggests that it is not the share of foreign-born which reduces employment ratios of native-born workers, but rather the other way around. The policies and planning were designed to attract foreign-born, highly-skilled workers to sectors and positions which lack sufficiently qualified native-born workers. Conversely, in Thailand, the statistically positive impact of immigration on paid employment rates could reflect the relatively unfavourable working conditions for foreign-born workers, providing native-born workers the chance to find better (paid) employment.

With the exception of South Africa, labour market impacts of immigration are less negative and, where they exist, are slightly more positive in the regional level analysis than the national. However, regional studies risk producing biased effects due to the possible relocation of native-born workers outside their region (Annex 4.A1). The divergence between the results may be due to the potentially large differences in the geographic distribution of foreign-born workers and of economic development within many developing countries. Indeed, the skill cell approach assumes that the labour market exists at a national level and that workers are perfectly mobile within a country.

The impacts of immigration might in fact benefit labour market outcomes of native-born workers in those regions with more economically active immigrants. In countries where most productive activity occurs in a single or a few large urban areas and prevalent poverty levels limit internal mobility, native-born workers might not have much opportunity to relocate in the presence of increasing numbers of foreign-born workers.¹¹ Hence, the regional results presented here might be less sensitive to the methodological bias that plagues results from more industrialised countries.

Time spent in the host country can affect the way immigrants integrate into the labour market. People who arrived in earlier waves of immigration might be better integrated than those who arrived later, because of improved language skills or other labour market competencies specific to the local context. Given this potential integration over time, it is likely that newly arrived foreign-born workers have a different labour market impact than all foreign-born workers taken together.

The analysis of newly arrived foreign-born workers (see Table 4.3) therefore attempts to estimate shorter-term labour market impacts of immigration. This approach in no way replaces a model including more dynamic effects, such as adjustments in wages and/or investment behaviour in the long-run. Nonetheless, recently arrived foreign-born workers tend to have stronger labour market impacts than more established foreign-born workers, suggesting that labour migration policies should encourage labour market integration, particularly for the most recently arrived immigrants.

Future research should look into more explicit indicators of quality of work. This is especially pertinent given the relative homogeneity of labour market indicators across national educational and experience spectrums, for example low and unvarying unemployment. The indicators should include shifts in employment status and other forms of non-standard employment. As illustrated in Chapter 3, existing labour market indicators might not be sufficient to identify the specific vulnerabilities to which foreign-born workers are exposed. Consequently, these same indicators might also not provide the variation in data required to isolate potential labour market impacts of immigration. Improving the reliability of impact assessments hinges on more detailed and regular data collection.

Future research on impacts of immigration in developing countries could also benefit from simultaneously accounting for possible effects of emigration. In Kyrgyzstan and Nepal, for instance, emigration rates are large enough to have considerable impacts on the workers who remain in the country. It is important in those cases to explore how emigration flows relate to immigration flows and to labour market outcomes of non-emigrant native-born workers. Research could look specifically at whether immigrants tend to move into the sectors and occupations left open by departing workers, or whether they occupy entirely different positions.

Notes

1. For certain countries, total (South Africa) or labour income (Argentina, Costa Rica and Kyrgyzstan) data are analysed instead of wage data.
2. For all countries, wage gaps were estimated using a simple earnings function in which the natural logarithm of wages is regressed on place of birth, controlling for age, education, time and region. The Mincer equation is arguably the most widely used earnings function, based on the work of Jacob Mincer (1974). Mincer modelled the natural logarithm of earnings as a function of years of education and years of potential labour market experience. Using a Mincer-type earnings function, log wages are modelled here as the sum of a linear function of educational achievement and a quadratic function of years of potential experience:

$$\log(W) = \log(w_0) + rM + \beta_1 E + \beta_2 X + \beta_3 X^2,$$

where W is the real wage (w_0 is the wage of a native-born individual with no education and no experience), M is a dummy identifying foreign-born workers, E is a dummy for educational achievement and X is years of potential labour market experience (see also Lemieux, 2003). In Kyrgyzstan, region is not controlled for in the estimation of wage gaps.

3. Sample sizes in existing data are too small to test the effect of language skills on wage gaps empirically in Kyrgyzstan.
4. The low employment rates of workers with no schooling in Kyrgyzstan likely reflect high educational achievement rates. There are almost no workers in the country with less than a primary level of education.
5. The analysis in this chapter is correlational, describing a relationship between variables at given time points, and does not make any empirical claims about the causal link between immigrant shares and labour market outcomes of native-born workers.

6. Most effect sizes are relatively small in absolute terms. However, the effect size in Ghana is uncharacteristically large (see Annex Table 4.A3.1). This is likely a result of very small variation in both the employment rate and the immigrant share across skill cells, as evidenced by consistently large standard errors in other model specifications. Similarly large standard errors can also be seen in Argentina, Nepal and to some extent Thailand, where the variations in immigrant shares across skill cells are limited.
7. Paid employment is those jobs where the workers hold explicit or implicit employment contracts that give them a basic remuneration that does not directly depend on the revenue of the unit for which they work. Paid employment tends to be associated with decent work, and as such a high proportion of waged and/or salaried workers in a country can signify advanced economic development (ILO, 2016).
8. Whereas waged and salaried workers are strongly associated with decent work, own-account workers and contributing family workers have a lower likelihood of benefiting from formal working arrangements. Own-account workers are workers in self-employment jobs, where remuneration directly depends on the profits derived from the goods and services produced. Contributing family workers are workers who hold “self-employment jobs” as own-account workers in an establishment operated by a related person living in the same household. Given their lack of formal arrangements, both are more likely to lack decent working conditions, such as access to social security or certain forms of political representation. These two work statuses combined constitute what can be classified as “vulnerable employment” (ILO, 2015).
9. Some authors have argued that any emerging negative effects of immigration in the context of large emigration flows might not be significant (e.g. Facchini, Mayda and Mendola, 2013).
10. Data limitations can have an impact on interpretations of regional level effects. Effect sizes at the regional level tend to be larger than national level regressions. This might result from increased regional variation in the immigrant share variable. Significance levels are also higher, likely as a result of more statistical power due to a larger sample size (more skill cells) per country. However, in some countries, observations of foreign-born workers are so few that regional disaggregation by skill cell would become unreliable. In the case of Rwanda, for instance, only four skill cells could be used in the regional disaggregation.
11. Moreover, in some low-income countries, the same characteristics attracting foreign-born workers might equally attract native-born workers. Hence, rural-to-urban migration pressures might in some countries be as strong as or stronger than a potential bias from native-born workers relocating in the presence of immigrants.

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ANNEX 4.A1

Estimating the impact of labour immigration: Conventional methods and empirical evidence

Effects of immigration on the economies of destination countries are widely studied yet often poorly understood. Hypothesised effects based on traditional labour market models are difficult to isolate in empirical analyses. As a result, a vast and diverse array of empirical literature has developed to explain and estimate impacts of migration, mostly in high-income countries. This annex explains a few of the most popular and influential methods, following Bodvarsson and van den Berg (2013).

One of the most common methods used is the spatial correlation approach. It links the share of immigrants in the population in a geographical area (region or city) to the employment and wage outcomes of native-born individuals (e.g. Altonji and Card, 1991; Pischke and Velling, 1997). Effects found using this method tend to be weak or insignificant. Steinhardt (2009) hypothesised and Borjas (2006) showed that this approach does not adequately account for various endogeneity problems with respect to labour market adjustment processes and (re-)location decisions of native workers. Depending on the level of internal mobility in a country, effects of immigration might therefore be easier to detect at the national rather than regional level.

One method which examines effects at the national level is the production function approach. Here a production function is specified with foreign- and native-born workers as separate inputs. Coefficient estimates are used to calculate factor price elasticities of native versus foreign-born labour (e.g. Grossman, 1982). With this approach, effects on labour market outcomes of native-born workers are sometimes positive, but almost always modest at best. This approach tends to find that substitutability between foreign- and native-born workers is low, likely due to differing skills (Bodvarsson and van den Berg, 2013). Differences in skills and returns on skills between workers are needed to estimate substitution elasticities and direct effects of immigration on labour market outcomes of native-born workers.

Accounting for these skill differences and local shifts led researchers to a third commonly used method known as the skill cell approach. In this approach, workers of comparable levels of skill are grouped into cells, typically based on two dimensions: education and experience. As noted by Borjas (2003), both dimensions have been emphasised by human capital theory (Becker, 1975; Mincer, 1974). As an individual's allocation to a skill cell cannot be easily changed, the endogeneity of native relocation is not present here, leading to a less biased test of immigration's impact. This approach has three underlying assumptions: the labour market functions at a national level, workers are perfectly mobile within the country, and foreign- and native-born workers only compete with each other at the same level of skill.

The skill cell approach is seen by many researchers as one of the most reliable methods to study empirically the effects of immigration on labour markets. Borjas (2003) pioneered this methodology using United States census data. He found a significant negative effect on native-born men's earnings and time worked. He also noted that a 10% rise in the share of immigrants reduces native-born workers' weekly earnings by 4.0% and hours worked by 3.7%.

A number of biases, some of which were openly acknowledged, remain challenging. For instance, the "downgrading" of immigrants on arrival might lead to measurement errors in their education, experience or both (Dustmann, Schönberg and Stuhler, 2016). Further, workers within cells must be perfectly substitutable, an assumption which can be tested by calculating within-cell elasticities.

Ottaviano and Peri (2012) found, using the same data as Borjas, that foreign- and native-born workers are imperfect substitutes even within cells. They concluded that immigration has a positive impact on wages of native-born workers, particularly among those with at least a secondary education. This suggests that models assuming perfect substitutability within cells tend to overstate adverse effects (or understate benefits) of immigration to native-born labour market outcomes.

Finally, none of these methods distinguishes between short- and long-term impacts as markets adjust over time. Also, they ignore or only implicitly account for other responses to immigration which might also affect labour market outcomes of native-born workers. These include changes in labour demand, adjustments to investments, changes in production technologies, or labour supply responses by native-born workers. Despite these shortcomings, the skill cell approach remains the most popular method of studying immigration impacts, due to its immunity to biases resulting from shifts in regional migration by native-born workers.

As with all regression analyses, estimates based on the skill cell approach show the correlation, or the strength of the linear association, between two variables. In other words, as one rises or falls, the other rises or falls as well. The skill cell approach, however, does not address the source, or cause, of this association. Causal inferences can rarely be made with simple observational designs such as that employed in this chapter, and the chapter should be read with this caveat in mind.

The term "impact" as it is used in the skill cell approach and in this chapter, refers to the correlation between the concentration of economically active foreign-born workers and a labour market outcome of native-born workers in each skill cell. The term does not imply that there is by definition a causal relationship between the two.

ANNEX 4.A2

Methodology and data

This chapter used the so-called skill cell approach to determine the impact of immigration on labour market outcomes for native-born workers as described in Annex 4.A1. Skill level is estimated by dividing the working-age population of each country into cells based on four levels of educational achievement and eight levels of years of experience, dimensions which have long been emphasized as determinants of skills in human capital theory (Becker, 1975; Mincer, 1974). The educational qualifications are no education or less than a primary education, primary or some secondary education, secondary education, and tertiary or higher education.

Work experience is estimated by subtracting a worker's expected age at the end of education from his or her current age. The ages are 15 years for less than a primary education, 17 for a primary education, 21 for a secondary education and 23 for a tertiary education. Work experience is divided into eight 5-year bands, up to a maximum of 40 years of experience (see Figure 4.2).

The sample is restricted to individuals aged 15-64 who actively participate in the labour market (i.e. are employed or unemployed). Native-born men and women are included in a pooled sample separately. Women's work experience is adjusted downwards by four years given that it is more likely affected by possible time outside the labour market due to childrearing or other domestic tasks (see, for example, Blau and Kahn, 2013).¹

Variations in the proportion of foreign-born workers across skill cells are used to assess the impact of immigration on various labour market outcomes. The labour market outcomes include in the analysis are the employment-to-population ratio, the unemployment, paid employment and vulnerable employment rates, and the natural log of real wages of native-born workers.

Accounting for interactions between education and experience and for changes in these variables over time, the main equation to be estimated becomes:

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

where Y_{ijt} is the labour market outcome for a native-born worker with education i ($i = 1...4$) and work experience j ($j = 1...8$) for year t . Furthermore:

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

where M_{ijt} is the number of foreign-born workers with education i and work experience j at time t and N_{ijt} is the number of native-born workers with education i and 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. Borjas (2003) argues that work experience cannot be adequately estimated for both men and women in the case of the United States, due to lower female labour force participation rates, particularly among older cohorts. While in the United States, differences in the male and female labour force participation rates between 1960 and 2000 might have a strong cultural component, there is no obvious reason for this to be the case in partner countries.

The analysis can also be adjusted to 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:

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

where d is a fixed effect taking into account regional divisions in a country (provinces, districts, etc.) k ($k = 1 \dots K$). Two-way interactions with other fixed effects are also included.

Data is aggregated at the level of individual cells per year, and regressions are weighted by the size of the economically active population per skill*year cell. Therefore, the analysis is repeated limiting the “immigrant” population to only those foreign-born workers residing in the region for less than ten years.

Population census and labour force survey data used in the analysis were collected from the Minnesota Population Center (2017) or Country studies. Labour force data for Thailand are based on employment only.

Note

1. Adjusting women’s work experience downwards by four years is a crude measure, but the lack of sufficient data limits the applicability of other approaches in most countries examined. Preferable would be a measure which takes into account differences in labour market experience due to age and cohort, such as weights constructed on the basis of yearly age-specific fertility rates which cumulatively build up a predetermined gap between the ages of 15 and 49 (e.g. De Brauw and Russell, 2014). In the case of Argentina, it was possible to construct an even more precise measure based on microdata which translates shares of men and women with a particular age and schooling who are working in a given year into years of work experience.

ANNEX 4.A3

Regression results

Table 4.A3.1. Coefficients of regressions of native-born workers' labour market outcomes on foreign-born workers' share per country, national level

Labour market outcomes	Argentina	Costa Rica	Côte d'Ivoire	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Employment-to-population ratio of native-born workers	-0.442 (0.984)	-0.303** (0.131)	-0.676 (0.415)	-0.259** (0.011)	-1.59* (0.836)	-1.597 (1.327)	1.828 (1.103)	-0.436** (0.203)	0.440 (0.469)	0.424 (0.592)
Unemployment rate of native-born workers	-0.717 (0.921)	-0.066 (0.039)	0.335 (0.301)	-0.132* (0.068)	0.141 (0.163)	0.0933 (1.044)	-0.262 (0.325)	-0.006 (0.138)	-0.257 (0.295)	
Paid employment rate of native-born workers					0.016 (0.641)	0.165 (1.526)	-1.099** (0.547)	-0.092 (0.191)	-0.301 (0.280)	0.389* (0.234)
Vulnerable employment rate of native-born workers		0.026 (0.080)		0.132 (0.137)	0.172 (0.571)	0.310 (1.669)	1.033* (0.611)	-0.128 (0.259)	-0.082 (0.400)	-0.503* (0.276)
Wages of native-born workers	-0.619 (0.877)	-1.059 (0.775)	84.371 (171.639)	0.170 (0.221)	1.533 (3.142)	-3.039 (1.968)		3.402*** (1.178)	2.055 (1.604)	
Observations	96	604	55	637	128	224	96	191	96	96

Note: The table reports the coefficient of the foreign-born workers' share variables from regressions where the dependent variable is the mean labour market outcome for a native-born education*experience group at a particular point in time. Asterisks indicate significance levels (*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$). Robust standard errors are reported in parentheses. All regressions are based on the same 32 observations per year and are weighted by the sample size of the education*experience*year cell, except in Côte d'Ivoire, where data was limited to ten-year experience intervals. All regression models include education, experience and period fixed effects. They also include interactions between education and experience fixed effects, education and period fixed effects, and experience and period fixed effects. Wage regressions are done using the natural logarithm of average wages per education*experience group, except for Côte d'Ivoire, where absolute wages are used.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

Table 4.A3.2. **Coefficients of regressions of native-born workers' labour market outcomes on foreign-born workers' share per country, regional level**

Labour market outcomes	Argentina	Costa Rica	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Employment-to-population ratio of native-born workers	-0.0525 (0.133)	-0.251*** (0.037)	-0.200*** (0.025)	-0.050 (0.525)	0.244*** (0.0845)	2.468*** (0.528)	-0.057 (0.138)	-0.203** (0.080)	0.327** (0.161)
Unemployment rate of native-born workers	-0.0956 (0.0589)	0.002 (0.017)	-0.015 (0.017)	-0.050 (0.061)	-0.0319 (0.164)	-0.336*** (0.086)	-0.078** (0.035)	0.102 (0.076)	
Paid employment rate of native-born workers				-0.074 (0.136)	0.318 (0.210)	0.604*** (0.217)	-0.009 (0.171)	0.071 (0.085)	-0.175 (0.143)
Vulnerable employment rate of native-born workers		0.015 (0.031)	-0.057 (0.038)	-0.088 (0.132)	-0.242 (0.182)	-0.577*** (0.220)	0.128 (0.161)	-0.123 (0.079)	0.093 (0.140)
Wages of native-born workers	0.137** (0.0694)	-0.275* (0.154)	-0.105 (0.070)	2.345** (0.981)	-0.081 (0.384)		-7.172* (3.824)	0.281 (0.235)	
Observations	2 424	3 512	6 105	1 277	512	480	714	864	478

Note: The table reports the coefficient of the foreign-born workers' share variables from regressions where the dependent variable is the mean labour market outcome for a native-born education*experience*experience group at a particular point in time. Asterisks indicate significance levels (*** p < 0.01, ** p < 0.05, * p < 0.1). Robust standard errors are reported in parentheses. All regressions are based on the same 32 observations per region and year and are weighted by the sample size of the education*experience*region*year cell, except in Côte d'Ivoire, where data was limited to ten-year experience intervals. All regression models include education, experience, region, and period fixed effects. They also include interactions between education and experience fixed effects, education and period fixed effects, and experience and period fixed effects. Wage regressions are done using the natural logarithm of average wages per education*experience*region group, except for Côte d'Ivoire, where absolute wages are used.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

Table 4.A3.3. **Coefficients of regressions of resident workers' labour market outcomes and new foreign-born workers' share per country**

Labour market outcomes	Argentina	Ghana	Nepal	Rwanda	South Africa	Thailand
Employment-to-population ratio of native-born workers	5.292 (5.529)	0.512 (0.799)	-0.511*** (0.166)	-1.254*** (0.382)	0.978*** (0.360)	0.774 (1.373)
Unemployment rate of native-born workers	5.435 (4.105)	-0.171 (0.388)	0.049 (0.120)	0.683** (0.327)	-0.531* (0.275)	
Paid employment rate of native-born workers		-2.439** (1.025)	-0.183 (0.176)	0.404 (0.272)	0.117 (0.264)	0.91** (0.457)
Vulnerable employment rate of native-born workers		2.876*** (0.941)	0.267 (0.276)	-0.491 (0.344)	-0.926*** (0.351)	-1.171** (0.531)
Wages of native-born workers	-1.816 (4.593)	-5.780 (6.191)		1.294 (1.791)	3.905*** (0.905)	
Observations	96	96	96	160	96	96

Note: The table reports the coefficient of the foreign-born workers' share variables from regressions where the dependent variable is the mean labour market outcome for a native-born education*experience group at a particular point in time. Asterisks indicate significance levels (*** p < 0.01, ** p < 0.05, * p < 0.1). Robust standard errors are reported in parentheses. All regressions are based on the same 32 observations per year and are weighted by the sample size of the education*experience*year cell. All regression models include education, experience and period fixed effects. They also include interactions between education and experience fixed effects, education and period fixed effects, and experience and period fixed effects.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

Table 4.A3.4. **Coefficients of regressions of native-born men and women's labour market outcomes on foreign-born men and women's shares per country, national level**

Labour market outcomes		Argentina	Costa Rica	Côte d'Ivoire	Dominican Republic	Ghana	Kyrgyzstan	Nepal	Rwanda	South Africa	Thailand
Employment-to-population ratio of native-born workers	Men	-0.340 (0.349)	-0.228*** (0.069)	-0.792** (0.342)	-0.267** (0.101)	-0.921 (0.873)	-1.508 (1.672)	1.173*** (0.418)	-0.618*** (0.169)	-0.064 (0.415)	0.220 (0.524)
	Women	-1.230 (0.730)	-0.199** (0.085)	0.707 (1.463)	-0.138 (0.115)	-1.280 (0.783)	-1.19	-0.280 (0.230)	0.043 (0.229)	0.485 (0.367)	0.333 (0.374)
Unemployment rate of native-born workers	Men	-0.846 (0.721)	0.053* (0.030)	0.0720 (0.175)	-0.084 (0.055)	0.014 (0.176)	-0.307 (0.536)	-0.276 (0.239)	-0.033 (0.074)	0.006 (0.221)	
	Women	-0.614 (1.187)	0.026 (0.058)	0.878 (1.519)	-0.181 (0.161)	0.358* (0.201)	-0.341	0.296 (0.228)	-0.026 (0.104)	-0.449 (0.385)	
Paid employment rate of native-born workers	Men					0.481 (0.540)	-0.347 (1.119)	-0.533 (0.485)	-0.335 (0.228)	-0.020 (0.250)	0.671* (0.349)
	Women					-1.893*** (0.648)	-0.135	0.744* (0.410)	0.063 (0.235)	-0.251 (0.408)	-0.093 (0.160)
Vulnerable employment rate of native-born workers	Men		-0.027 (0.074)		0.084 (0.106)	-0.474 (0.476)	-0.508 (1.290)	0.492 (0.564)	0.241 (0.251)	-0.020 (0.303)	-0.811* (0.428)
	Women		0.148 (0.099)		0.115 (0.118)	1.769*** (0.538)	1.183	-0.608 (0.390)	-0.155 (0.299)	-0.369 (0.432)	0.049 (0.158)
Wages of native-born workers	Men	0.413 (0.359)	-0.165 (0.242)	-110.148 (567.253)	-0.035 (0.207)	8.547 (6.222)	3.289** (1.410)		-2.539 (3.748)	0.464 (1.300)	
	Women	0.475 (0.371)	-0.943 (0.756)	-454.739 (471.771)	0.197 (0.323)	-4.298 (10.207)	2.154		0.950 (3.697)	4.729** (2.271)	
Observations		96	604	55	635	96	63	96	191	96	96

Note: The table reports the coefficient of the foreign-born workers' share variables from regressions where the dependent variable is the mean labour market outcome for a native-born education*experience group at a particular point in time, for men and women separately. Asterisks indicate significance levels (*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$). Robust standard errors are reported in parentheses. All regressions are based on the same 32 observations per year and are weighted by the sample size of the education*experience*year cell, except in Côte d'Ivoire, where data was limited to ten-year experience intervals. All regression models include education, experience and period fixed effects. They also include interactions between education and experience fixed effects, education and period fixed effects, and experience and period fixed effects. Wage regressions are done using the natural logarithm of average wages per education*experience group, except for Côte d'Ivoire, where absolute wages are used.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices.

