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**REPORT OF THE TASK FORCE ON SOCIO-ECONOMIC CONDITIONS
OF MIGRANTS
Note by the Secretariat**

This is the final report of the Task Force on the Measurement of the Socio-Economic Conditions of Migrants. The work of this Task Force was initiated in 2010 to undertake methodological work on how to better measure the socio-economic conditions of migrants, including a review and recommendation of possible indicators for the demographic, education, economic, and social and civic participation dimensions. The report presents the work done by this group, with specific focus on longitudinal analysis to measure socioeconomic conditions of migrants and their descendants over time. A set of recommendations are also set forth.

The Bureau is invited to take note of the work done and to approve the proposal for future work.

Final Report of the Task Force on Measurement of the Socio-Economic Conditions of Migrants

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1. Introduction

1. Large scale migration gives rise to the need for a better understanding of migrant groups. More specifically, robust statistical information is needed to understand the migration phenomenon, to study the characteristics of migrants and their impact of international migration on sending and receiving countries.

2. The need for information on migration generally falls under two streams. The first types of studies address questions regarding how many migrants reside in a given country and their migration patterns. The second types of studies usually focus on the socio-economic characteristics of migrants, information which is often used to gain insights into the adjustment and settlement experience of migrants in the receiving country.

3. Migrant integration is an important concern which could lead to policy responses. From the receiving country perspective, migrant integration signifies the country's absorbing capacity of its various societal institutions, such as the labour market and the education system. Positive integration experiences could mean a successful use of migrant human capital. In contrast, a failure to adjust for negative settlement experiences could marginalize the migrant population. From the sending country perspective, the immediate impact could be brain drain when skilled people leave the country, while remittances or return migration could be longer term implications.

4. While there has been work to identify relevant migrant socio-economic characteristics and their statistical indicators, the indicators have generally been cross-sectional in nature. As such, these indicators address the question of how migrants are faring at a given point in time (e.g. at a Census) as described by their socio-economic characteristics. However, they do not address the question of whether migrant socio-economic outcomes improve or worsen over time. It was in this context that the current Task Force set out to examine the measurement of conditions that would permit better understanding of how migrants' conditions change over time, i.e. a longitudinal perspective on migrant groups.

5. More specifically, the Task force aimed to:

- (i) Identify the socio-economic dimensions that are most relevant to better understanding the situation of migrants (e.g. employment, education, residence, participation in civic society, language);
- (ii) Review the definitions and practices adopted by countries for the measurement of relevant migrant groups;
- (iii) Identify and develop indicators for different dimensions and population groups, and discuss measurement issues;
- (iv) Review existing sources (including sources allowing longitudinal analysis of the socio-economic conditions of migrants) and their suitability to provide relevant data;
- (v) Provide guidelines to countries intending to produce statistics on socio-economic conditions of migrants using existing sources or ad hoc surveys.
- (vi) This document reports the work of the Task Force and is organized into three major parts. The first part describes the migrant groups of interest: the foreign-born and their descendants who were born in the host country. This discussion addresses the above objective (ii).

6. The second part outlines the reasons behind the need and demand for a longitudinal perspective in understanding migrant socioeconomic conditions. The limitations of existing data sources to develop longitudinal indicators and possible alternatives are also discussed. This part addresses objectives (iv) and (v).

7. Task force members discussed migrant issues that concerned their respective countries and the type of information that would be required to understand settlement outcomes or conditions of migrants and their descendants. Based on the discussion, key socio-economic indicators were identified and organized under the demographic, education, economic, social and civic dimensions. The third part of the report presents the indicators. Also, key indicators from each dimension were selected to illustrate how they could be analysed with a longitudinal perspective and the type of data which could be used to develop the indicators. The discussion in part three addresses objectives (i) and (iii).

2. Migrant groups of interest

2.1. Relevant initiatives

8. The scope of the migrant population is as complex as their socio-economic characteristics. There are different ways to define migrant groups and persons with a migrant background. For example, migrant groups could be defined on the basis of indicators related to citizenship, origin (country of birth), residence or migration history (e.g. year of residence in the receiving country, year of arrival, etc.), legal status, descent or ethnicity (Kraler and Reichel, 2010). How migrant groups are defined and measured is strongly related to the historical and political context of different countries (e.g. Fassman et al., 2009). Also, migrant groups are not always mutually exclusive: the definition of some migrant groups can overlap with others.

9. The challenge of pinpointing relevant migrant groups is evident from previous international work to measure migrants and those known as hard-to-count migrants groups (e.g. UNECE Task force on the analysis of international migration estimates using different length of stay, UNECE Task force on improving migration and migrant data using household survey and other sources, 2008 UNECE questionnaire on international migration statistics). These international initiatives have worked to evaluate available data sources to produce information on migrants, develop measurements of migrant groups and harmonize definitions to facilitate comparative studies. Other initiatives have compiled additional information about various data sources that are available to better understand the migrant population (e.g. Prominstat, OECD database).

2.2. Choice of migrant groups: foreign born and their descendants

10. The Task Force discussed the migration phenomenon and considered issues for a number of migrant groups, for example, foreigners (people who do not hold citizenship of their country of residence), individuals who move and settle in a country with the intention of permanent migration (generally in countries with immigration programs such as Australia, Canada or the United States), their children who were born in the receiving country, and individuals who move on a temporary basis or those who have multiple moves.

11. Although the variety of ways to define migrant groups is an issue facing all Task Force member countries, the Task Force also recognized that the relevance of socio-economic characteristics was group-specific. For example, some socio-economic characteristics, such as language acquisition or credential recognition, are mainly relevant to people born outside the receiving country, rather than their children who were born in the receiving country. Other characteristics, such as employment, are relevant to all migrant groups.

12. The Task Force focused on two groups: (a) the foreign born and (b) their descendants. Foreign-born individuals are generally known also as the first generation and their descendants are often referred to as the second generation. These two groups were chosen for a number of reasons. First, they are the two most common priority target groups as they represent the largest share of migrant population in member countries. The foreign-born population and the second generation could be defined by country of birth and parents' country of birth. Country of birth was the recommended content in the United Nations *Principles and Recommendations for Population and Housing Censuses*. As such, this information is likely to be included in censuses in many countries and should be widely available. Finally, additional details, such as citizenship, year of migration and reason of migration, could be used to further delineate the groups; for example, the foreign-born population categorized by year of migration or country of origin, or the descendants of the foreign born by citizenship.

2.3. Operational definition

Foreign born or the first generation

13. The Task Force proposed the foreign-born population be defined by the country of birth concept, which is the country in which the person was born. A foreign-born individual is someone whose country of birth is not the country where he/she currently resides and where the data are collected. Persons born in the country of residence (where the data are collected) are defined as the native-born population. A UNECE initiative in 2008 already concluded that most UNECE countries are able to use this definition to identify their foreign-born population by using country of birth questions from surveys or censuses.

14. The Task Force acknowledged that this definition has its own limitations, as it does not take into consideration citizenship of the person. For example, this definition includes persons born abroad with citizenship of the country by birth due to their parents' citizenship (such as children born abroad of expatriates). The socio-economic characteristics of this group of foreign-born individuals could be different from those foreign born without citizenship of the country where they reside.

15. The foreign-born population generally comprises individuals who moved to settle in the receiving country on a long-term or permanent basis, including both those who have naturalized and those who have not. However, some foreign-born individuals could be foreigners who moved on a temporary basis or did not have citizenship of the country where they resided.

16. In addition to citizenship, the Task Force also discussed other migrant characteristics which could be used to further disaggregate the foreign-born population. These characteristics are year of

arrival in the receiving country, age at migration¹, region or specific country of origin, reason for migration (e.g. work, study, family, humanitarian) and migrant's short-term/long-term status in the host country. In particular, information such as year of arrival or age at migration could be used to distinguish recent arrivals, as opposed to migrants who have lived in the receiving country for a longer period of time. These characteristics are crucial to longitudinal analysis of migrant settlement experiences (e.g., it is possible labour migrants adapt much quicker than asylum seekers or family migrants).

17. The terms foreign born, migrants and first generation were used interchangeably in this report.

Descendant of the foreign born or the second generation

18. The second generation refers to those who are local-born descendants of the foreign born. In other words, the person was born in the receiving country, but one or both of his/her parents were born outside the country of residence. The Task Force recommended this migrant group because their experience signifies the longer term impact or outcomes of migration. The second generation also represents a growing share of the total population of many Task Force member countries.

19. Based on this definition, the second generation is measured by combining information on individuals and their father's and/or mother's country of birth. However, few countries can identify the second generation population among their data sources, as concluded by the 2008 UNECE questionnaire on international migration statistics (UNECE, 2008). There have been nonetheless some efforts to add questions on parents' birthplace in data collection, e.g., the European Labour Force Survey.

20. The Task Force discussed further refining the definition of the second generation. For example, one distinction could be between having one parent who is native born and another who is foreign born versus both parents who are foreign born, since mixed migrant-native marriages can blur the distinction between the migrant and native-born family (Rumbaut, 2004).

21. Another refinement is in regards to the so-called *de facto* second generation. This group refers to individuals who are foreign born but migrated at a young age and as such, their experience in the host country is expected to be more similar to native-born children of migrants, i.e. the second generation, than to the foreign born. One example of categorizing the *de facto* second generation is based on developmental stages of life course: the 1.25 generation refers to those who arrive as teenagers (13 to 17 years), 1.5 refers to those who arrive as pre-teen school age children (5 to 12 years), and 1.75 generation refers to those who arrive as preschoolers (0 to 5 years) (Rumbaut, 2004). The rationale for making this distinction comes from research which showed that age at immigration matters for settlement outcomes. The research suggested that migration during the crucial transitional period in the life course, e.g., teenage years of age 15 and 18, could lead to a negative impact on education attainment and economic outcomes (Schaafsma and Sweetman, 2001).

¹ Age at migration could be derived by calculating the difference between year of arrival into the country and the respondent's year of birth.

22. The breakdown of age at migration to define the *de facto* second generation is somewhat arbitrary and could be country-specific, depending on the age associated with the school system. Nevertheless, when age at immigration information is available, it is possible to further delineate foreign-born individuals migrating at different age brackets or to use the information to develop a longitudinal perspective in the analysis.

23. For the purpose of indicators in this report, migrants who arrived at a young age were included in the foreign-born population, and not in the second generation population.

24. The terms **second generation** and **native-born descendants of the foreign born** are used interchangeably in this report.

Who are the reference groups?

25. The discussion of migrant socio-economic conditions is often framed in a comparative way in order to evaluate how migrants' conditions fare. Possible comparisons could be made between the foreign and native-born population, across generations, countries of origin, arrival cohorts (i.e. year of migration) or duration of stay in the destination country.

26. The decision on the reference group becomes relevant in two ways. First, comparisons could be made against the reference group when analysing migrant indicators, such as proportion of migrants in literacy level 1 vs. the proportion of reference group in literacy level 1. Second, comparisons could be built within an indicator that takes into account the migrant and reference group, e.g., ratio of migrant median earnings to reference group median earnings.

27. Since the need for information on migrant socio-economic conditions is driven mostly by the question of whether migrants settle successfully in the receiving country, the Task Force agreed that the native-born population would be a reasonable and logical choice as the reference group with which to compare migrant conditions. When the research question is about longer term settlement experiences, the second generation could be compared with foreign-born or native-born individuals whose parents were also native born (a group generally referred to as the third generation or higher). As well, year of arrival or duration of stay could be used to distinguish recent migrants from migrants who had a longer stay in the receiving country.

Data limitations on measuring migrant groups

28. Most Task Force member countries derive their information on migrants and the second generation from censuses and surveys, while some also have administrative data sources. The Task Force noted some limitations when collecting data on migrant groups through censuses and household surveys. These limitations, which impact data quality, need to be taken into consideration when developing indicators.

29. For example, migrants are considered to be a mobile group that tends to change residence relatively frequently, especially during the initial settlement period. Therefore, in data collection, especially through longitudinal household surveys, there is a higher tendency of non-response and sample attrition from this population. Language barriers and irregular legal status in the country, such as undocumented migrants, can also increase the risk of missing some migrant groups.

30. Electronic data collection (e.g. via the internet) provides another source of non-response because not everyone has the capacity to respond via electronic means. Some Task Force members noted that limited internet access is an issue for their migrant population. Hence, if data are collected electronically, it could create systematic bias against the migrant population.

31. In addition to non-response, household surveys also have sampling challenges. It is difficult to conduct surveys on migrants in countries where migrants make up a small share of the population (e.g. Turkey, Estonia). Special sampling strategies are needed to survey small population subgroups. The small size of the migrant population may also limit analysis at a very detailed level. As such, different approaches to data collection should be considered.

32. While the challenges in capturing migrant populations are real, the Task Force acknowledged that international collaboration in sharing best practices would mitigate some difficulties. For example, collecting data in the migrant's mother tongue or through their community outreach have been used to improve migrant response to censuses and surveys.

3. Longitudinal perspective on migrant socio-economic characteristics

33. The longitudinal perspective is one way to examine the socio-economic characteristics of migrants. The Task Force discussed the relevance of the longitudinal perspective to analyse migrants' settlement experiences and identified how this perspective could be employed with various types of data.

3.1. Longitudinal perspective and its relevance to study migrant characteristics

34. The longitudinal perspective used in this report is a general approach towards analyzing the socio-economic conditions of migrants that takes into account and highlights the time dimension. A longitudinal perspective in data analysis essentially examines how data changes over time.

35. This approach is well-suited to the analysis of the migrant population because settlement into a new country is a long-term process. In many cases, the key questions when analysing migrant settlement are whether and how the socio-economic outcomes of migrants change or improve with increased length of stay or whether native-born off-springs fare better than their parents.

36. More specifically, a longitudinal perspective on migrants could include examining the pattern and trajectories of their socio-economic characteristics and identifying the factors influencing these trajectories. For example, the analysis could address whether the provision of language training or credential recognition would improve labour market outcomes of the migrants, or the impact of citizenship acquisition on civic participation. Longitudinal analysis could also take into account the effect of cohort composition on outcomes.

3.2. Types of data for longitudinal analysis

37. The most appropriate type of data for longitudinal analysis would be repeated data collection, i.e., data for more than one point in time, of the same respondents. In reviewing the

availability of longitudinal data that focused on migrants, the Task Force concluded that such data, especially those collected through surveys, were not available on a regular basis. There have been some migrant longitudinal studies, for example, the Longitudinal Survey of Immigrants to Australia and the Longitudinal Survey of Immigrants to Canada, but these surveys were conducted on an ad hoc basis.

38. There are also other longitudinal surveys, such as the Survey of Income Program Participation in the United States of America, which are not migrant-specific but include information to identify migrants. While this type of longitudinal data would provide information on non-migrants who would be the comparison group, the sample size of migrants would need to be sufficiently large in order to provide meaningful estimates on migrant socio-economic characteristics.

39. To achieve the Task Force objective of establishing socio-economic characteristics and indicators of migrants for longitudinal analysis, both longitudinal and cross-sectional data were reviewed to identify data requirements and to explore how longitudinal analysis could be achieved using each type of data.

Longitudinal perspective using longitudinal data

40. Longitudinal data with repeated measures of the same subjects, from survey or administrative sources, would be a logical choice of data for longitudinal analysis. Analysis using this type of data could provide an accurate picture of changes or reasons for changes over time. Using the example of evaluating the impact of language training on labour market outcomes, impact could be assessed before and after training while simultaneously controlling for cross-sectional characteristics, such as the composition of migrants by education level at arrival, and country of origin.

41. Furthermore, there are other analytical benefits of using longitudinal data. For example, it is possible to study transition between states or circumstances, such as unemployment to employment, as well as duration of event (e.g., time to acquire citizenship). Longitudinal data also afford the evaluation of causality by taking into account unobserved differences between people and temporal ordering of events, as well as reducing recall bias of change because information on the timing of the event is known, e.g., time to obtain first job after migration.

42. There are, however, some limitations to longitudinal data, particularly longitudinal survey data. Longitudinal survey data are generally more costly to collect when compared with cross-sectional sample surveys. There is also the challenge of sample attrition when respondents from the original sample do not respond to subsequent surveys. Sample attrition is expected to be more acute in the migrant population, who tend to be more mobile and harder to contact in subsequent data collection. Furthermore, attrition could create bias in the estimates, when there are systematic differences between respondents who 'stayed' in the survey and those who 'left'.

43. Most of the longitudinal data on migrants are collected with panel surveys or from administrative sources. Some countries have explored creating longitudinal data through data linkage. For example, countries which have a long history of using administrative data or population registries for statistical use (such as Norway, Denmark, etc.) are able to derive socio-

economic indicators for migrants over time. Most of the data from these countries are compiled via record linkage, e.g. linking different administrative data to population registers. Other countries (such as Canada and Australia) have been exploring linkage between censuses and administrative data sources.

Longitudinal perspective using cross-sectional data

44. Cross-sectional data sources that contain immigration and socioeconomic information are generally more available than longitudinal data sources. In the absence of longitudinal data, the longitudinal perspective can be achieved by using cross-sectional data, from census or surveys which ask the same question in different cycles or include retrospective questions in a single cycle.

45. When the same socio-economic concepts are repeatedly measured in cross-sectional data, indicators can be presented to illustrate trends and patterns or change between time-periods. Information such as year of migration, age at migration, or place of birth of parents can be used to derive indicators that imply a time dimension. Some cross-sectional surveys ask respondents retrospective questions about how and when a characteristic changed through time. For example, data on the job migrant had before the migration, the first job after migration, and the time when migrants first obtain a job after migration could be used to derive information on the dynamic nature of migrants' adaptation processes.

46. Table 3.3.1 illustrates the requirements for cross-sectional data to produce indicators from a longitudinal perspective.

Table 3.3.1

Types of indicators that can be produced from available cross-sectional data

Type of indicator	Number of cross-sectional cycles	Minimum migrant variables needed
(a) socioeconomic condition <i>across various cross-sectional sources</i>	2+	foreign-born status (country of birth)
(b) socioeconomic condition by <i>period of arrival</i>	1+	year of arrival
(c) socioeconomic condition by <i>duration of stay in country</i>	1+	year of arrival
(d) socioeconomic condition by <i>age at time of migration</i>	1+	age at migration
(e) socioeconomic condition by <i>generation status</i>	1+	generation status
(f) <i>longitudinal change</i> in socioeconomic condition at <i>person level (e.g. history of all jobs a person had and the time of each job)</i>	1+	foreign-born status
(g) change in socioeconomic condition <i>across cross-sectional sources at cohort level</i>	2+	period of arrival

47. Each type of indicators in Table 3.3.1 has its own limitations when they are used to examine migrant conditions over time.

48. **Trend analysis with multiple cross-sectional cycles:** This type of analysis would be using indicators of type (a) of Table 3.3.1. An example of this type of data includes censuses or

any regular on-going national survey which produce estimates using similar methodology, with the same measurement and population universe at each separate collection. This type of indicator can produce parameter estimates that show general changes in the migrant population over time. However, even when the survey design is the same in each cycle, observed changes from one cycle to another could be due to the changes in the composition of the migrant population (e.g., changes in source country across different cohorts of migrants) as the population covered in different cross-sectional cycles are different.

49. **Analysis of indicators derived from a cross-sectional data source with time-related information:** Examples of this analysis would be using indicators of type (b), (c), (d) and (e) of Table 3.3.1. Additional time-related information could be a concept such as year of arrival, which could be used to derive information such as duration of stay in the receiving country, or whether the migrants are recent arrivals versus more settled migrants. When the age of migrant is known, information on year of arrival could also be used to derive age at migration to further analyse the socioeconomic conditions of migrants who arrived at a young age or those who migrated later in life.

50. With the increasing mobility of the population, it is possible that migrants arrived in a given country, and then left the country, then moved back to the country again. For example, in Canada people could initially live in the country on a temporary basis (e.g., as international students on student visas, or as temporary workers on limited work permits) before becoming permanent residents. The concepts of year of arrival (or year first moved to the country) and year of landing, when migrants become permanent residents, are different. Both concepts could be used as time-related information when conducting longitudinal analysis.

51. Another key concept or question to afford analysis of longitudinal perspective is country of birth of parents. Using parents' birthplace and respondent's birthplace, the generational status of the population can be derived into first, second and third or higher generation. The research question from these types of indicators is whether socioeconomic conditions improve with duration of stay or with subsequent generations among native-born off-springs of migrants in the receiving country. One consideration of collecting country of birth, either for respondents or their parents, is changing international borders over time. According to the United Nations recommendations on population censuses, current country borders should be used to collect country of birth information.

52. Similar to trend analysis with multiple cross-sectional data, the analysis would need to take into consideration the composition of foreign-born cohorts (in terms of source countries, educational attainment, etc.). Furthermore, foreign born who have been in the country longer are more likely to be older and the age of migrants would also affect the socioeconomic conditions of interest. Put another way, this type of indicator will confound effects of cohort characteristics and post-migration experiences on outcomes.

53. **Retrospective analysis with one cross-sectional data source:** This type of analysis uses indicators of type (f) in Table 3.3.1. Detailed questions about how a particular characteristic changed over time would be included in a cross-sectional data source. For example, a survey might ask about a foreign-born respondent's employment situation at different times before and after arriving in the host country. This type of cross-sectional data might allow for the same types

of analysis that are possible with panel (longitudinal) data, such as survival models and panel regression, because characteristics at different points in time are available. However, this type of data is subject to unknown selection bias because not all foreign born will be living in the host country at the time of the cross-sectional survey collection. Furthermore, this type of data is subject to recall bias, which may increase with length of time respondents are expected to report about.

54. **Pseudo cohort analysis with multiple cross-sectional cycles:** This type of analysis uses indicators of type (g) in Table 3.3.1. The analysis focuses on a given cohort in the various cross-sectional data sources and examines the socioeconomic conditions of that cohort across subsequent data collections. This approach is a way to address some of the limitations of the previous types of indicators. Given a cross-sectional survey or census that collects similar information over time, a cohort can be defined by a period of migration (e.g. those who migrated between 1991-1996) and then compare a socioeconomic concept (e.g. employment rate) for this cohort across multiple points in time. This approach is simulating panel data, which follows individuals over time. The approach is also known as a pseudo-cohort approach.

55. However, there are important limitations associated with this type of analysis of change. This type of indicator examines cohort-level changes in outcomes rather than person-level change. Furthermore, observed changes in cohorts through time are subject to biases as a result of unknown composition change of the cohort, due to factors such as emigration, return migration, death, and sample coverage changes. One example of sample coverage change would be when migrants of specific characteristics leave the country.

Longitudinal perspective using record linkage approach

56. Record linkage can be a useful tool to create longitudinal data sets from cross-sectional data sources. Essentially, if different files from different times (or waves) can be linked, then it is possible to establish observations of the same individual or unit of analysis over time. The challenge of this approach hinges on the availability and quality of the linkage keys in the different data files (census, survey or administrative data). If a unique identifier is not available in the files, other linkage methods, such as deterministic or probabilistic methods, would need to be considered.

57. Theoretically, linkage would be more successful when linking files to census data, which are generally more complete and have better coverage than survey data. For this reason, linkage among surveys, which they themselves are based on sampling, may not yield desirable outcomes. Similarly, if linkage is performed over administrative files, the success of the linkage depends on the quality of the linkage keys and the coverage of the files. For example, if the administrative file is driver licence records, then coverage would be limited to individuals who have ever received driver licenses.

58. For additional information, with examples of lessons learned from the data linkage approach, and a list of Task Force member countries which use a record linkage approach to study changes of migrant socio-economic characteristics over time, refer to Appendix C and Appendix D.

4. Key dimensions and indicators

59. The Task Force recognized the multi-dimensional nature of the migrant settlement experience. In order to identify indicators that were relevant to understanding the migrant population, the Task Force reviewed literature from a variety of academic, government and non-government sources, to evaluate if the indicators would be useful for policy discussion and to provide a general understanding of migrant settlement experiences and outcomes. Through the review process, the Task Force agreed to organize the socioeconomic indicators into several dimensions: demographic, education, economic (which include labour market experience) and social and civic. These dimensions were chosen based on pragmatic reasons: they provided a relatively coherent framework that most countries could agree upon and it was a way to organize work among members.

60. It is obvious that the dimensions adopted by the Task Force were not the only relevant dimensions for which indicators could be developed. For example, the European Union Agency for Fundamental Rights (FRA) planned to use a rights-based framework to develop indicators to assess the progressive implementation of fundamental rights linked to migrant integration. This framework is composed of three categories of indicators: structural (legal and policy framework), process (measures and action taken to implement law and policy) and outcome (reflecting people's actual experience of the realization of their rights in practice). This framework and its indicators were developed with the purpose of evaluating the European Union Member States' commitment and efforts to fulfil specific fundamental rights towards migrants, as well as the actual impact of the efforts.

61. The Task Force also built on existing work on migrant statistics, especially two recent initiatives: a pilot study by Eurostat based on the 2010 Zaragoza declaration and the work of OECD. These studies were chosen for a number of reasons. First, these works focused on comparative analysis; thus there has already been effort to harmonize concepts and definitions under which their indicators were developed, and the availability of data to measure indicators had been reviewed. Second, the indicators proposed in these studies were deemed to be most relevant to the goals of the Task Force; the indicators were the most basic and fundamental to the dimensions and would be useful for policy discussion and general understanding of migrant socio-economic characteristics. Third, these studies attempted to look at migrant characteristics from a longitudinal perspective; these ideas would be adopted for the Task Force.

62. At the European Ministerial Conference on Integration in Zaragoza in 2010, it was agreed that integration was a driver for development and social cohesion and therefore integration issues should be incorporated in all relevant policy fields. The declaration identified three migrant groups (foreigner, foreign born and second generation) and four policy areas (employment, education, social inclusion, and active citizenship) as relevant to integration.

63. Based on this declaration, Eurostat prepared a pilot study in 2011 to verify the data availability and data quality for the Zaragoza indicators across European countries. A statistical portrait of the foreigner², the foreign born and the second generation was produced in 2011.

² Although foreigner was not a migrant group that the Task Force decided to focus on, all members agreed that this was an important or emerging segment of the migrant population.

Aligning with the Zaragoza indicators, some countries (e.g., the United Kingdom, Ireland, Italy, and Norway) also produced country-specific reports to monitor the integration of the migrant population.

64. The OECD report, titled “Settling In,” presented various aspects of socio-economic characteristics of the migrant population across member countries. These indicators included household income, housing characteristics, health status and access to health care, education characteristics, labour market outcomes, job characteristics, civic engagement, such as citizenship acquisition, and discrimination. Indicators were derived using cross-sectional data. In an attempt to examine the extent of settling in, the report compared the characteristics of recent arrivals with that of migrants who moved a decade or so earlier, individuals who were second generation and native-born individuals with native-born parents. As well, migrant’s year of arrival and length of stay were taken into account to create pseudo-cohorts to examine employment rates. By using year of arrival, duration of stay and birthplace of individuals and birthplace of parents, the OECD report demonstrated various ways to analyse cross-sectional data with a longitudinal perspective.

65. The Task Force reviewed the relevance of the indicators and adopted some of the approaches included in the Eurostat and OECD studies and also discussed the need for a framework to guide the identification of indicators. In general, for each dimension, there should be basic information on what the characteristics are. Once this step is achieved, further data to inform the detail and nature of the characteristics and outcomes from the characteristics should be considered.

66. For example, under the economic dimension, the basic indicator would be employment or labour market participation for migrants. To understand better the issues of labour market characteristics, more details on the nature of employment, such as whether the employment is full-time or part-time, tenure of the employment, occupation or industry of the employment, would be needed. Furthermore, the impact of employment, such as economic outcomes, participation in society, would be relevant information.

67. While the Task Force acknowledged that using such a framework would provide a comprehensive understanding of migrant characteristics within a given dimension, the Task Force also concluded that if this framework is used, there would be too many potential indicators to review for data availability and to develop for longitudinal analysis. In order to make the work manageable, the Task Force would use the full framework to discuss the research questions. When using data to illustrate longitudinal analysis, the Task Force would focus only on basic information in each dimension and use one indicator to illustrate the type of analysis. A list of potential indicators in each dimension was identified (see Appendix A). Task Force members ranked the importance and data availability of the indicators and selected one indicator from each dimension to illustrate the longitudinal perspective.

4.1. Demographic dimension

Description and relevance of this dimension

68. The Task Force agreed that before any analysis of migrant socio-economic characteristics, the first type of information on the population should be about demographic characteristics. This demographic information could include ascribed characteristics such as the size of the migrant population and the size of each migrant cohort, migrant's source countries, location where the migrant group(s) resided in the host country, as well as the age and sex of the population.

69. Apart from knowing how many migrants are in the country and their share in the total population, demographic characteristics such as age and sex are important determinants of the socioeconomic conditions of migrants. For example, age could be a measure of the life cycle; the experiences and life conditions of men and women, young adults beginning to enter the labour force and baby boomers nearing retirement age, can be quite different. Therefore, in making comparisons between migrant and other populations, it is important to consider the impact of the groups' demographic composition in the observed differences. In the analysis of labour market participation between migrants and the native born, age of the two groups needs to be taken into consideration because difference in participation could be due to settlement barriers faced by migrants or to the different age structure of the two groups.

70. The Task Force also discussed demographic behaviour such as mortality, fertility and concepts related to the area of demo-linguistics. Among the different types of demographic behaviour, the Task Force agreed to focus on knowledge and proficiency in host country language(s). These concepts were deemed important to understand the migrant conditions, because they would be key predictors for other socio-economic characteristics, such as labour market activities, economic well-being and participation in society. For this reason, the Task Force decided to include knowledge of host country language(s) to illustrate the longitudinal perspective, in addition to the concept on migrant group size.

Migrant population: size and backgrounds

71. All Task Force members agreed about the need to have basic demographic estimates of the migrant population. From a longitudinal perspective, interest would be whether the number and share of the migrant population changed over time and whether there was any change in terms of migrant composition (e.g. in terms of source countries). The size of the migrant population would be a basic count of the population. Its share in the total population could be expressed as a percentage.

Illustrations of longitudinal analysis using cross-sectional data – migrant population count, population share and source countries

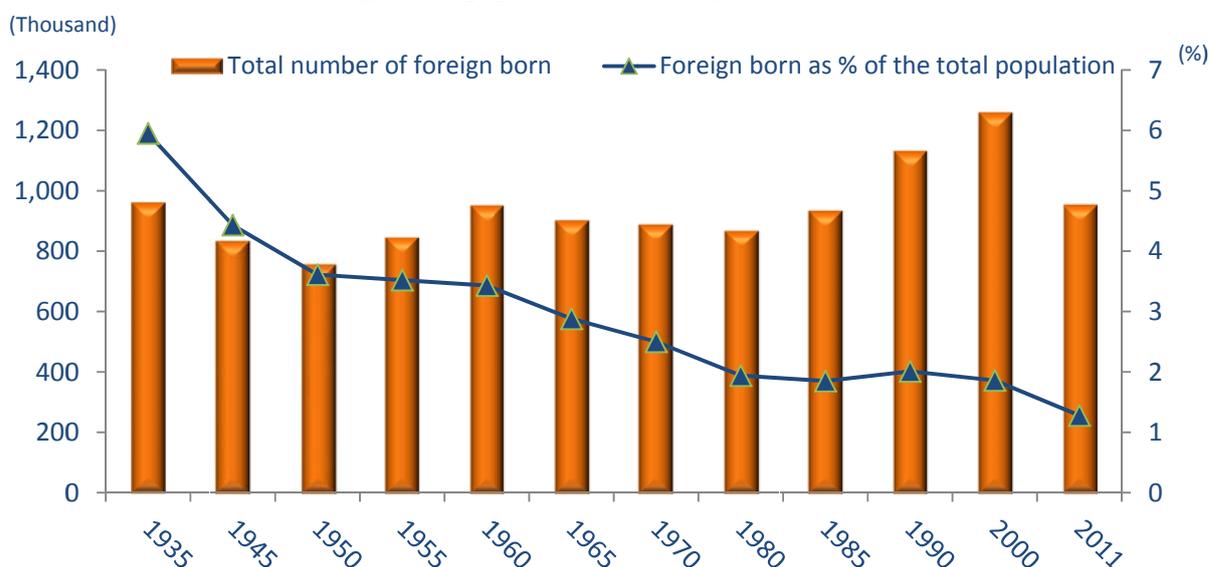
72. Using cross-sectional data, it is possible to provide information on the size of the migrant population or its share in the population at a given point in time. If cross-sectional data are available for multiple points in time, it is possible to address the question of whether the size or share of the migrant population changes over time. Furthermore, if information on year of arrival

of migrants is available, it is possible to use multiple cross-sectional data to examine pseudo-cohorts of migrants and to evaluate cohort size or composition over time.

73. Taking estimates from various censuses, Figure 4.1.1 illustrates the change in the size of the foreign-born population and its share in the total population over time in Turkey. According to the data, the size of foreign born in Turkey has been increasing since 1980, but the share of foreign born in total population has declined over this time period, as Turkey's natural population increase was much higher than that of immigration. Fluctuation in the volume of foreign born can be explained by various factors. These fluctuations and structure of this foreign-born population can only be explained with sufficient data which are not currently available for Turkey. The significant drop in foreign-born population in Turkey's 2011 Population and Housing Census could be explained by changing methodology and due to the switch to a sample-based methodology, where despite the large sample size, rarely occurring cases, like migrants, are possibly underrepresented.

Figure 4.1.1

Number and share of the foreign-born population in Turkey, 1935 to 2011

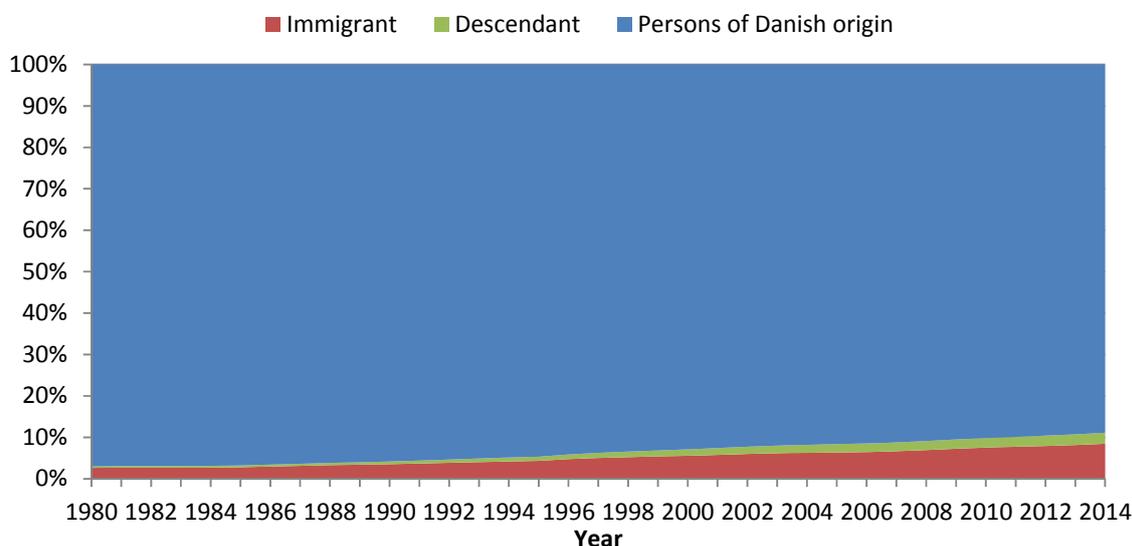


Source: Turkstat, 1935 to 2001 Population censuses; and 2011 Population and Housing Census

74. Figure 4.1.2 shows the Danish population in terms of generational status. In the chart, a distinction is made between immigrants and their Danish-born descendants (second generation). In 2014, 11.1% of Danes were either immigrants or descendants: about 8.5% (476,059) were immigrants and 2.7% (150,011) were their Danish-born descendants.

Figure 4.1.2

Share of persons who are immigrants and descendants of immigrants in Denmark, 1980 to 2014

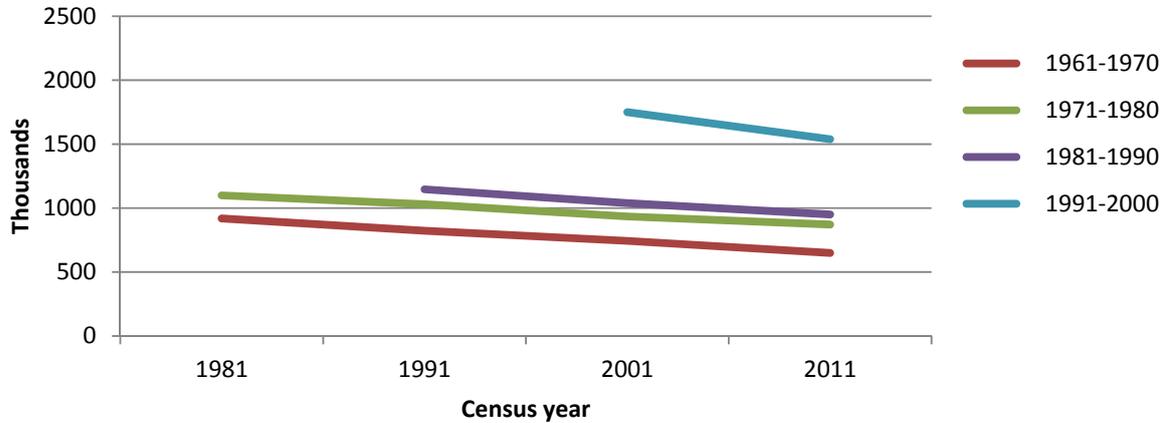


Note: An immigrant is a person born outside Denmark whose parents are both foreign citizens or were both born outside Denmark. If no information is available on either of the parents, and if the person was born abroad, the person is also defined as an immigrant. A descendant is a person born in Denmark of parents, neither of whom is a Danish citizen born in Denmark. If no information is available on either of the parents, and if the person is a foreign citizen, the person is also defined as a descendant.

Source: Statistics Denmark population register.

75. Year or period of immigration data are also available in Canadian censuses. Using information on period of immigration from each census, pseudo-cohorts can be created, as illustrated in Figure 4.1.3. This approach could provide information on the net change in size of a particular immigrant cohort over time. The data indicate a clear pattern of cohort attrition over time. Attrition could be due to different types of migrant flows across border, such as return migration to the home country, emigration to other countries or mortality. However, the net change could also be due to differences in the coverage of various immigrant cohorts across different censuses.

Figure 4.1.3
Size of various cohorts of immigrants in Canada, by census year

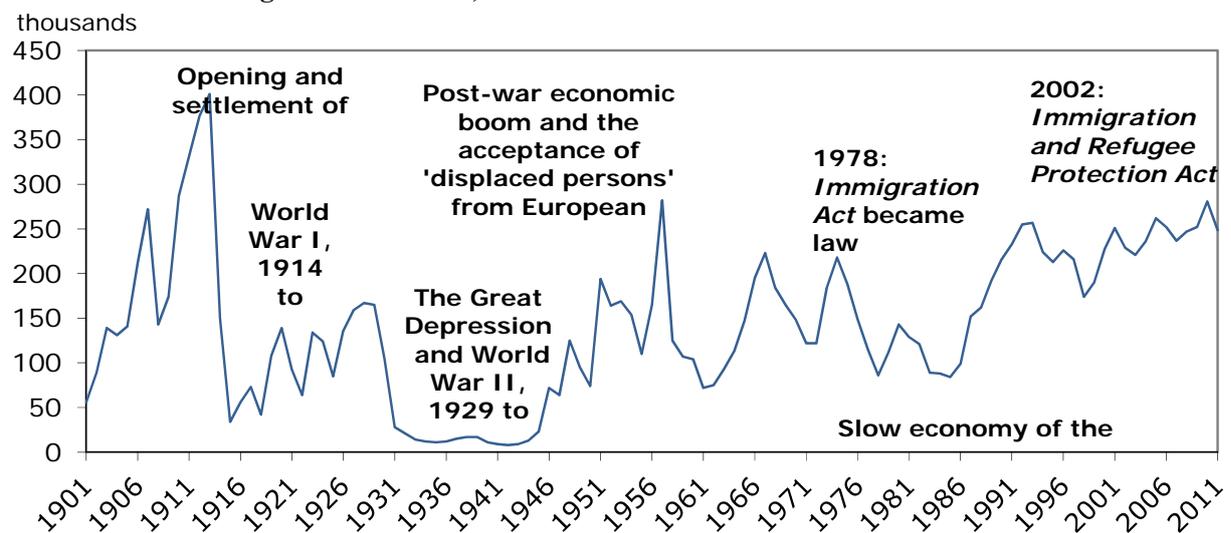


Note: Immigrants refer to persons who have been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not.

Source: Statistics Canada, censuses of population, 1981 to 2001 and National Household Survey, 2011

76. Administrative data provide another source of migrant information that may be useful for analyzing migrant flows. Based on Canadian data, Figure 4.1.4 illustrates the flow of immigrants to Canada over time using data collected when migrants land in the country. The chart shows that annual flows of immigrants into Canada since 1990 have been historically high, not having reached similar levels since the 1950s post-war economic boom.

Figure 4.1.4
Annual flow of immigrants to Canada, 1901 to 2011



Source: Citizenship and Immigration Canada

Knowledge of host country's language(s)

77. The Task Force discussed many language-related concepts that could be relevant for migrants. These concepts were: mother tongue³, knowledge of host country language(s), language(s) spoken at home and/or work, proficiency in host country's language(s), etc. Among these concepts, knowledge of host country's language has been identified as one of the priority indicators for the demographic dimension.

78. This indicator was deemed most important because the ability to communicate in the host country is considered as a key factor for migrant settlement or integration. Lack of language proficiency can be a major barrier to interaction with the other groups (Alba and Nee, 2003), to participation in social and civic activities, to succeed in the labour market (Grondin, 2007), and may also have important impacts on health and access to healthcare (Pottie, Ng, Spitzer et al., 2008; Ng, Pottie and Spitzer, 2013).

79. As migrants' duration of stay in the receiving country increases, it is generally the case that proficiency of the host country language(s) improves. Some research topics on migrants' knowledge of host country languages from a longitudinal perspective include: the extent to which proficiency improves over time, the process of language acquisition, how long it takes to gain knowledge or proficiency, and whether certain characteristics (such as age at migration, education level, similarity or proximity of host and origin country language, etc.) affect the time required to acquire the host country language(s).

80. The issue of knowledge of official languages is more relevant for the foreign born and less for their offspring, as children who grow up in the country and go through its education system will likely be able to speak the country's official language(s).

81. Information on knowledge of receiving country language(s) can be collected by survey instruments with questions on whether the respondent knows the language(s). However, the Task Force acknowledged that the self-reporting collection method has the limitation that there would be a tendency to overstate knowledge of language(s). As well, proficiency or information on whether migrants speak the host country language without an accent may be also relevant to the settlement experience and experiences of discrimination.

Illustration of longitudinal analysis – Knowledge of host country's language(s)

82. Using Canadian data and concepts, Figure 4.1.5 compares the linguistic profile of recent immigrant cohorts at three different census/survey years, based on the mother tongue of recent immigrants (which refers to the first language learned at home in childhood and still understood at the time of the survey) and their knowledge of official languages (which refers to their ability to conduct a conversation in one or both official languages of the host country).

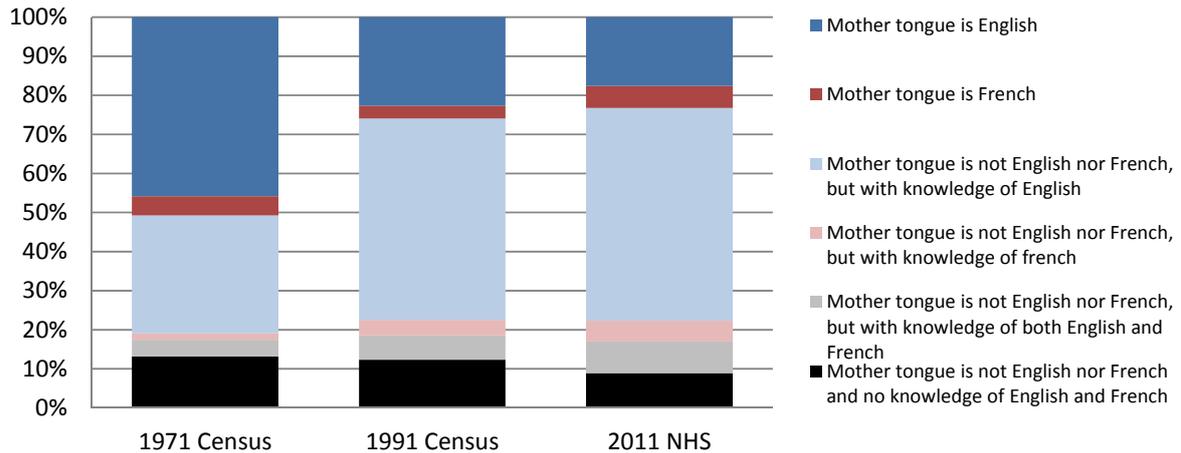
83. The Canadian data show a shift in the linguistic profile of the recent immigrant population over time. In 1971, half of recent immigrants had English or French as a mother tongue, compared to around a quarter of the recent immigrant population in 1991 and in 2011. At the same time, the

³ Mother tongue is defined as the first language spoken in childhood at home.

share of the recent immigrant population who did not know the two host country official languages declined from 13% in 1971 to 9% in 2011, while the share of recent immigrants who know English or French, but not as a mother tongue, had increased from 36% in 1971 to 68% in 2011. This chart reflects the changing linguistic composition of the immigrant population over time.

Figure 4.1.5

Mother tongue and knowledge of official languages of recent immigrants in Canada, by census/survey year



Notes: Recent immigrants refer to immigrants who arrived in Canada within five years prior to a given census/survey. Immigrants refer to persons who have been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not.