Chapter 5

Immigration and economic growth

This chapter looks at the impact of immigrants on economic growth in the context of the project Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination. The first section discusses immigrants' contribution towards value added and per-capita income. The second section explores ways in which immigration contributes to selected economic sectors, including potential effects on productivity. The final section investigates the link between immigration and entrepreneurship.

Immigration's effect on economic growth is one of the key factors that determine whether immigration boosts the well-being of the host society. If the growth rate of per-capita income increases thanks to immigrants, the standard of living of the general population can rise. This chapter seeks to provide evidence on this topic while building on the previous chapters.

Existing studies on the per-capita growth effects of immigration are much less numerous than studies on its labour market or fiscal impacts. Most studies in this area rely on cross-country data and tend to find positive effects (Aleksynska and Tritah, 2015; Alesina, Harnoss and Rapoport, 2016; Boubtane, Dumont and Rault, 2016; Felbermayr, Hiller and Sala, 2010; Jaumotte, Koloskova and Saxena, 2016). Studies based on individual countries also find positive effects (Muysken and Ziesemer, 2011, on the Netherlands; Boubtane, Coulibaly and D'Albis, 2015, on France). Studies suggesting that impacts are negative include Borgy et al. (2010) in terms of gross domestic product (GDP) per worker and Dolado, Gloria and Ichino (1994). Finally, other studies indicate that the way immigration affects economic growth depends on the type of immigrants or the country of destination (Kang and Kim, 2012; Orefice, 2010). The different methodologies, country samples and time frames used in the existing analyses make it difficult to directly compare results.

This chapter does not replicate the methodologies from the above-mentioned studies but rather discusses evidence from multiple sources in a broad framework. The cross-country analyses cannot be replicated because the number of partner countries is limited to ten. The individual country analyses cannot be applied because there is not enough immigrant stock data. Instead, the first part discusses immigrants' current contribution of value added and per-capita income. The second part explores ways in which immigration contributes to selected sectors, including potential effects on productivity. Finally, the third part investigates the link between immigration and entrepreneurship.

Immigration and per-capita income

While an expansion of the workforce almost invariably increases a country's total output level (Borjas, 1999), this section seeks to provide evidence on whether foreign-born workers also affect the level and growth rate of per-capita income for the entire population. Under the right circumstances, immigration could be associated with productivity growth, which is discussed in the following section.

It is unclear whether immigration has a negative, a positive or no effect on GDP per capita. Theoretically, under certain assumptions, an increase in the labour supply due to immigration would lower wages and expand total employment and output. This would be the case in an economy (i) which does not trade with other countries, (ii) where the capital stock is fixed and (iii) where only one type of worker produces goods and services (iv) and whose production does not become more or less efficient as production quantities change.¹ The overall income would increase, but benefits would accrue to the owners of capital at the detriment of workers (Bodvarsson and van den Berg, 2013). However, real-world economies are more complex and the effects less clear. For example, if immigrants encourage firms

to raise investment or invest themselves, or if they contribute to the development of new products, production technologies or export markets, the impact can differ greatly from the simple model.

At the empirical level, the impact of immigration on GDP per capita can be assessed by looking at two components:

- the share of employed individuals in the total population
- the GDP per employed worker (labour productivity).²

This implies that if either the share of employed individuals in the total population or labour productivity rises while the other remains constant or increases, per-capita income would rise. However, the per-capita income of native-born persons would not necessarily rise.

Immigration tends to boost the share of the population that is employed

Immigration can increase the share of employed individuals in the total population. This is true for eight partner countries. In these countries, the share of the employed in the foreign-born population is higher than the same share in the native-born population (Figure 5.1). The two exceptions are Kyrgyzstan and Nepal.

All else remaining equal, the presence of immigrants should raise income per capita. This is primarily due to the higher share of immigrants of working age (defined as those aged 15 and above) compared to the native-born population. To a lesser extent it is due to a higher employment rate among working-age immigrants. In all partner countries, the share of the working-age population is higher for the foreign-born than for the native-born (Figure 5.1). The effect on the overall share ranges from 0.2 percentage points in Ghana to 2.4 percentage points in Côte d'Ivoire, for an average of one percentage point. The potential increase in GDP per capita due to a higher share of the working-age population can be significant. A report by the World Bank estimates that an increase of 1 percentage point in the working-age population boosts GDP per capita growth by 1-2 percentage points (World Bank, 2016).

The immigrants' employment rate is higher than the native-born rate in six of the partner countries. In Ghana, Kyrgyzstan, Nepal and Rwanda, the opposite is true (Figure 5.1). But because immigrants are more likely to be of working age, this lower employment rate does not significantly reduce the share of employed in the overall population. In fact, in Ghana and Rwanda, the higher share of working-age individuals among the immigrant population more than compensates for the lower employment rate, resulting in a higher overall share of workers in the total population.

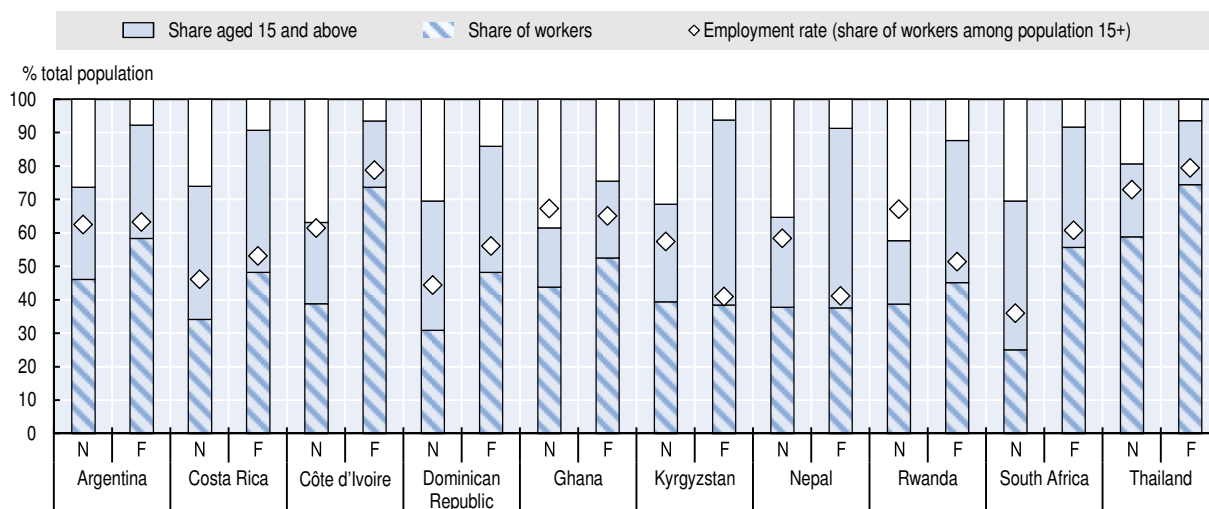
The higher concentration of immigrants among the working-age population observed in the partner countries is not atypical. Globally, about 80% of immigrants are aged 15 or above, compared to around only 58% of the overall population (UN DESA, 2016). The labour force participation rate is also higher among immigrants than among the native-born population in all groups of countries except low-income countries (ILO, 2015a). While a higher labour force participation rate could in theory be offset by a higher unemployment rate, it is likely that the employment-to-population ratio of immigrants is also higher than the same ratio for native-born individuals in middle- and high-income countries.

An upward effect of immigration on the share of the employed in the population, and through this channel on per-capita income, could be mitigated or even reversed if foreign-born workers displace native-born workers. Table 5.1 shows the results of the labour market impact analysis conducted in Chapter 4. A negative impact on the employment rate of the native-born population was found in Costa Rica, the Dominican Republic, Ghana and Rwanda,

although the impact on the paid employment rate was insignificant (column 3). The impact of the paid employment rate on GDP per capita is possibly larger than of employment overall as productivity levels are likely to be higher for workers in paid employment (which excludes, for example, workers in subsistence agriculture). A negative impact of immigration on the paid employment rate of native-born workers was found only in Nepal, possibly due to the large outflows of skilled Nepal-born workers (see also Chapter 4).

Figure 5.1. The share of employed individuals is usually higher among the foreign- than the native-born population

Share of the population aged 15 and above, share of the population employed and the employment rate (for individuals aged 15 and above), by foreign- and native-born populations



Note: N = native-born population, F = foreign-born population. The share of the population aged 15 and above includes the share of workers.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; household survey data was used for Argentina and Côte d'Ivoire.

StatLink  <http://dx.doi.org/10.1787/888933649164>

Table 5.1. In most partner countries, there are no negative impacts from immigration on native-born employment

	All employment	Paid employment
(1)	(2)	(3)
Argentina (2015)	No impact	No impact
Costa Rica (2011)	Negative	No impact
Côte d'Ivoire (2008)	No impact	..
Dominican Republic (2010)	Negative	No impact
South Africa (2011)	No impact	No impact
Ghana (2010)	Negative	No Impact
Kyrgyzstan (2009)	No impact	No impact
Nepal (2011)	No impact	Negative
Rwanda (2012)	Negative	No impact
Thailand (2010)	No impact	Positive

Note: Results on the impact of immigration on native-born employment are based on national level regressions pooling men and women together, as discussed in detail in Chapter 4.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; household survey data was used for Argentina and Côte d'Ivoire.

The evidence so far shows that, in the partner countries, immigration generally leads to an increase in the share of the employed in the population and hence to growth of the labour force. An increase in the share of workers causes a mechanical increase of per-capita income but may affect it even further. Population growth through immigration can lead to additional increases in per-capita income in models where certain sectors of the economy become more efficient at higher production levels. That is, the higher the production volume, the fewer inputs are required per product, although this may depend on certain pre-conditions and the qualifications of the immigrants (Bretschger, 2001; Reichlin and Rustichini, 1998). Similarly, if a larger labour force allows workers to become more specialised (Peri, 2012a) or if immigrants fill shortages in positions that are critical to the economy, per-capita income can increase further. However, it can possibly decrease, for example if employers invest less in technologies (Ortega and Peri, 2009).

GDP per foreign-born worker is difficult to determine

Changes to the GDP per worker, that is, labour productivity, also determine how immigration affects per-capita income. The effects can be analysed by looking at changes in the following:

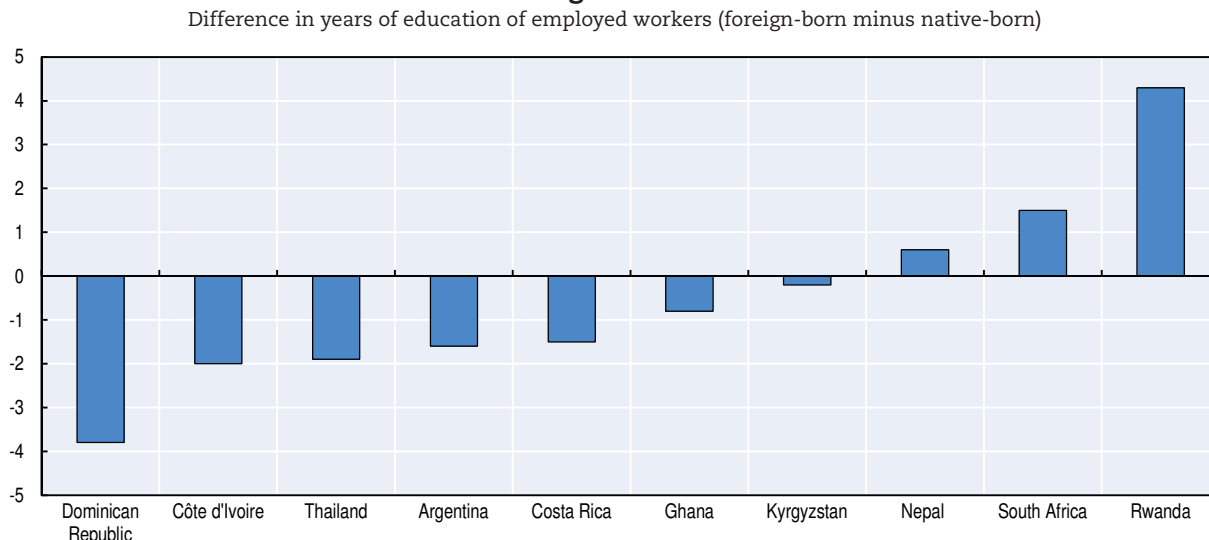
- the capital-labour ratio
- the average human capital per worker
- total factor productivity.³

There is no systematic evidence on how immigration affects the capital-labour ratio. In theory, the ratio initially drops when the labour force grows. Over time, firms undertake investments that restore the ratio to a higher level. However, immigrants who invest or spur foreign direct investment into the economy can offset the drop in the capital-labour ratio from the outset. Given these theoretical considerations and the fact that the entry and exit of native-born individuals affects labour force growth rates much more than the arrival of immigrants in many countries (see Chapter 2), changes in the other two components are of more interest.

Human capital can be understood as the stock of skills and knowledge of individuals that contribute to their productivity (Acemoglu and Autor, undated). Formal training and education are important investments in human capital (Becker, 1994). Informal learning on and off the job also affects human capital in positive ways. While people with the same educational level may have different human capital levels, education captures a major part of human capital. Years of education are easy to compare across countries and between foreign- and native-born individuals and therefore are used as a human capital measure.


In the partner countries, average human capital – measured as years of education – of foreign-born workers is not uniformly higher or lower than that of native-born workers. In Nepal, Rwanda and South Africa, it is indeed higher for foreign- than for native-born workers, ranging from an additional 0.6 years of education in Nepal to 4.3 years in Rwanda (Figure 5.2). In seven partner countries, native-born workers have more years of education than the foreign-born. Hence, in these countries, immigration is associated with a modest decrease in average human capital per worker. However, in Costa Rica, where foreign-born workers have on average 1.5 years less education than native-born workers, the share of immigrants with a tertiary education is higher than that of the native-born. In OECD countries where the relative human capital of immigrants is higher, it increases GDP per capita (Boubtane, Dumont and Rault, 2016).

Figure 5.2. **In most partner countries, native-born workers are more educated than foreign-born workers**



Note: In some countries, the years of education were estimated based on reported highest educational attainment.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; household survey data was used for Argentina and Côte d'Ivoire.

StatLink  <http://dx.doi.org/10.1787/888933649183>

The final component – changes in total factor productivity – is the hardest to capture. There is no concrete comparable measure of this component in this report, but the second section of this chapter presents evidence based on different quantitative and qualitative research methods. In addition, modelling analyses suggest that foreign-born workers may increase total factor productivity due to efficiency gains generated by increased specialisation in the labour force. This appears to be the case in South Africa and Thailand (OECD/ILO, forthcoming d; OECD/ILO, 2017b).

Immigrants' contribution to value added often exceeds their population share

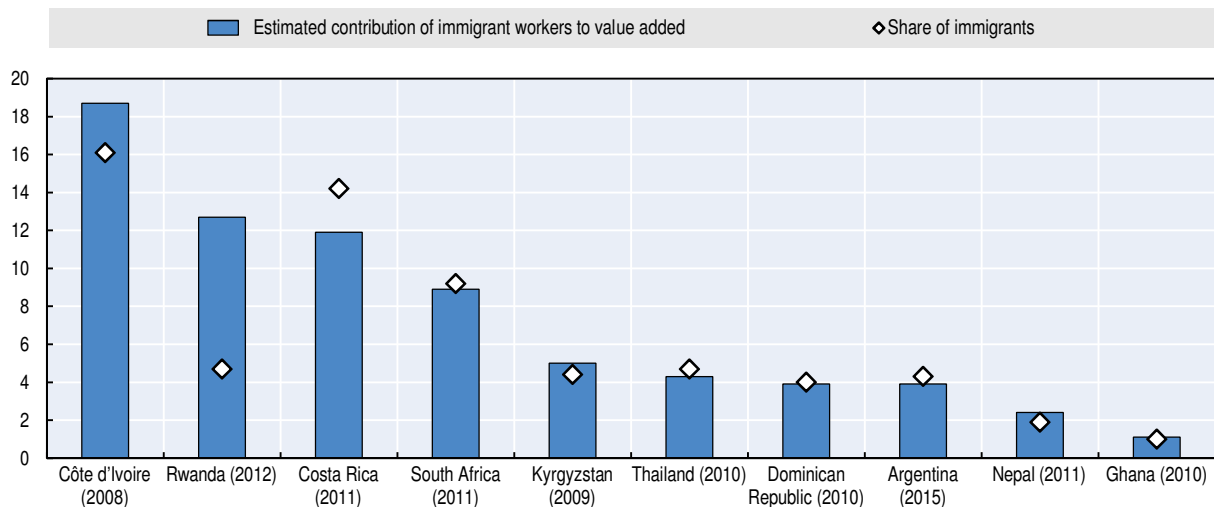
It is difficult to determine the contribution of foreign-born workers to GDP with great certainty. This is due to the lack of comparable information on the relative productivity of foreign-born workers and to their effects on overall productivity in their host country. If the productivity of foreign- and native-born workers is the same, their contribution to GDP could generally be assumed to be equal to their share in employment, but this assumption is unlikely to hold.

A more precise estimate can be made by taking into account two factors. One is the sectoral distributions of foreign- and native-born employment (given that labour productivity differs widely by sector). The second is the ratio of years of education of foreign- and native-born workers (see, for example, Martin, 2007; ILO/OECD/World Bank, 2015) as a proxy for differences in human capital and, indirectly, productivity. Each sector's value added is multiplied by the share of foreign-born workers in the sector and the education ratio of foreign-to-native-born workers. These estimated immigrant contributions to each sector's value added are then added up to arrive at an estimate of their contribution to overall value added.

Based on these calculations, the contribution of foreign-born workers ranges from about 1% of GDP in Ghana to almost 19% in Côte d'Ivoire (Figure 5.3). In most partner countries, these estimates are fairly close to the share of foreign-born workers in employment. Thus

immigrants' estimated contribution minus the share of employed workers who are foreign-born equals close to zero. Large differences are observed in Côte d'Ivoire (2.6 percentage points) and in Rwanda (8 percentage points). They are due to the concentration in some higher-productivity sectors such as mining in Côte d'Ivoire and to the high level of education of foreign-born workers in Rwanda.

Figure 5.3. **Immigrants' contribution to value added is often similar to their employment share**
Immigrants estimated share of value added and of the employed



Note: The estimated contribution of foreign-born workers to GDP is calculated as follows: the share of employed individuals that are immigrants in a sector is multiplied by the ratio of years of education of foreign- to-native-born workers employed in the sector and by the value added generated by the sector. These estimates of the value added generated by immigrants in the different sectors are then added up to arrive at the total estimated value added generated by immigrants. The share of this value added in total value added corresponds to the estimated contribution of foreign-born workers to GDP.

Source: Authors' own work based on population census data from the Minnesota Population Center (2017) or national statistical offices; household survey data was used for Argentina and Côte d'Ivoire.

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Overall, given the large differences in the share of the employed population among the foreign-born and the native-born, it seems unlikely that foreign-born workers depress income per capita. This would only happen if productivity levels were sufficiently low to eliminate the advantage generated by relatively high employment shares, and if there were no other positive effects (such as those due to increased specialisation).

Econometric models illustrate the contribution of foreign-born workers to GDP in South Africa and Thailand

The effects of immigrant workers on GDP can be illustrated using econometric models. These models capture not only the immediate contribution of immigrant workers, but also second-order effects on consumption and investment, and their subsequent impact on GDP. Such modelling exercises were carried out for South Africa and Thailand, as internationally used models that appeared appropriate were available for these countries. For Thailand, a Computable General Equilibrium (CGE) model was applied. This model is based on the single country standard model outlined by the Partnership for Economic Policy (PEP).⁴ For South Africa, a multisector macro-econometric model was used; it is based on Inforum models developed by the University of Maryland (Conningarth Economists, 2017).⁵ The models for both countries draw extensively on input-output data, other economic and

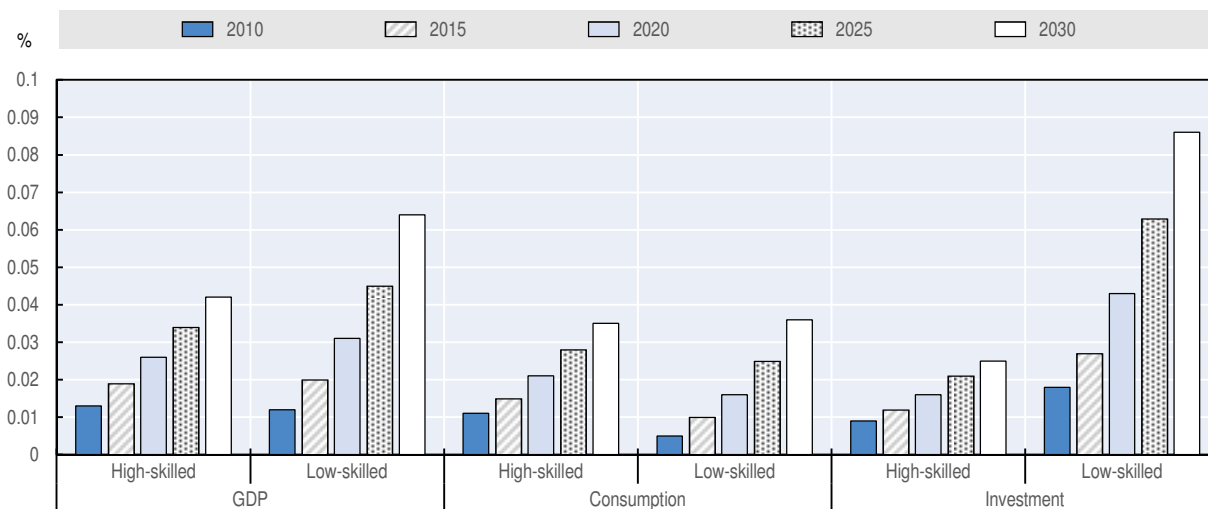
social data, and on population censuses for data on immigrants. Like all models, they are stylised representations of the economy and are necessarily built on a number of simplifying assumptions.