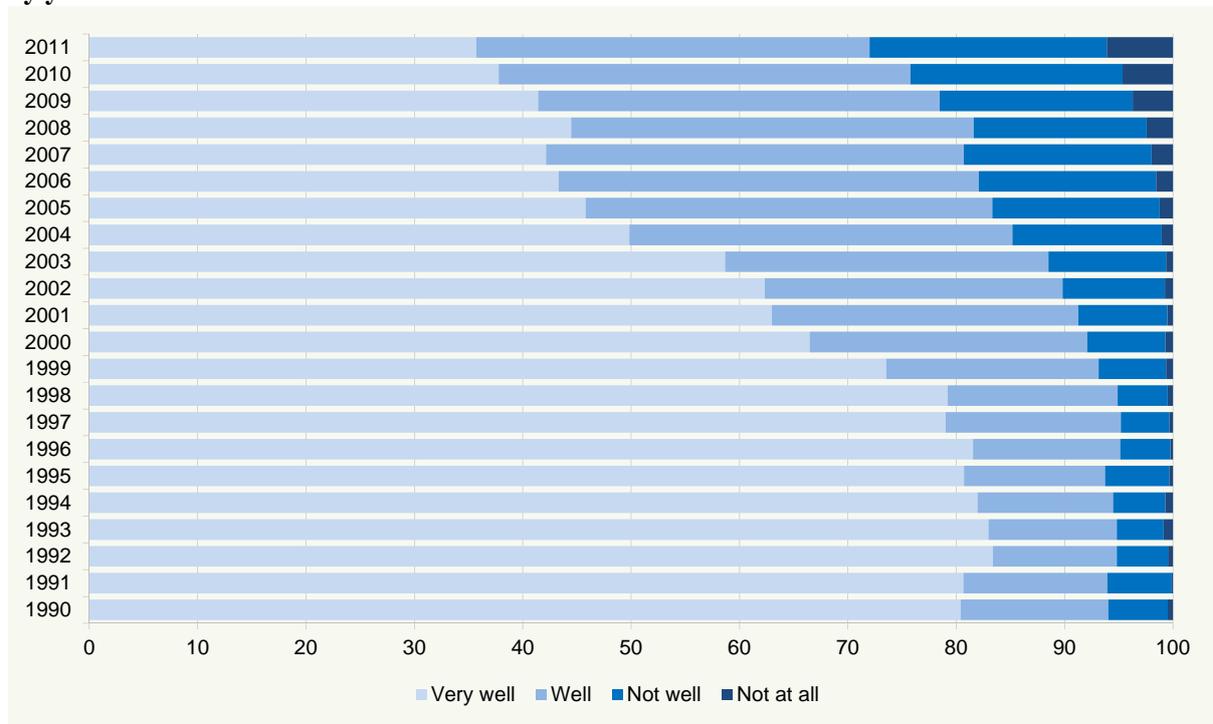
Source: Statistics Canada, censuses of population, 1971 and 1991, National Household Survey, 2011

84. However, Figure 4.1.5 provides no information on to what extent immigrants’ knowledge will improve over time. Also, this chart provides limited information on how well recent immigrants know the host country’s language. Knowledge proficiency and function proficiency are different aspects of language. For example, migrants may consider themselves as knowing the host country’s language, but may not be functionally proficient in the labour market.

85. Figure 4.1.6 provides information about how well the foreign born are able to speak the host country language by different year of arrival (or length of stay) in the country using a single cross-sectional data source. According to 2011 Irish census data, the percent of the migrant population who report speaking English “very well” increases with time in the country. Conversely, the proportion of those who reported speaking English “not well” or “not at all” decreases with time in the country. However, it is difficult to evaluate to what extent this pattern of increase in the knowledge of English with duration of stay in Ireland is due to a shift in foreign-born composition. This would require further deconstruction of the data.

Figure 4.1.6

Ability to speak English for foreign-born who speak a language other than English or Irish at home, by year of arrival in Ireland



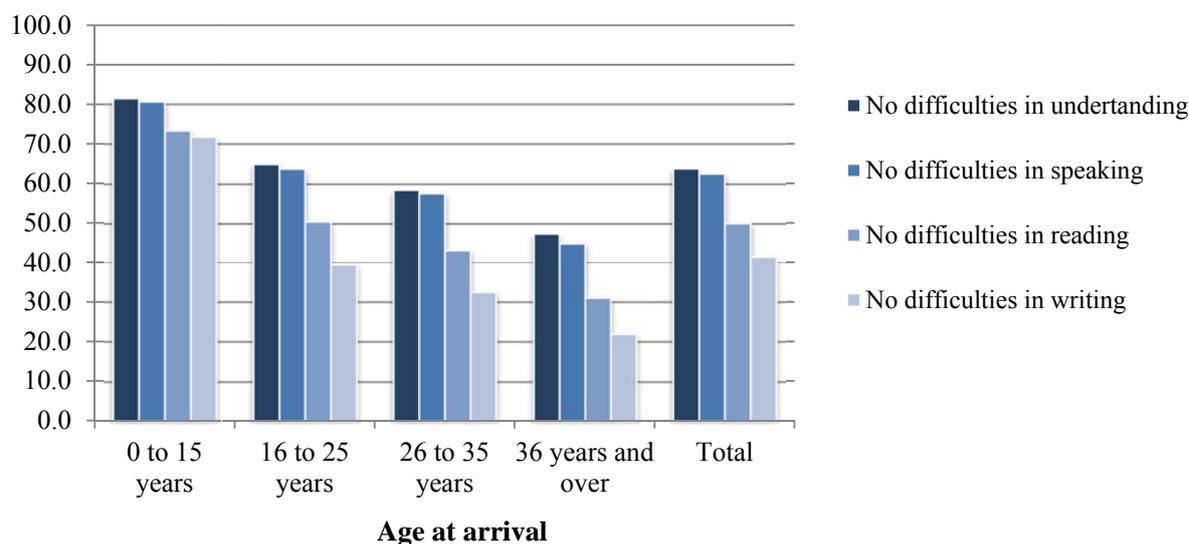
Source: Central Statistics Office, 2011 Census Ireland

86. Figure 4.1.7 presents another example of using single cross-sectional data, such as the 2011-2 Italian survey on “Condition and social integration of foreign citizens,” to evaluate if age at arrival affects proficiency in the host country’s language. The result of this survey shows that age at arrival does appear to make a difference. The majority of migrants who arrive at a young age report no difficulties in understanding, speaking, reading and writing in Italian. This pattern is linear – difficulties in host country language increases with age at arrival.

87. Although the data are cross-sectional, using the age at arrival concept does allow analysis from a longitudinal perspective, with the assumption that those who arrive at a young age would have gone through or at least have some exposure to the education or school system of the receiving country and more time and opportunity to learn the language (and that learning the language in the formative years increases proficiency).

Figure 4.1.7

Foreign citizens in Italy aged 6 years and over, by proficiency in host country's language and age at arrival



Note: Foreign citizens refers to people who are not Italian and resident in Italy in 2011-2012. Irregular immigrants are not included as well as those who are regular but not resident in Italy. People with foreign background who acquired Italian citizenship are also excluded.

Source: Italian National Institute of Statistics, “Condition and social integration of foreign citizens” Survey – Year 2011-2012

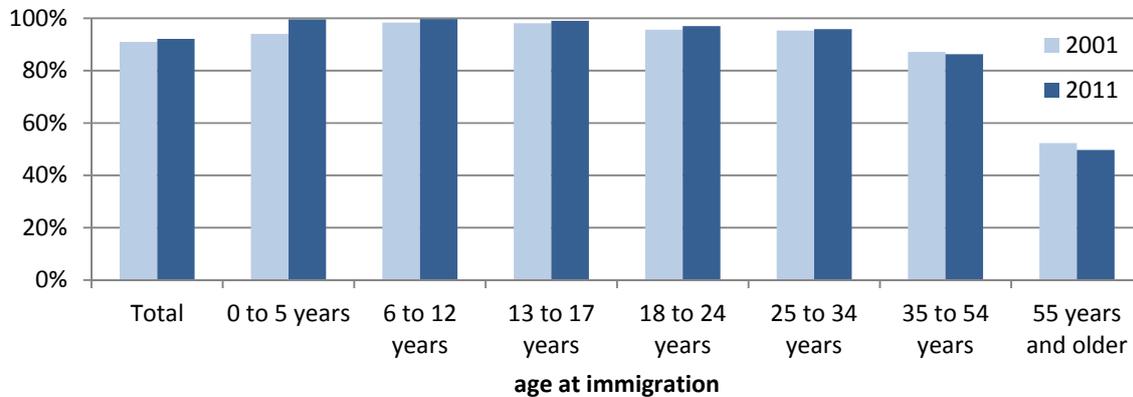
88. Figure 4.1.8 illustrates how to analyse two repeated cross-sectional data sets to examine change in language proficiency of a given pseudo-cohort over time. The cohort in this illustration is immigrants who landed between 1991 and 2000 in Canada. The proportion with knowledge of an official language by age at immigration is shown for 2001 and 2011.

89. According to this figure, most immigrants who landed in the 1990s reported knowledge of (an) official language(s). Furthermore, the proportion of migrants who know the host country language(s) was slightly higher in 2011 than in 2001, but it varies by age at which migrants immigrated. Those who entered at a young age in Canada tend to show the greatest language improvement between 2001 and 2011. In comparison, the change is much slower or even decreases amongst those who immigrated at an older age.

90. The findings for this cohort of migrants who immigrated at an older age point to a possible limitation of this approach. Since the immigrant cohort is constructed as a pseudo-cohort, with data collected from two independent samples, instead of true longitudinal data, change in sample coverage or cohort attrition (through emigration, return migration, or mortality) could impact the cohort composition. That is, there could be difference in knowledge of English and/or French between immigrants who stayed, hence were included in the 2001 and 2011 censuses, and immigrants who left, hence were only captured in the 2001 Census.

Figure 4.1.8

Percentage of immigrants who entered between 1991 and 2000 that know at least one official language in Canada, by age at immigration, 2001 and 2011



Note: Immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not. Age at immigration refers to the age at which they first obtained permanent resident status.

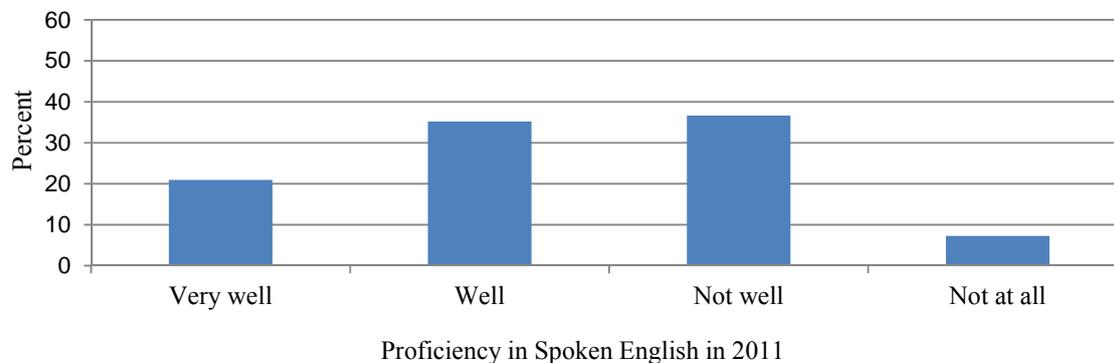
Sources: Statistics Canada, 2001 Census of population and 2011 National Household Survey.

91. Another possibility to measure the knowledge of official languages among the foreign-born population over time is by linking individual records from two censuses. By linking two data sources (i.e. the 2006 and 2011 Censuses) which have the same content (i.e., a question on knowledge of language), Australia was able to create an indicator of change in language proficiency for a specific cohort of foreign born. This approach could also be used in comparison with other cohorts of foreign born.

92. Figure 4.1.9 illustrates the progression of official language ability of recent migrants (those arriving between 2001 and 2006) in Australia over a 5 year period (between 2006 Census and 2011 Census). According to this linked data, over half of recent migrants transition from speaking English “Not well” or “Not at all” to speaking it “Well” or “Very Well” over the 5 year period.

Figure 4.1.9

Overseas migrants who arrived in Australia between 2001 and 2006, Proficiency in spoken English in 2011, as a proportion of all people who spoke English 'Not well' or 'Not at all' in 2006



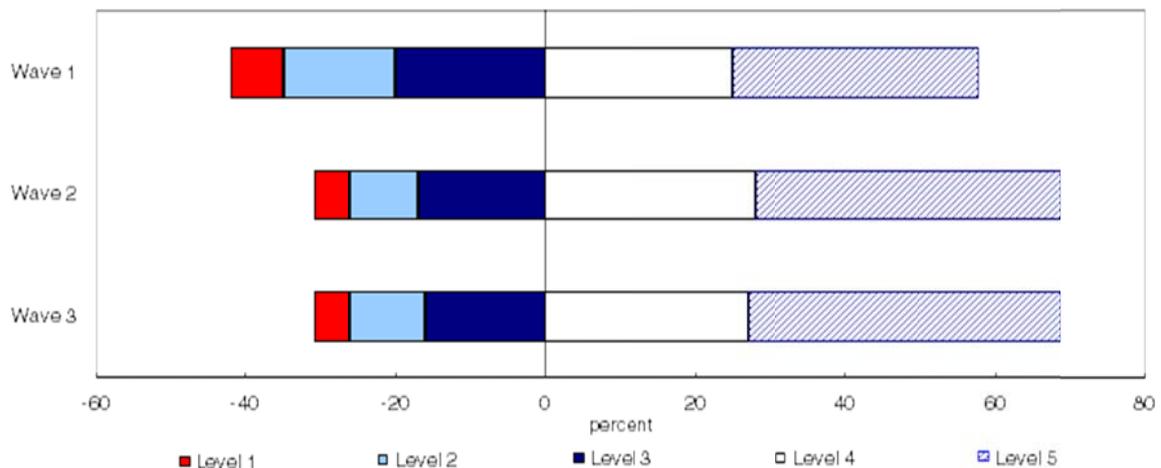
Source: Australian Census Longitudinal Dataset, 2006-2011.

93. With a longitudinal panel survey, it is possible to follow the same individuals over time and ask different language questions to measure immigrants' level of official language(s) knowledge at different points in time.

94. For example, in the Longitudinal Survey of Immigrants in Canada, immigrants were asked to assess their proficiency in official languages six months (wave 1), two years (wave 2) and four years (wave 3) after their arrival. The possible answers were: cannot speak this language (level 1), poorly (level 2), fairly well (level 3), well (level 4) and very well (level 5). Figure 4.1.10 illustrates how self-reported knowledge of host country language(s) changes during the first four years in Canada for one cohort of immigrants who arrived in 2000-2001. Six months after migration, 58% of immigrants reported that they are able to speak English well or very well, while only a small proportion (7%) did not speak it at all. After two years, the proportion of migrants who reported that they were able to speak English well and very well increased to 68% and the proportion remain about the same (69%) after 4 years in the country. The data show that proficiency in host country language improves most during the first two years in the country. Further work could examine the factors that contribute to the improvement of knowledge of official language. As well, as with any longitudinal survey, it is important to evaluate any potential bias from panel attrition, e.g. immigrants who left the survey may exhibit different language proficiency than those who remained or respond to the survey.

Figure 4.1.10

Proportion of immigrants aged 15 years and over in Canada, by level of spoken English at each wave



Note: Immigrants refer to those who obtained permanent resident status from abroad and arrived in Canada between October 2000 and September 2001

Source: Grondin C. *Knowledge of Official Languages among New Immigrants: How Important is it in the Labour Market?* (Statistics Canada, Catalogue 89-624-X1E) Ottawa: Minister of Industry, 2007.

Summary

95. Basic demographic data, such as population size, source country, age and sex were discussed by the Task Force as the type of standard information that would be required to monitor and analyze the condition of migrant populations.

96. From a longitudinal perspective, change in population count, share, and composition (e.g. changes in major source countries), are important basic indicators. With cross-sectional data sources, trend graphs can be produced illustrating change in migrant population counts, their share of the total population, and composition changes over time. When year or period of arrival/immigration data are available, it is possible to examine demographic changes in foreign-born cohorts over time. In addition, some Task Force countries are able to use longitudinal administrative data sources in order to produce annual flow indicators that provide a picture of the movement and socio-economic characteristics of migrants.

97. The Task Force also discussed the relevance of various language-related concepts and the time-varying nature of these concepts. Migrants' language skills develop as they stay in the host country for a longer duration, but their starting point and the rate of change can vary depending on their source country and the age at which they immigrate. A number of indicators of knowledge and proficiency in the host country languages are illustrated to show how these concepts could be measured with a longitudinal perspective.

98. The Task Force acknowledged that demographic information represented a crucial component of migration statistics, not only in its own right, but also as it relates to other socioeconomic dimensions.

4.2. Education dimension

Description and relevance of this dimension

99. Task Force members considered education as a key dimension to understanding improvement in the socioeconomic conditions of migrants and their descendants. Education is an important element of human capital. It equips individuals to participate in social and economic life and it trains individuals with skills essential for the economy.

100. From a settlement perspective, the education level of migrants should facilitate adjustment to the host society. In particular, migrant's labour market experience is expected to be more positive among skilled migrants. Another need for better understanding migrants' educational characteristics is to address the issues of credentials recognition or education and occupation mismatch. A set of literature in North America considers how and where education is obtained may affect one's labour market outcomes (Borjas 1990, Ewoudou 2011, Wanner, 1998, Li 2008, Sweetman 2004). Generally, this literature suggests that labour market outcomes of migrants are affected by the transferability of education across international borders. In other words, some migrants, depending on where they obtained their education, could have problems getting their education credential recognized in the receiving country. From the receiving country perspective, the mismatch or over-qualification of migrants could mean an under-utilization of human capital among the migrant population. When information on mismatch is further disaggregated by fields of study, occupation or industry classification, it could provide information on the effectiveness and responsiveness of whether migration policies have the ability to adjust to skill and qualification demand or gaps within the country's labour market. Apart from whether credentials are recognized or not, it is also relevant to know if credential non-recognition is a temporary phenomenon and what the long-term impacts of non-recognition are.

101. Education indicators for native-born children of migrants would be somewhat different from those for the foreign-born group. For example, credential recognition is not an issue when children of migrants are born and receive their education and training in the adopted country. The need for information on native-born children of migrants is associated with issues of equity in access or participation in education, performance in school and intergenerational education mobility. Do the adjustment problems experienced by foreign-born migrants impede the education attainment of their children? Does having a mother tongue other than the official language of the host country affect learning and education performance?

102. The Task Force discussed the relevance of various aspects of education (including field of study, school attendance, and vocational training), the availability of existing data sources and those under development (e.g. Australia's longitudinal learning database that links data from various educational stages), and challenges and opportunities from a longitudinal perspective. The Task Force acknowledged that the scope of potential relevant indicators was ambitious, and most of which could not be produced due to a scarcity of good longitudinal data sources. In the following section, longitudinal analysis is illustrated using only the indicator of educational attainment. A complete list of education indicators that the Task Force identified can be found in Appendix A.

Educational attainment

103. Educational attainment was the indicator that Task Force members deemed most important to include. It is an indicator that is applicable to both foreign-born migrants and native-born children of migrants. Educational attainment refers to the highest level of education an individual has successfully completed and it provides some information about their skills and knowledge. This type of indicator is useful for policy evaluation, especially in countries such as Canada and Australia where programs are in place to select migrants on the basis of educational qualifications. Educational attainment is also an indicator that is widely measured and available in major data sources and efforts have been made to harmonize it (e.g., Eurostat, OECD).

104. The Task Force also discussed the information gap in existing international work. A cross-sectional data source that only has basic information on educational attainment and the target migrant group (i.e. place of birth) can only provide a snapshot of the educational attainment of migrants at the time of the survey, which could be different from when they first arrived. Moreover, information such as the location where educational attainment was obtained, or post-migration education or training would provide better understanding on credential recognition, transferability of qualifications across national boundary and post-migration settlement strategies adopted by migrants in terms of human capital development. But these types of information are not commonly available.

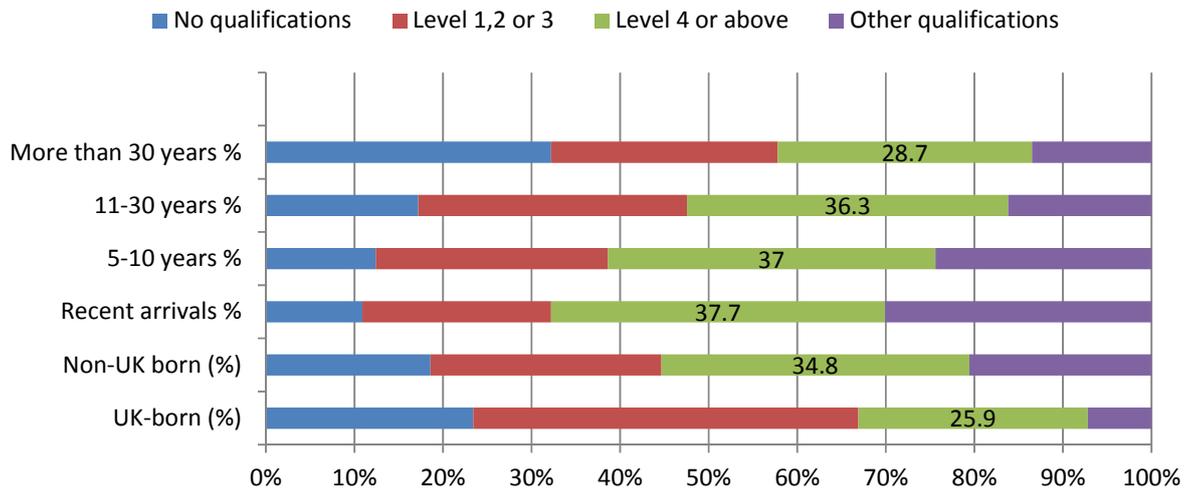
Illustration of longitudinal analysis - Educational attainment

105. When a time-varying variable, such as length of residence, is available in one single cross-sectional survey, it is possible to compare the education attainment of recent immigrant with previous cohorts of immigrants and the native-born population. Figure 4.2.1 illustrates this approach with 2011 census data from England and Wales. It shows that the non-UK born population is more likely to have a university degree (level 4 or above) than the UK-born

population. Moreover, recent arrivals were more likely to have a university degree than those who have been in the UK for more than 30 years.

Figure 4.2.1

Highest qualifications of UK-born population, and non-UK born population by length of residence amongst the population aged 16+, England and Wales, 2011



Note: Level 4 and above includes those who have a university degree (e.g. BA, BSc, MA, PhD)

Source: Office for National Statistics, 2011 Census

106. When the indicator is available in repeated measures, it is possible to demonstrate trends of educational attainment for the target populations over a period of time. Figure 4.2.2 illustrates this approach with statistics from Ireland, using different census year data.