The CGE model for Thailand, based on data from 2001 to 2004, includes groups of households differentiated by level of income, while production in each economic sector is determined by a function that uses labour and capital. Both native-born and foreign-born workers can be low- and high-skilled, and the production function assumes that their inputs are complementary. The model is able to simulate the main components of GDP with a large degree of accuracy (Puttanapong, Limskul and Bowonthumrongchai, 2017).

The CGE model demonstrates the strong connection between the immigrant workforce and production in the Thai economy. The degree of complementarity between native- and foreign-born workers determines the magnitude of the impact that foreign-born workers have on the economy. The greater the complementarity, for example, the more a reduction of foreign-born employment harms the economy (OECD/ILO, 2017b). The model's simulations for the period up to 2030 for example show that an increase in productivity of high-skilled workers may initially be more beneficial than an increase in the productivity of low-skilled workers, while over time the opposite is true (see Figure 5.4). These differences are due to the central role of investment in determining the growth path of the economy, and the fact that high-skilled workers are a relatively small group (OECD/ILO, 2017b).

Figure 5.4. The economic impact of an increase in the productivity of low-skilled workers is stronger in the long term

Impact of an increase of the productivity of low-skill and high-skill workers on GDP, consumption and investment, selected years (deviation from the base case, %)



Source: OECD/ILO (2017b).

StatLink  <http://dx.doi.org/10.1787/888933649221>

An important feature of the multisector macro-econometric model used for South Africa is its bottom-up approach. Macro-economic aggregates are built up from detailed activities at an industry or product level rather than being estimated according to production functions. The model includes a production block and, in this block, intermediate and final demand add up to total demand, which forms the basis for production on a sectoral level. Final demand includes consumption and investment, while intermediate demand is calculated for each sector by using an input-output coefficient matrix.

The South African model simulated economic development with and without foreign-born workers for the 2001-11 period. The model distinguished between low- and high-skilled workers and took into account information on labour-related incomes of both groups.⁶ The lower average earnings of foreign-born workers help explain the estimated favourable impact on GDP. On average, high-skilled foreign-born workers raised GDP per capita by 2.2%, and low-skilled workers by 2.8%. Foreign-born workers also generated additional employment for native-born workers. These results are consistent with the findings reported earlier (Figure 5.1), which showed the relatively high share of foreign-born workers employed in South Africa; therefore a positive effect of foreign-born workers on GDP per capita seems likely. There is no measurable impact of the presence of foreign-born workers on native-born employment at the national level (see Chapter 4). However, the estimates in the South Africa country report suggest that new immigrants may have a positive effect on native-born employment levels (OECD/ILO, forthcoming d).

Immigration and productivity

Immigration can affect the productivity of a country through several channels. These include knowledge and technological transfers that can lead to a change in the level of innovation (Akcigit, Grigsby and Nicholas, 2017; Böhme and Kups, 2017). The effects can be positive or negative.

The results of empirical studies on the overall impacts of immigration on productivity are mixed. Some studies find positive effects of either the size or the diversity of the immigrant group in the local area or firm (Mitaritonna, Orefice and Peri, 2017; Peri, 2012b; Trax, Brunow and Suedekum, 2015). Others find no (Ortega and Peri, 2009) or even negative effects (Ortega and Peri, 2014). The effects may also differ by sector (Paserman, 2013).

Productivity is normally estimated by looking at total output as a function of inputs. For any given stock of input, a higher output means higher productivity (Daude and Fernández-Arias, 2010). The relationship between immigration and productivity within a country can be examined at the aggregate, sector and firm levels. Because output and input data at these levels are scarce, rather than estimating the exact impact of immigration on productivity, the relationship has been analysed less formally.

In particular, this section of the chapter presents the following evidence. The first sub-section summarises results from qualitative sector studies focusing on how immigrants integrate into businesses and the labour force in key sectors in Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal. The second sub-section explains what trade patterns can reveal about how immigrants contribute to sectoral productivity. The third sub-section investigates the relationship between the presence of immigrant workers at the firm level and firm characteristics based on enterprise survey data from Côte d'Ivoire, Nepal and Rwanda.

Sectoral studies help better understand immigrants' role in key economic sectors

Qualitative sector studies for Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal aim to analyse how foreign-born workers contribute to specific sectors. They explore why this contribution might differ from that of native-born workers and how the two groups interact. At the national level, the presence of immigrant workers did not have a measurable effect on the employment of native-born workers in most partner countries (see Table 5.1). However, these national results do not necessarily hold for each economic sector. The qualitative studies discussed in this sub-section illustrate such effects, as well as broader effects on knowledge generation and ultimately productivity. They therefore complement the quantitative analysis in this and other chapters.

Scope and methodology

The sector studies focused on two economic sectors in each of the four countries in which the project team conducted them (Table 5.2). The sectors were selected based on two criteria: immigrants were overrepresented and the sector produced a sizeable share of GDP.

Table 5.2. **Trade was analysed in all of the sector studies**
Selected sectors by country

	Agriculture	Mining	Manufacturing	Trade
Côte d'Ivoire	X			X
Ghana		X		X
Kyrgyzstan			X	X
Nepal			X	X

The structure of the sector studies was similar across countries. The studies' findings relied on (i) interviews with key stakeholders; (ii) interviews with enterprises; and (iii) focus group discussions among both native-born and immigrant workers. The project team organised training workshops to conduct pilot fieldwork, and a team from a research institution in each country undertook the study. Annex Table 5.A1.1 lists the research institutions and the number of interviews conducted.

The selection of study participants depended on whether they were key stakeholders, enterprises or workers. The key stakeholders interviewed were the main institutions involved in the migration process. These included ministries of the interior and labour, other government departments, as well as national and sectoral organisations of employers and unions. The enterprises, especially large enterprises, were considered to represent the formal economy, and were selected in consultation with relevant (sector) organisations. The focus groups were composed of both foreign-born and native-born workers to assess the effects of immigration for workers including those in the informal economy. Geographical coverage was determined in consultation with relevant organisations.

In most countries, studies were designed to include at least 20 stakeholder interviews, 50 interviews with representatives of enterprises, and 10 focus group discussions. However, these numbers were not always achieved due to various constraints. In Ghana, for example, it was not possible to secure interviews with representatives of many enterprises particularly in the mining sector. This was partially compensated by interviews with key informants, but still resulted in a shortfall in comparison with the planned number of interviews.

Each focus group discussion consisted of 5 to 12 participants to allow for an effective discussion. The composition of the groups was generally guided by the need to balance socio-demographic characteristics of the populations. The interviews were conducted in both national and appropriate local languages.

Immigrant communities and the many factors associated with immigration

Both push and pull factors affect migration flows (Baum, 2012). While economic constraints and opportunities are major drivers (Chapter 2), individual characteristics such as income, education (Chapter 3), and access to information and networks are also important to explain migration decisions (Flahaux and De Haas, 2016). Economic opportunities, a stable political environment, perceived hospitality, availability of basic amenities and a more competitive environment in countries of origin were frequently mentioned in this context in partner countries. Among Nigerian traders in Ghana, for example, there is a strong perception

that profit margins are higher in Ghana, while this country is considered more peaceful than Nigeria. Kyrgyzstan is thought to have a tolerant and liberal environment compared to other Central Asian states or Russia. Education is another motive for migration, as some immigrant workers initially move to a destination country to benefit from higher education and end up staying. On the other hand, unemployment and extreme poverty in contiguous Indian states are considered to be the leading causes for Indians to migrate to Nepal.

Networks can play an important role in shaping both migration flows and the integration of immigrants into the economy:

- The sector studies confirmed the enabling role of networks in the migration process, which the existing literature widely acknowledges (Anjos and Campos, 2010). For example, migration networks from China to African countries, once established, continue to generate further migration (Mohan and Kale, 2007). Such networks may start with the migration of a single family member, who is then followed by other members of the family or even of the larger community.
- Likewise, the sector studies also provided examples of the role of migrants' networks in cross-border investment and business development, which had already been stressed in the literature (Docquier and Lodigiani, 2010). In Côte d'Ivoire, for example, immigrants often integrate into the informal sector through immigrant networks that help newcomers find work or that even provide credit so that they can become self-employed. Likewise, social networks play a significant role in the migration process and are intertwined with the economic activities of traders in Ghana.

International treaties or bilateral relations between countries may encourage or reinforce immigrant networks. For example, since 2000, Ghana attended several meetings in the context of the Forum on China-Africa Cooperation (FOCAC) and subsequently signed agreements with China in areas that include agriculture, trade and infrastructure. Accordingly, Chinese companies have been among the top ten source countries of investment in Ghana for many years, and some of the immigration from China is linked to these agreements.⁷

But international agreements may also affect immigrant networks and their economic contributions to the country of destination in less positive ways. For example, it has been argued that Kyrgyzstan's joining the Eurasian Economic Union has led to a decrease in re-exports of Chinese and Turkish goods through Kyrgyz markets.

Views on immigrant workers' contribution to large enterprises are often positive

Particularly in large enterprises, the need to fill skills gaps is one of the drivers of recruiting immigrant workers. Many of these workers appear to be concentrated at the specialist or managerial level in the selected sectors of partner countries.⁸ In Nepal, immigrant workers concentrate in technical occupations, as native-born workers have not yet been trained in the use of newly imported technologies. In Kyrgyzstan, business representatives mentioned that certain skills – including in engineering, electrical and mechanical maintenance and financial and supervising functions – were simply not available on the labour market. Similarly, specialists are recruited in limited numbers by the mining and trade sectors in Ghana to fill both technical and economic skills gaps (e.g. engineering, accounting and marketing). Some employers also deem immigrants desirable workers because of their attitude towards work. This was mentioned in Côte d'Ivoire, Ghana and Nepal.

When seeking to obtain work permits, employers may have to overcome bureaucratic hurdles. In some countries, this is often perceived to be problematic. In Kyrgyzstan, for example, work permits are sometimes only granted for a short period, and the frequent

need to renew permits places a large administrative burden on companies. Another problem is corruption, as some immigrant workers and employers reported that they had to pay bribes in order to obtain permits. Nevertheless, corruption is not a universal phenomenon, as permits were also obtained according to legal procedures in Kyrgyzstan. In Ghana, the process also involves various bureaucratic procedures but appeared less prone to abuse.

In Nepal, where the overwhelming majority of immigrant workers comes from impoverished neighbouring states in India, issuing work permits is less prevalent. Reciprocal free mobility and labour market access, ensured by the 1950 treaty between India and Nepal, indirectly contributes to informal employment and to exploitative working conditions for vulnerable immigrant workers. For instance, employers in the formal manufacturing sector in Nepal sometimes show a preference for Indian workers, particularly because of their lack of documentation and willingness to work under poor conditions. The combination of the lack of documentation and use of sub-contractors is further seen as exacerbating working conditions in general, as undocumented immigrant workers do not pay taxes or receive social benefits.

In a country such as Nepal, where emigration flows are considerable, another commonly cited reason for hiring immigrant workers is the lack of native-born workers interested in working in the country. Several Nepalese employers pointed out that because of the general belief that wages in third countries, primarily in the Middle East and Southeast Asia, are higher than in Nepal, retaining Nepali workers is difficult even when they are provided with employment opportunities.

Perceptions of immigrant workers in small-scale economic activities, self-employment and the informal economy are mixed

Perceptions of immigrant workers outside large enterprises seem more mixed. Some interviewees voiced positive views on the contribution of immigrant workers in terms of skills and even job creation. But some also expressed fears concerning higher levels of competition in product and labour markets. In addition, problems such as environmental issues were attributed to the activities of immigrants.

Some of the perceptions on competition for jobs are linked to the limited role of the formal economy. In most partner countries, the informal economy is large and may even be growing. For example, in many African economies, the lack of employment opportunities in the formal economy is a major factor driving the growth of the informal economy (ILO, 2015b). In Kyrgyzstan, about two-thirds of workers are employed in the informal sector. A heavy tax burden and extensive administrative requirements and a lack of confidence in government authorities are seen to drive the informalisation of the Kyrgyz economy.

In the trade sectors of the partner countries that were included in the study, immigrants are often perceived to dominate certain sub-sectors. In Côte d'Ivoire, some think this dominance is the result of a traditional lack of interest by native-born workers in certain jobs. While a large share of immigrants in the trade sector are own-account workers, some also employ both foreign- and native-born workers. Certain interviewees in Côte d'Ivoire and Kyrgyzstan, however, suggested that immigrant employers offered less favourable employment terms to native-born than to foreign-born workers.

In Nepal, a scarcity of skilled labour in both the trade and manufacturing sectors also fuels the immigration of Indian workers. The importance of Indian immigrants in these as well as the service sectors is evident. When Indian workers left the country following the 2015 earthquake, many services and traders, including barbers, cobblers and mobile vegetable vendors, stopped their activities, thus affecting the population in Kathmandu.

Even when immigrant and native-born workers are active in the same sub-sectors, they may take up different niches. For example, Kyrgyz-born traders mentioned they believed that many foreign-born traders sold low-quality goods at low prices, while they themselves sold high-quality goods at higher prices.

Perceptions of the desirability of certain kinds of work can play a role in creating migrant niches. In Nepal, native-born workers usually regard as undesirable many occupations in which immigrants are now overrepresented, be they low-skilled or highly specialised (such as producers and sellers of traditional Indian confectionery). This is seen to be the result of deeply rooted perceptions and fears of social stigma from family or the community. Interestingly, this is not only the case for native-born workers, but also for many immigrants, as they often come to Nepal in pursuit of low-skilled jobs for which they would be unfavourably judged by their own community.

In several countries, there are also perceptions that entrepreneurs displace some native-born workers in the trade sectors. One explanation put forward is that importing consumer goods is cheaper for Chinese immigrants in particular. In general, immigrants from industrial countries have more connections with manufacturers in their countries of origin, and consequently it is easier for them to import consumer goods. At the same time, immigrants can also transfer knowledge about the supply chain to native-born individuals. For example, an immigrant trader in Côte d'Ivoire mentioned that he passed on information about good whole-sellers to his native-born friends that asked him for advice.

Policy efforts to prevent displacement may not always have the desired effect. The Ghana Investment Promotion Centre (GIPC) Act of 1994 (Act 478) and revision in 2013 (Act 865) reserve certain types of activities and enterprises for Ghanaian citizens, including sales of goods in markets or open stalls. The objective is partly to counter the perception of “unfair competition”. However, interviews suggested that foreign-born entrepreneurs circumvent this legislation by using Ghanaian connections. This “fronting” practice entails joint ownership of businesses and may create benefits for immigrants and Ghanaians alike (Adjavon, 2013). Some interviewees noted that generally the Ghanaian fronters exploit the foreigners, while the foreigners evade taxes and sell their wares at lower prices, which is unfavourable to other Ghanaian traders. While government tax revenue is lost in the process, the perceived opportunities for Ghanaians include the prospect of obtaining employment when the business is formalised. The largest union in the trade sector – Ghana Union of Traders Association (GUTA) – often draws the government’s attention to retail activities by immigrants.

Transfer of skills and long-term effects of immigrants

There are other forms of reciprocity in the relationship between immigrants and small-scale and informal sector entrepreneurs. In Ghana, the support from Nigerians for establishing businesses seems common. Ghanaians benefit from Nigerian skills and capital, and Nigerians gain a stake in the business.

In Kyrgyzstan, several workers in the focus group discussions said that they had learned new skills through working with immigrants. These immigrants introduced new technologies, while also bringing strong marketing skills.

The transfer of skills can either occur informally or be explicitly planned. The latter is probably more common in large enterprises, for example, as noted earlier, in mining in Ghana. Informally, foreign- and native-born workers can learn from each other while working side-by-side. However, in some cases, language barriers prevent mutual learning.

Language is a key factor in how successful immigrants integrate into the workforce. Focus group participants in Kyrgyzstan stated that the integration occurred easily if there were no language barriers. Conversely, local workers in the trade sector in this country mentioned that sometimes certain groups of immigrants, such as the Chinese, did not seek to communicate with the Kyrgyz-born traders and instead preferred to stay among themselves. Similarly, participants in Ghana sometimes pointed to the use of different languages as obstacles to integration.

In Kyrgyzstan, it was noted that increased competition may also have positive consequences in the long term. A business association representative suggested a way in which Kyrgyz traders could deal with the increased competition: by working together with Chinese designers, they could develop and subsequently sell new products. In fact, in some cases this already appears to occur. Another representative asserted that increased competition from foreign-born entrepreneurs could push Kyrgyz firms to innovate, leading to growth.

Box 5.1. Mining in rural areas in Ghana

Mining activities undertaken by both large-scale formal enterprises and small-scale entrepreneurs affect rural communities in Ghana. Mostly Ghanaian entrepreneurs initiate ancillary businesses to provide services to mining companies that are predominantly either foreign-owned or jointly owned by Ghanaians and foreigners. Apart from hospitality and personal services, increasing production resulting from the presence of immigrants in the small-scale sector has encouraged the production of washing plants for gold, and created opportunities for technical jobs such as welding. On the other hand, some Ghanaians believe that immigrants working as intermediaries between local small-scale miners and large-scale buyers of gold for export are displacing the native-born.

By creating small-scale mining firms in rural Ghana and employing local people to work with, interviewees considered Chinese entrepreneurs to enhance rural incomes and promote rural development. The operations of Chinese miners have also given local people the opportunity to benefit from the extraction of natural resources. This is contrary to large mining firms that tend to pay royalties both to governments and to high-level traditional rulers who do not reside in the communities from which the resources are extracted.

However, involving immigrant entrepreneurs and workers in small-scale mining is also associated with less positive effects. A study by Amonoo (2014) indicates that, similar to the trade sector, “fronting” is an issue (according to Ghanaian legislation, foreigners are not allowed in small-scale mining). Furthermore, even though small-scale mining has been undertaken in Ghana since pre-colonial times, Chinese entrepreneurs use sophisticated machines such as power plants, washing plants, excavators and wash pipes, while Ghanaians tend to use hand tools. Partnerships of Ghanaians with the Chinese are mostly driven by the fact that the Chinese have access to this machinery. Unfortunately, as informal, small-scale mining activities by the Chinese, other migrants and Ghanaians alike usually take place along water bodies, waste materials are washed back into the water sources. The pollution generated by small-scale mining using machinery is much greater than that generated by traditional Ghanaian methods.

The studies in Côte d’Ivoire, Ghana, Kyrgyzstan and Nepal shed light on the variety of channels through which immigrant workers interact with native-born workers, and affect the productivity of both groups of workers. The next sub-section looks into the quantification of effects – in particular on productivity – at the level of enterprises.

Trade data suggests that immigrants do not have a clear effect on a sector's productivity

The different sector studies suggested pathways by which immigration could affect productivity levels in businesses or a sector overall but did not quantify these productivity effects. In the following pages, this quantification is attempted based on aggregate export data and enterprise surveys.

For the export analysis, the growth in a sector's exports is used as a proxy for productivity. Exports have been proposed as a proxy for productivity in existing research (Bahar and Rapoport, forthcoming). The underlying assumption is that countries can only become exporters of a new good if the sectors that produce them have become more productive in comparison to the rest of the world.

A sectoral approach is also employed in the value added calculation of the first section of the chapter, but it differs in important aspects from the trade-based approach explored below. The value added calculation combines the share of immigrants per sector with the sector's contribution to GDP. Productivity is adjusted based on the educational distribution of immigrants compared to native-born workers. The sectoral approach thus captures productivity differences based on immigrants' observable characteristics. However, it does not take into account immigrants' potential impact on productivity due to spill-over effects, such as increased or decreased innovation at the enterprise or sector level. When immigrants change a sector's productivity due to these indirect effects, they affect productivity beyond their share in the sector.

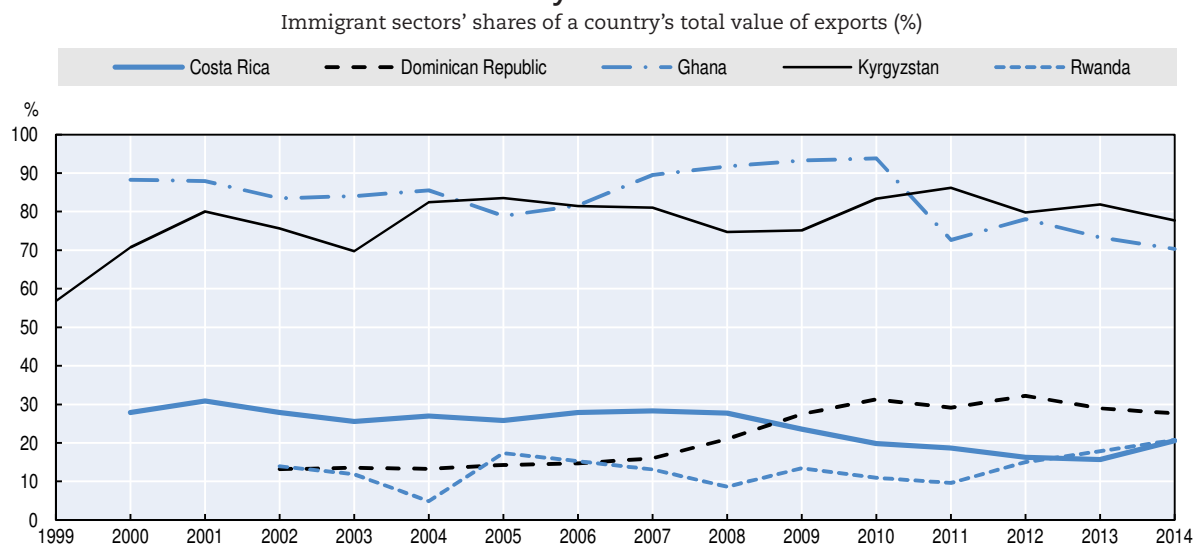
The relationship between immigration and export growth as a proxy for productivity growth is explored in two different ways. For both, the share of immigrants in a base year is compared to a sector's export growth. The first approach divides sectors into two groups, depending on whether immigrants are overrepresented or underrepresented in the sector compared to their overall share in the active labour force.⁹ Among the sectors in which immigrants are overrepresented are agriculture, commerce, and certain subsectors of manufacturing and mining. The second approach compares the correlation between the relative share of immigrants and the export growth in each sector.

The underlying assumption for both approaches is that if immigration influences productivity and hence export growth in a sector, this influence should be more pronounced in sectors in which immigrants form a relatively large part of the workforce. For example, if immigrants raise productivity, exports from sectors in which immigrants are overrepresented are expected to increase relative to those where they are underrepresented. Export growth is calculated based on the share of each sector in the total value of exports of the country as reported in the *United Nations Comtrade database* (DESA/UNSD, undated). The immigrant shares in the base year come from census data for the year closest to 2000, using the *Integrated Public Use Microdata Series* database (Minnesota Population Center, 2017). Detailed information on the sectors in which immigrants work is available for Costa Rica, the Dominican Republic, Ghana, Kyrgyzstan and Rwanda. This sub-section therefore limits the analysis to these countries.