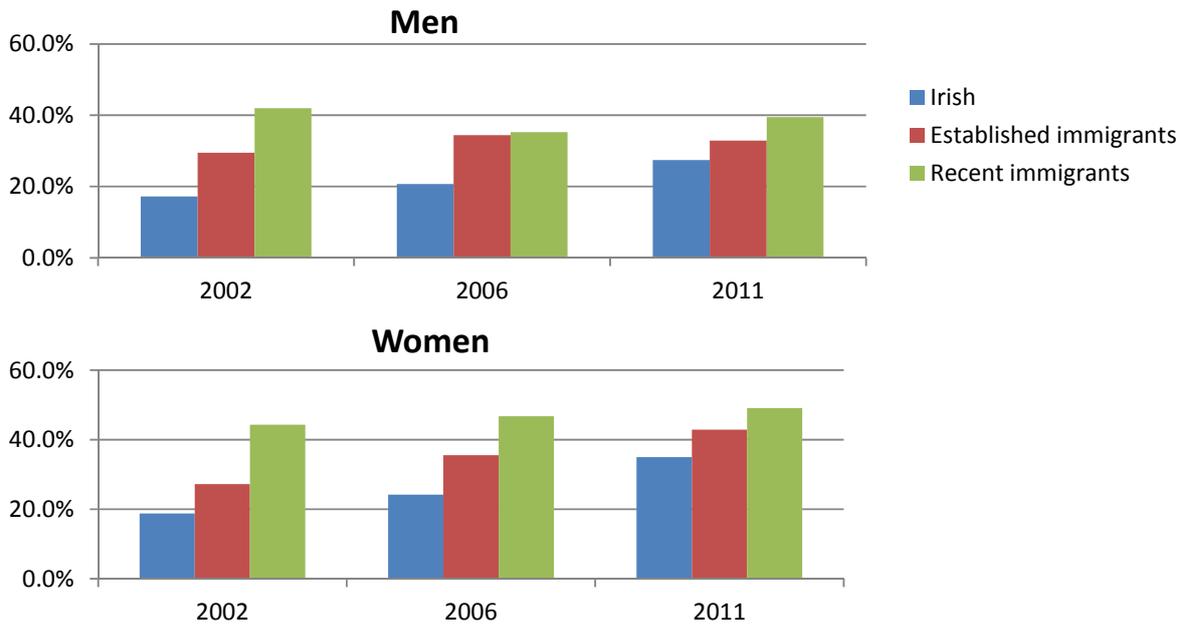
107. This figure could address research questions such as: How do recent immigrants educational attainment compare with previous cohorts and the native-born population? Has the educational profile of recent immigrants/newcomers (i.e. entry conditions) changed over time (i.e. are subsequent newcomers more or less educated)?

108. The figure 4.2.2 shows that the proportion of university educated for those aged 25 to 54 is higher among the recent migrant population than the established migrant or the Irish population. From 2002 to 2011, educational attainment has increased for females in all three groups. For men, Irish males were the only group to show an increase over the same period.

109. Further work could examine the reasons behind changes in the education profiles of the different groups, whether the changes were due to policy targeting more educated migrants, better access to education or design effects of the census.

Figure 4.2.2

Proportion of university degrees among males and females in Ireland aged 25 to 54 years, showing migration status and period of arrival, by census year



Notes:

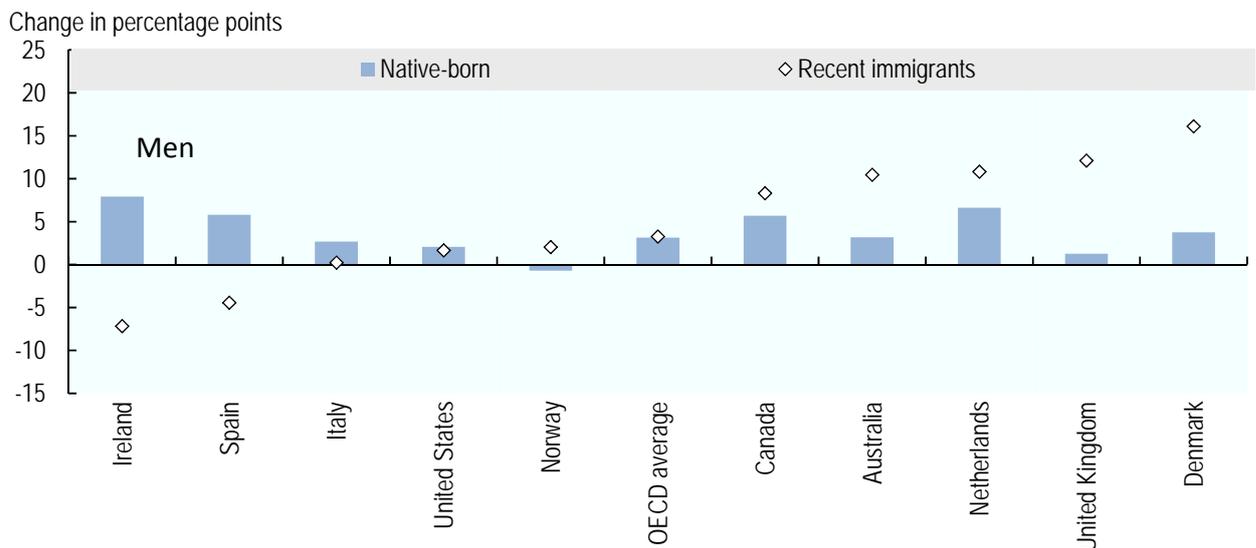
- (1) The data in these charts are based on de facto population.
- (2) The periods used to determine if someone is a recent or established immigrant are from 1st January 5 years previous to the Census up to the date of the Census, i.e. the 2011 Census figures class an immigrant as recent if their date of arrival in Ireland is between 1st January 2006 and the Census date (11th April 2011).
- (3) Established and recent immigrants include non-Irish nationals only.

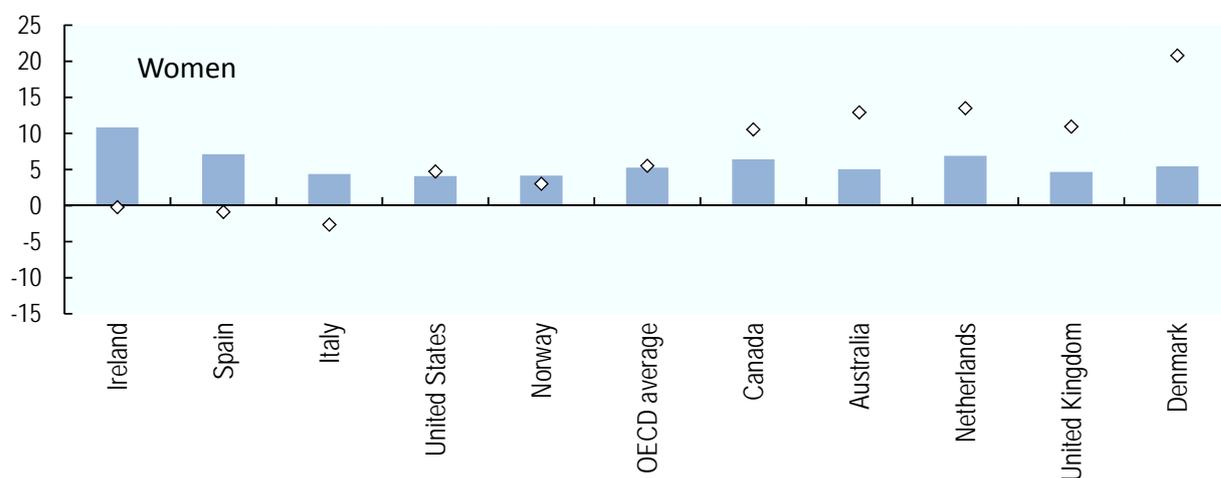
Source: Central Statistics Office, censuses of population in Ireland, 2002, 2006 and 2011.

110. Using multiple cross-sectional data from different countries, as seen in figure 4.2.3, OECD showed changes in the proportion of highly educated (tertiary) recent immigrants and native-born population in OECD countries between 2000/1 and 2009/10. This figure shows that while the proportions of native born with high educational attainment increased in most countries during the ten-year period, the education profile for recent migrants did not show the same pattern. The proportion of recent immigrants having tertiary education dropped in some countries but increased in others.

Figure 4.2.3

Change in the proportion of highly educated males and females among recent immigrants and the native-born population between 2000-01 and 2009-10





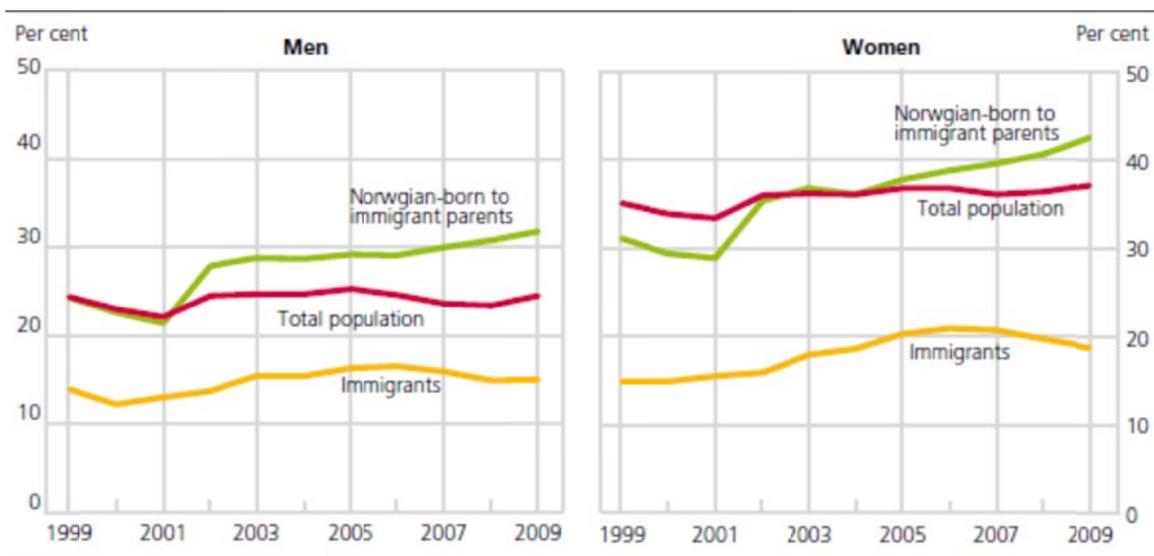
Note: Recent immigrants have arrived in the last five years.

Source: European Union Labour Force Survey (Eurostat) for Denmark, Ireland, Italy, the Netherlands, Norway and Spain; Database on Immigrants in OECD Countries (DIOC) 2000 and 2005-06 for data on all other countries.

111. Time-series administrative data can also be used to examine migrant education characteristics. Figure 4.2.4 shows participation rates in tertiary education among immigrants and second generation populations in Norway. The indicator here is not educational attainment, but rather participation rate in tertiary education, which indicates access and participation in higher education. The chart shows that second generation males and females had higher participation rates to tertiary education than their immigrant counterparts. Second generation females had lower participation rates than the total population prior to 2002, but the rate has increased since then.

Figure 4.2.4

Participation rate in tertiary education among immigrant, Norwegian-born to immigrant parents and total population, aged 19 to 24 years, by sex, 1999-2009

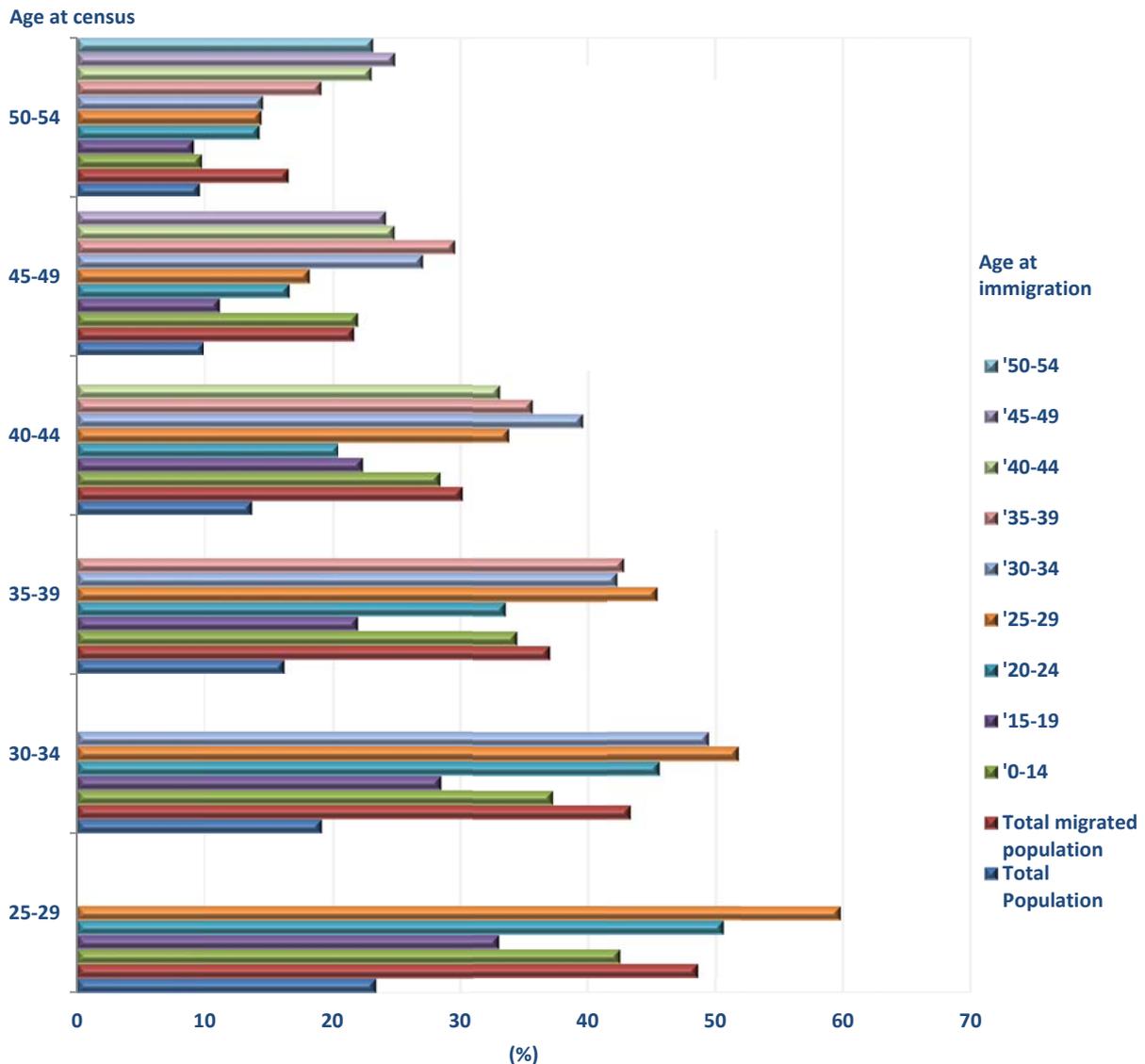


¹ Doctorate students are not included.

Note: Immigrants refer to those who are born outside of Norway and have four foreign-born grandparents.
Source: Nygard, Geir (2010). "3.1 Education", *Immigration and immigrants 2010*, Statistics Norway 2010.

112. Retrospective data, such as age at immigration, can be analysed to address the question of whether migrant educational attainment varies by age at which they arrive in the host country. Based on the Turkish 2011 Population and Housing Census, Figure 4.2.5 shows that individuals in older age groups, irrespective of their age at immigration, tend to have a lower proportion of having university or higher degrees. At the same time, this figure shows that immigrants who arrived prior to or after their teenage years achieved higher educational attainment than those who arrived between 15 to 19 years. What it suggested is that there seems to be a critical age range when migrants' moves will have the greatest impact on educational outcomes. In this case, it is the teenage years.

Figure 4.2.5
Proportion of population having at least a university degree, by age group and age at immigration, Turkey, 2011



Note: Age at immigration refers to the age at which they arrived in Turkey.

Source: Turkstat, 2011 Population and Housing Census.

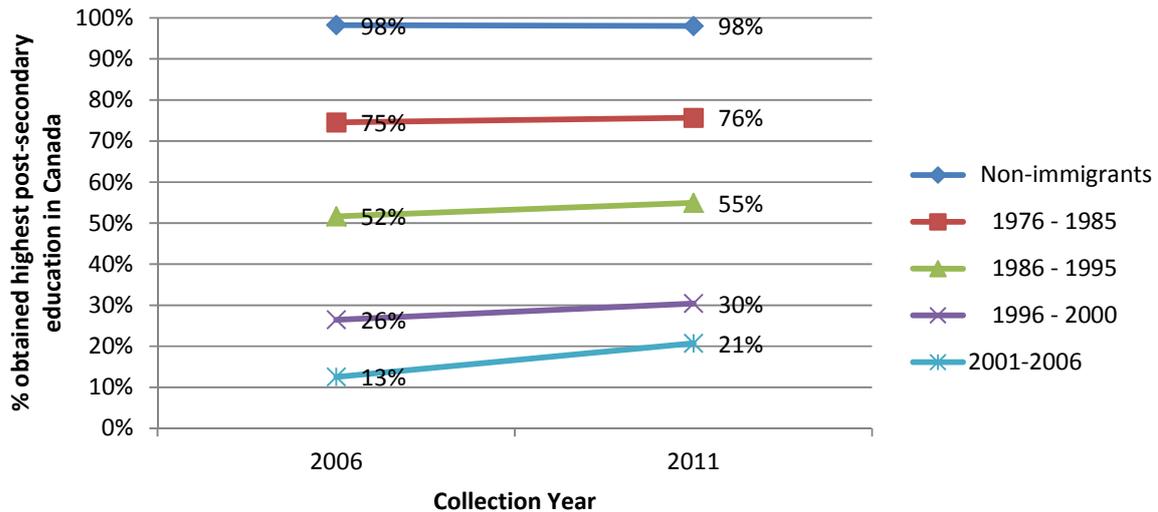
113. Among Task Force members, Canada and Australia have been exploring the development of longitudinal data through linkage between national censuses. Figure 4.2.6 illustrates how educational attainment could be analysed using a data linkage approach; in the following case it was a linkage between the 2006 Canadian Census and the 2011 National Household Survey. The objective of the analysis was to examine changes in educational attainment after migration.

114. The figure shows the proportion obtaining their highest post-secondary education in Canada among different immigrant cohorts and Canadian-born aged 25-54 between 2006 and 2011. The data indicate that immigrants who immigrated between 2001 and 2006 were the most likely to transition from a foreign highest post-secondary education to a Canadian highest

education between 2006 and 2011. In 2006, 13% reported that they obtained their highest education in Canada. By 2011, 21% of these individuals reported that they had obtained their highest education in Canada, an 8 percentage point difference.

Figure 4.2.6

Proportion whose highest post-secondary education was obtained in Canada amongst the population aged 25 to 54 years and with a post-secondary degree in 2006, by immigrant status, period of immigration and census/survey years



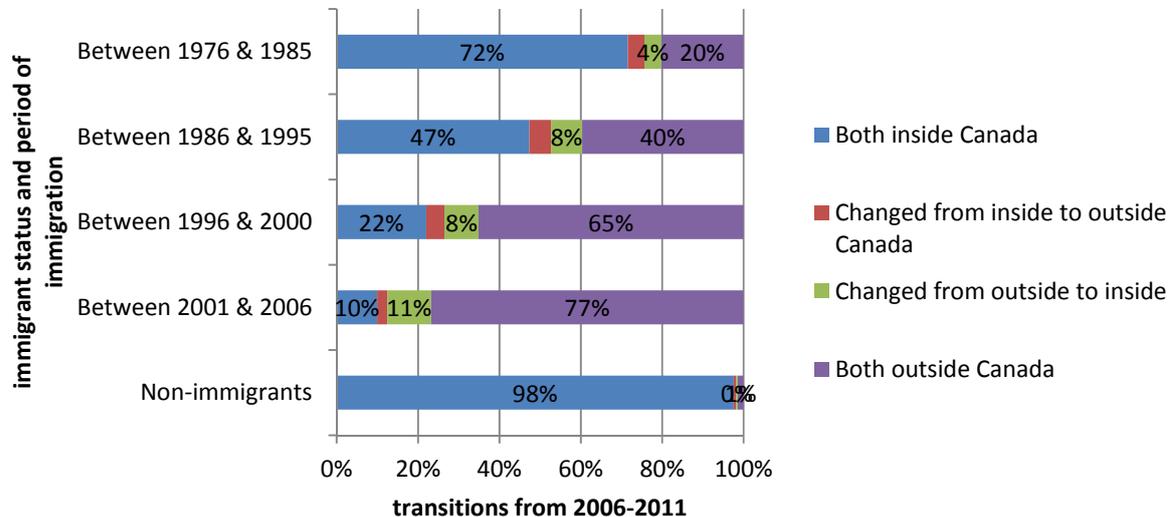
Note: The population of interest is those aged 25 to 54 years with a post-secondary education in 2006 and who are still present in Canada in 2011. Non-immigrants refer to those who are Canadian citizen at birth. Immigrants are not a Canadian citizen by birth. Immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not. Period of immigration refers to the year they first obtained permanent resident status.

Source: Canadian Census Longitudinal Dataset, 2006-2011.

115. Using the linkage of 2006 Canadian Census and 2011 National Household Survey to compare location of highest education attainment, it is also possible to look at the transition from foreign to domestic educational credentials. According to figure 4.2.7, 11% of recent immigrants whose highest post-secondary degree was obtained outside the country transitioned to a Canadian highest education by 2011.

Figure 4.2.7

Location of highest educational attainment transitions from 2006 to 2011, amongst the population with a post-secondary degree aged 25-54 in 2006, Canada



Note: The population of interest is those aged 25 to 54 years with a post-secondary education in 2006 and who are still present in Canada in 2011. Non-immigrants refer to those who are Canadian citizen at birth. Immigrants are not a Canadian citizen by birth. Immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not. Period of immigration refers to the year they first obtained permanent resident status.