The use of exports as a proxy for productivity has several important limitations. First, the share of immigrants per sector is based on one moment in time, not taking into account possible changes over years. Second, the level of aggregation might disguise effects that take place at a smaller scale. For example, productivity gains in one sector can affect the productivity in related sectors due to flows of intermediate inputs between the sectors (OECD, 2001), making it more difficult to capture productivity differences on the sectoral level. Third, price fluctuations may influence the value of exports.

There is no clear trend of sectors in which immigrants are overrepresented contributing more to export growth than sectors in which they are underrepresented. In some of the countries, the share of the export values of sectors in which immigrants are overrepresented in total exports declined (Figure 5.5). For Costa Rica, this share dropped from 28% in 2000 to 16% in 2013, but increased again to 21% in 2014, for an average decline of 0.5 percentage points per year. In Ghana, the average relative growth was -1.2 percentage points per year, ranging from 88% in 2000 to 70% in 2014. The negative relative growth rate does not imply a decline in exports, as export growth rates for the sample countries were high, particularly for Ghana (Table 5.3). For the Dominican Republic, Kyrgyzstan and Rwanda the share of exports by sectors in which immigrants are overrepresented increased, by on average 1.8, 0.5 and 0.5 percentage points per year, respectively. Thus while no clear trend exists across countries, one commonality is that the shares fluctuate from year to year.

Figure 5.5. **The share of exports from sectors where immigrants are overrepresented is relatively stable over time**



Note: The different starting points reflect the different years of the censuses used.

Source: Authors' own work based on data from UN Comtrade (DESA/UNSD, undated) and the Minnesota Population Center (2017).

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Table 5.3. **Exports as a share of GDP vary in selected partner countries, but most show high growth rates**

Country	Export share of GDP (% , 2014)	Average export growth rate (% , 2009-14)	Share of exports by immigrant sectors (% , 2014)
Costa Rica	32.2	4.0	20.6
Dominican Republic	25.6	14.6	27.6
Ghana	39.5	20.5	70.4
Kyrgyzstan	37.4	3.4	77.7
Rwanda	14.8	16.7	20.7

Note: Immigrant sectors are based on two-digit ISIC-3 codes, and are defined as sectors in which immigrants are overrepresented compared to their share among workers in the whole country.

Source: Authors' own work based on data from UN Comtrade (DESA/UNSD, undated) and the Minnesota Population Center (2017).

When the relative immigrant share is used as an alternative measure to simple overrepresentation, there is similarly no relationship. Whether export growth is studied in two, five or ten years, there is no significant correlation between it and immigration.

The findings above suggest that sectors in which immigrants are overrepresented do not perform better or worse than those with fewer immigrants. It could be deduced that, for Costa Rica and Ghana, the decline in the value share of exports points to a relative decline in productivity of sectors in which immigrants are overrepresented compared to those where they are not. The opposite is the case for the Dominican Republic, Kyrgyzstan and Rwanda. However, the relatively strong year-to-year fluctuations reduce confidence in this interpretation.

Immigrants can influence productivity at the firm level

In view of the difficulties of identifying productivity effects using proxy measures at the sector level, this sub-section focuses on the correlation between immigration and productivity at the firm level. The analysis is based on enterprise surveys or establishment censuses for Côte d'Ivoire, Nepal and Rwanda.¹⁰

The types of enterprises they represent vary from country to country:

- Côte d'Ivoire: The 2016 informal enterprise survey (phase two of the *Enquête nationale sur la situation de l'emploi et le secteur informel* – ENSESI) covers non-agricultural informal enterprises (INS, 2016).
- Rwanda: The 2014 establishment census includes both formal and informal enterprises (NISR, 2014a).
- Nepal: The *National Census of Manufacturing Establishments 2011-2012* is restricted to firms in the manufacturing sector with at least ten workers (CBS, 2013).

As seen through the sector studies, immigrants can play different roles in formal and informal sector enterprises, which presumably also shape their productivity effects. But the different coverage also has consequences for the analysis. For Côte d'Ivoire, the informal nature of sampled enterprises complicates productivity analysis due to the lack of official accounting records. Instead of using written records, the information is based on the recall of the business owners and therefore the questions concerning revenue and costs relate only to the month prior to the survey. Similarly, for Rwanda, the survey contains information on the total revenue but not on input costs.

The definition of an immigrant had to be adapted for the analysis of some of the establishment censuses. In particular, the Nepali and Rwandan establishment censuses only contained information on the nationality of workers rather than the country of birth. While in most countries, there is a large overlap between the immigrant and non-citizen (foreign) populations, this is not the case in Rwanda: according to the 2013 household survey, only 7% of foreign-born individuals were non-citizens (among the native-born, the share of foreigners was less than 0.1%) (NISR, 2014b).¹¹ For Côte d'Ivoire, co-operation between the National Statistical Institute and the project team led to including additional questions in the informal enterprise survey, including on the number of foreign- and native-born individuals working for the businesses. Hence, in Côte d'Ivoire, an immigrant is still defined as a foreign-born person, while in Nepal and Rwanda, the proxy measure of nationality is used.

Businesses with and without immigrants tend to have different characteristics

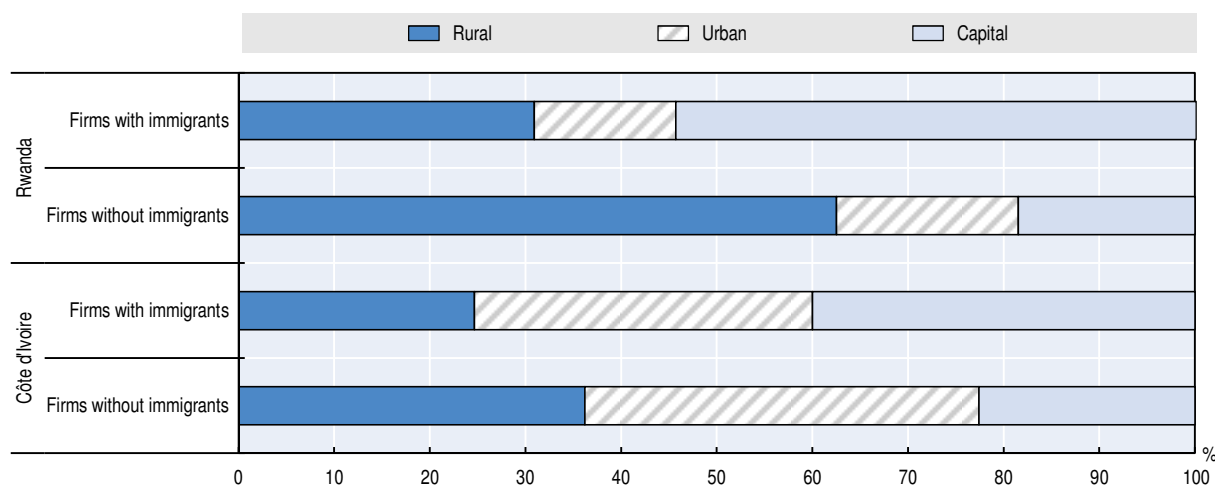
Firms employing immigrants tend to be larger than firms that do not. This does not imply that employing immigrants makes businesses more successful, as it is simply more likely to find at least one immigrant worker in firms with more than with fewer employees. In Côte d'Ivoire, where own-account workers are also included in the survey, the difference is small: businesses with at least one immigrant (which may well be the sole worker as well as owner)

have 1.4 workers, compared to 1.3 workers among firms without immigrants. In Rwanda the difference in size is more pronounced due to the inclusion of formal enterprises. Formal enterprises there on average employ 15.6 employees compared to an average of 1.5 employees in informal enterprises. Companies with immigrants average 44 workers compared to 3 workers in companies without immigrants. Finally, in Nepal, the average number of employees in businesses with immigrants is 110, compared to 38 in businesses without immigrants.

Because immigrants tend to migrate to urban areas in many countries, firms with immigrants are more likely to be found in cities (Figure 5.6). In Rwanda, 54% of the firms with immigrants are located in Kigali, the capital. For Nepal, the situation is slightly different as the majority of manufacturing firms – with and without immigrants – is located near the border with India. The location of the firm is important, as previous research found that business owners of small enterprises in Rwanda are more likely to have other occupations in addition to managing their business when they are located in rural areas (Abott, Murenzi and Musana, 2012). In Côte d’Ivoire, immigrants that run one-person enterprises are less likely than native-born entrepreneurs to have another job besides running their firm. Their concentration in urban areas can partially explain this.

Figure 5.6. **Firms with immigrants are more concentrated in urban areas, with the majority in the capital**

Distribution of firms across the capital, other urban and rural areas by whether the firm employs at least one immigrant



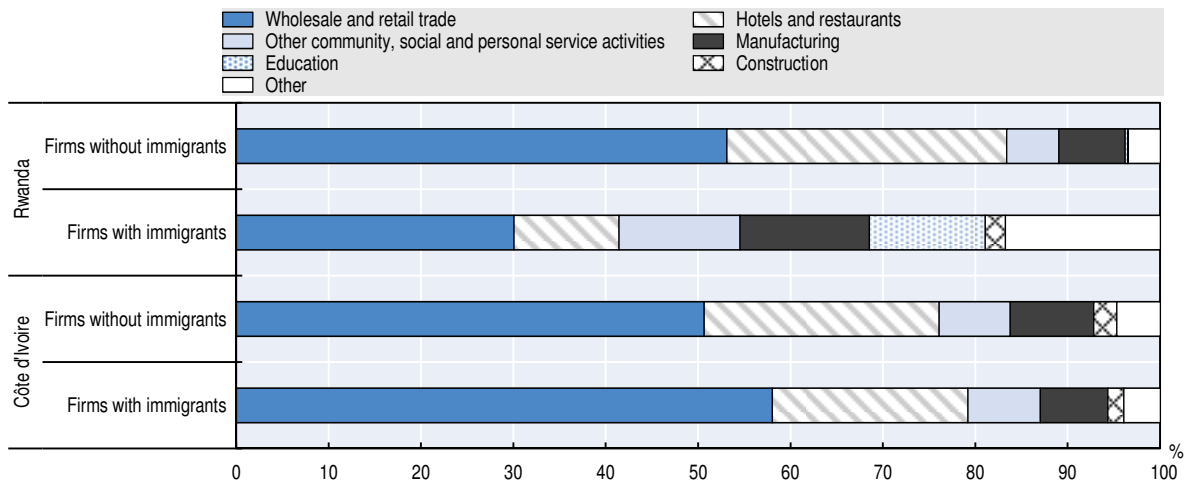
Note: Nepal is not included in this figure as the *National Census of Manufacturing Establishments* does not report an urban/rural indicator. Source: Authors' own work based on data from ENSESI 2016 for Côte d'Ivoire (INS, 2016) and the Rwandan establishment census 2014 (NISR, 2014a).

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The relative distribution across sectors between firms with and without immigrants varies between Côte d'Ivoire and Rwanda. In both countries, firms with immigrants are less frequently in the hotels and restaurants sector (Figure 5.7). In Côte d'Ivoire, the share of non-immigrant firms active in the sector is 25% compared to 21% of immigrant firms. In Rwanda, the difference is even larger, with the respective shares being 29% and 8%. However, while the majority of surveyed companies are in commerce in both countries, there are differences with regards to the distribution of firms with and without immigrants. In Côte d'Ivoire, a higher percentage of firms with immigrants is active in this sector (58% in comparison to 51%), while in Rwanda, the opposite is true (21% in comparison to 51%).

Figure 5.7. **Most surveyed businesses are in commerce**

Sectors in which businesses operate, by country and whether they employ an immigrant



Note: Nepal was not included because the establishment census is limited to manufacturing firms.

Source: Authors' own work based on data from ENSESI 2016 for Côte d'Ivoire (INS, 2016) and the Rwandan establishment census 2014 (NISR, 2014a).

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Immigrants might influence productivity beyond their effect on human capital

An important determinant of labour productivity is the capital-labour ratio, as mentioned earlier. This ratio might differ between firms with and without immigrants. Capital could be replaced by the use of immigrant labour, and immigrants who run businesses might bring more or less capital with them than native-born entrepreneurs. In Côte d'Ivoire, the amount of capital used is significantly higher among firms with immigrants compared to firms without, at USD 156 versus USD 112 respectively. But firms with immigrants also employ more workers, and the average capital per worker does not differ significantly.

The situation is similar in Nepal and Rwanda. Enterprises with foreigners employ more physical capital than firms without, but this does not necessarily imply that these firms are more capital intensive as they also employ more workers.¹² In Nepal, the average capital per worker is lower in firms that employ non-Nepalese workers. Regression analysis confirms this negative association between employing these workers and capital per worker once controlling for firm size and subsector. In Rwanda, firms employing foreigners on average have higher capital levels, but the difference disappears once the number of employees is taken into account.

Besides physical capital, labour productivity is also a function of human capital. Higher levels of human capital lead to higher productivity and to a higher compensation for workers. Therefore, if immigrants raise the level of human capital in the firm, it is likely that average wages increase as well. However, growth in the labour supply could mean more competition, leading to lower wages, especially if immigrants accept lower wages in return for their labour.

Chapter 4 shows that in Côte d'Ivoire and Nepal, immigrants' wages do not significantly differ from that of native-born workers once controlling for human capital and occupation. In Côte d'Ivoire, without these controls, immigrants on average earn slightly more than native-born individuals. In the informal sector in Côte d'Ivoire, based on ENSESI data, firms that employ immigrants have higher wage costs compared to firms

that do not employ immigrants. Whether the higher wages benefit the immigrants, the native-born workers or both cannot be distinguished from the data. But the findings from Chapter 4 suggests that the difference in wage costs might be due to differences in workers' human capital or occupation. This implies that the average level of human capital in firms with immigrants is higher. In manufacturing firms in Nepal, the average wage per Nepalese worker is similar in firms with and without non-Nepalese workers. Regression analysis, controlling for capital and labour, confirms that Nepalese workers' wage does not differ by the presence of non-Nepalese workers in a firm. Wage costs are not included in the Rwandan establishment census, but Chapter 4 shows that foreigners' average wage is higher than that of workers with Rwandan nationality, even when controlling for education or occupation.

The effect of immigrants on a firm's productivity beyond their effect on human and physical capital can be positive or negative, and theoretical arguments exist for both. To estimate the effect empirically, the ideal experiment would allocate immigrants randomly across firms and measure their productivity over time. In reality, immigrants are far from randomly distributed across firms. Controlling for other factors that influence productivity, such as location or capital, can partially offset the lack of random allocation. Nonetheless, the results should be interpreted with caution. In particular, the allocation is still not random even once these characteristics are taken into account, and immigration may also affect productivity through its effects on physical and human capital.

In Côte d'Ivoire and Rwanda, employing immigrants does not seem to influence a firm's efficiency in transforming inputs into output, but this finding is influenced by firm size. The average productivity of firms with and without immigrants in Côte d'Ivoire (as measured by the average revenue per worker) does not significantly differ. Regression analyses, controlling for capital, raw material inputs, sector, location and number of workers, confirm that productivity is not influenced by whether or not the firm employs immigrants. However, in firms with at least two workers, average revenue per worker is significantly higher among firms that employ immigrants, including when other explanatory factors are taken into account. In Rwanda, where both the formal and informal sectors are included, firms with immigrants have higher revenues. But regression analysis shows that this is mainly a function of firm characteristics such as size, formality, capital used, sector and location. Employing foreign-born workers does not influence a firms' revenue once these controls are accounted for.

In Nepal, in contrast, manufacturing firms that employ foreigners appear to be more productive. Labour productivity, measured as value added per worker, in firms in which immigrants make up less than 5% but more than 0% of the workforce, is 25% higher than in firms without foreign workers. If the share of foreign workers is higher than 5%, the productivity gain compared to firms not employing immigrants is 20%. However, firms employing up to 5% immigrants tend to be larger than firms employing no immigrants or more than 5% immigrants. When comparing only larger firms (those with more than twenty employees), the productivity gains due to employing any immigrants disappear. However, employing highly skilled immigrant workers is still associated with higher productivity levels.

To conclude, the analysis provides modest evidence on boosting productivity through immigration. Sectors in which immigrants are overrepresented do not experience above-average productivity growth. However, Ivorian and Nepali – but not Rwandese – firms that employ immigrants appear to be more productive than firms that do not (provided one-person firms are excluded). The sector studies illuminated mechanisms that could lead to productivity impulses, such as mutual learning between foreign- and native-born workers

and high work morale among foreign-born workers. However, few informal enterprises in Côte d'Ivoire reported such effects in the survey.

Turning back to the production function introduced at the beginning of the chapter, the first and current sections provided evidence on how immigration affects human capital-augmented labour and capital on the one hand and productivity on the other hand. Entrepreneurship can affect both the utilisation of capital and labour as well as productivity. Therefore, the final section explores the relationship between immigration and entrepreneurship.

Immigration and entrepreneurship

One definition of entrepreneurship is the exploitation of business opportunities, either within existing firms or through the creation of new firms (see Ahmad and Seymour, 2008). Self-employment, which is often used as a proxy in this context, is hence only an incomplete measure of entrepreneurship. On the one hand, it excludes entrepreneurial activities of employees and, on the other hand, it can include non-entrepreneurial self-employment activities (sometimes called “necessity entrepreneurship”).

When entrepreneurs focus on developing new products or production methods or opening new markets, it is easy to see how entrepreneurship could increase productivity or employment. In the case of productivity, either the value of output for a given level of inputs could rise or the required levels or costs of inputs for a given level of outputs could fall. However, exploiting business opportunities does not always increase overall productivity (Baumol, 1990). One study suggests that the productivity effect of business ownership is positive (Erken, Donselaar and Thurik, 2016). However, another study finds the economic growth effects (and hence most likely the productivity effects) to be negative in developing countries. This study measured entrepreneurship by the share of the adult population that is either in the process of starting a business or owns or manages one that is less than 42 months old (van Stel, Carree and Thurik, 2005).

Immigration can affect entrepreneurial activities – defined here as the share who are employers (business ownership rate) – in two ways. First, if the share of business owners among the immigrant population differs from the share among the native-born, this would alter the overall ratio of business owners in the population. Aside from differences in the share of the working-age population and the labour force participation rates, this can occur if immigrant labour force participants are business owners at different rates than native-born labour force participants. Reasons for such differences may be that business ownership rates were different in the immigrants’ home country, that they are unable to find other employment or that they have different business opportunities than native-born individuals (Zhou, 2006). While the rates among the immigrant population might differ, the effect on the overall rate is likely to be limited as immigrants form only a small share of the population.

Second, immigrants may make native-born individuals more or less likely to be entrepreneurs (Duleep, Jaeger and Regets, 2012; Fairlie and Meyer, 2003). For example, increased competition through immigrant business owners could keep some native-born individuals from starting businesses or put them out of business. More positively, native-born individuals may feel more confident about starting or continuing to operate their businesses if they can find employees with the right skill set more easily or if additional suppliers or customers are available.

There are no general patterns in the entrepreneurship rate of foreign- compared to native-born individuals across countries. The average self-employment rate of foreign-born individuals in OECD countries is slightly higher than that of native-born individuals

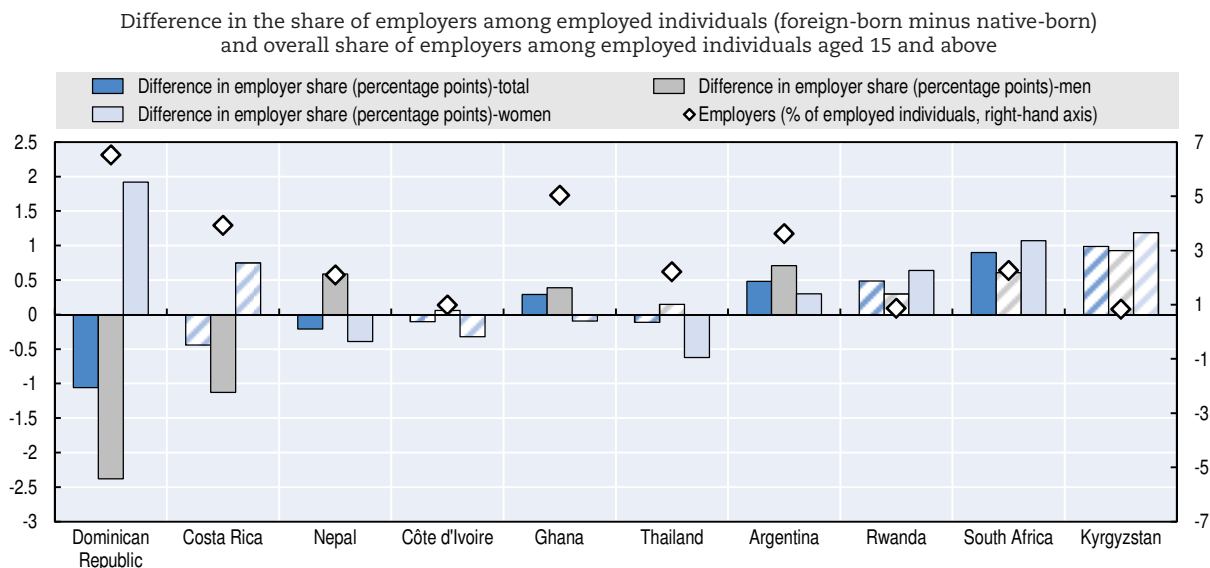
(OECD, 2011). Nevertheless, even in many OECD countries, the reverse is actually true (OECD, 2011). Looking at business start-ups in a sample of 69 countries, the prevalence is higher among the foreign-born than among the native-born population in most regions in the world, but about equal in Eastern Europe and Russia and lower in South and Central America (Vorderwülbecke, 2012).

The following two sub-sections explore the effect of immigration on entrepreneurship in the partner countries. The first sub-section compares the propensity to be an employer between otherwise similar foreign- and native-born workers. The second investigates the effect of the share of immigrants in a local area on the likelihood of owning a business among native-born individuals in the same area.

There is no clear pattern of firm ownership among immigrants versus the native-born

The share of employers is not universally higher among the foreign- than the native-born employed population in partner countries. The overall rate for foreign- compared to native-born workers is lower in the Dominican Republic and Nepal and higher in Argentina, Ghana and South Africa (Figure 5.8). It is not statistically different in Costa Rica, Côte d'Ivoire, Kyrgyzstan, Rwanda and Thailand. A lower share of foreign-born male workers than native-born male workers are employers in Costa Rica and the Dominican Republic, while a higher share are employers in Argentina, Ghana and Nepal. Among female workers, a higher proportion of immigrants are employers in Argentina, the Dominican Republic, Rwanda and South Africa.

Figure 5.8. **The employer share is not necessarily higher among foreign- than native-born workers**



Note: Solid fills indicate that the difference between the shares of employers among foreign- and native-born individuals is statistically significant at the 10% level. The comparison is restricted to the employed population, typically aged 15 and above but for Argentina aged 15-64.

Source: Authors' own work based on the 2010-13 *Life in Kyrgyzstan* survey (IZA, 2016), the 2003-15 *Encuesta Permanente de Hogares* (INDEC, 2003), the 2010 *Census of the Dominican Republic* (ONE, 2012), the 2010-14 *Encuesta Nacional de Hogares* (INEC, 2010-14), the 2008 *Enquête sur le niveau de vie des ménages* (INS, 2008), the *Community Survey 2007* (STATS SA, 2007), the *Integrated Household Living Conditions Survey* (NISR, 2014a) and samples of the 2001 and 2010 *Nepali National Population and Housing Censuses* (CBS, 2001 and 2010), 2002 and 2010 *Ghanaian censuses* (GSS, 2002 and 2010), 2001 and 2011 *South African censuses* (STATS SA, 2001 and 2011) and the *Thai Population and Housing Census 2010* (NSO, 2010).

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While there is no clear pattern in the difference between the foreign- and native-born employer share, it does appear that in the most partner countries, immigrants are either equally or more entrepreneurial than native-born individuals (Table 5.4). Once basic demographic and educational characteristics and the region of residence are taken into account, immigrants are more likely to be employers than similar native-born individuals in Argentina, Costa Rica, Kyrgyzstan, Rwanda, South Africa and Thailand. In Côte d'Ivoire and Ghana, immigrant workers are neither more nor less likely to be employers; and in the Dominican Republic and Nepal, they are less likely to be so.

Table 5.4. In most partner countries, foreign-born workers are as likely as native-born workers to be employers, or more so

Marginal effect of being an immigrant, holding demographic, educational and regional characteristics constant

	Total	Men	Women
Argentina	0.8***	0.8***	0.7***
Côte d'Ivoire	-0.1	-0.2	-0.1
Costa Rica	1.1*	-0.9*	0.6**
Dominican Republic	-1.0***	-0.6***	2.9***
Ghana	0.2	0.2	0.1
Kyrgyzstan	0.6**	0.5	0.6**
Nepal	-0.2***	0.2***	-0.3***
Rwanda	0.7*	1.0*	0.4*
South Africa	1.1***	1.3***	0.8***
Thailand	0.7**	1.0**	0.3

Note: The control variables are age, age squared, sex, highest educational attainment and region. ***/**/* indicate that the marginal effect is statistically significant at the 1/5/10% level.

Source: Authors' own work based on the 2010-13 *Life in Kyrgyzstan* survey (IZA, 2016), the 2003-15 *Encuesta Permanente de Hogares* (INDEC, 2003), the 2010 Census of the Dominican Republic (ONE, 2012), the 2010-14 *Encuesta Nacional de Hogares* (INEC, 2010-14), the 2008 *Enquête sur le niveau de vie des ménages* (INS, 2008), the 2007 *Community Survey* (STATS SA, 2007), the 2013/2014 *Integrated Household Living Conditions Survey* (NISR, 2014b) and samples of the 2001 and 2010 Nepali (CBS, 2001 and 2010), 2002 and 2010 Ghanaian (GSS, 2002 and 2010), 2001 and 2011 South African (STATS SA, 2001 and 2011) and 2010 Thai Population and Housing (NSO, 2010) Censuses.

In two out of a sample of four partner countries, foreign-born employers do not disproportionately own larger or smaller companies. In the Dominican Republic and Rwanda, the share of immigrants who are employers is lower in microenterprises but higher among small and medium-to-large sized companies. In Argentina and Costa Rica, a higher share of foreign-born employers own micro-enterprises (2-9 employees) and a lower share own smaller enterprises (11-49 employees). The relationship holds when taking into account the employer's age, sex and education level.¹³ In the other countries, some of the differences in shares are statistically significant but the relationship cannot be established when immigrants' age, sex and education level are taken into account.

Immigrants may affect entrepreneurial activities of native-born individuals

Immigrants may increase the average business ownership rate by facilitating entrepreneurship among native-born individuals. There are a few reasons why this could happen. For example, native-born workers could find it easier to hire workers with the right skills either for their businesses, or for taking care of some non-remunerated activities (such as child care) that had previously kept them from being employers. They could spot new business opportunities that are linked to immigrant individuals as consumers or immigrant-owned businesses as providers or buyers of intermediate input. Finally, overall boosts to

economic growth thanks to immigration can also make it easier to start new businesses. But it is also possible – as some interviewees in the sector study suggested – that native-born workers are discouraged from starting businesses when there are many foreign-born entrepreneurs in their local area.

This secondary effect can also be analysed. In particular, it was investigated whether native-born individuals, aged 15 or older, that live in areas with higher concentrations of immigrants have a higher likelihood of owning a business than native-born individuals similar in terms of sex, age and education that live in areas with lower concentrations of immigrants.¹⁴ The analysis relies on census data for the most recent year.¹⁵ Since immigrants are not randomly distributed across the country, additional analysis using an instrument was performed where data were available. The immigrant share from earlier years were used to “instrument” the immigrant share in the most recent census (for a similar approach for the Dominican Republic, see Sousa, Sanchez and Baez, 2017). This instrumental variable approach relies on the fact that immigrants often move to areas where other immigrants from their home country already live.

The analysis shows a positive correlation between the immigrant concentration and entrepreneurial activity among native-born workers in most partner countries. The exception is Argentina where a higher concentration of immigrants in an area is associated with a lower likelihood of native-born individuals being business owners (Table 5.5). For Costa Rica, the Dominican Republic and South Africa, native-born individuals are more likely to own a business if they live in an area with a higher concentration of immigrants. In probit regressions of the native-born population aged 15 and above in which the business ownership is the dependent variable and sex, age, education, region and rural status are controlled for, the marginal effect of the immigrant share is -0.0017 for Argentina, 0.0007 for Costa Rica, 0.0057 for the Dominican Republic and 0.0002 for South Africa. This may appear like a small effect on the business ownership rate, but taking into account the low share of individuals who are business owners, the effect is actually substantial. A ten percentage point increase in the concentration of immigrants in an area is associated with a change in the likelihood of being a business owner ranges from about -65% in Argentina to 35% in South Africa. In the instrumental variable regression, the marginal effects are similar in Argentina and the Dominican Republic but not statistically significant in Costa Rica and South Africa.

Table 5.5. Immigrants’ impact on entrepreneurship among native-born individuals differs across countries

Marginal effect of the share of immigrants in the local area on the likelihood among the native-born population of being an employer

	Argentina	Costa Rica	Dominican Republic	South Africa
Marginal effect (without instrument)	-	+	+	+
Marginal effect (with instrument)	-	0	+	0

Note: The regression is restricted to the population aged 15 and above. + indicates a positive marginal effect, - a negative one and 0 that the estimated marginal effect was not statistically significant at the 10% level.

Source: Authors’ own work based on census samples from the Minnesota Population Center (2017).

Despite the numerous potential benefits of increased entrepreneurial activities, not all new businesses create jobs or innovate. A positive correlation between the share of immigrants in the local area and the rate of entrepreneurial activities of native-born individuals does not necessarily increase growth. Governments should therefore review their policies to ensure that incentives are geared towards new enterprises with a high probability

of succeeding (Shane, 2009). Two questions merit further research: Were the businesses that native-born individuals created in areas with a high concentration of immigrants started because of new opportunities or as a last resort? And did these businesses have the potential to increase the economy's overall productivity?

Conclusions and policy implications

In the partner countries, immigration is unlikely to lead to a decrease in GDP per capita. GDP per capita can be divided into the share of employed people in the total population and GDP per employed individual. The composition of the immigrant labour force and the employment effects of immigrants drive the first factor. The relative productivity of foreign-born compared to native-born workers and immigration's effect on overall productivity levels drive the second factor.

The chapter provides evidence that immigration is generally associated with a rise in the share of employed people in the total population. In all but Kyrgyzstan and Nepal, the share of the employed foreign-born population is higher than the equivalent share among the native-born population, in some cases drastically so. And in most partner countries, immigrants do not appear to have a negative effect on the employment of native-born workers.

If the relative productivity of foreign- to native-born workers in a sector equals the ratio of their years of schooling, the estimated direct contribution of immigrants to value added exceeds their share among the employed in half of the partner countries. This estimation, however, does not reflect that immigrants may have further effects on productivity.

The evidence on the effect of immigration on productivity is less clear. Depending on data availability, different research methods were employed:

- Modelling exercises for South Africa and Thailand suggest that complementarity between foreign- and native-born workers is an important factor determining the growth effects of immigration. They also imply that in South Africa, low-skilled immigrant workers, and the high-skilled to a lesser degree, raised GDP per capita and employment opportunities for native-born workers.
- Qualitative sector studies in Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal underline mutual learning opportunities as well as the positive and negative effects of potentially increased competition on native-born employees and employers. These studies suggest that skilled immigration and immigrant entrepreneurship can raise the productivity of surviving firms. But in some cases, they may make the market entry or survival of firms of native-born individuals more challenging.
- Trade data did not provide clear evidence of immigration-induced productivity gains at the sectoral level in five of the partner countries.
- Enterprise survey data for Côte d'Ivoire suggest that productivity in immigrant-employing informal firms may be more elevated than in firms without immigrants. However, a similar result was not established for formal and informal firms in Rwanda and formal firms in Nepal.
- In some countries – most notably the Dominican Republic – immigration may boost entrepreneurial activity overall, which could have positive productivity effects in the medium and long term.

Given the data limitations for the study of productivity, especially in relation to immigration in developing countries, the results presented in this chapter must be

interpreted with caution. Formulating precise policy implications in the face of these difficulties is a precarious undertaking. Nonetheless, numerous actions could contribute to improving the effect of immigration on GDP per capita. These include boosting immigrants' participation in the labour force, stimulating their integration into the labour market, increasing the degree of complementarity between foreign- and native-born workers, and identifying and removing general obstacles to productivity growth. The ways to achieve these would necessarily be country-specific:

- Increasing immigrants' participation in the labour force may be hard to achieve in some countries where the concentration of immigrants among the working-age population and their employment-to-population ratio are already high.
- Providing language courses could help immigrants better use their skills and hence integrate into the labour market. This makes sense where many immigrants do not already speak the local language(s). As suggested by the sector study, improved language skills would not only benefit the immigrants themselves, but also increase mutual learning between foreign- and native-born workers, and therefore potentially raise productivity.
- Policies that attract immigrants to occupations where skills shortages exist could increase the complementarity between foreign- and native-born workers. But countries face challenges in planning and implementing these.
- Therefore, policies that do not concern migration in particular but aim at reducing general barriers to productivity growth may be the most fruitful. Nevertheless, facilitating the immigration of investors can be part of this effort. Credit constraints often make it difficult for entrepreneurs to start or grow their businesses; this can limit productivity growth. Allowing immigrants to start their own companies, either alone or together with native-born workers, could help in this area.

Finally, immigration's effect on economic growth would benefit from more research. In particular, collecting and analysing additional enterprise survey data could increase governments' understanding not only of immigration's impact on productivity and entrepreneurship, but of productivity dynamics and obstacles in general. If data were collected on a sample of the same firms over time, the amount that could be learned would be even greater.

Notes

1. In technical terms, this is a closed economy with fixed capital stock, homogeneous labour and constant returns to scale.
2. GDP per capita can be decomposed as follows:

$$\frac{GDP}{POP} = \frac{GDP}{EMP} * \frac{EMP}{POP} = \frac{GDP}{EMP} * \frac{EMP}{WAPOP} * \frac{WAPOP}{POP}$$

where POP is the population, WAPOP is the population of working age and EMP is employment. Note that labour market analysis (e.g. in Chapter 3) usually focuses on EMP/WAPOP (the employment-to-population ratio or employment rate), which is different from the variable EMP/POP.

3. This can be shown on the basis of a standard Cobb-Douglas production function (Aleksynska and Tritah, 2015; Jaumotte, Koloskova and Saxena, 2016):

$$\frac{GDP_{dt}}{EMP_{dt}} = \alpha \ln HC_{dt} + (1 - \alpha) \ln \frac{K_{dt}}{EMP_{dt}} + \ln A_{dt}$$

where HC_{dt} is human capital per worker, $\frac{K_{dt}}{EMP_{dt}}$ is the capital-to-labour ratio, A_{dt} is total factor productivity and α is the labour share.

4. The PEP Modelling and Policy Impact Analysis programme assists researchers in developing countries in constructing models of their national economies. These models are used to simulate the impact of economic shocks and policies. For details, see www.pep-net.org/pep-1-t-single-country-recursive-dynamic-version.
5. The Inforum group is a satellite of the International Input-Output Association. Various types of Inforum models are used to simulate the impact of economic shocks and policies in many countries. For details, see www.inforum.umd.edu/.
6. Information on labour-related income of foreign-born and native-born workers in South Africa is available from the Quarterly Labour Force Survey, 2012, Quarter 3.
7. See the quarterly reports from the Ghana Investment Promotion Centre available at www.gipcghana.com/press-and-media/downloads/reports.html.
8. This pattern is not universal, as large numbers of low-skilled immigrant workers continue to be recruited in the mining sector in South Africa, for example.
9. Stricter definitions of overrepresentation – including only sectors with 50% to 100% more immigrants than could be expected from the general share of immigrants in the labour force – showed similar results.
10. Data for the Dominican Republic was not available in time, and is therefore not included in the analysis.
11. Recent household surveys for Nepal did not contain questions on both countries of birth and citizenship.
12. In the Rwandan enterprise survey, the capital question is categorical. Categories are 1) less than 500 000, 2) 500 000-15 000 000, 3) more than 15 million to 74 million and 4) more than 74 million. In the calculations, capital per employee is used; it is calculated using the midpoint of the categories. For the fourth category the increase for the first three categories is extrapolated.
13. The analysis method was ordered logit regressions.
14. The immigrant concentration was calculated for the second subnational division, referring to the department in Argentina, the canton in Costa Rica and the municipality in the Dominican Republic. For South Africa the analysis was instead based on the magisterial district, a local determinant of a geographical area which was included in the census data of 1996 and 2001.
15. For South Africa, the most recent census did not distinguish between being self-employed and being an employer. Therefore analysis was based on the census of 2001, with the immigrant share based on the census of 1996/1984 as an instrument.

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ANNEX 5.A1

*Interviews and focus group discussions conducted for the sector studies*Table 5.A1.1. **Interviews and focus group discussions conducted for the sector studies**

	Research institution	Interviews with key informants	Interviews with enterprise representatives	Focus group discussions
Côte d'Ivoire	Laboratoire de Sociologie Économique et d'Anthropologie des Appartenances Symboliques de l'Université Félix Houphouët-Boigny d'Abidjan	28	22	20
Ghana	Centre for Migration Studies, University of Ghana	37	23	19
Kyrgyzstan	Dialecticon LLC	19	60	10
Nepal	Centre for the Study of Labour and Mobility	54	29	24

Source: OECD/ILO (2017a and forthcoming a, b and c).

Chapter 6

Immigrants' contribution to public finance

The present chapter seeks to determine whether immigrants pay more or less in taxes than they generate in public expenditures in a given year, and what sources account for outcome differentials across countries. The first section provides a general overview of public finances in the partner countries in comparison to other developing countries. The second section explains the methodology and presents the main results of the analysis. The third section discusses how immigrants' education and labour market characteristics affect their fiscal impact. Finally, the conclusions summarise the main findings and discuss their policy implications.

The public debate in many countries of destination tends to focus on the costs of immigration. In this respect, policy makers and public opinion are often concerned by the impact immigrants (foreign-born individuals) may have on public budgets and whether they “over use” public services such as schools, hospitals and public housing. The fear exists that immigration might lead to future tax increases or that the native-born population might have less access to these public services because of immigrants. An additional concern is that the quality of public services suffers because they are over-utilised. This is particularly the case for access to schools and quality education in areas with a strong concentration of foreign-born populations.

Despite the importance of the debate, evidence on the impact of immigration on both the fiscal balance and the quality of public services is missing for developing countries. Yet, this topic is especially relevant for low- and middle-income countries, as their budgets are often limited. Their revenues may not be sufficient to provide the basic public services required for a state apparatus to function. Immigrants who use more resources than they contribute would therefore put further pressure on public budgets. On the other hand, any immigration-related boost to the public budget would be welcome under these fiscal circumstances.

In fact, just as immigration usually raises overall gross domestic product (GDP) (see Chapter 5), it also contributes to increasing overall public revenues, but not always a sufficient amount to offset rising public expenditures. If the revenue increases that immigrants create are smaller than the additional expenditures governments undertake to accommodate them, then immigration translates into a net fiscal drain. In contrast, if revenues generated by immigrants surpass the expenditure they require, immigrants are positive net fiscal contributors.

Research on the fiscal effects of immigration in OECD countries shows that the net impact varies from country to country, from year to year and from immigrant group to immigrant group. In this respect, a recent cross-country analysis concludes that the net fiscal contribution of immigration, whether positive or negative, is usually less than 0.5% of GDP (OECD, 2013). The positive impact on public budgets tends to be higher when a larger share of the foreign-born is labour immigrants rather than humanitarian immigrants, when they are younger and when they have high employment rates. This chapter presents a similar analysis for nine partner countries. The tenth, Thailand, was largely omitted due to insufficient data.¹

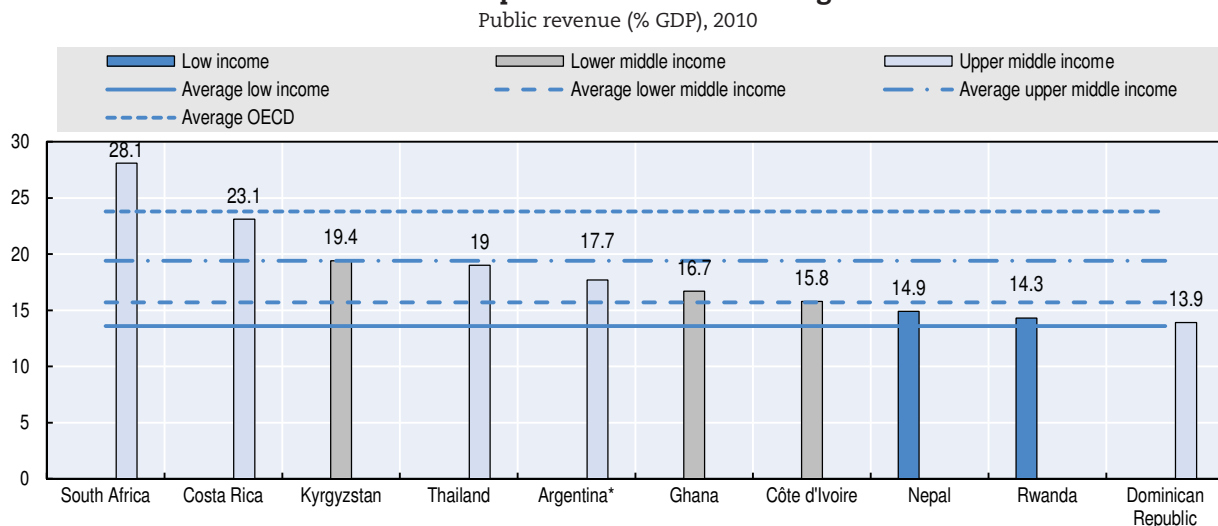
Public finance in partner countries

Most partner countries have public finance characteristics that are typical for low- and middle-income countries. Their public revenue shares are similar to respective averages for other countries with those income levels. And, as elsewhere, most have increased their revenues and expenditures in recent years.

Public revenue shares have been rising

Figure 6.1 shows that the public revenues (excluding grants) of partner countries broadly align with most low- and middle-income countries (Figure 6.1).² At 14.3% and 14.9% of GDP, respectively, the 2010 revenues of the two low-income countries, Nepal and Rwanda, slightly exceed the 13.6% average for low-income countries. Similarly, the revenues of the lower-middle-income partner countries all surpass the respective average of 15.7% of GDP: 15.8% in Côte d'Ivoire, 16.7% in Ghana and 19.4% in Kyrgyzstan. Among the upper-middle-income countries, some have below-average revenues – the Dominican Republic (13.9%), Argentina (17.7%) and Thailand (19.0%) – while others have above-average revenues – Costa Rica (23.1%) and South Africa (28.1%). For the latter, revenues even exceed the average for OECD countries, which represents 23.8% of GDP.

Figure 6.1. **The public revenue shares in partner countries are predominantly low compared to the OECD average**



Note: Revenue is cash receipts from taxes, social contributions and non-tax revenues such as fines, fees, rent, and income from property or sales. Grants are also considered as revenue but are excluded. * For Argentina, the information is from the Statistical Yearbook.

Source: World Bank, *World Bank DataBase* (undated) based on the International Monetary Fund (IMF) *Government Finance Statistics Yearbook* and data files, World Bank and OECD GDP estimates and INDEC (2015). <https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS>.

StatLink <http://dx.doi.org/10.1787/888933649316>

Most partner countries have grown their revenues as a share of GDP between 1990 and 2010. In five of the countries – Costa Rica, the Dominican Republic, Ghana, Kyrgyzstan (1993-2010) and South Africa – the increase was around a third or less. In Rwanda, revenue increased by slightly less than two-thirds; and in Argentina, it increased by as much as 266% (from 4.8% to 17.7%). The 1990 revenue share in Argentina was particularly low due to the high inflation rates (CIAT, 2017). The exceptions to the general increase are Thailand, where the decrease was below 3%, and Côte d'Ivoire, where revenues dropped by around 20% (from 1995 to 2010). For Côte d'Ivoire, 1995/96 represented a high point in public revenues (IMF, 2000) which has not been attained again since 2005; in 2011 revenues reached a low point due to the political-military crisis.

The rising public revenue trend is also observed in other countries. Thanks to an endogenous feedback loop between economic development and governments' taxation capacities, the level of taxation in an economy tends to go up as a country transitions from being a low to a high-income country (Besley and Persson, 2013). In Latin America and the Caribbean (LAC), the unweighted average for tax revenues increased from 13.9% in 1990

to 19.4% in 2010. The rising trend followed significant fiscal instability and high inflation throughout the 1980s. In response, during the 1990s many LAC governments focused on reducing inflation and stabilising public budgets by lowering expenditures (for example by privatising social protection systems, health care and education) and stabilising revenues (for example by introducing a value added tax). After 2000, some of the increases in tax revenues were driven by higher prices of export commodities (OECD/ECLAC/CIAT, 2012).