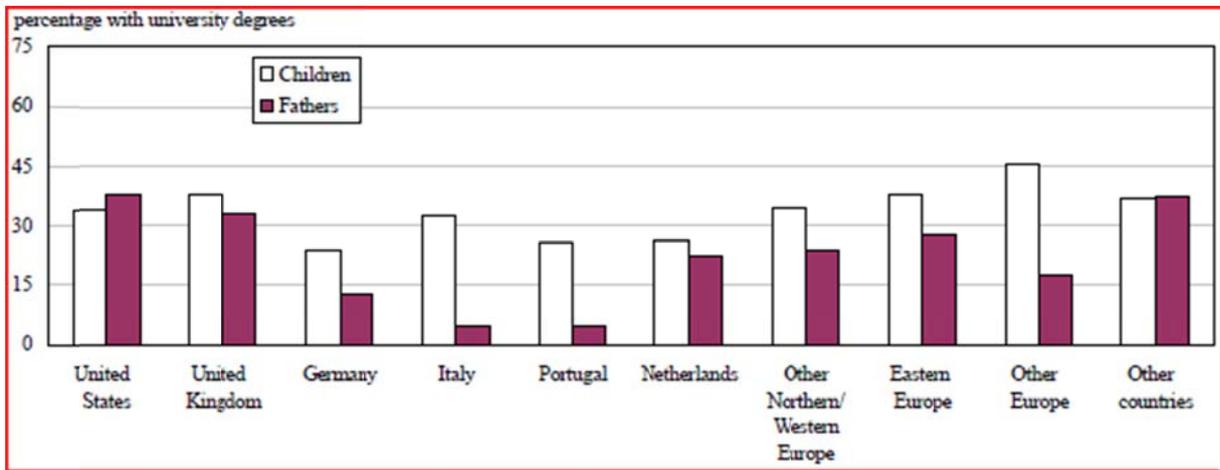
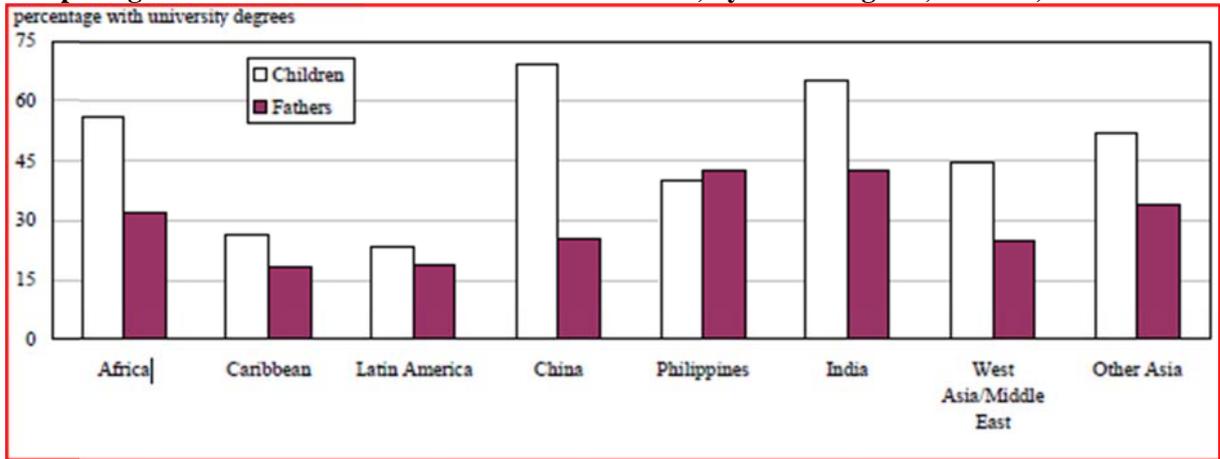
Source: Statistics Canada, Canadian Census Longitudinal Dataset, 2006-2011.

116. In the literature on intergenerational mobility, the major research question is whether children acquire higher education than their parents. This question is particularly pertinent to better understand migrant integration. There are various approaches to measuring intergenerational mobility.

117. One approach would be to determine intergenerational mobility based on a single cross-sectional survey where respondents were asked to provide their highest level of education for their mother and father. Examples of studies that used this approach can be found in the Australian and Canadian General Social Survey, as well as the Program for the International Assessment of Adult Competencies. Figure 4.2.8 illustrates this approach based on a cross-sectional survey from Canada. Data from the Ethnic Diversity Survey show that children of immigrants of most groups attain a higher percentage of university education than their fathers in Canada.

Figure 4.2.8

Comparing children and fathers' educational attainment, by source regions, Canada, 2002

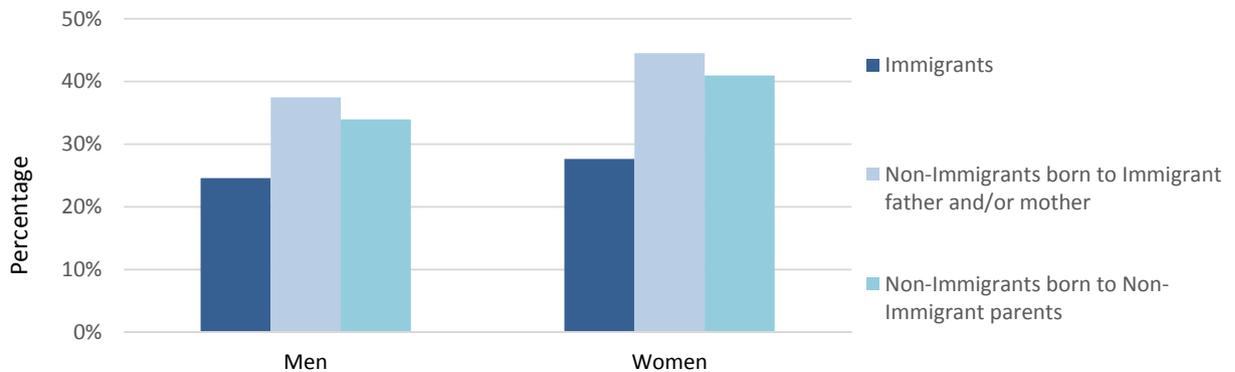


Source: Teresa Abada, Feng Hou and Bali Ram (2008). Group Differences in Educational Attainment Among the Children of Immigrants, Analytical Studies Branch Research Paper, Catalogue no. 11F0019M, no 308. Ottawa: Statistics Canada.

118. When a cross-sectional survey has information on education and place of birth of respondents and place of birth of their parents, but not on education of their parents, an alternate approach would be to compare educational attainment across respondents of different generations. Figure 4.2.9 illustrates this approach with census data from Spain. It shows the proportion of people with a post-secondary education in the 25 to 54 age group is higher for females. It also shows the education attainment among three groups: immigrants (or first generation), non-immigrants born to immigrant parents (second generation) and non-immigrants born to non-immigrants (native population or third generation). According to this census data, the proportion of university educated is higher among non-immigrants born to immigrant parents than the other groups.

Figure 4.2.9

Proportion of post-secondary education among males and females aged 25 to 54 years in Spain, by generation status, 2011

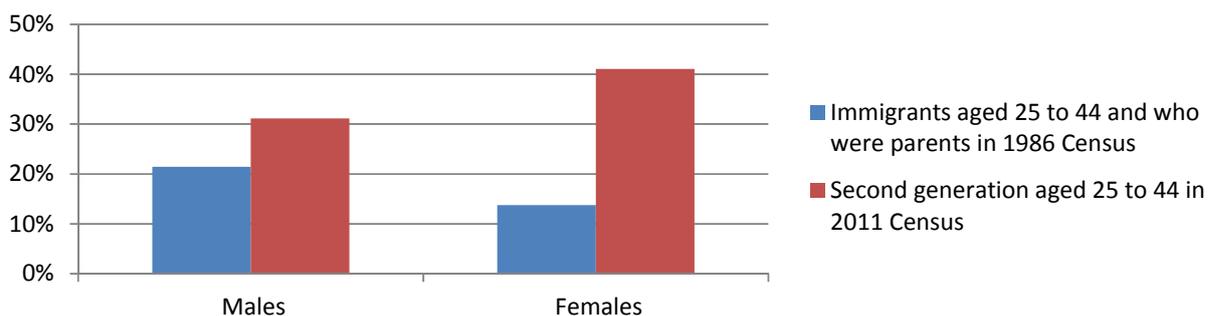


Note: Immigrants refer to those who are born outside Spain. Non-immigrants refer to those who were born in Spain.
Source: National Statistics Institute of Spain, 2011 Census

119. If repeated cross-sectional data are available, it is possible to analyse pseudo-cohorts as shown in Figure 4.2.10. The proportion with a university education amongst immigrant parents (i.e. immigrants who have native-born children) was estimated from cross-sectional data in 1986. This proportion is compared with the proportion with a university education among the second generation in 2011. The estimates show that the second generation were more likely to obtain a university degree than their immigrant parents. Furthermore, second generation females had a bigger gain in educational mobility than their mothers when compared with second generation males and immigrant fathers. What this approach does not take into account is that immigrant parents could have acquired higher education since 1986; hence the proportion with a university education among the immigrant parents could also be higher in 2011.

Figure 4.2.10

Proportion with university degree among immigrants who were parents and were aged 25-44 in 1986 and the second generation aged 25-44 in 2011, Canada



Note: Immigrants refer to those who are not Canadian citizens at birth who obtain permanent resident status.
Source: Statistics Canada, 1986 Census and 2011 National Household Survey

Summary

120. Much of the Task Force’s discussion centred on the relevance of longitudinal analysis on migrant’s education characteristics. While credential recognition is a major obstacle toward smooth transition into the labour market for many of the highly-skilled foreign-born population,

the challenge for the second generation is often about accessing and achieving educational outcomes comparable to that of the native population at various stages of their development. Longitudinal analysis provides a natural and useful perspective to monitor these evolving conditions.

121. Using the example of educational attainment, we illustrated a number of examples of how a longitudinal perspective could be used to enhance our understanding of migrants' evolving conditions. We showed trends in educational attainment for our target groups by using repeated cross-sectional data sources. On the topic of intergenerational mobility, we illustrated how single cross-sectional data sources could be used to compare the educational attainment of older migrants with younger ones. When multiple cross-sectional data sources were available, pseudo-cohorts offered an opportunity to compare the educational attainment of older generations with younger ones when they were the same age. More rarely, single cross-sectional data with information on parental and child education allowed snapshots of intergenerational educational mobility.

122. More recently, linkages between census data from different years have allowed us to develop indicators showing the post-migration upgrading of education amongst migrants. These linkages enhance the value of existing cross-sectional sources, allowing us to analyze important educational transitions as migrants seek to overcome obstacles to receive recognition of their foreign credentials or improve their labour market opportunities.

123. The Task Force also discussed briefly the relevance of information on school drop-out of second generation migrants (Portes and Fernandez-Kelly 2008 and Zhou et al. 2008). There have been some indicators developed on this issue. For example, Eurostat's Zaragoza report, and its report on "Migrants in Europe," describes the percentage of migrants that complete certain levels of education, the share of young migrants who are early school leavers, and what their socio-demographic profile is. The Task Force recognized that further work is required to identify how best to compile information on this issue.

4.3. Economic dimension

Description and relevance of the dimension

124. The Task Force acknowledged that the economic dimension was a key dimension to better understand the migrant settlement experience. The economic dimension refers to migrants' labour market characteristics, their income, and their general economic well-being. Labour market characteristics can cover various topics such as participation, employment and unemployment, hours of work, job tenure, occupation and industry, etc. (see list of indicators in Appendix A). Additional issues particularly pertinent to the second generation include the need to understand their school to work transition, as well as if labour market difficulties experienced by immigrant parents will have a negative impact on their children's labour market outcomes (Boyd, 2008; Portes and Fernandez-Kelly, 2008).

125. Other economic information, such as employment income, household income, poverty rates, and property ownership give a picture of the performance of migrants in the host country labour market and their general economic well-being. Generally, international indicators on economic well-being for migrant populations make comparisons with the native-born population

at one point in time. Most studies on the economic well-being of migrants document a less favourable economic situation for migrants than the native-born population. However, while some migrants groups' economic conditions improve over time, for others, economic outcomes remain below the average.

126. Given that considerable international work has already established harmonized indicators on key economic characteristics for the foreign born and the second generation (e.g., Eurostat, 2011, OECD, 2012), the Task Force decided to focus on applying a longitudinal perspective to one existing indicator.

Employment rate

127. Of the different economic concepts, employment is considered as one of the most important. Employment signifies an aspect of economic independence and is seen as an important step in migrants' settlement process in the receiving country. Employment rate refers to the rate between the employed population and the total population of the same age group.

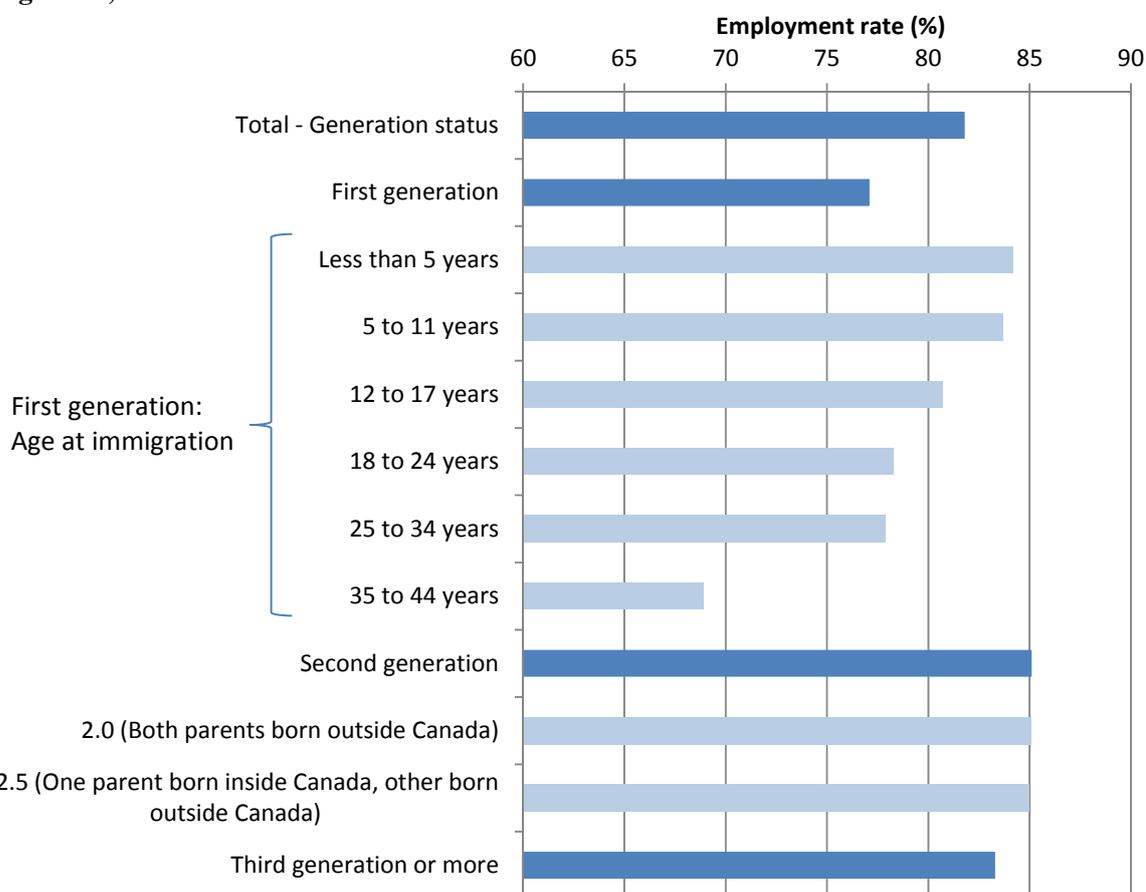
128. Some research questions that call for a longitudinal perspective include: How long does it take for migrants to enter the labour market after migration? Are migrants able to hold their employment for a reasonable period of time or are they more susceptible to economic downturn and more likely to lose their job? To put it differently, what are migrants' duration of employment or unemployment? How do employment rates differ from one cohort of migrants to the other? Does migrant employment improve with time in the host country? Do some migrant cohorts have more difficulties getting employment than other cohorts, especially when cohorts enter the country during economic downturn while others migrate during economic boom? Are there long-term employment consequences for different cohorts of migrants? Does age at migration affect employment outcomes? Do offspring of migrants, such as the second generation, fare better in employment than their parents? Below, we present a few illustrative examples of charts that can address some of these questions.

Illustration of longitudinal analysis - Employment rate

129. Most Task Force countries use census or labour force survey to study migrant labour market performance. Figure 4.3.1 shows employment rates of different migrant groups as defined by their age at immigration, place of birth and place of birth of their parents. This figure demonstrates how to use a single cross-sectional data with retrospective time-related information. According to the Canadian data, the second generation had a higher employment rate than those of the first generation. Among the first generation, immigrants who immigrated at young ages performed better than the migrants who immigrated at older ages. Since analysis is restricted to a specific age group (35 to 44 years) in a single cross-sectional survey, this is a direct indication of how long immigrants have been in the country, thus able to find work (e.g. the 35 to 44 year old immigrants are very recent migrants, hence the lowest employment rate).

Figure 4.3.1

Employment rate of persons aged 35 to 44 years in Canada, by generation status and age at immigration, 2011



Note: Generation status refers to whether or not the person or the person's parents were born in Canada. It identifies persons as being first generation, second generation or third generation or more. 'First generation' includes persons who were born outside Canada. For the most part, these are people who are now, or have ever been, immigrants to Canada. 'Second generation' includes persons who were born in Canada and had at least one parent born outside Canada. For the most part, these are the children of immigrants. 'Third generation or more' includes persons who were born in Canada with both parents born in Canada. Age at immigration refers to the age at which the foreign-born immigrant first obtained permanent resident status.

Source: Statistics Canada, National Household Survey, 2011

130. One of the key data sources used to regularly monitor the labour market situation in Europe is the Labour Force Survey (e.g. European Union Labour Force Survey (EU-LFS)), a large household sample survey with information on detailed annual and quarterly data on employment, unemployment and inactivity, as well as information on occupation, working hours, etc. Data can be broken down along many dimensions including age, sex, and educational attainment. A major advantage to this data source is that all countries participating in the survey aim to use the same concepts, definitions, classifications in order to facilitate comparison. The sampling frame and methods of the data collection, however, differ between countries.

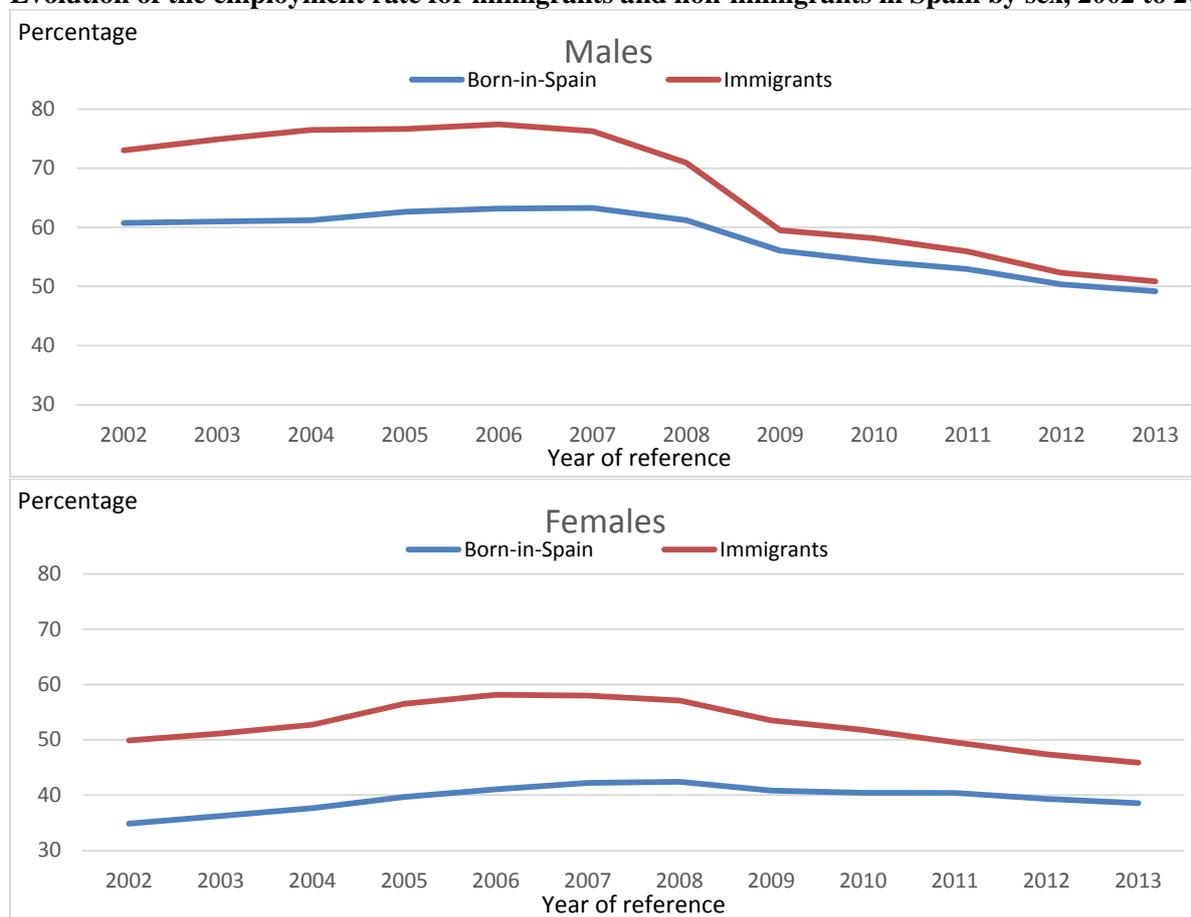
131. In 2008 and 2014, an ad hoc module was added to the EU-LFS in order to gather information about the situation of migrants and their immediate descendants. In this module, additional immigrant related questions were added. A first attempt of European comparisons based

on the LFS data is presented in “Migrants in Europe – a statistical portrait” Eurostat (2011). In this publication, Eurostat compares the labour market integration of the foreign-born, foreigners, second generation and total population. A broader and more exploratory study “Indicators of Immigrant Integration,” was done by Eurostat in 2011. Other countries, such as Canada, Australia and US, also have a set of questions to identify some migrant groups in their labour force surveys.

132. Figure 4.3.2 compares annual employment rates of Spanish born and foreign born by sex between 2002 and 2013. It is an example of using multiple cross-sectional data points to monitor trends. It shows that although the economic situation of migrants and the native born, as measured by their employment rate, both declined between 2008 and 2009, the decline was most drastic for immigrant males.

Figure 4.3.2

Evolution of the employment rate for immigrants and non-immigrants in Spain by sex, 2002 to 2013



Notes: Employment rate is the quotient between the total active population and the population aged 16 years and older. It is measured for “Immigrants aged 16 and more,” understanding immigrants as those who were born abroad, versus “Native born aged 16 and more”.

Source: National Statistics Institute of Spain Labour Force Survey (LFS), 2002-2013.

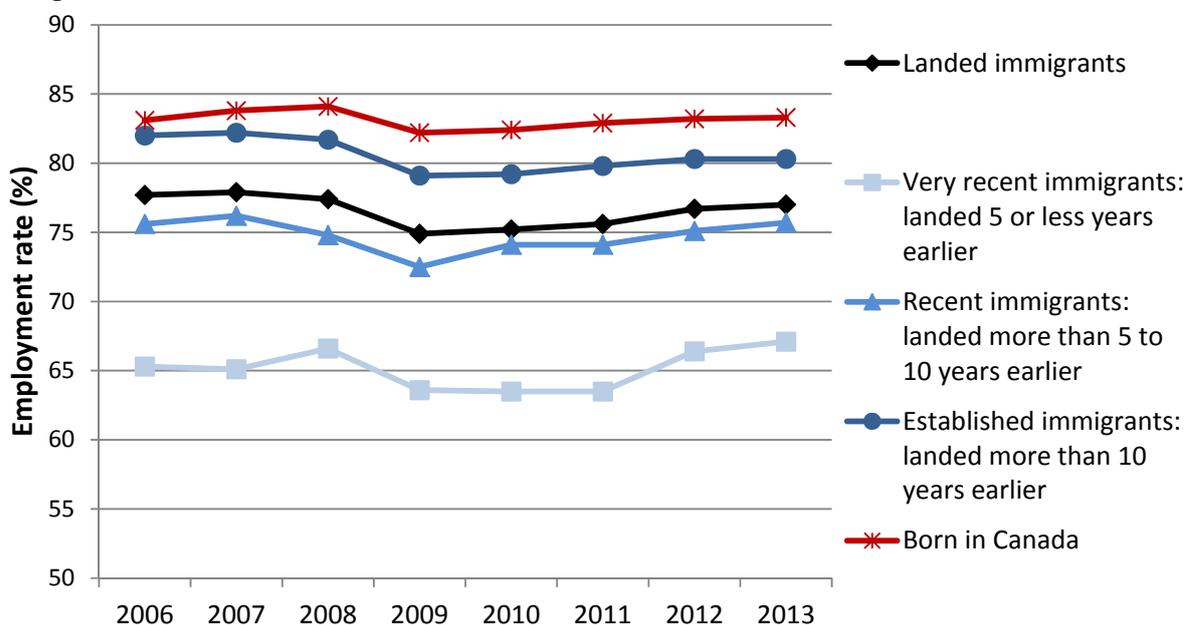
133. As is the limitation in most surveys, the LFS sample size in many countries is too small to give detailed statistics by, for instance, country of birth combined with other variables. For many countries, a general trait is that migrants, and especially recently arrived migrants, are likely to be

under-covered by the survey. Furthermore, for reasons such as language difficulties, response rates are lower for migrants.

134. When data from multiple cross-sectional surveys such as the LFS and censuses, as well as time-related variables such as the period of arrival/immigration, are available, it is also possible to examine period effects on employment. Figure 4.3.3 compares the employment rate of Canadian born and different cohorts of migrants in Canada between 2006 and 2013. Employment rates for the different groups, such as recent immigrants and established immigrants, were highest in 2008, the year prior to the economic downturn and lowest in 2009. Since 2009, the employment situation of the different cohorts of migrants has seen an improvement.

Figure 4.3.3

Employment rate of persons aged 25 to 54 years in Canada, by immigrant status and period of immigration, 2006 to 2013



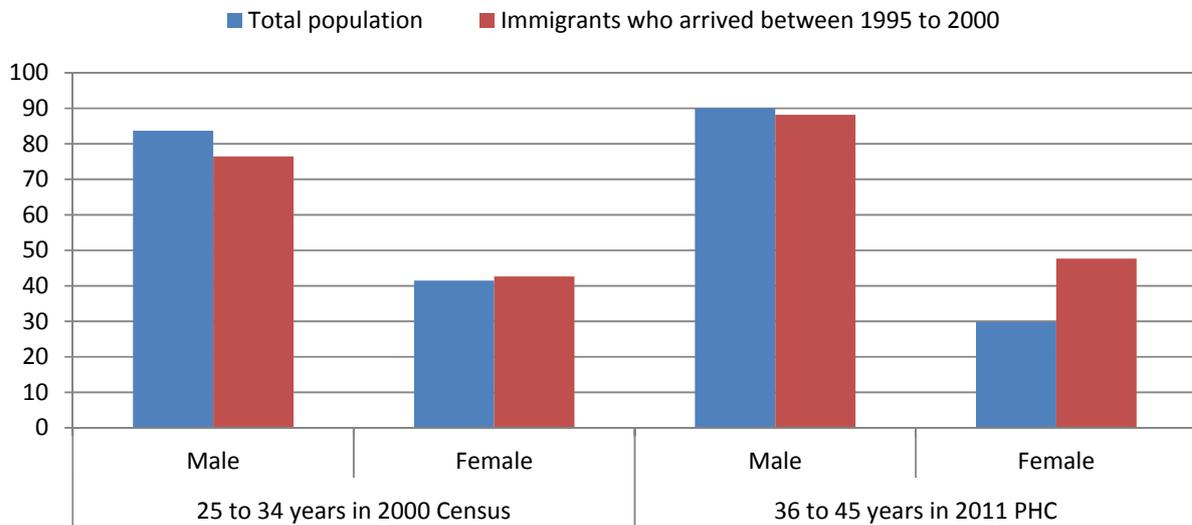
Note: Landed immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not. Period of immigration refers to the year they first obtained permanent resident status.

Source: Statistics Canada. Table 282-0106 - Labor force survey estimates (LFS), by immigrant status, educational attainment, sex and age group, Canada, annual (persons unless otherwise noted), CANSIM (database). (Accessed: 2014-11-06)

135. However, Figure 4.3.3 does not address the question of whether the employment experience of recent immigrants improves over time, since it does not follow the same individuals over time. Using multiple cross-sectional data from Turkish censuses, Figure 4.3.4 provides an example on how to follow labor market outcomes of a pseudo-cohort of migrants over time. The chart indicates that between 2000 and 2011, the employment rate of both male and female immigrants who arrived between the years 1995 to 2000 improved.

Figure 4.3.4

Employment rate in Turkey, by age group, period of immigration and census year

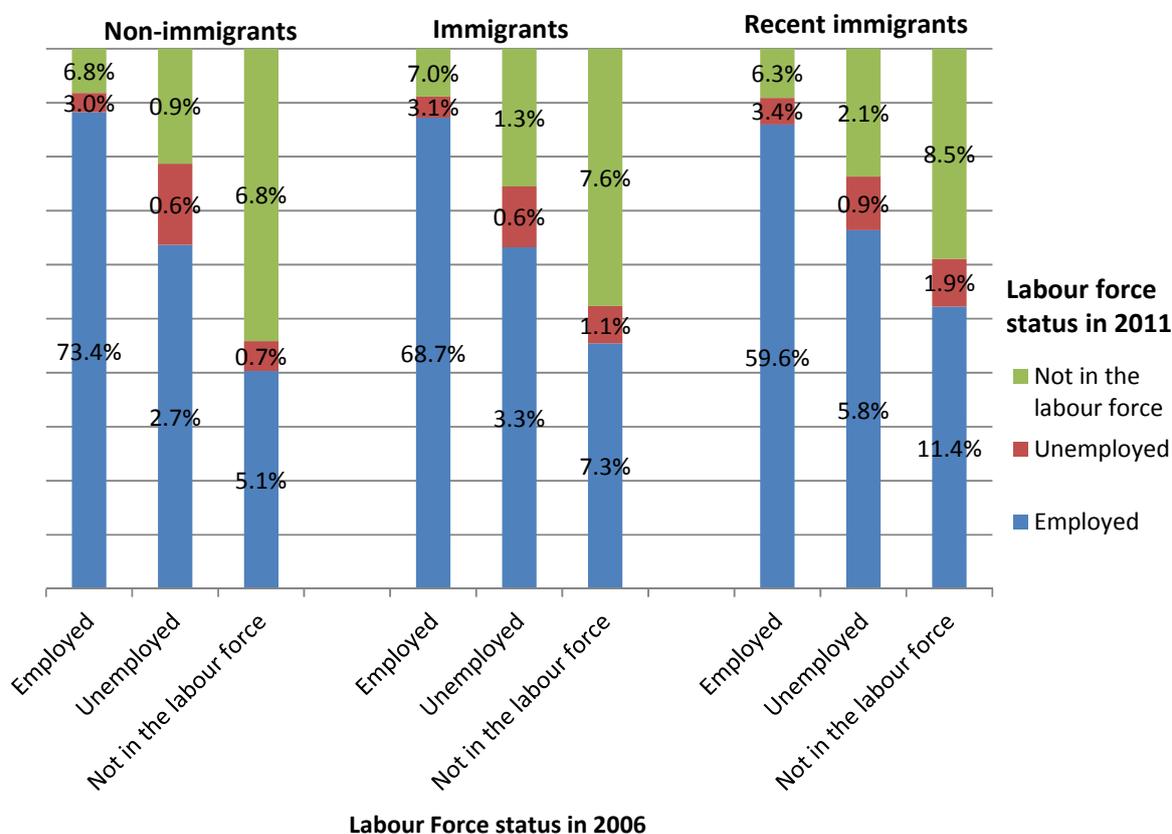


Note: In 2000, 1995-2000 Period immigrants are derived from the question on "the place of residence five years prior to the census". On the other hand in 2011, "Ever resided abroad and year of arrival in the country" is used and the persons who declared 1996, 1997, 1998, 1999, 2000 as the year of arrival is accepted as 1995-2000 period immigrants.
Source: Turkstat, 2000 Population Census and 2011 Population and Housing Census

136. Another way to follow the same individuals could be by linking information from two cross-sectional data sources. Figure 4.3.5 shows an example from linked data from the 2006 Canadian Census and 2011 National Household Survey. Data were used to derive an indicator on labour market transition between the two time-points. Labour market status could be categorized as employed in both reference periods, from employed to unemployed, from unemployed to not in the labour force, from unemployed to employed, etc. Results show that close to one-third (31%) of recent immigrants who arrived in Canada up to five years prior to 2006 had experienced a change in labour force status between 2006 and 2011, compared to 19% of non-immigrants and 22% of the total immigrant population. Recent immigrants were least likely to be employed in 2006 and 2011, but most likely to transition from being unemployed or not in the labour force in 2006 to being employed in 2011.

Figure 4.3.5

Labor force transition for the population aged 25 to 54 years, by migrant status and period of migration in Canada

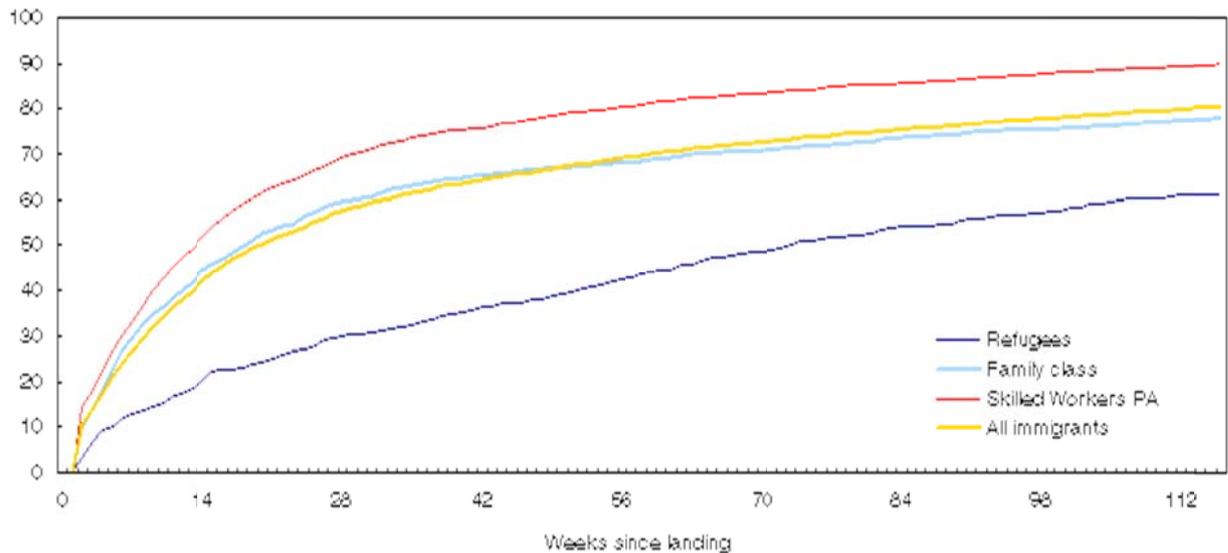


Note: The population of interest is those aged 25 to 54 years in 2006 and who are still present in Canada in 2011. Non-immigrant refers to those who are Canadian citizen at birth. Immigrant refers to those who are not Canadian citizens at birth, but who obtain a landed immigrant/permanent resident status. Recent immigrants refer to immigrants who arrived in Canada between 2001 and 2006.

Source: Statistics Canada, Canadian Census Longitudinal Dataset, 2006-2011

137. Some surveys ask retrospective questions about how and when a characteristic changed through time. For example: What was the job a migrant had before migration? What was the first job after migrating? When did a migrant start working after migration? This type of survey, which includes an extensive set of questions about how socioeconomic characteristics change through time, is costly and burdensome to the respondent. However, when this type of information is available, it can be used to study the dynamic nature of migrants' adaptation processes. Figure 4.3.6 illustrates the results from a longitudinal survey that asked retrospective questions about jobs since arrival. Immigrants who entered the country as a "skilled worker principle applicant" obtained employment sooner after arriving in Canada than migrants of the other admission categories. Refugees had the least favourable labour market entrance experience.

Figure 4.3.6: Proportion of immigrants aged 25 to 44 who had any employment, by weeks since landing, for selected immigration categories in Canada



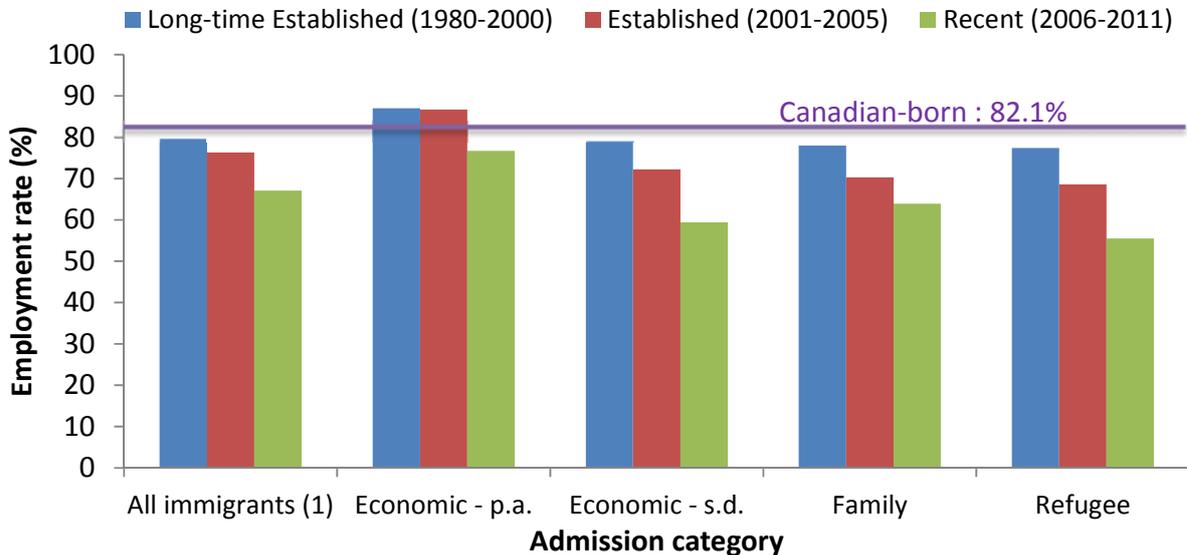
Note: Immigrants refer to those who obtained permanent resident status from abroad and arrived in Canada between October 2000 and September 2001.

Source: Tran and Chui (2005). Longitudinal Survey of Immigrants to Canada: Progress and Challenges of New Immigrants in the Workforce (89-615-X)

138. Linked databases can enhance the content of existing data sources. Figure 4.3.7 provides an example where immigrant landing records were linked to survey data. This linked database contains information on admission categories from immigrant landing records, as well as labour market and period of immigration information from the National Household Survey of Canada. While recent immigrants of all admission categories had lower employment rates than the Canadian born, recent immigrants admitted under the “economic principle applicant” category fared better than their counterparts in the other admission categories. Employment outcomes of economic principle applicants who have lived in the country for at least six years exceeded the Canadian born.

Figure 4.3.7

Employment rate of immigrants¹ aged 25 to 54 years in 2011, by admission category and length of stay in Canada (preliminary data)



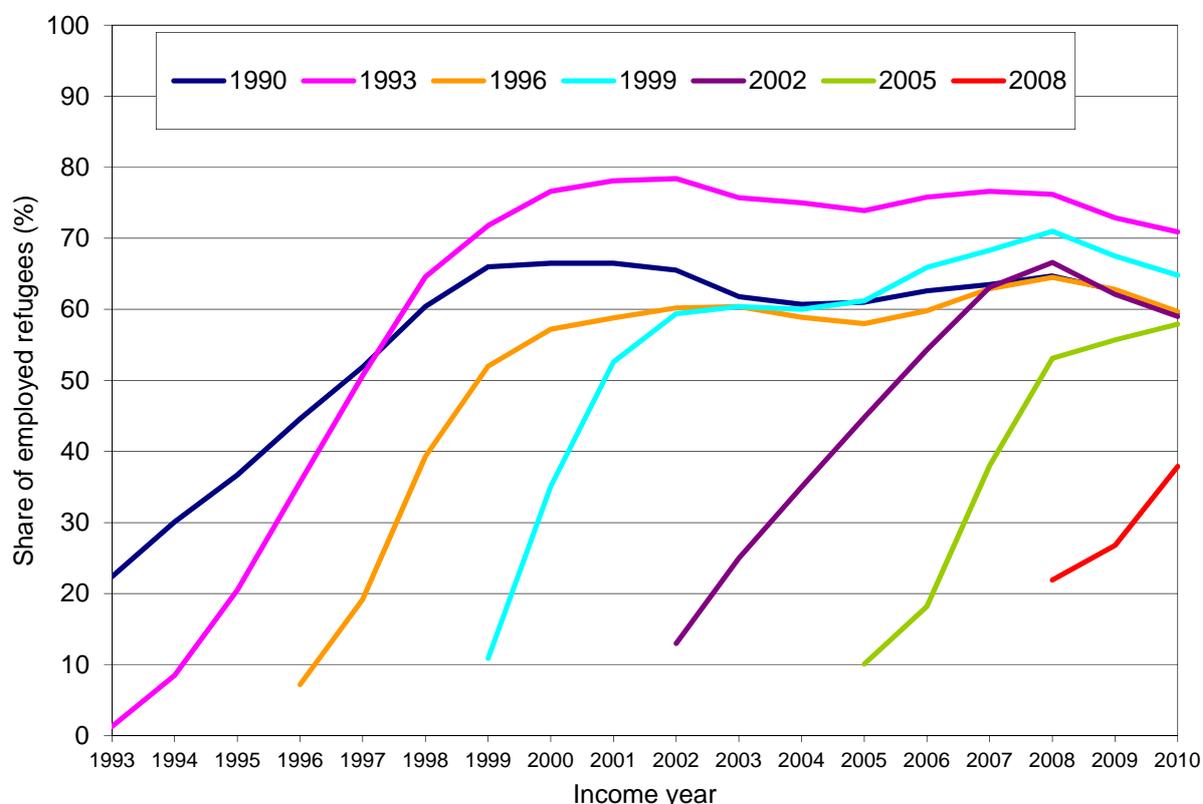
Note 1: Persons who immigrated in Canada between 1980 and May 10, 2011 and who were linked with the 2011 National Household Survey. The admission categories “Other immigrants” and “Not stated” are included in the total.
Source: Statistics Canada, 2011 National Household Survey linked with Immigrant Landing File

139. Administrative registers allow for rich longitudinal studies of the labour market situation of migrants. Several prerequisites have to be in place before one can effectively exploit administrative registers for statistical purposes. These prerequisites typically include access to individual data files by the statistical office and that linkage keys are in place in each register. Although a growing number of countries plan to increase their use of administrative registers, at the moment only a few countries (the Nordic countries + the Netherlands) regularly produce detailed statistics on the labour situation on migrants based on data from administrative registers.

140. Figure 4.3.8 demonstrates the full potential of Norwegian register data. The employment data stems from income files from the years 1990-2010 that have been linked to data from the CPR (Central Population Register), a more detailed description of method and metadata is given in (Blom, 2014). Different cohorts of refugees coming to Norway were identified and then followed every year since arrival. This figure shows how refugees fare in the labor market: the most visible effect being the gradual rise of employment by years of residence, but also the impact of economic downturn for some years, as well as the importance of which period you enter the labor market.

Figure 4.3.8

Share of employed refugees in Norway, 17-36 years old, by cohort and income year



Source: Statistics Norway, Population and Income Statistics

Summary and additional remarks

141. Labour market experience and economic well-being are pivotal to migrant integration. A longitudinal perspective helps capture the process of transition of the foreign-born population into the host country’s labour market and the economic outcomes. How descendants of the foreign-born population fare in the labour market, and whether or not they will face the same obstacles, requires a longitudinal perspective that highlights the importance of intergenerational comparisons. This section used the longitudinal approach to illustrate the use of cross-sectional and longitudinal data sources for examining the employment rate of migrants.

142. In addition to this indicator of employment rate, the Task Force discussed many related concepts that could be viewed from a longitudinal perspective. For example, it was agreed that job mismatch, labour market discrimination, employment and household income, poverty, unemployment, precarious work conditions, occupation, industry, and property ownership were all areas of concern for the migrant population and would warrant analysis with a longitudinal perspective. The Task force also discussed how to measure the economic situation of migrants, such as employment earnings, etc. Further discussion could be done for each concept.

143. The Task Force also briefly discussed the relevance and measurement issues for three of these concepts: education mismatch (a type of job mismatch), employment discrimination and employment income.

144. Generally, the concept of **education mismatch** describes whether or not a worker's level of qualifications matches the level of qualifications that is required for a particular job. Some research questions associated with job mismatch or over-qualification include: what is the extent of job mismatch among the migrant population? Does the country where qualification is obtained have any impact of job mismatch? Do migrants experience persistent job mismatch over time, in other words, will incidence of job mismatch decrease with length of residence in the country? There have been some international indicators on education mismatch of the migrant population. For example, Eurostat (2011) compared over-qualification between foreign-born and native-born populations. Individuals with tertiary education working in low or medium skilled jobs were considered to be over-qualified for their employment. Another key study was conducted by OECD (2012). This study derived over-qualification rates by comparing levels of educational attainment with occupational classifications and over-qualification rates were compared between foreign-and native-born, as well as with the second generation.

145. **Employment discrimination** can take many forms; it is not necessarily limited to individual biases and prejudices but can be the product of historical institutional practices (e.g. arbitrary job exclusion criteria). Employment discrimination can result in differences in access to particular occupations but can also lead to differences in pay between those employed in the same occupation. From a longitudinal perspective, changes over time in the existence and impact of employment discrimination on immigrants at the aggregate level, as well as increasing time in the host country, are relevant. For immigrants, some barriers to employment may lessen with time as they become more similar to the native-born population in terms of language and culture. Immigrant parents often endure employment discrimination with the hope of better economic opportunities for their children who, although native born, may continue to experience employment discrimination based on their minority characteristics. Employment discrimination can be particularly hard to measure. Commonly, employment discrimination is measured indirectly by attributing gaps in employment and income that remain between groups after all factors known to be related to earnings and employment (e.g. education level, place of education, age, geography, etc.) are taken into account. Self-reported employment discrimination is another way these data are collected, through general social surveys and special surveys like the EU-MIDIS survey.