A selected number of African countries also saw an increase in tax revenues after 2000 (OECD, 2016). Tax reforms were identified as one of the underpinning factors for this trend. The opposing trend in Côte d'Ivoire occurred partially because of the repeated crises the country underwent. For example, the revenue to GDP ratio dropped from 14.3% in 2010 to 10.9% in 2011 (World Bank, undated).

In Asia, the average tax revenue as a percentage of GDP increased as well. Between 2008 and 2012 period, tax revenue was two percentage points higher than the 1998-2002 period (14.8% instead of 12.6%). It was about one percentage point higher than the 1993-1997 period (13.7%) (Aizenman et al., 2015).

Low-income partner countries rely heavily on indirect taxes

Countries situated at the lower end of the per-capita income spectrum often rely heavily on indirect taxes, such as taxes on goods and services and on imports and exports. This trend is also perceptible among partner countries. In all of the low-income and lower-middle-income countries, the share of indirect taxes in the sum of total taxes and social security contributions exceeds 57% and even reaches 78.2% in Nepal (Figure 6.2). In contrast, four of the five upper-middle-income countries have lower indirect tax shares, ranging from 57.0% at the upper end in Thailand to 39.7% at the lower end in South Africa. The Dominican Republic is the exception with an indirect tax share of 72%.

The pattern concerning the contribution of taxes on international trade are less clear cut. Two countries with relatively more elevated per-capita incomes – Costa Rica and South Africa – generate below 4% of their revenues through these taxes. But in Argentina and the Dominican Republic, at 8-12%, the shares are relatively comparable to two of the lower-middle-income countries, Kyrgyzstan and Rwanda, at 13% and 10% respectively. However, the lowest-income countries in the sample – Côte d'Ivoire, Ghana and Nepal – generate an excess of 20% of their public revenues through taxes on international trade.

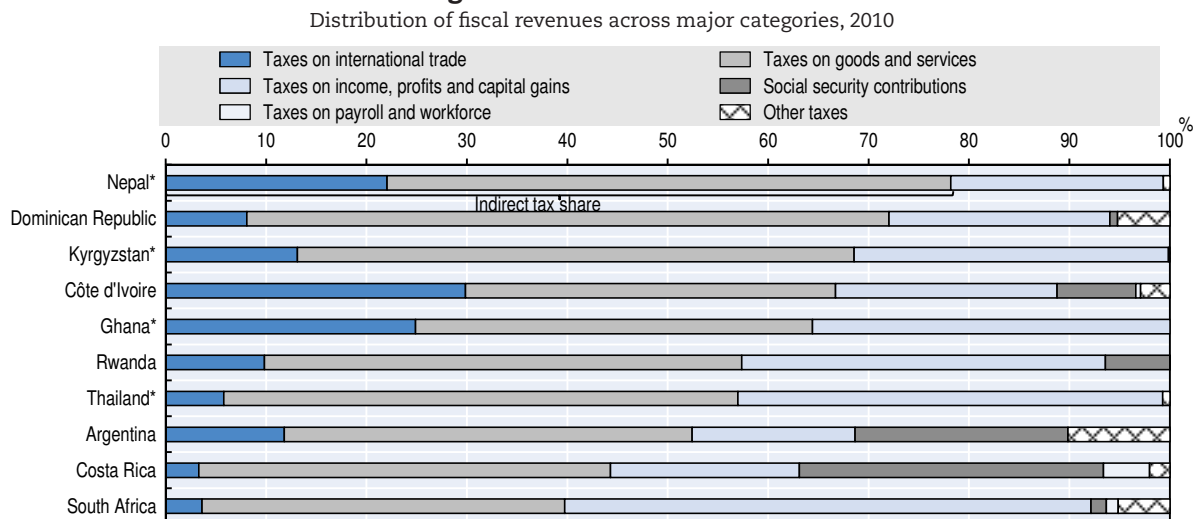
Countries with lower income levels generally rely more heavily on indirect taxes than direct taxes (Besley and Persson, 2013). In part, this is because these taxes are relatively easy to administer compared with the more complex personal or corporate income taxes. In addition, the integration of countries into the global economy is often accompanied by a reduction of trade barriers, hence a reduction of trade-based tariffs (Aizenman et al, 2015).

Countries that raise a high share of taxes as a percentage of GDP tend to generate much of this revenue through income taxes; however, this is not always the case among the partner countries. The two countries with the highest fiscal revenue as a share of GDP – Costa Rica and South Africa – also have the highest combined share generated through direct taxes and social security contributions. But Kyrgyzstan, which has the third highest fiscal revenue as a share of GDP, generates less than one-third through these taxes and contributions. Rwanda, with the second lowest revenue as a percentage of GDP, generates almost 43% of these revenues through these taxes and contributions.

The size of the informal economy may influence tax revenue. The informal economy is defined here as all legal economic activities that are deliberately hidden from authorities. By

its very nature, determining its size and even defining what activities fall within its scope is not an easy exercise. Based on a model of the size of the informal economy (Hassan and Friedrich, 2016),³ Thailand is estimated to have the largest informal sector and Argentina the smallest relative to their overall output among the partner countries (Figure 6.3). Thailand is in fact an outlier for a country at its income level, while the informal sector sizes of other countries are relatively typical.

Figure 6.2. **In many low- and middle-income countries, indirect taxes represent a significant share of revenues**



Note: For Ghana, Kyrgyzstan, Nepal and Thailand, the shares were calculated based on data from the IMF *Government Finance Statistics Yearbook* as presented in the *World Bank DataBase* (World Bank, undated). The shares as a percentage of public revenues of the international trade, income, goods and services, and other taxes are divided by the sum of these shares (thereby excluding grants and other revenues).

Source: OECD/ATAF/AUC (2016), OECD/CIAT/IDB/ECLAC (2016) and World Bank, *World Bank Databank* (undated), <https://data.worldbank.org/>. StatLink <http://dx.doi.org/10.1787/888933649335>

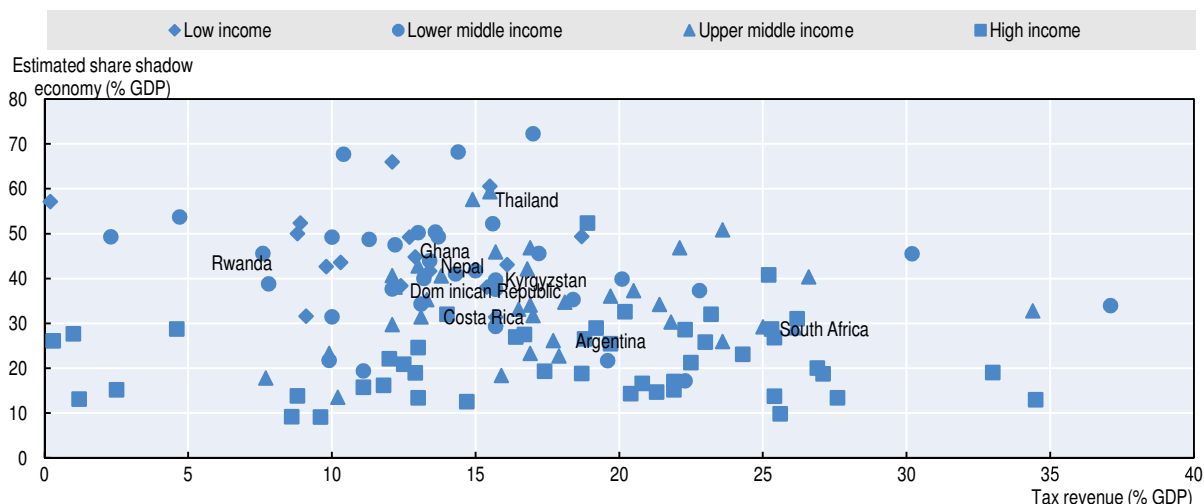
Analyses often identify informality based on the share of companies that are not registered or who have unregistered workers. Recent ILO data suggest that 32% (South Africa) to 49% (Dominican Republic) of non-agricultural employment in partner countries for which the data are available is informal (ILO, 2012).

Some countries are attempting to address the problem of the lack of revenues that often arises from a large informal sector. For example, Ghana (as well as Peru and Senegal) has tried to levy direct taxes on informal enterprises. These attempts had mixed success (Joshi and Ayee, 2008). Aside from direct taxes, there is an ongoing debate as to what extent indirect taxes cover the informal sector (Boadway and Sato, 2009). Overall, the effect of informality on tax revenues may be restricted because informal enterprises' profits are often so low that they would fall below tax thresholds (IMF, 2011).

Public expenditures have generally risen

The size of public expenditures as a share of GDP varies largely in partner countries. It is small in Côte d'Ivoire, the Dominican Republic, Nepal and Rwanda. Their expenditures are below the average for countries with low incomes (Figure 6.4). In contrast, the expenditure share in South Africa exceeds the average share for OECD countries. This has been partially attributed to the need for social and infrastructure investments in the post-Apartheid period (Idenyi et al., 2016).

Figure 6.3. **Most partner countries have shadow economies estimated at 30-43% of their GDP**
1999-2013 average shadow economy (% GDP)

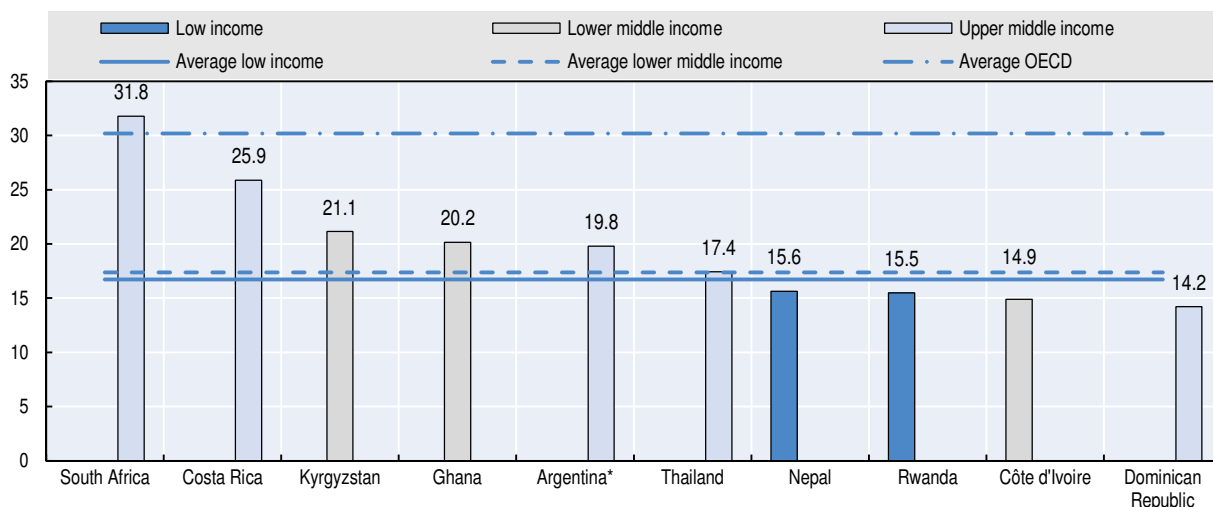


Source: Data for the estimated share of the shadow economy is taken from Hassan and Friedrich (2016) and tax revenue as a share of GDP from the World Bank, *World Bank DataBank* (undated), <https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS>.

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The data have gaps but, overall, many of the partner countries appear to have rising public expenditures. Those which had higher expenditures in 2010 than in 2000 were Costa Rica, the Dominican Republic, Kyrgyzstan, South Africa and Thailand. With the exception of Kyrgyzstan (for which information for 1990 is missing) and South Africa, expenditures had already increased between 1990 and 2000. For Rwanda, there was also an increase from 2010 compared to 1990. For Nepal and Ghana, earlier data were missing and compared to 2005, there was little change. Moreover, with the exception of Ghana (where data are unavailable) and Kyrgyzstan, expenditures had increased once again by 2013-15.

Figure 6.4. **Côte d'Ivoire, the Dominican Republic, Nepal, Rwanda and Thailand have low expenses**
Expenses (% GDP), 2010



Note: Expenses are cash payments for operating activities of the government in providing goods and services. They include compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rent and dividends. * Information from the 2013 Statistical Yearbook (INDEC, 2015). Averages for upper-middle-income countries and middle-income countries overall were not available.

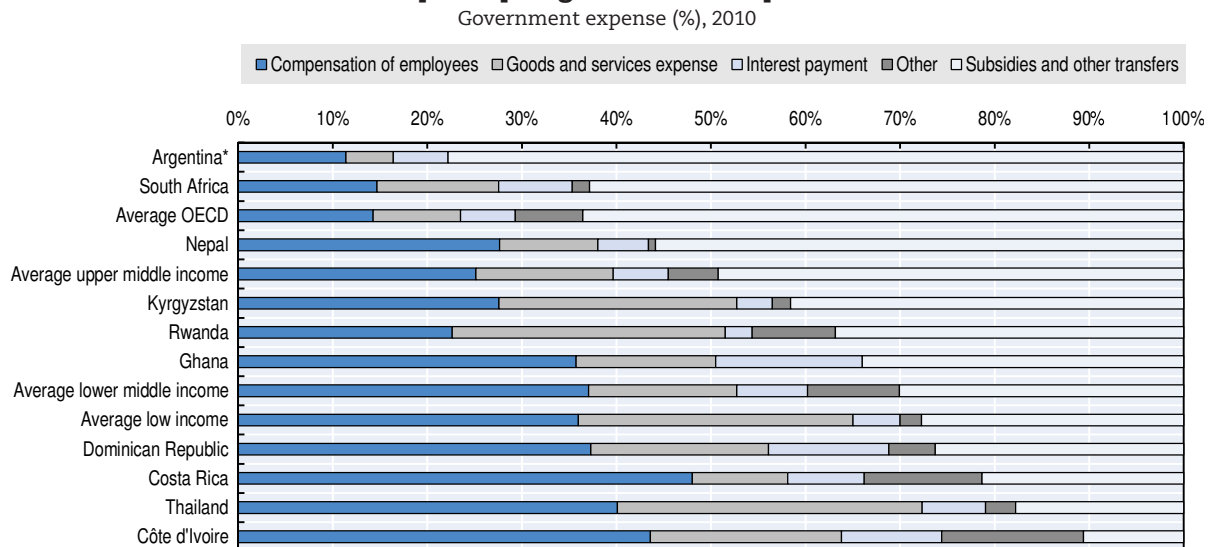
Source: INDEC (2015) and World Bank, *World Bank DataBase* (undated), <https://data.worldbank.org/indicator/GC.XPN.TOTL.GD.ZS>.

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The composition of public expenditures varies according to national income levels

Some of the partner countries devote a high share of government expenditures to subsidies and other transfers. This is particularly true for Argentina and South Africa, where in 2010 this share exceeded the OECD average (Figure 6.5). In contrast, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana and Thailand spent more than one-third on the compensation of employees. Interest payments ranged from 2.9% to 15.5% of public expenditures.

Figure 6.5. In partner countries, subsidies and transfer payments tend to rise with per-capita gross domestic product



Note: Compensation of employees consists of all payments in cash, as well as in kind (such as food and housing), to employees in return for services rendered, and government contributions to social insurance schemes such as social security and pensions that provide benefits to employees. Goods and services include all government payments in exchange for goods and services used for the production of market and nonmarket goods and services. Interest payments include interest payments on government debt – including long-term bonds, long-term loans and other debt instruments – to domestic and foreign residents. “Other” expenses are spending on dividends, rent and miscellaneous expenses, including provision for consumption of fixed capital. Subsidies, grants and other social benefits include all unrequited, non-repayable transfers on current account to private and public enterprises; grants to foreign governments, international organisations, and other government units; and social security, social assistance benefits, and employer social benefits in cash and in kind. The sum of the shares for the country groups only added up to 85-95% of expenses. They were normalised to add up to 100%.

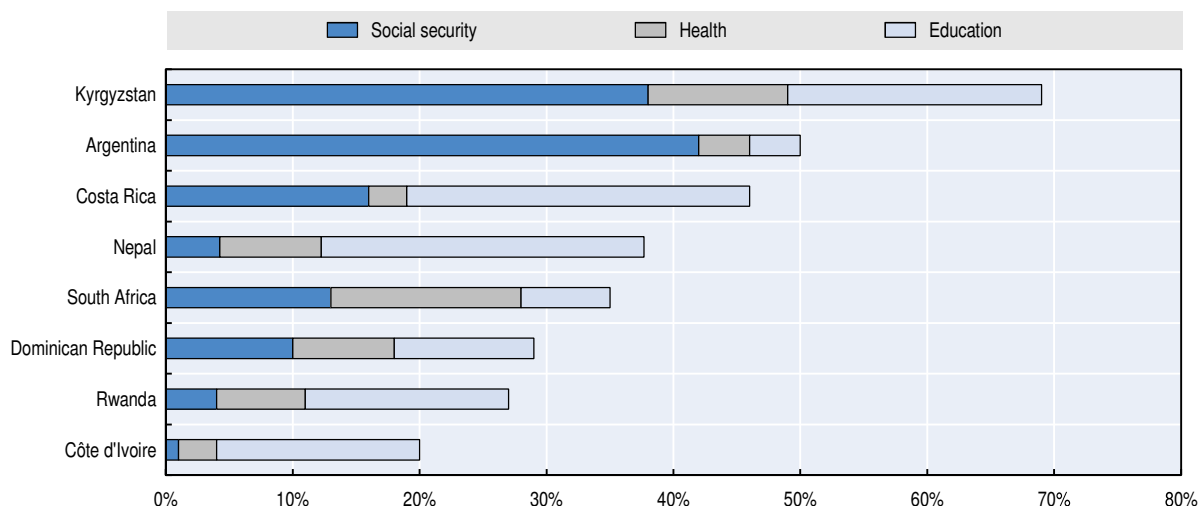
* For Argentina, the allocation is based on the 2013 Statistical Yearbook (INDEC, 2015). The total expenses that are considered include all current expenditures as well as capital transfers, excluding direct real and financial investments. Remunerations are taken as compensation of employees; consumption expenditures on goods and services as goods and services expenses; interest payments as property rents; other consumption expenditures and other current expenditures as other expenses and social security payments, current transfers, and capital transfers as subsidies and other transfers.

Source: World Bank, World Bank database (undated) and INDEC (2015).

StatLink <http://dx.doi.org/10.1787/888933649392>

Upper-middle-income countries tend to devote a higher share of their expenditures to the three major categories of social spending – social security, health and education – than countries with lower income levels (Figure 6.6). The exception is Kyrgyzstan, which has only recently transitioned to a lower-middle income status, but devotes the highest share of its expenditures to these three categories. This can be explained by the legacy of its pension scheme with universal coverage from the Soviet era. Interestingly, and despite its middle-income status, Nepal also devotes a quarter of its government expenditures to education.

Figure 6.6. **Partner countries with higher per-capita income usually spend over a third of public expenditures on social security, health and education**



Note: This figure is based on the latest years for which the fiscal analysis was carried out: 2013 for Argentina, Costa Rica, Kyrgyzstan and Rwanda, 2011 for Nepal and South Africa, 2008 for Côte d'Ivoire and 2007 for the Dominican Republic. Ghana is not included because data on certain security expenditures, such as personnel-related costs in public health and education, are not listed separately in the country's classification of public expenditures.

Source: Authors' own work based on government budget data (see the chapter's appendix).

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Pension systems vary across countries, which partially explains their different shares in public expenditures. Several countries combine various elements. For example, Kyrgyzstan's pension system has contributory and non-contributory components, with defined-benefit and defined-contributions plans (Bogomolova, 2014). Argentina similarly has non-contributory and defined-benefit contributory pension components (OECD, 2015). Costa Rica has defined-benefit and defined-contribution as well as non-contributory elements (OECD/IDB/World Bank, 2014). Ghana currently has a three-tier system for private and public sector employees with defined-contribution and defined-benefit components (Social Security and National Insurance Trust, undated). Several countries have flat-rate taxes for elderly individuals that may have to fulfil residency or citizenship requirements. This is the case for Nepal (Social Security Administration, 2011) and South Africa (OECD, 2015). The Dominican Republic has a defined-contribution plan that guarantees a minimum pension for non-public employees (OECD/IDB/World Bank, 2014). Rwanda (Rwanda Social Security Board, undated) and Thailand (Social Security Administration, 2011) have defined-benefit plans without a minimum pension. Côte d'Ivoire's systems currently only cover public and formal sector employees (CLEISS, 2016).

Concerning social protection payments, comprehensive programmes that cover the majority of the population for unemployment and sickness remain rare outside of upper-middle and high-income countries (ILO, 2014). Low- and middle-income countries generally provide only disability and old-age insurance.

Measuring the direct fiscal contribution of immigrants

The estimates presented in this chapter are based on a static accounting approach that measures the net fiscal contributions of the foreign- and native-born populations in a single year. This section first describes how the approach compares to other methods and then presents the results of the estimation.

The methodology chosen is the accounting approach

There is a variety of methodologies to measure the fiscal impact of immigration. These include static analyses, in principle the accounting approach, and dynamic analyses including net transfer profiles, generational accounting and macroeconomic models. An overview of the characteristics, advantages and drawbacks as well as of the results of key studies for the four methodologies below is provided in OECD (2013). Each methodology measures a different scope of the fiscal impact:

- The **accounting approach** compares the net fiscal impact of foreign- and native-born individuals in a given year or multiple years.
- **Net transfer profiles** seek to estimate the net present value of the fiscal impact of foreign- and native-born populations across their entire lives.
- **Generational accounting** estimates the net present value of the net fiscal contribution of foreign- and native-born individuals across not only their own lives, but also the lives of their descendants.
- **Macroeconomic models** generally investigate whether a change in foreign-born inflows would affect future government budgets, not only through taxes paid and services used by the foreign-born and their families, but also through their wider effects on the economy. These wider effects can for example include increases in tax payments of native-born workers whose labour incomes rise as a result of immigration.