146. In addition to basic labour market characteristics, the Task Force considered **employment income** (both through wages and salaries and self-employment) and its change over time as a key measure to understand migrants' adjustment to the host country and its labour market. A key to understanding the economic situation of migrants is their employment income because, for most migrants, income through employment in the labour market is the most important factor determining their general economic well-being (e.g. their total income and housing situation). Research questions on employment earnings include: how does entry level employment income of immigrants compare with the native born? How does entry level employment income of immigrants vary across different immigration cohorts? How does immigrants' employment income change over time? Do immigrants ever catch-up to the native born in terms of employment income and if so, how long does it takes to catch-up? Many of the challenges immigrants/foreign-born face in the host country may not apply to their children who arrive at a young age or were

born in the country (e.g. language problems, credential recognition). Research questions associated with the second generation include: How does employment income of the children of immigrants compare with their parents? Do individuals of the second generation fare better than their foreign-born parents?

4.4. Social and civic dimension

Description and relevance of this dimension

147. The social and civic dimension of migrants' socioeconomic conditions represents not only their legal and social incorporation into the host country, but also the health of the society itself. Broadly, this dimension refers to the extent to which migrants and their descendants are included into the democratic process, civic organizations and associations of the host country. In addition, this dimension seeks to capture the degree to which there are harmonious intergroup relations.

148. The UNECE Task Force discussed a number of key indicators for this dimension, including citizenship (citizenship rate, single/multiple citizenship, rate of naturalizations, speed of access, pathway), participation in social and civic groups, participation in social activities, volunteering, voting participation, access to services, ability to access support, discrimination, victimization, feelings of safety, trust and cultural diversity.

149. A successful transition into the labour market is of the utmost importance for many immigrants and their families; their social and civic incorporation can both facilitate and benefit from this.

Citizenship acquisition

150. Based on a survey of UNECE Task Force participants, citizenship acquisition was identified by most Task Force members as one of the priority indicators for the social and civic dimension. Obtaining or having an intention to obtain citizenship can be an indicator of connectedness to their country of residence for new migrants. This indicator could also be relevant for native-born children of migrants in countries where citizenship is not automatically conferred at birth to all persons born in the country.

151. Citizenship is a common bond, bringing both rights and responsibilities which contribute to both individual and societal well-being. Citizenship also includes rights beyond those offered to foreign residents. For example, it could provide a passport of the adopted country, the right to vote, hold government office, right to practice some regulated occupations, eligibility to work and/or for permanent government employment, as well as security from deportation.

152. The pathway and conditions for citizenship eligibility vary from country to country. Most countries require migrants to meet a minimum period of residential qualification as a condition to acquire citizenship. For example, in Australia, this was two years up until 2007, after which it was increased to four years with the added condition of a 12 month period of permanent residence before an application for citizenship can be made. In Spain and Italy it is 10 years, with residency generally being consecutive years. In most OECD countries, migrants can acquire citizenship after 5 to 8 years of residence in the host country (OECD 2011). In addition, some countries will require

prospective citizens to pass a 'citizenship test'. Such tests are aimed at ensuring that applicants for citizenship have a general understanding of the laws, values and community of the host country. There are also issues surrounding family connections to the host country and the need to meet language proficiency criteria. Many migrants can bypass/reduce the waiting period if they have *jus sanguinis* status or some ethnic connection to the country (e.g. Germany, Hungary, Romania, Israel, etc.). There are also often different time criteria based on age of migrant (e.g. young migrants can qualify more quickly, especially if born in the country).

Illustration of longitudinal analysis - Citizenship acquisition

153. Citizenship data are usually available from immigration authorities as well as from censuses and population registers. One measure is the annual **rate of naturalization**, based on the number of people who would be eligible to acquire citizenship during that year (e.g. those who have been resident long enough to apply for citizenship). This measure gives a sense of the number of migrants who become citizens every year and is usually based on administrative data from immigration authorities (the flow).

154. Figure 4.4.1 focuses on naturalization rates in Italy in 2011, and also includes when the application for citizenship was filed. It is an example on how naturalization rates can be calculated more properly by using a longitudinal instead of a cross-sectional approach. In the examples c) and d) denominators are based on the number of active/valid resident permits per year. Consequently denominators used do not refer exactly to the population at risk to experience the naturalization, but they are probably bigger than the effective number of people who would be eligible to acquire citizenship during the reference year (e.g. those who have a valid permit and have been resident for at least 10 year in Italy). Nevertheless, what is gained from the figures in the table is that a more realistic acquisition rate can be obtained when a longitudinal approach is used. Figures in the chart show how citizenship oaths in Italy are distributed by time according to the year when the application of citizenship is filed.

Figure 4.4.1

Oaths taken in 2011 for the acquisition of citizenship for residence by year of application for the top 10 nationalities in Italy.

Table 3 – Oaths taken in 2011 for the acquisition of citizenship for residence by year of application for the top 10 nationalities. Different methods for calculating naturalisation rates (a) (per 1,000 residence permits)

Citizenship	Total 2011	% of applications per year						Naturalisation rates (x 1,000)		
		2009	2008	2007	2006	2005	Before 2005	Raw b)	Corr. 1 (c)	Corr. 2 (d)
Morocco	3.840	7,5	43,9	31,9	10,5	4,4	1,9	7,7	14,1	13,5
Albania	3.424	13,5	48,9	26,0	9,0	1,1	1,5	7,1	11,3	10,8
Tunisia	624	7,9	36,5	34,3	15,1	4,3	1,9	5,3	9,3	9,2
Peru	601	11,3	49,3	28,3	9,3	1,2	0,7	5,9	10,6	10,0
Serbia/ Kosovo/ Montenegro	449	14,0	51,0	22,5	9,4	2,2	0,9	4,5	7,5	7,2
Egypt	446	5,4	24,0	33,2	30,0	5,4	2,0	4,0	8,8	8,7
Macedonia, Republic of	444	19,8	54,7	18,9	4,7	1,6	0,2	5,7	9,3	8,7
India	439	5,7	33,9	29,6	23,9	6,2	0,7	3,1	7,4	7,2
Bangladesh	362	6,4	40,9	31,5	17,7	3,6	0,0	3,5	8,1	7,7
Bosnia and Herzegovina	296	10,1	54,1	25,7	6,4	3,0	0,7	10,0	14,3	13,0

Notes: (a) From 2005 to 2009 the calculations only considered permit holders, excluding other persons listed on the permit; (b) calculated for the permits in early 2011; (c) correction 1: sum of the rates obtained by comparing the applications in each year to the number of residence permits at the beginning of the corresponding year; (d) correction 2: oath takings related to a weighted average of valid residence permits in previous years with weights given by the share of applications for each year.

Source: Istat processing of Ministry of the Interior data.

Source: Istat. 2014. "Integration: Knowing, Measuring, Evaluating".

155. Figure 4.4.2 shows the average annual number of naturalizations across different time periods from a number of Task Force member countries. The chart shows that in the time period between 2000 and 2010, some countries (e.g. Spain) witnessed an average upward trend, while others (e.g. Netherlands) saw a decline.

Figure 4.4.2

Trends in number of naturalizations per year, 2000-10

	2000-04		2005-09		2010	
	Numbers (annual average)	% of the foreign population	Numbers (annual average)	% of the foreign population	Numbers (annual average)	% of the foreign population
Australia	82 044	..	109 865	..	95 284	..
Canada	174 450	9.0	198 424	11.4	143 562	..
Denmark	13 914	5.3	6 823	2.4	3 006	0.9
Estonia	4 167	1.6	3 969	1.6	1 184	0.5
Ireland	2 836	1.8	5 088	1.6	6 387	..
Italy	11 194	0.7	34 613	1.1	40 223	0.9
Netherlands	39 386	5.8	29 243	4.2	26 275	3.6
Norway	9 083	4.8	12 248	5.0	11 903	3.6
Spain	23 089	1.2	68 149	1.4	123 721	2.2
Turkey	17 683	..	5 987
United Kingdom	114 284	4.5	162 704	4.8	195 046	4.5
United States	614 211	2.8	751 520	3.5	619 913	2.9

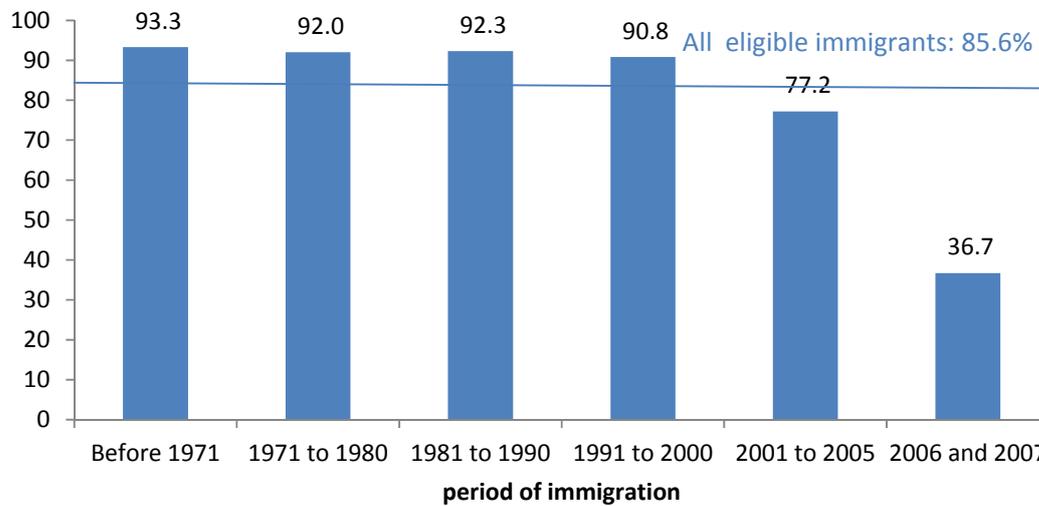
Source: OECD Database on International Migration.

156. Another measure is the **citizenship rate**, which is the total percent of eligible migrants who have acquired host country citizenship. This measure provides information on the proportion of the eligible migrants who have obtained citizenship (the stock of citizens). The size of the eligible population changes through time as new migrants become eligible after meeting minimum residency requirements and others take up (acquire) citizenship.

157. The following example was taken from the 2011 National Household Survey of Canada. Using data on citizenship status and period of immigration, it shows that immigrants who have resided longer in Canada were more likely to be Canadian citizens.

Figure 4.4.3

Percentage of immigrants who are Canadian citizens, by period of immigration, Canada, 2011



Note: Immigrants refer to persons who have been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Period of immigration refers to the year immigrant first obtained permanent resident status. Immigrants are generally required to reside in Canada for a minimum of three years before they are eligible for Canadian citizenship.

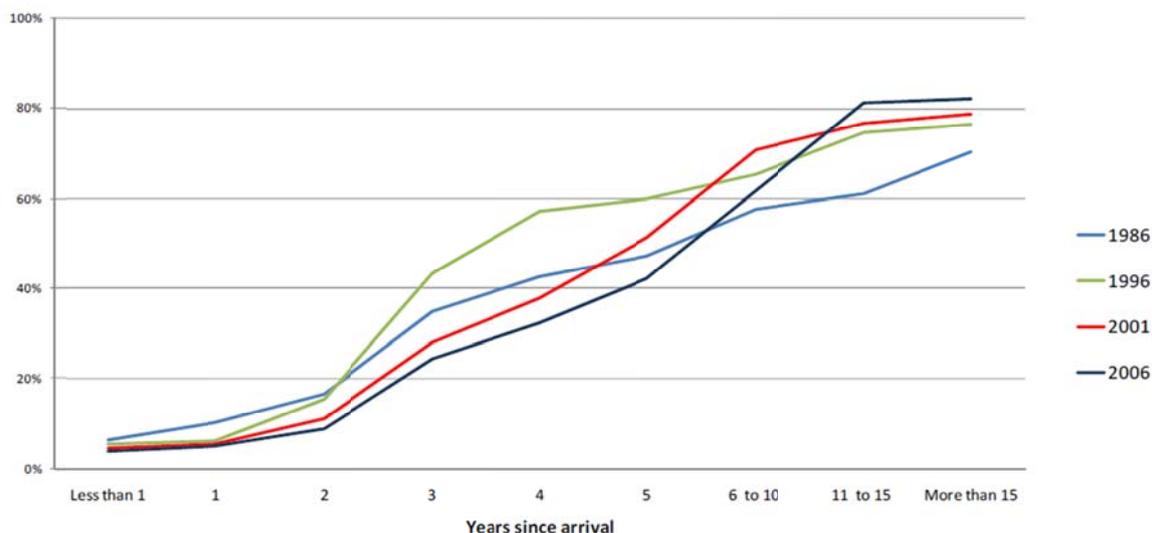
Source: Statistics Canada, National Household Survey, 2011.

158. The following example in Figure 4.4.4 was taken from the 1986, 1996, 2001 and 2006 Census of Population and Housing of Australia. The chart shows significant increase in the citizenship rate with years in the host country. For example, while about 60% of those who had been in the country 4 years in 1996 were citizens, only 30% of those who had been the country 4 years were citizens in 2006. The chart also demonstrates the effect of the minimum residency requirement on the citizenship rate in the first few years after immigration.

159. Furthermore, the chart shows that immigrants who have arrived at different time periods have different trends in citizenship rates through time. Different immigrant cohorts can have different demographic profiles (e.g. language profiles) and face different citizenship policy contexts, which can affect their access to citizenship.

Figure 4.4.4

Percentage of immigrants who are Australian citizens, by time since arrival and selected census years

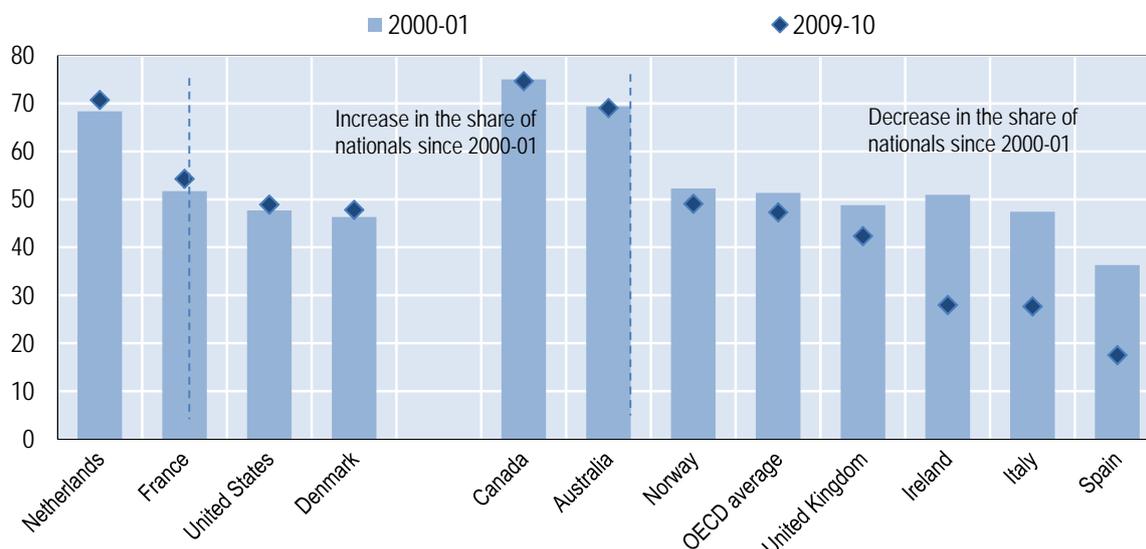


Source: Australian Bureau Statistics, Unpublished data from the 1986, 1996, 2001 and 2006 Census of Population and Housing.

160. Figure 4.4.5 provides an international perspective on the measurement of citizenship over time. The chart shows the percent of foreign born who are citizens across various OECD countries in 2000-01 and in 2009-10. What this chart illustrates is that the percent of citizens among the foreign-born population does not necessarily always trend upwards over time. While in some countries (e.g. Netherlands, U.S, Denmark), there is an increase in the proportion of eligible foreign-born population that hold citizenship of the host country, in other countries (Canada, Australia, Norway, Ireland, Italy, Spain) the growth of the eligible foreign-born population has outpaced the rate of naturalization and thus resulted in a decrease in the citizenship rate. Evolving policies around citizenship requirements, but also changing migration patterns, demographic factors and the processing of citizenship applications are all possible explanations for these changes.

Figure 4.4.5

Percentage of foreign-born who are citizens of host country, population aged 15 years and over, 2000-01 and 2009-10



Source: Database on Immigrants in OECD Countries (DIOC) 2000 and 2005-06; European Union Labour Force Survey, 2008 ad-hoc module; OECD Database on International Migration; US Current Population Survey (CPS) 2008.

161. On its own, the citizenship or naturalisation rate has a limited value for policy and research purpose. When it is combined with socio-demographic, educational, labour and economic variables, as well as other migrant characteristics such as age at arrival, years in the country, visa category and country of origin, it provides a richer understanding of the propensity to acquire the citizenship of the host country. According to longitudinal research from five countries (OECD 2011), there is also a positive advantage of citizenship acquisition on economic and social outcomes for foreign born.

Voting participation

162. Exercising one's right to vote is a measure of civic and political participation. It is an outward sign of interest in the political landscape of the community or inclusiveness of the political system. The level of voter turnout can indicate a strong democracy and how representative governments are of the electorate. Jupp, Nieuwenhuysen and Dawson (2007) noted that 'the attitudes that sub-communities take to being a part of their host communities can be gleaned by observing data relating to attendance rates at elections (and) voting behaviour at elections.' Consideration needs to be given to the political environment or culture within various countries. For example, is voting compulsory? Where compulsory voting exists measurement of migrant voter behaviour is more problematic, however, where voting is voluntary, the level of migrant turnout is a good indicator of interest and involvement with the political environment.

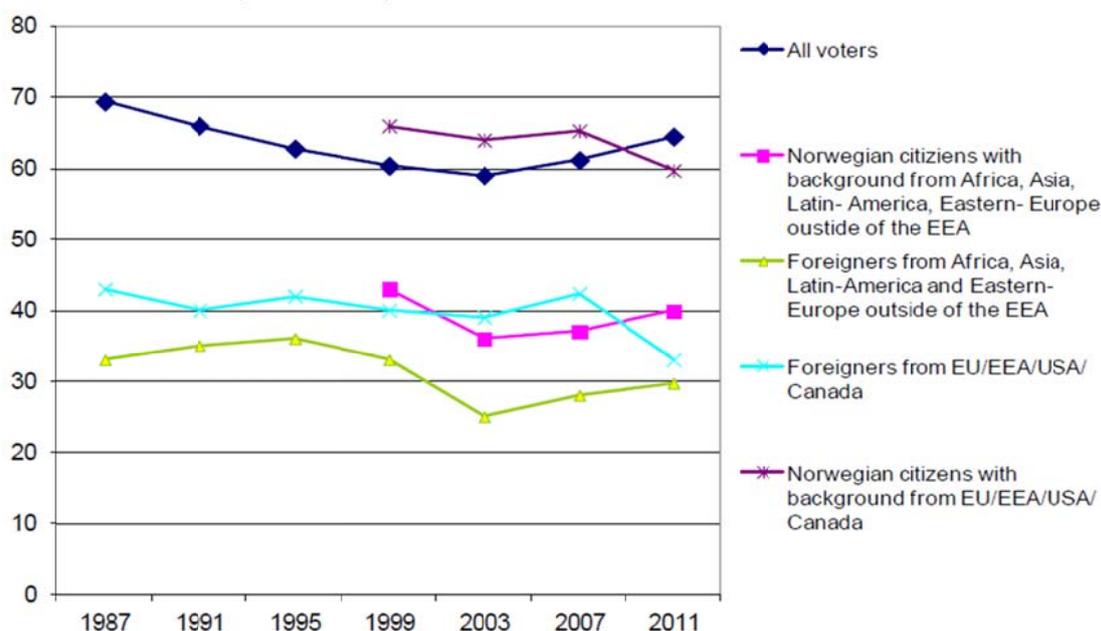
163. Voting is quite often related to citizenship status so the concepts are inextricably linked. Voting rights are often only available upon conferring of citizenship, however, in some countries (e.g. United Kingdom) there is a distinction between a national and one who possesses the right to leave, to enter, or remain in the country. In the United Kingdom, this latter group consists of Commonwealth citizens and those belonging to European Union member states. Both of these groups have voting rights without the requirement to take out British citizenship.

164. Many countries have electoral rolls that enable identification of people with an immigrant background. It is possible to determine whether or not these people voted, although not how they voted. For countries such as Australia, where enrolment and voting is compulsory, the level of non-turnout is of interest. For political systems where voting is voluntary, it may be possible to determine the level of turnout by immigrant group relative to each other as well as the host country population. For these countries, consideration of those who are eligible to vote who have not enrolled, especially after taking up citizenship, is a revealing indicator.

165. Cross-sectional data are usually the primary way of looking at voting participation. Electoral rolls would allow, by flagging when people voted, a longitudinal view of voting behaviour of migrants. This would be particularly useful in systems where voting was voluntary.

166. Figure 4.4.6 shows trends in voting in local elections in Norway amongst immigrants from different source countries over time. In Norway, people who have lived in the country at least 3 years can vote in local elections (although not national ones). The data indicate that those with an immigrant background tend to be less likely to vote than the native born. However, the pattern amongst immigrants does vary depending on the source country.

Figure 4.4.6: Participation in local elections in Norway – all voters and voters with immigrant background, 1987-2011.



Source: Statistics Norway³³

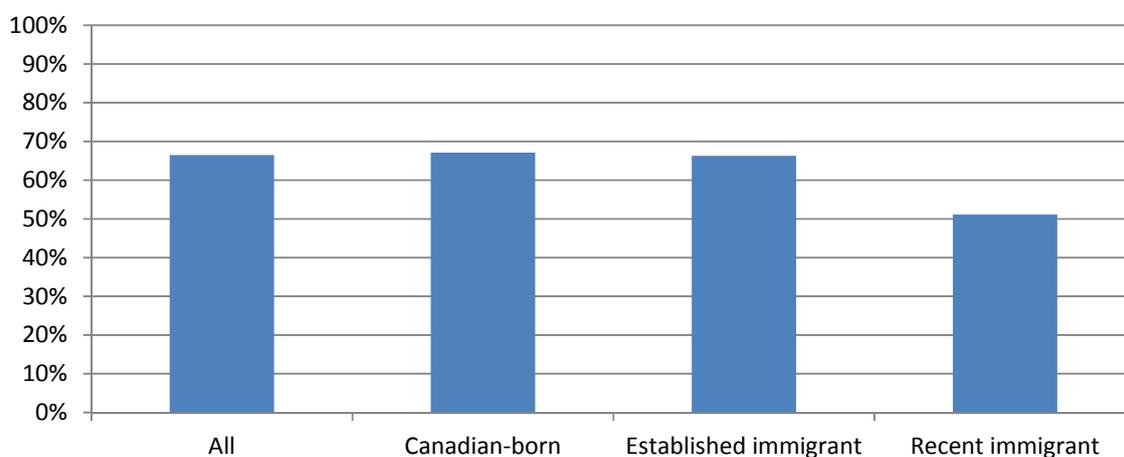
Note: Immigrant background refers to persons born abroad of two foreign-born parents and four foreign-born grandparents or Norwegian-born to immigrant parents.