The accounting approach's functional components

For the accounting approach on which this chapter's analysis is based, public revenues and expenditures are divided into their functional components.⁴ For each of these components, the share contributed by immigrants is estimated based on survey information related to individuals' incomes, expenditures, and usage patterns of public programmes and services. The estimated revenues and expenditures are added up to estimate the net fiscal contribution of the foreign- and native-born populations. By dividing these contributions by the number of foreign- and native-born individuals, the average per-capita net fiscal contribution (hereafter called per-capita net fiscal contribution) is then calculated.⁵

The estimation basis for the share of tax payments and government expenditures attributable to immigrants depends on the type of revenue or expenditure and on the survey on which the estimation is based. Annex 6.A1 provides a more detailed explanation, but for most partner countries, the major categories were estimated as follows:

- The immigrant payment share of income taxes and social security contributions were typically based on labour income as reported in the survey. It corresponded either to the immigrant income share or was estimated by applying simplified tax rules to reported incomes.
- The value added and other indirect taxes payment share usually corresponded to the share of reported expenditures or was estimated by applying tax rates to different categories of goods and services. Most other immigrant tax payment shares were simply set equal to the immigrant share in the population aged 18 and above.
- The immigrant share in many government expenditures was set equal to the immigrant share in the overall population. The reasoning is that, for example, while children and teenagers are unlikely to contribute to the payment of corporate income taxes, they nonetheless cost the government money in terms of the provision of for example infrastructure.

- Health and education expenditures were usually calculated based on estimated usage. Examples are the share of immigrants among individuals that had reported to have visited a public hospital or the share of immigrants and their offspring among students.
- The share of social security transfers of immigrants was typically estimated (i) according to whether they or someone in their household had received transfers or (ii) directly based on the reported amounts received.

The approach's disadvantages and advantages

Compared to other estimation methodologies, the accounting approach suffers from a number of shortcomings. The main disadvantage is that individuals' contributions vary greatly over their lifetimes. Children and retirees typically generate a lot of costs and pay few taxes, while the opposite is true for the average person of working age. When immigrants are overrepresented in the working age category, their fiscal contribution may look positive in a given year, but this may shift over time as these immigrants age. In contrast, when immigrants are particularly concentrated among the elderly, their net fiscal contribution in a given year may be negative, but this estimate neglects to take into account that they may have paid more taxes and contributions in the past. This shortcoming is partially addressed later in the chapter by studying to what extent the fiscal impact of immigrants would shift if they had the same age structure as native-born individuals.

The second major disadvantage is that general equilibrium effects are not taken into account. For example, immigration could boost economic growth, which could increase tax revenues and decrease public expenditures overall. Another effect is that immigrants have children and grandchildren, who themselves can make positive or negative net fiscal contributions.

Several advantages of the methodology counterweigh its disadvantages. Aside from the lower analytical and data requirements, it relies on fewer assumptions. For example, an estimation of the lifetime fiscal contribution of current immigrants would require strong assumptions about future public expenditures and tax structures as well as about how likely immigrants are to remain in the country and how well they will integrate into the labour market. Given the sometimes strong fluctuations in these and other determining components, creating reasonable assumptions about their future development is extremely difficult. This is true for all countries, but perhaps particularly so for developing countries.

While efforts were undertaken to make the estimates as comparable as possible across countries, the actual comparability is still limited. Because the different surveys did not all contain the same information, the basis for allocating different revenues and expenditure shares to foreign- and native-born individuals is not always consistent. Another reason is that the expenditure and tax structure itself determines how much the per-capita net fiscal impacts of foreign- and native-born taxpayers vary. This is because certain taxes and expenditures cannot be directly allocated to individuals based on their characteristics, but rather "belong" either to all inhabitants or to the native-born. In countries where such non-assignable components make up a large share of revenues and expenditures, the difference between the estimated net fiscal contributions of foreign- and native-born individuals under the average cost scenario (see below) is smaller.

Finally, the precision of estimates varies across countries. In some countries, the underlying household survey includes many observations and immigrants make up a large share of the population. In others, both the number of observations and the immigrant share

are limited. The smaller the number of observations, the less precise is the estimate. Given these constraints, the most interesting feature of the cross-country comparison is to see to what extent the difference in the characteristics of foreign- and native-born individuals affected the difference in their fiscal impacts.

The direct fiscal contribution of foreign populations varies but is limited overall

The analyses show not only that the shares of expenditures and income allocated to immigrants but also the overall net fiscal impacts of immigration differ across countries.

In countries where immigrants pay a disproportionately high share of income taxes and social security contributions, they also pay an estimated higher share of indirect taxes on goods and services (Table 6.1). The income tax share of immigrants is estimated to be below the population share in the three Latin American countries and Côte d'Ivoire, while the share of indirect taxes is estimated to be below the population share in Argentina and Côte d'Ivoire.

This pattern suggests that even though immigrants send more transfers to their family members than do native-born individuals,⁶ they may also spend more in their host countries. This is the case in Côte d'Ivoire, the Dominican Republic, Ghana and Kyrgyzstan. Thus, they would save proportionally less than native-born individuals at the same income levels.

Evidence from a number of OECD countries suggests that immigrants' savings rates are indeed lower than that of comparable native-born individuals;⁷ but this may not apply in other countries. Actually, the immigrant shares of personal income taxes and social security contributions are estimated to be higher than their shares of indirect tax payments in Argentina, Costa Rica, Nepal, Rwanda and South Africa. This indicates that the consumption of immigrants in these countries may be lower than their income levels would suggest.

Regarding social security expenditures, a relatively clear and intuitive pattern emerges. The share of these benefits paid to immigrants tends to be higher than the immigrant population share in countries such as Argentina and Kyrgyzstan where a high proportion of immigrants have been living in the country for a long time and are older. This mirrors the findings for OECD countries (OECD, 2013).

The estimated share of education and public health costs attributable to immigrants varies. Of the nine countries, only in the Dominican Republic, Ghana and South Africa are both their education and health cost shares at or below their share in the population. Nepal is the country where immigrants are estimated to require disproportionately high expenditures in both health and education.

Simply based on the method by which the immigrant share of expenditure was estimated, the cost share estimate for other public goods is either equal to their population share or below it.

- The **average cost scenario** estimate is one where the costs of all public goods are distributed equally among all individuals, regardless of their country of birth. Each individual is assumed to be responsible for the same average cost.
- Under the **marginal cost** scenario, expenditures on categories of public goods that are not thought to depend on population size are allocated solely to native-born individuals. Such public goods (e.g. defence) would therefore presumably be equally high even if all immigrants left the country. This scenario only allocates to immigrants those expenditures that are in addition to (marginal) compared to those that would have been undertaken in any case.

Table 6.1. Immigrants contribute to different taxes and expenditures in varying shares

Public revenues	Immigrants (% population)	Immigrants (% adult population)	Immigrants (% working population)	Income	Social security	Corporate income	Capital transactions	Property	Goods and services	Imports and exports	Other
Argentina	4.3	5.6	5.2	3.4	4.0	5.6	5.4		2.5		4.3
Costa Rica	8.9	11.1	12.1	7.5	6.7	11.1		5.3	6.8		11.1
Côte d'Ivoire	7.1	11.6	13.2	5.6	3.7	11.6		11.8	7.6	7.6	0
Dominican Republic	2.8	3.7	4.0	0.6	4.4	3.7	2.5	2.5	3.8		3.7
Ghana	1.0	1.1	1.1	1.2	1.0	1.1			1.3	1.1	0.0
Kyrgyzstan	4.4*		3.8	4.5	4.5	3.1			4.8		3.7
Nepal	4.2	6.1	5.0	6.1		6.1		6.1	4.1	6.1	6.1
Rwanda	3.6	5.4	4.2	19.2		5.2	5.1		6.8	3.9	1.6
South Africa	4.2	5.8	8.8	11.7	5.8	5.8	5.8		6.4	5.8	5.8

Public expenditures	Immigrants (% population)	Immigrant (% adult population)	Immigrants (% working population)	Public goods	Social security	Education	Health
Argentina	4.3	5.5	5.2	2.7/4.3	5.9	5.1	4.2
Costa Rica	8.9	11.1	12.1	2.4/8.9	2.9	11.9	8.0
Côte d'Ivoire	7.1	11.4	9.9	1.0/7.1	21.2	6.6	7.2
Dominican Republic	2.8	3.7	4.0	1.8/2.8	0.4	1.8	2.7
Ghana	1.0	1.1	1.1	0.07/1.0	1.0	1.0	0.8
Kyrgyzstan	4.4*		3.8	1.4/4.4	11.3	3.5	6.5
Nepal	4.2	6.1	5.0	2.3/4.2	3.5	5.3	5.6
Rwanda	3.6	5.4	4.2	0.3/3.6		10.9	3.1
South Africa	4.2	5.8	8.8	1.7/4.2	4.2	2.6	4.2
Lower revenues and higher expenditures compared to overall population share							
Equal revenues and expenditures compared to overall population share							
Higher revenues and lower expenditures compared to overall population share							
Not applicable							

Note: * Information on the place of birth is available only for individuals over 18-years-old in the *Life in Kyrgyzstan* survey.

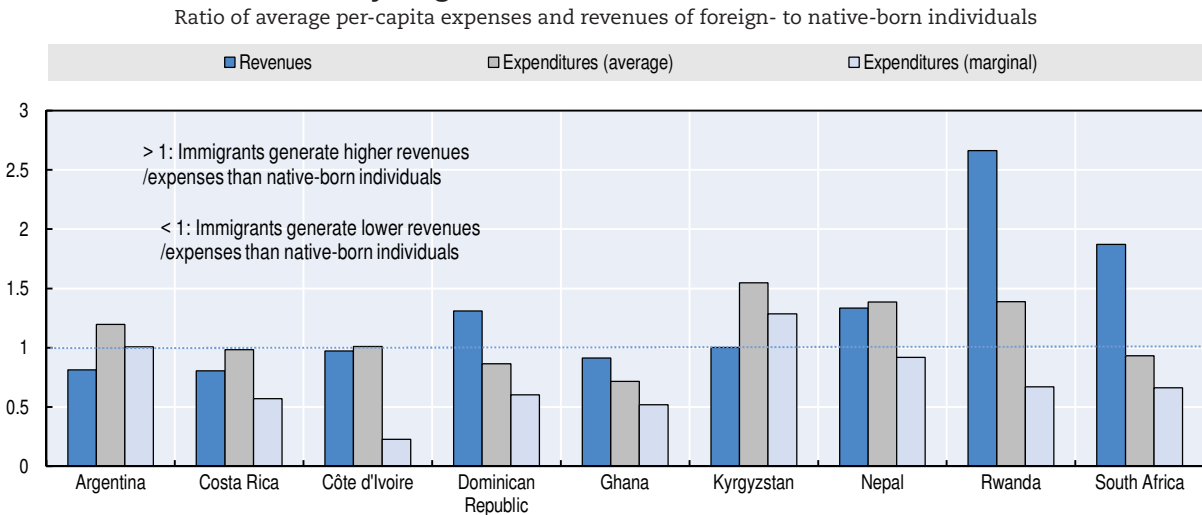
Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

Depending on the size of expenditures on these types of goods, the gap between the upper and lower range estimates is larger or smaller.

In some countries, the ratio of per-capita public revenues and expenditures of immigrants compared to native-born citizens is close to one, while in others, one or both of them is substantially larger than one (Figure 6.7). A ratio of one indicates that an immigrant pays on average as much in revenues or costs in expenditures as a native-born individual. In most countries, the ratio is not lower than 0.8 (Argentina and Costa Rica) nor higher than 1.9 (South Africa). In Argentina and Costa Rica the per-capita public revenues generated by immigrants were around 20% lower than those of the average native-born person and in South Africa 87% higher.

The situation in Rwanda is drastically different. The average expenditure ratio is 1.4, indicating that immigrants "cost" more than Rwandans, as long as the costs for pure public goods are also borne by them. Nevertheless, this is by far offset by the tax payments of immigrants: the average revenue ratio is 2.7, meaning that immigrants on average pay almost three times the taxes and contributions that native-born taxpayers do. It is clear that the higher concentration of immigrant workers in non-vulnerable employment and in high-productivity sectors boosts their contributions to public finances, particularly through income tax payments.

Figure 6.7. There are no clear patterns that fiscal revenues and expenditures of foreign-born individuals are always higher or lower than those of native-born individuals

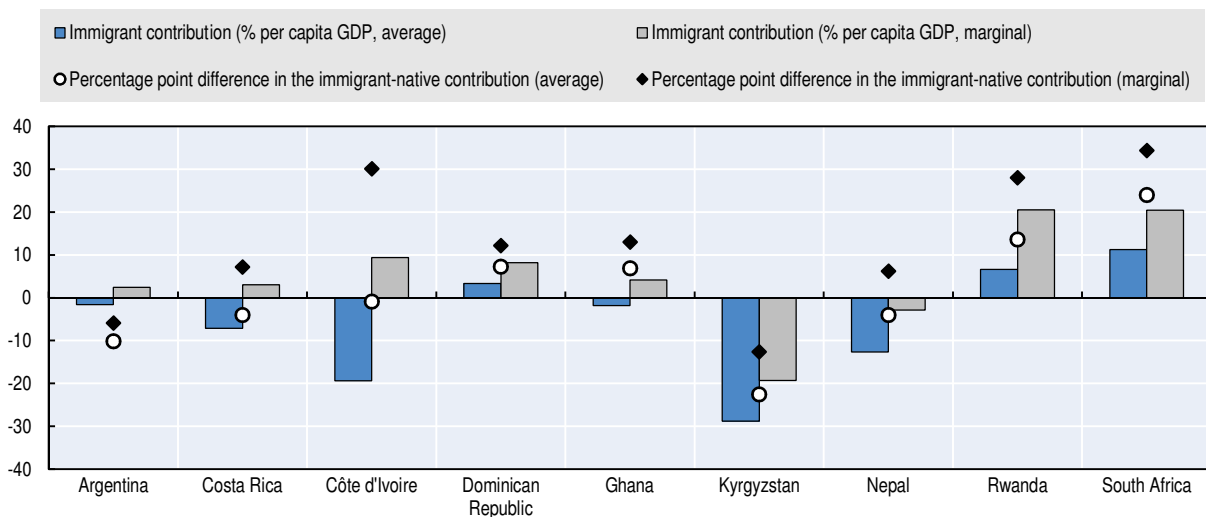


Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

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In some partner countries, the per-capita net fiscal contribution of immigrants is relatively large (Figure 6.8). Under the average cost scenario in which the costs of all public goods are allocated to the entire population, the per-capita net fiscal contribution of immigrants is lower than -10% of per capita GDP in four countries (Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal) and higher than 10% of per capita GDP in one country (South Africa). However, under the marginal cost scenario, the average per-capita net contribution is below -10% in only one country (Kyrgyzstan) and exceeds 10% in two countries (Rwanda and South Africa).

Figure 6.8. The per-capita fiscal impact of immigrants may be quite high in developing countries



Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

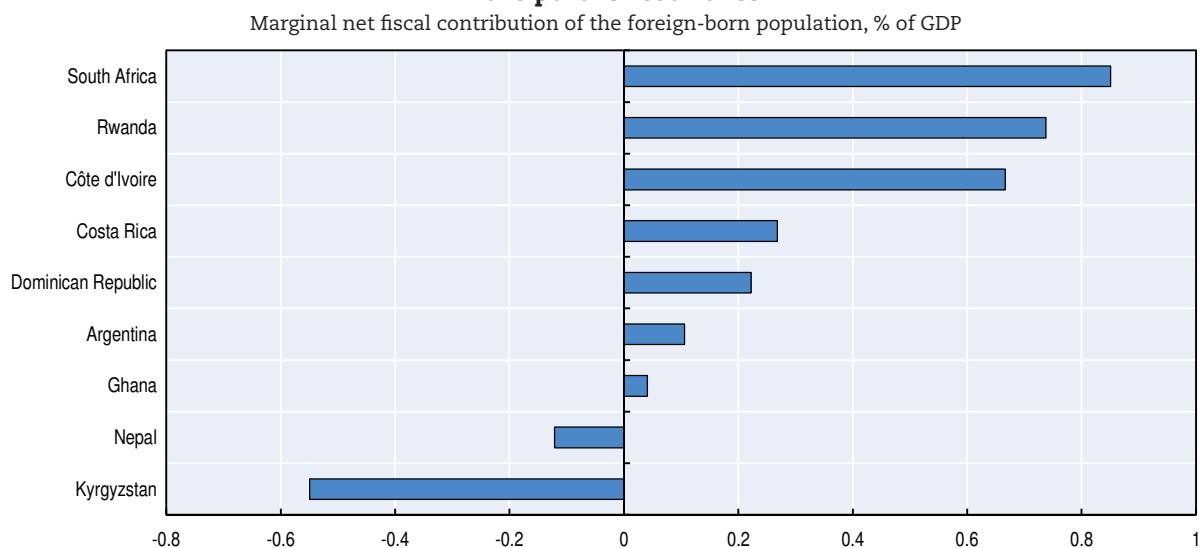
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The overall average net fiscal contribution in a country (that is, of both foreign- and native-born individuals together) depends on whether the country currently has a public surplus or deficit. The difference between the per-capita net fiscal contributions of the foreign- and of the native-born is more useful for this report. The marginal-cost scenario estimates that the per-capita net fiscal contribution of immigrants is negative and significantly lower than that of the native-born population in Argentina and Kyrgyzstan; the average-cost scenario adds Costa Rica and Nepal (Figure 6.8). Even under the average-cost scenario, the per-capita net fiscal contribution of immigrants is at least five percentage points higher than that of the native-born in Rwanda and South Africa.

The seemingly large negative impacts in certain countries (notably Côte d'Ivoire, Ghana, Kyrgyzstan and Nepal) may raise fears that immigration imposes a substantial fiscal burden they can ill afford to bear, but several caveats apply:

1. In two of the four countries – Côte d'Ivoire and Nepal – the per-capita net fiscal contribution of immigrants is much less negative or even positive once expenditures on certain public goods, such as defence, are allocated only to the native-born. In this situation, spreading the costs of these public goods on more shoulders may actually be beneficial.
2. The precision of the overall estimates is necessarily limited because they are not based on actual tax records.
3. Per-capita net fiscal contributions can vary greatly over time.
4. When the focus shifts to the overall rather than the per-capita net fiscal contribution, it becomes clear that in all partner countries, the impact is quite limited (Figure 6.9). Under the marginal-cost scenario, the overall net fiscal impact of immigration is less than -1% of GDP in the two countries in which it is negative (Kyrgyzstan and Nepal). It is positive, but below 1% of GDP, in the other seven countries. Even under the average-cost scenario, the lowest impact is above -1.5%.

Figure 6.9. **The overall net fiscal contribution of immigrants is limited in the partner countries**



Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

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A negative contribution in one year does not mean that the overall fiscal contribution of immigrants is negative. In ageing economies such as Kyrgyzstan, immigrants who

seem to generate higher public expenditures than revenues have often contributed to the economy for several decades. Over their lifetimes, they may thus have made positive net fiscal contributions, even though in one particular year, the contribution is negative. The following section explores this in more detail.

Factors shaping the foreign-native-born difference in the fiscal contribution

As seen above, there are large ranges in the net fiscal contribution of immigrants and in the difference between it and the contribution of native-born individuals across partner countries. Differences in the composition of the immigrant population and in the tax and expenditure structure clearly contribute to this range of outcomes. In contrast, immigrants in most partner countries are less likely to benefit from social security mechanisms than native-born individuals.

Immigrants in the partner countries depend less on the social security system

The level of development of the social security systems in the partner countries varies strongly. Argentina devotes 42% of public expenditures to social security, while Côte d'Ivoire and Ghana allocate 1% or less. The rights for immigrants to access the social security system naturally also differ from country to country (see Table 2.1). At the time of the analysis, Ghana, the Dominican Republic⁸ and Nepal restricted their pension schemes to citizens. In other countries, regular immigrants could participate in the social security system. Minimum contribution periods apply before they are eligible for payments.

Irregular immigrants cannot participate in the social security system of any of the partner countries. In countries where irregular immigration is prevalent, immigrants are therefore less likely to receive benefits. In addition, workers in the informal sector, be they foreign- or native-born, are excluded from the contributory components of the system in most partner countries. Given that immigrants are often over-represented in irregular employment, this further reduces their inclusion in the social security system.

When comparing the shares of foreign- and native-born individuals that receive social security benefits and their amounts, the foreign-born proportionally receive benefits more frequently and in higher amounts in some partner countries and proportionally less in others (Table 6.2). For example, the share of immigrants that reported receiving pension payments in Argentina in a 2013 household survey was seven percentage points higher than the equivalent share of native-born individuals; in Kyrgyzstan, the discrepancy was even three times higher. In contrast, the share of immigrants in Costa Rica that received social transfers other than pension payments was eleven percentage points lower than the equivalent share among native-born individuals. In Côte d'Ivoire, Ghana, Nepal and Rwanda, there was almost no difference in the share of the native- and foreign-born populations receiving a pension, but some of the average benefits received by immigrants were lower than those of native-born beneficiaries.

The different characteristics of foreign- and native-born individuals explain these patterns of receiving benefits. The results either showed no significant differences in the likelihood that foreign- and native-born individuals with similar characteristics (such as age and education) receive benefits or that immigrants were less likely to receive them. This is the case in Costa Rica, Nepal and Rwanda. However, immigrants in Argentina are one percentage point more likely to receive non-pension benefits than native-born individuals that are similar in terms of demographic characteristics and education. When immigrants do receive transfer payments, the amounts tend to be equal to or lower than those of similar

native-born individual. The exception is pension benefits in Kyrgyzstan, which are on average slightly higher for immigrants than for similar native-born individuals. However, in Côte d'Ivoire and Ghana, sample sizes were insufficient to come to a definite conclusion.

Table 6.2. Immigrants in most partner countries are less likely to receive social security benefits

Difference in unadjusted means and characteristic-adjusted regression results

	Unadjusted				Adjusted			
	Benefit receipt (p.p.)		Benefit amount (%)		Benefit receipt (p.p.)		Benefit amount (%)	
	Pension	Social benefits	Pension	Social benefits	Pension	Social benefits	Pension	Social benefits
Argentina	7	-3	-1	-16	-4***	1**	-8***	-3
Costa Rica	-7	-11	15	-31	-9***	-6***	-4***	-31***
Côte d'Ivoire	0		-20		0		23	
Ghana	0	0	-80	-58	0	0	-65	-12
Kyrgyzstan	21	1	23	-23	-2	1	6*	-30
Nepal	-2	-1	3	-47	-4*	-1	-14	-6
Rwanda	0	-4	-2	-50	-1**	-2***	-3***	-73

Note: The difference in benefit receipt is given in percentage point (p.p.). For the adjusted regression results, the additional control variables include age, age squared, an indicator variable for being 65 years or older, sex, education level and being married or living with a partner. Significance levels are indicated by * (.1), ** (.05), *** (.01). The Dominican Republic is excluded because the social security system was privatised in 2001. For Nepal, the benefit receipts and amounts are for the household rather than the individual.

Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

One important factor that can influence whether or not immigrants receive social security benefits is how long they have been in the country. Unfortunately, most of the data sources used do not contain immigrants' years of arrival. For Côte d'Ivoire and Rwanda, years since immigration were inferred by the number of years immigrants had lived in their community since arriving from abroad. However, information was missing for 80% of immigrants in Côte d'Ivoire and 30% in Rwanda, because they moved within the country at least once after their arrival. For Côte d'Ivoire, including the proxy variable and an indicator variable showing when the information was missing for immigrants does not alter the results in a fundamental manner. For Rwanda, immigrants who had just arrived or for whom the information was missing are about two percentage points less likely to receive social benefits, but not pensions. For the benefit and pension amounts for Rwanda, the point estimates change but remain statistically insignificant.

Different characteristics of native- and foreign-born individuals can explain differences in their fiscal contributions

As seen in Chapters 2 and 3, the native- and foreign-born populations have different demographic and labour market characteristics from each other in most of the partner countries. For example, a smaller proportion of immigrants tend to be children, while a higher proportion of them are working-age adults (Figure 2.6). Concerning educational distribution, immigrant workers in four countries are both over-represented among the low and highly educated and underrepresented among intermediate educational levels (Figure 3.18). In two countries, the over-representation is solely concentrated at higher educational levels, while in three countries it occurs at lower and intermediate levels. In all but two countries, the difference in the employment-to-population rates exceeds nine percentage points.

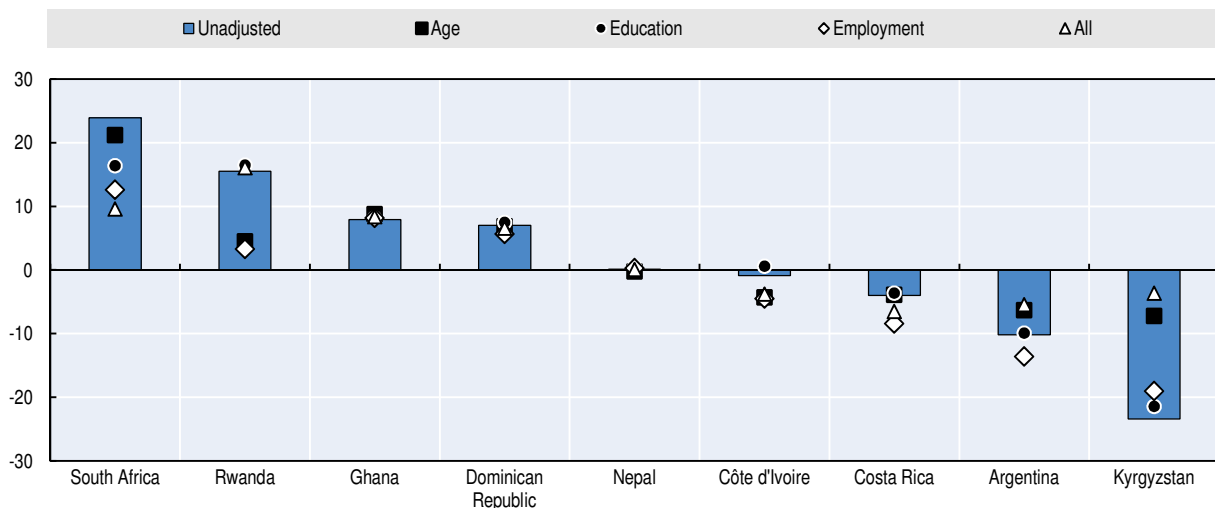
Naturally, these different characteristics also affect the populations' net fiscal contribution. Further analyses determined how much of the difference in the per-capita net fiscal contribution of immigrants can be attributed to their different characteristics compared to the native-born.

If the age structure of the immigrant population were more similar to that of the native-born population, the difference between the per-capita net fiscal contributions of the two populations would be less pronounced in several partner countries than it currently is (Figure 6.10). One likely reason is that in many countries where the net fiscal contribution of immigrants is lower than the one of the native-born, such as Argentina and Kyrgyzstan, a higher share of immigrants than of native-born individuals is elderly. This has two causes. On the one hand, public expenditures – in the form of pension payments and medical expenditure – typically rise as individuals age. On the other hand, public revenues are probably lower because retirement-age individuals typically earn and consume less, affecting receipts from personal income taxes and indirect taxes. In contrast, in countries where the net fiscal contribution of immigrants is higher than that of native-born individuals, such as in Rwanda, a larger share of immigrants is of working age. This is consistent with findings for OECD countries (OECD, 2013).

If the employment rates of foreign- and native-born individuals were more equal, the per-capita net fiscal contribution of immigrants compared to the native-born would typically be less favourable. The exceptions are Ghana, Kyrgyzstan and Nepal, where hardly any shift would occur. The change would be particularly pronounced in Rwanda and South Africa.

Figure 6.10. **Personal characteristics account for part of the difference in the net fiscal contribution of foreign- and native-born individuals in several countries**

Unadjusted and assuming that immigrants had the same characteristics as the native-born



Note: These results are based on a pooled Blinder-Oaxaca decomposition. This methodology divides the difference in the per-capita net fiscal contribution in the part that can be explained by different characteristics and the part that cannot be. This is achieved by first running a pooled regression with net fiscal contribution as the dependent and place of birth as well as the relevant adjustment variable(s) as the explanatory variables. Then, the predicted difference in the net fiscal contribution between foreign- and native-born individuals is calculated by applying the estimated regression coefficients to the adjustment variable set at its mean among the native-born population. For the decomposition based on all characteristics, the sex and marital status (partnered or not) were equally included. Source: Authors' own work based on government budget data and household surveys (see the chapter's appendix).

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Shifts in the educational distribution would often have surprisingly small effects. The exception is South Africa, where the net fiscal contribution of immigrants would be less favourable if they had a similar education profile. This is despite the fact that the per-capita net fiscal contribution tends to rise with education level. For university graduates, the per-capita net fiscal contribution would be positive regardless of their place of birth in

all countries except Kyrgyzstan, where the per-capita net fiscal contribution of immigrants is negative.

Conclusions and policy implications

This chapter shows that the estimated net direct fiscal impact of immigrants in the countries studied was sometimes positive, sometimes negative and small overall. In the countries where the difference between the per-capita net fiscal impacts of foreign- and native-born individuals was largest, the difference would typically be less pronounced if their average ages were equal. With a few exceptions, an equalisation of the employment-to-population ratio would have the same result.

Because analysing the fiscal impact of immigrants is highly complex, determining policy interventions that could increase their fiscal contribution is also difficult. That said, a number of policy changes would likely have a positive impact in most countries.

Create a conducive environment for higher-skilled immigration

- The estimated average per-capita net fiscal contribution tends to rise with education level. Once employed, individuals with high school or university degrees often earn a multiple of what individuals with lower education levels make. This education-earnings premium is large enough to outweigh the increased risk of unemployment that highly educated people face in many low- and middle-income countries.
- That does not mean that a more selective immigration policy seeking to attract immigrants with higher education levels will necessarily raise immigrants' net fiscal contribution. In some of the countries where immigrants are on average less educated than the native-born population, it is unclear whether such an immigration policy would actually attract a significant number of high-skilled immigrants. Besides, given the high unemployment rates for university graduates in some countries, these immigrants may also end up unemployed or in positions for which they are overqualified and in which their wages are lower. Hence their overall net fiscal contribution would be smaller.
- While selective immigration policies are likely not appropriate, policy changes that create an accommodating environment for high-skilled immigrants could be beneficial. For example, in some partner countries, high-skilled immigrants are effectively the only ones that are subject to work permit requirements since only the formal sector requires permits. Simplifying visa and work permit applications and skill recognition processes for immigrants and their prospective employers alike could make the country a more attractive option for the highly-skilled. Given prevailing skill shortages, high-skilled immigrants might complement the skills of the native-born workforce, while potential negative labour market impacts from such a policy change could be limited. For example in Argentina, high-skilled immigration appears to be related to higher labour incomes for native-born high-skilled workers (OECD/ILO, forthcoming).

Promote the labour market integration of immigrants

- Policy interventions that aim to increase the quality of the labour market integration of immigrants are also likely to lead to increased net fiscal contributions. As was seen in Chapter 3, in many of the partner countries, immigrants often have high employment rates, but the quality of their employment may not be high. For example, they are often more concentrated in the informal sector or have vulnerable forms of employment (being

an own-account or contributing family worker). This situation can improve by itself as immigrants integrate into the society and the economy over time, and as the economy grows and offers more and better opportunities to all. In addition, both immigration and non-immigration policy interventions can speed up the process of integrating immigrants.

- In terms of immigration-specific policies, guaranteeing that immigrants have a regular status is the first step to ensure that formal employment opportunities are open to them, in addition to helping protect the immigrants' rights. Given that immigration tends to be intra-regional in the majority of partner countries, regional mobility agreements (such as those that exist for countries in the Economic Community of West African States) can be a way of achieving this, provided that they are implemented. Facilitating the administrative procedures for recruiting and hiring foreign-born individuals, and for recognising foreign degrees and certificates, could further help immigrants obtain higher-quality jobs.
- Other interventions that are open to firms and individuals regardless of their origins could also improve the net fiscal contribution of immigrants as well as of the native-born. These measures may include setting regulations for the formal sector – such as regarding labour rights and taxation - at appropriate levels and extending them to the informal sector (ILO/WTO, 2009). This could help grow the formal sector as the costs for firms to stay formal relative to being informal decrease. Providing training and education opportunities to workers throughout their lifetimes could also help improve the quality of employment (OECD, 2009), and hence the net fiscal contribution of workers.

The return of immigrants to their home countries should not be promoted for the sake of fiscal benefits

- The limited evidence in this chapter suggests that promoting the return of individuals of retirement age to their countries of origin would probably not have positive effects on the fiscal balance of the partner countries. The estimated net fiscal contribution, excluding the social security system, of retirement-age immigrants was positive in six of the seven countries for which the analysis was carried out.⁹ If immigrants continue to have rights to their pensions when they leave the host country, host countries would be fiscally worse off because they are estimated to pay less for congestible public goods, education and health services for immigrants than the immigrants contribute through their tax payments. The cost of pure public goods is disregarded because it would continue to be borne by the remaining population.
- Pension portability between countries should be promoted to improve the well-being of immigrants, rather than with the expectation to improve public finances.

Deepen the analysis of the fiscal impact of immigration

- The estimates presented in this chapter are a starting point for understanding the fiscal contribution of immigrants, and there is still much more to learn. First, to understand how their fiscal contributions evolve over time, and in particular through different phases of the business cycle, analysis needs to be carried out for multiple years. Second, the estimates, in particular of direct tax payment shares, could be more accurate if anonymised tax records linked to information about countries of birth could be analysed. Third, for certain countries it may be feasible and worthwhile to study not only the current but also the lifetime net fiscal contributions of immigrants.

Notes

1. The analysis requires survey or census data that at a minimum contains information on individuals' countries of birth and labour incomes. These data are not available for Thailand.
2. To ensure international comparability, most data presented in this part of the chapter are taken from the *World Bank DataBank* (World Bank, undated), which in turn is based on the *IMF Government Finance Statistics Yearbook* and World Bank and OECD GDP estimates. At times, however, there are discrepancies with the national-level data showing disaggregated public revenues and expenditures on which the fiscal impact analysis is based.
3. The model estimates the size of the informal economy based on tax and regulatory burden, business and economic freedom, and the unemployment and self-employment rates.
4. Ghana is an exception: expenditure was classified according to the economic rather than the functional components.
5. For Kyrgyzstan, the per-capita contributions and expenditures were estimated only for the population aged 18 and above.
6. For an example, see Kamasaki and Arce (2000) on Hispanic immigrants in the United States.
7. See for example Carroll, Rhee and Rhee (1994) on Canada, Bauer and Sinning (2011) on Germany and Amuedo-Dorantes and Pozo (2002) on the United States.
8. This changed in November 2015 through Resolution 377-15.
9. The analysis was not carried out for Nepal and Rwanda as the social security contribution share of immigrants was not estimated for these countries. The net contribution of immigrants 65 years old and older excluding the social security system was negative in Ghana.

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ANNEX 6.A1

Data and methodology

The analysis presented in this chapter follows an adjusted version of Dustmann and Frattini's (2014) analysis of the fiscal impact of immigration in the United Kingdom. The analysis is based on two main sources: government budget data and household surveys.

The budget data sources were provided by the Directorate General of Budget of the Dominican Republic (DIGEPRES, 2007), the Ministry of the Economy and Finance of Côte d'Ivoire (2010), the Ministry of Finance of the Government of Ghana (2014), the Ministry of Finance of the Kyrgyz Republic (2014), the Ministry of Finance of the Government of Nepal (2013), the Ministry of Finance and Economic Planning of the Republic of Rwanda (2013), the Ministry of the Treasury of Costa Rica (2013), the National Institute for Statistics and Censuses of the Republic of Argentina (INDEC, 2015) and the National Treasury of the Republic of South Africa (2011).

The household surveys were the 2013 *Annual Urban Household Survey* and the *National Household Income and Expenditure Survey* for Argentina (INDEC, 2011 and 2013); the 2013 *National Income and Expenditure Survey* for Costa Rica (INEC, 2013); the 2008 *Household Living Standard Survey* for Côte d'Ivoire (INS, 2008); the 2007-08 *National Household Income and Expenditure Survey* for the Dominican Republic (ONE, 2009); the 2013 *Ghana Living Standards Survey* (GSS, 2013); the 2010-13 *Life in Kyrgyzstan* survey (DIW Berlin/SIPRI, 2010-13); the 2011 *Nepal Living Standards Survey* (CBS, 2011); the 2014 *Integrated Household Living Conditions Survey for Rwanda* (NIS, 2014); and the 2011 *Population Census*, the 2010/11 *Income and Expenditure Survey* and the *National Income Dynamics Survey* for South Africa (Statistics South Africa, 2011a, b and c).

Each of the expenditure or revenue components is estimated based on the information that is given in the survey. The estimation usually relies on either the distribution of labour income, expenditures, personal characteristics (including enrolment in educational institutions), benefit usage or simple population shares.

Income-based estimates

The estimation of personal income taxes and social security contributions are typically based on labour income. The exceptions are the Dominican Republic and Nepal, where survey respondents directly reported tax payments (see "expenditure based estimates"). In some cases (Argentina, Costa Rica, Ghana, Rwanda and South Africa),¹ the individual tax payments are estimated by applying the relevant average tax rates and major deductions to the reported labour income. The estimated tax payments of foreign- and native-born workers are then added up in order to estimate their tax payment share.

In other cases (Côte d'Ivoire and Kyrgyzstan), the survey also contains information that provides an indication of whether individuals work in the formal or informal sector and hence whether they are likely to pay income taxes and in particular social security contributions. Where this information is available, the estimated taxes or contribution payments of informal workers are disregarded in the calculation of the overall tax share.²

The distribution of property and capital taxes in Côte d'Ivoire is also estimated based on a specific income category. They are based on the share of reported dividends, interest and other revenues obtained by immigrants according to the household survey.

For Rwanda, the distribution of corporate income taxes and import taxes are based on information on income derived from business activities. To estimate the share of income taxes immigrants pay, the shares of business income paid by foreign- and native-born individuals according to the survey are used. To estimate the share of import taxes immigrants pay, the share of immigrants that receive any business income is used.

In some countries, the estimates of social security expenditures are based on reported pension and other social security transfer income. These countries are Argentina, Costa Rica, Côte d'Ivoire and Kyrgyzstan. For Nepal, the reported social security benefits at the household level are distributed among the adult household members. For other countries, such information is not available. However, for the Dominican Republic and Rwanda, information is available on whether a household member benefited from such transfer payments. The share attributed to immigrants is equal to the share of immigrant heads of households receiving the benefits.

Expenditure-based estimates

Whenever possible, the estimation of indirect taxes such as value added and excise taxes are based on reported expenditures. In some cases (Côte d'Ivoire, Ghana, Kyrgyzstan, Nepal and Rwanda), it is simply based on the overall share of expenditures of foreign- and native-born individuals or households. When expenditures are reported at the household level, they are simply divided among all adult household members.

In other cases (Costa Rica and the Dominican Republic), the structuring of different indirect tax rates across categories or goods and services is taken into account. Where this is the case, the expenditure on each category is multiplied by the relevant tax rate and added up to obtain the total estimated indirect tax payments. The shares of these payments are then taken to estimate the amounts paid by foreign- and native-born individuals.

Finally, for Argentina and South Africa, two surveys are used to estimate the indirect tax payments of foreign- and native-born individuals. The survey that contains information on expenditures contains no information on the country of birth. Therefore, the estimated indirect tax payments for households with a given set of characteristics are estimated based on the second survey and then applied to the first in order to estimate the indirect tax payments of foreign- and native-born individuals.

In the Dominican Republic and Nepal, some direct taxes are equally estimated based on reported values in the household survey. For the Dominican Republic, the income tax payment share is estimated based on reported income tax payments in the income and expenditure household survey. For Nepal, the survey reports the household tax expenditure on income, land, housing and property taxes. It is therefore used as the estimation basis for all direct tax payments.

Usage-based estimates

Education expenditure estimates were typically based on inferred or actual usage. Information on whether someone attended school was taken from the relevant household survey. In some cases, the precise level of schooling was available, while in other cases it was inferred from the age of the person. In the majority of countries (Argentina, Costa Rica, Ghana, Nepal, Rwanda and South Africa) people attending private educational institutions were excluded from the calculation. Minors living in a household where the household head and the spouse were born abroad were counted among immigrants for the purposes of this calculation. If the household head was born abroad but the spouse was not, or vice versa, the number of children was split between the two. The share of immigrants and their children attending a given school level was then multiplied by the total cost of that level of education. In some cases, the disaggregation across educational levels was directly obtained from national sources, but in most cases the distribution was taken from a UNESCO database (undated).

For health expenditures, in many cases the estimation is based on reported usage of medical services in the previous month(s). The period differs from country to country depending on the household surveys. In many countries (Costa Rica, Côte d'Ivoire, the Dominican Republic and Nepal), care was taken to exclude medical visits to non-public medical practitioners. For Ghana, the immigrant share is equal to the share of immigrants among the beneficiaries of health care payments through the National Health Insurance Scheme. In Nepal, the usage share for health expenditures was also used to estimate the benefit share for other social security expenditures.

In Argentina, household surveys that contain information about the country of birth do not contain information about health care utilisation. Therefore, age-dependent public health utilisation rates were multiplied by the age structure of the foreign- and native-born populations in order to estimate their average health care expenditures.

The exception to the usage-based approach is South Africa. There the same expenditure amount for all individuals was assumed.

For Ghana, a functional split-up in public expenditures is not available. The distribution of expenditures on public employees is based on the shares that are native- and foreign-born.

Characteristics-based estimates

In some cases, taxes or other expenditures are based on personal or household characteristics. For example, in Costa Rica, property tax payment shares are estimated on the relative value of rent perceived by the household or the imputed rent their property would be worth if they did not live there.

Population share-based estimates

Finally, some revenues and a relatively large share of expenditures are based simply on the population share.

The revenue components that are most frequently estimated based on population shares are “other taxes” (in Argentina, Costa Rica, Côte d'Ivoire, Kyrgyzstan, Nepal and Rwanda), corporate income taxes (in Argentina, Costa Rica and Côte d'Ivoire) and property taxes (in Kyrgyzstan). The “other taxes” were often composed of a multitude of different taxes that made up a small share of the total tax revenue; and the estimation basis would frequently have been complex. In addition, in some countries (for example Rwanda) it also includes

non-tax revenues. For South Africa, social security benefits and health expenditures were also equally distributed among foreign- and native-born individuals.

For corporate income taxes, the justification for basing the estimation on the adult population share differed. The reason is that it is difficult to know what share of corporate income tax is “paid” by owners, shareholders or workers (Auerbach, 2006; Arulampalam, Devereux and Maffini, 2012). Given this uncertainty, it is more prudent to allocate it to all members of the society. Exceptions to this allocation are made in Kyrgyzstan, where general corporate income taxes are distributed to shareholders (estimated by the share of dividends received) and the tax on the profits of the Kumtor Gold Company are allocated based on the shares of foreign and Kyrgyz workers.

Expenditures on public goods, both pure and congestible, and expenditures of the legal system are in all cases allocated based on the population share. Pure public goods are goods to which additional users can be added and whose usage is non-rival, meaning that one person’s usage does not diminish its availability to another person. There is no rational basis to allocate their costs more to one individual than another. All inhabitants for example benefit from the national defence in an equal manner. The distribution of the costs of these goods to immigrants is subjective. Some people might argue that the expenditures on these goods would be as high even if there were no immigrants in the country. Under this scenario – the so-called marginal-cost scenario – the expenditures are divided among native-born individuals only. However, other people may point out that the immigrants also benefit from these goods so they should also be responsible for the expenditures. Under this scenario – the average-cost scenario – the costs are split among foreign- and native-born individuals according to the relative size of their populations.

Congestible public goods are goods for which the usage by one person can, above a certain threshold, affect the quality of that good for another user. Some may argue that certain population groups benefit from them more than others and should thus be attributed a higher share of the costs. For example, a car owner generally creates more wear and tear on roads than someone who does not own a car. The practical argument against this is that there is usually insufficient information to know an individual’s actual degree of usage of a congestible public good. In addition, it could be argued that if individuals could theoretically access congestible public goods, they should contribute to the costs, even if they do not actually make use of the goods. Therefore, this study splits the costs of congestible public goods among foreign- and native-born individuals according to the population share.

Notes

1. For South Africa, the census only indicates an individual’s income range. For the calculation, the mid-point of each income category and the lower bound for the upper-income category were assigned.
2. For Rwanda, for social security contributions only the income of workers that reported a monthly income were taken into account as these are assumed to be formal sector workers.

How Immigrants Contribute to Developing Countries' Economies

How Immigrants Contribute to Developing Countries' Economies 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 report covers the ten partner countries: Argentina, Costa Rica, Côte d'Ivoire, the Dominican Republic, Ghana, Kyrgyzstan, Nepal, Rwanda, South Africa and Thailand. The project, *Assessing the Economic Contribution of Labour Migration in Developing Countries as Countries of Destination*, aimed to provide empirical evidence – both quantitative and qualitative – on the multiple ways immigrants affect their host countries.

The report shows that labour migration has a relatively limited impact in terms of native-born workers' labour market outcomes, economic growth and public finance in the ten partner countries. This implies that perceptions of possible negative effects of immigrants are often unjustified. But it also means that most countries of destination do not sufficiently leverage the human capital and expertise that immigrants bring. Public policies can play a key role in enhancing immigrants' contribution to their host countries' development.

Consult this publication on line at <http://dx.doi.org/10.1787/9789264288737-en>

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