167. One possible reason for changes in aggregate voting participation patterns of immigrants from different source countries could be due to migration patterns of different groups. For example, migrants who have recently arrived (who are less familiar with the host country's political system and/or more likely to be represented in jobs where it is harder to take time off to

vote) may be less likely to vote in elections compared to those who are more established in their local community. For this reason, when possible, voting participation should be examined across different durations of stay in the host country. Indirectly this pattern is visible in the Norwegian data as participation is significantly higher for those who have obtained citizenship. In order to obtain a Norwegian citizenship you need at least 7 years of residency and in figure 4.4.6 we see that those with Norwegian citizenship have a higher participation rate than those who have a foreign nationality.

168. Figure 4.4.7 shows voting participation rates for Canadian citizens in federal elections by immigrant status and different duration of stay in Canada. The pattern indicates that recent immigrants tend to be less likely to have voted than more established ones.

Figure 4.4.7: Voting participation rate for persons aged 18 years and older in Canadian federal elections in May 2011, by migrant status



Note: Immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Established immigrant refers those who received permanent resident status at least 10 years before May, 2011. Recent immigrants refer to those who have received permanent resident status less than 10 years before May, 2011.

Source: Statistics Canada, Labor Force Survey, May 2011

169. While the focus in this section on voting participation is on a time perspective, the examples are limited to cross-sectional data. With these examples, we get a glimpse of how migrants voting participation can change through time, but are also subject to the typical limitations of cross-sectional data sources.

170. Also, voting rates estimated by surveys are typically higher than official turnout rate statistics. One reason suggested for this is that non-voters tend to be less likely to respond to surveys (Bauman and Julian 2010). Another possible reason is that self-reported voting may be affected by ‘social desirability’ bias – the tendency of respondents to respond to surveys in a way that they feel would be viewed positively by others (Holbrook and Krosnick 2010).

Social participation

171. Social participation is a broad concept, however, participation in inherently enjoyable activities that are valued in their own right provide some indication of a migrant's integration into community life. These activities can be either formal, provided by organised groups, or informal, with family and friends. Community participation can be viewed as participation in activities that

are aimed at providing assistance to other individuals, groups and the wider community, but are not directly related to political participation or participation in governance.

172. Participation in social aspects of the community such as sports and recreation, religious or school groups and arts and cultural activities provide some measure of integration. An Australian study (Khoo and Temple 2008) suggests that participation in these types of activities can contribute to developing friendships and a greater sense of community between local residents and migrants. Social surveys in Australia, New Zealand and Canada have found that level and type of social participation is related to the demographic characteristics of the migrant. Age, sex, marital status, education, labour force status, country of origin and language proficiency (in terms of the host country) all play a part in terms of a migrant's likelihood of participation.

173. Many indicators include participation in arts, cultural, sports and leisure activities as measures of well-being. The added dimension for migrants is the level to which they are involved, and specifically which activities they are involved in, relative to the native born and whether this changes through time.

174. The focus for the second generation is on whether their level of participation matches that of the native-born population and more importantly has it increased over that of the first generation or even expanded into areas that were not well supported by the first generation. Second generation individuals are often, as children, exposed to a wider range of social interactions through avenues such as education, as well as formal and informal social activities. Language proficiency in the context of the host country's language is usually high, with the added advantage that many of the second generation are multilingual.

175. As with the foreign born, social participation contributes to the development of friendships, sense of community and increases social capital. Indicators are essentially the same as for the foreign born, that is, rates of participation in arts, cultural, sports and leisure activities. The comparators of interest are the foreign-born group and that part of the host population who are at least third generation (i.e. have both parents born in the country). The added dimension to discern whether there has been any change or improvement in participation rates would be country of birth of father and/or mother, as this enables a direct comparison between the first and second generation.

176. Several countries conduct a General Social Survey or equivalent survey. Some of these surveys have been based on capturing elements associated with the concept of well-being. These surveys allow for point in time comparisons of migrant social participation compared with the native born. This participation is in the context of a range of activities that include sport and recreation, arts and culture, as well as religious and ethnic activities.

177. In addition, some countries (e.g. Australia) conduct specialised surveys that examine sport and physical recreational activity, participation in arts and cultural activities, as well as attendance at arts and cultural events and venues. These surveys allow for a more detailed breakdown of the types of activities that are undertaken, while still allowing for comparison with the native-born population.

178. The use of longitudinal surveys would enable examination of how settlement outcomes change over time in the context of different types of social participation. Factors associated with

both positive and negative change could be determined. These factors relate to, and include, the demographic characteristics of migrants, their geographic location within their new environment, and the strength of linkages to the host society as well as their ethnic networks. Several longitudinal surveys have been conducted (e.g. Longitudinal Survey of Immigrant to Canada, Longitudinal Survey of Immigrants to Australia) that have sought information about social participation and interactions of migrants within the migrant's new country. These two surveys were conducted in the early 2000s but have since ceased.

179. For the second generation, such methods would allow for analyses of the level of engagement and participation from an early age and how that relates to the first generation. Factors associated with both positive and negative change in both generations could then be determined. For the second generation these factors would relate to the demographic characteristics of their parents, their geographic location, as well as their own education and social situation.

Volunteering

180. Volunteering is a diverse activity that delivers significant economic and social benefits for both individuals and the broader community. Willingly giving time to do work for an organisation or community group on an unpaid basis can extend and enhance social networks. For example, volunteering may be the basis of relationships between community members who do not normally associate with one another.

181. People volunteer for a variety of reasons. These include social reasons, such as making new friends and contributing to their community, to economic reasons such as gaining new skills and gaining job experience. It is generally acknowledged that new immigrants have immediate needs such as finding shelter, employment and schools for children which may act as barriers to volunteering initially.

182. Hugo (2011) notes that second generation migrants are 'less likely to operate in a communal paradigm 'seeing voluntary work as an 'individualistic perspective of society' rather than as a 'community obligation'. So both the nature of the volunteering and the rates of volunteering are of interest.

183. The ability to differentiate between formal and informal volunteering is important as it has an impact on people's views of whether they have volunteered or not. Formal volunteering, mediated through an organisation or group, is relatively straightforward to define and measure. Non-organised or informal volunteering, defined as informal unpaid help and care that occurs within the personal networks of family, friends, neighbours or acquaintances can often be misunderstood with some migrants not being aware that this constitutes volunteering. Such misconceptions can lead to an understatement of levels of volunteering in surveys.

184. It is also important to know the context in which migrants are volunteering. Is it for organisations or activities within their own ethnic sphere or is it for the wider community of their new country? Understanding why people volunteer may assist policy makers in providing an environment that encourages greater involvement. In addition, barriers that preclude migrants from volunteering need to be understood so that they can be addressed.

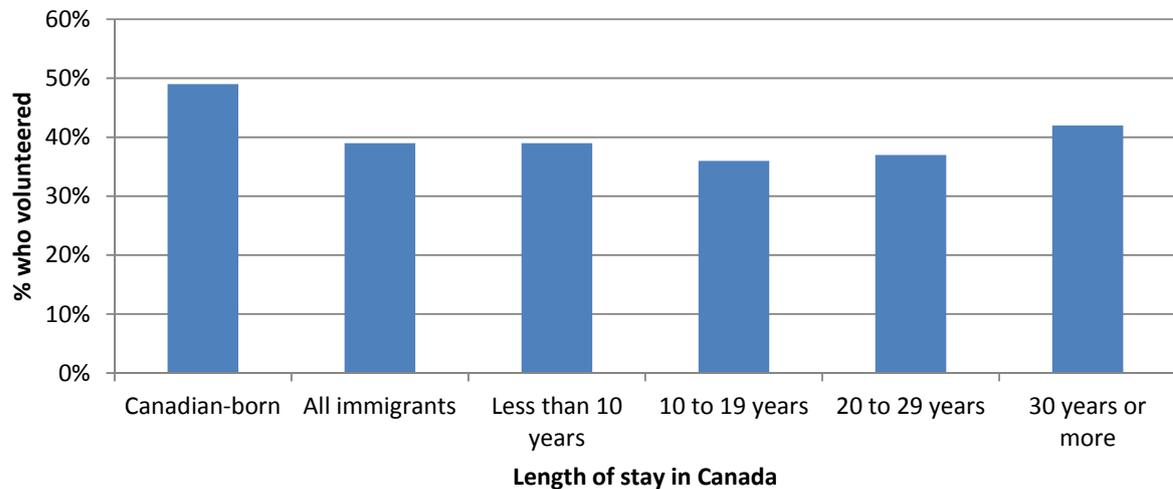
185. The major sources of information about volunteering come from general social surveys (as in Canada and Australia). The primary measures relate to the level of volunteering among the population and in relation to specific population groups such as migrants. A breakdown of the type of volunteering, either formal or informal, provides insights into the level of connectedness of migrants with their new community.

186. Measures relating to barriers to volunteering are critical. Examining the various barriers that prevent migrants from working with community organisations is important in the context of understanding the levels of engagement of migrants with their new community. General social surveys can provide this type of information.

187. The majority of surveys provide cross sectional information that deliver volunteer rates by sectors of the community, type of volunteering undertaken and occasionally, and barriers to being a volunteer. These allow us to know much about the demographic characteristics of volunteers. However, there are a few longitudinal studies that encompass volunteering by migrants. One of these is the Households Income and Labour Dynamics in Australia (HILDA) survey. Such studies show how a life-course perspective can benefit the study of people's involvement in volunteering. The use of longitudinal surveys enables a picture of how changes in a migrant's life affect the propensity to volunteer. They also provide for a greater understanding of the factors that are related to starting or stopping volunteering.

188. Figure 4.4.8 provides a snapshot picture of volunteer rates for immigrants across different lengths of stay. Immigrants who have been in the country for less than 10 years and those who have been in the country more than 30 years tend to volunteer more, but not as much as the Canadian born.

Figure 4.4.8
Volunteer rate by length of stay in Canada, 2010



Note: Immigrant refers to person who has been granted the right to live in Canada permanently by immigration authorities. Most immigrants are born outside Canada, but a small number are born in Canada. Some immigrants are Canadian citizens by naturalization, while others are not. Period of immigration refers to the year they first obtained permanent resident status.

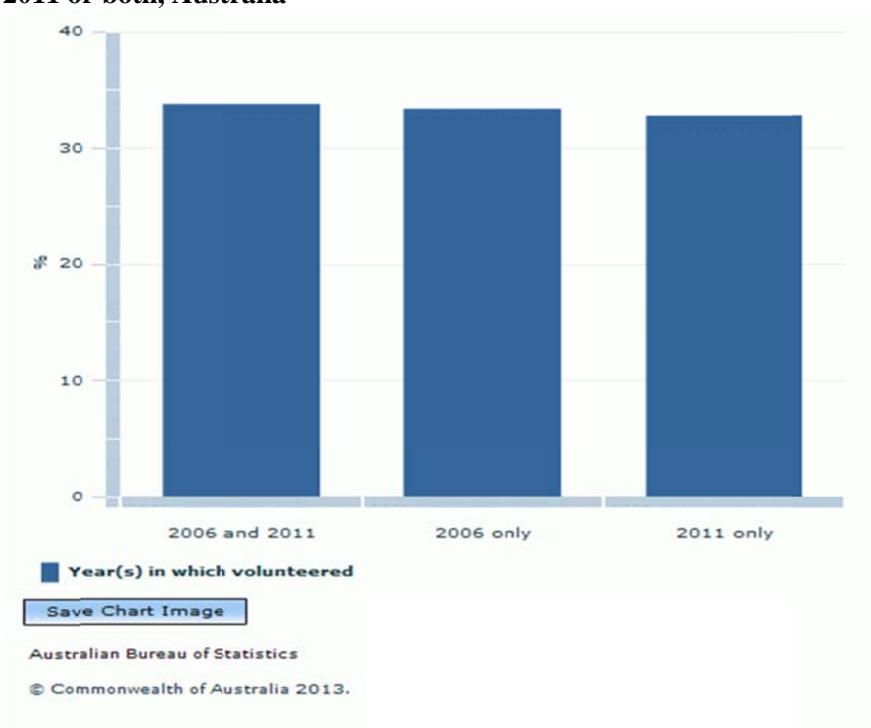
Source: Statistics Canada, Canada Survey of Giving, Volunteering and Participating, 2010.

189. Again, because this is cross-sectional data, we cannot say if this change in volunteer rates with length of stay is not actually due to other factors, such as differences in the age composition of different immigrant cohorts. More recent immigrant cohorts tend to be younger, while cohorts who have been in the country longer tend to be older. Previous research in Canada has indicated that younger people tend to be more likely to volunteer, but tend to volunteer fewer hours than older individuals (Vézina and Crompton 2012)

190. Longitudinal data that follow individuals through time could be used to better understand changes in volunteer rates across different life course stages. In Figure 4.4.9, data from the Australian Census Longitudinal Dataset show how there is significant movement in and out of volunteering through time. In fact, only one third of Australians volunteered in both 2006 and 2011, while the rest only volunteered in one of these years.

Figure 4.4.9

People who volunteered in 2006 and/or 2011 as a proportion of all people who volunteered in 2006, 2011 or both, Australia



Footnote(s): (a) Excludes people where it was not stated if they volunteered in either 2006 or 2011.

Source: Australian Census Longitudinal Dataset (ABS cat. no. 2080.0).

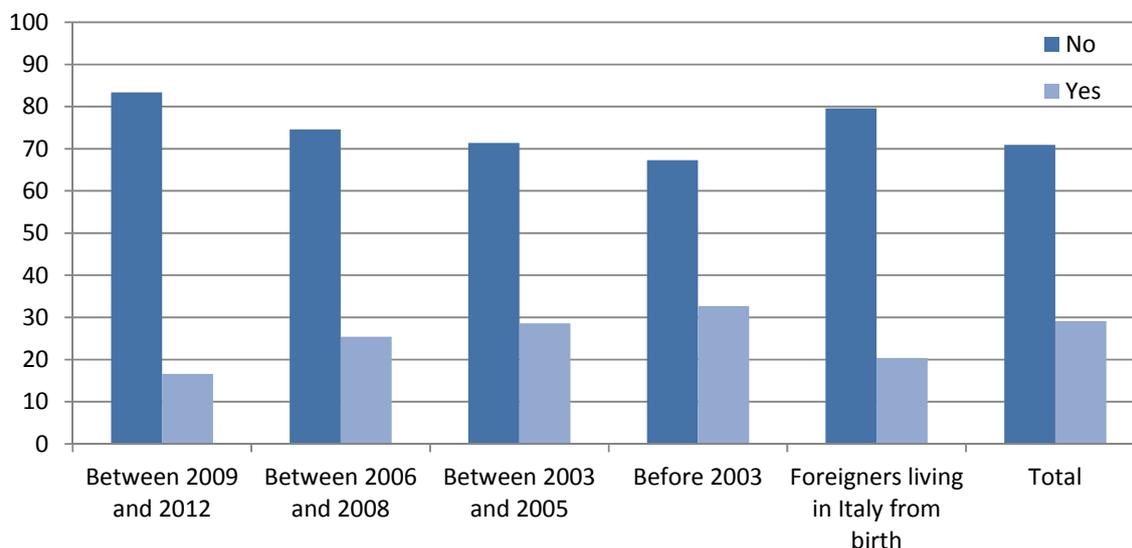
Discrimination, victimisation and feelings of safety and trust

191. Laws, rules and guidelines underpin societies. When these breakdown people can be subject to discrimination, become victims of crime and generally feel less safe within their community. Being discriminated against or being a victim of crime can cause financial, physical, psychological and emotional hardship for the victim and their families. The foreign born, and particularly recent migrants, can be more severely affected in this way. Recent migrants are often unfamiliar with their new community's norms and may find themselves subject to discrimination. Their support networks may also be less well developed and thus the impact of the event may be more profound.

192. Rights awareness increases with the length of stay in the host country. The perception of discrimination may therefore be greater with increasing persistence in the host country. Figure 4.4.10 provides a snapshot of the proportion of foreign citizens who felt to be victims of discrimination due to their foreign origins across different length of stay in Italy. Immigrants who have been in the country for less than 4 years feel to be victims of discrimination less than those who stay in the country more years; the percentage of immigrants tends to increase with increasing length of stay.

Figure 4.4.10

Foreign citizens 15 years and older who perceived to be discriminated against because of their foreign origin by year of arrival. Years 2011-2012.



Note: Foreign citizens refers to people who are not Italian and resident in Italy in 2011-2012. Irregular immigrants are not included, as well as those who are regular but not resident in Italy. People with foreign background who acquired Italian citizenship are also excluded.

Source: Italian National Institute of Statistics, “Condition and social integration of foreign citizens-SCIF” Survey – Year 2011-2012

193. Crime statistics have long been considered as potential indicators of social well-being or cohesion; however, there are concerns about whether they reflect a true picture of discrimination and/or offending, particularly in the context of migrants. For example, is racial discrimination actual or perceived? These issues are continually being debated. Other considerations are whether migrants are more likely to be victims of crime, whether they are less likely to report crime to the police, or whether they actually contribute to an increase in criminal activities. All these lines of thought have been posed and perpetuated by various social and political groups.

194. The impact of discrimination and/or being a victim of crime can also lead to lower feelings of safety. Such feelings can mean that migrants may adjust their behaviours. For example, not going out at night or taking additional security measures. These actions can affect the individuals involved such that they may lose confidence and their sense of freedom thus potentially affecting their ability to integrate into their communities.

195. Allied to feelings of safety are the degrees to which people trust others people in general, as well as people associated with particular occupations and institutions. Having trust in others to behave according to accepted social values and norms is a fundamental aspect of a well-functioning community and data which seek to measure levels of trust in others are recognised as being important to understanding levels of social capital¹.

196. While the second generation may be more immersed in the ways of their country of birth they often remain connected to the culture and customs of the country of birth of their parents. So, while they invariably have more well developed networks formed through education and social

activities, they can be subject to discrimination in a manner not dissimilar to that experienced by their parents on the basis of ancestry, visual appearance and /or religion.

197. Information about criminal justice systems exist in most countries, however, there are often differences in the style, timing, level and extent of reporting. Information about offences and victims is often available from administrative data, such as that compiled by police, courts and corrections systems. For example in Australia, the ABS uses administrative data to compile offender and victimisation statistics from police records. Administrative data also allows for the compilation of courts and corrections information.

198. In figure 4.4.11 below, trend data are presented for various countries showing the number of racist crimes recorded in their official records.

Figure 4.4.11

Trends in officially recorded racist crime, 2000-2009.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change 2008-2009	% change 2000-2009
Belgium	757 crimes	751	727	848	1,021	1,272	1,375	1,304	1,188	1,053	-11.4%	+8.5%
Czech Republic	364 crimes	452	473	335	364	253	248	196	217	265	+22.1%	-6.0%
Denmark	28 incidents	116	68	53	37	87	227	35	175*	306	+74.9%	+89.1%
Germany	-	14,725 crimes	12,933	11,576	12,553	15,914	18,142	17,607	20,422	19,468	-4.7%	+8.2% 2001-2009
France	903 reports	424	1,317	833	1,574	979	923	723	864	1,841	+113.1%	+6.1%
Ireland	72 reports	42	100	62	84	94	173	214	172	128	-25.6%	+27.9%
Austria	450 complaints	528	465	436	322	406	419	752	835	791	-5.3%	+11.3%
Poland	215 crimes	103	94	111	113	172	150	154	122	109	-10.7%	-1.5%
Slovakia	35 crimes	40	109	119	79	121	188	155	213	132	-38.0%	+31.6%
Finland	495 crimes	448	364	522	558	669	748	698	1,163*	1,385	+19.1%	+33.1%
Sweden	2,703 crimes	2,785	2,391	2,436	2,414	2,383	2,575	2,813	4,826**	4,707	-2.5%	+10.3%
England & Wales	47,701 incidents	53,121	54,858	49,344	54,157	57,863	60,926	62,071	58,445	55,862	-4.4%	+2.2%
Scotland			1,699 offences	2,673	3,097	3,856	4,294	4,474	4,543	4,564	+0.5%	+18.1% 2002-2009
Northern Ireland							1,006 incidents	1,183	1,044	1,036	-0.3%	-0.5% 2002-2009

Source: European Union Agency for Fundamental Rights. 2011. "Fundamental rights: challenges and achievements in 2010".

199. In addition, some countries, such as Australia, conduct household surveys to collect information about crime victimisation. This approach allows for measures of personal crime, household crime and social disorder to be calculated in the context of other demographic and labour force variables.

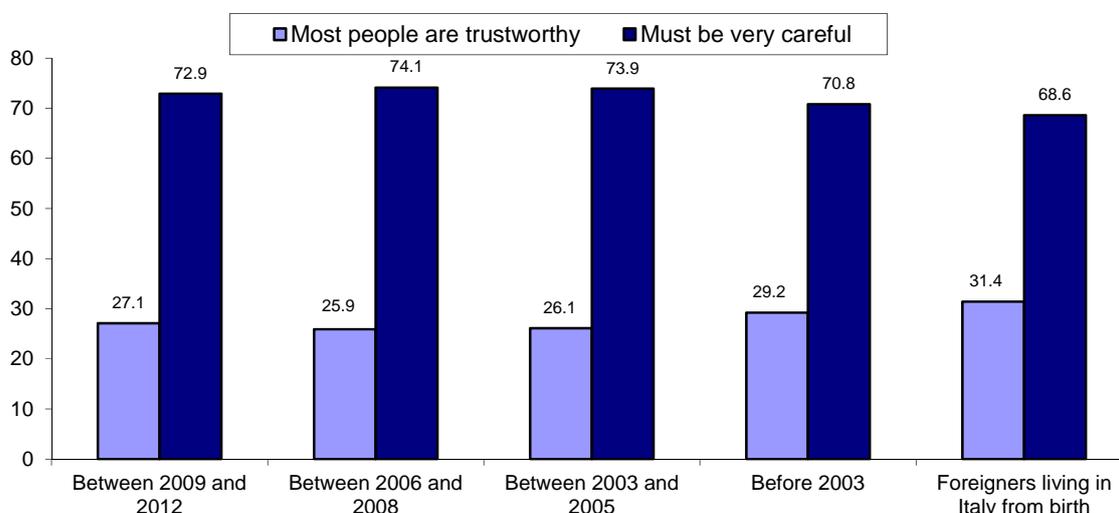
200. General social surveys may also collect information about a person's feelings of safety within the community and how that level of feeling manifests itself in terms of their behaviours. Some of these surveys also collect information with respect to the levels of trust that people feel for others in their community, doctors, hospitals and the police - key services within a migrant's new community police.

201. There are various examples of the collection of data about trust. Often responses are based on a scale (with varying number of points) of trustworthiness, e.g. from 'People can almost always be trusted' through to 'You can't be too careful'. The Australian General Social Survey utilises this method as does the European Social Survey and the International Social Survey Programme for non-OECD Europe.

202. In Italy, information with respect to the levels of trust that people feel for other people in their community, as well as the trust with respect to neighbors, police and unknown people, have been regularly collected since 1990 for the total resident population. The same information was also collected on foreign citizens in a social survey devoted to foreign population carried out in 2011-2012 (see figures 4.4.12 and 4.4.13).

Figure 4.4.12

Foreign citizens aged 14 years and older who trust/distrust people by year of arrival in Italy, Year 2011-2012

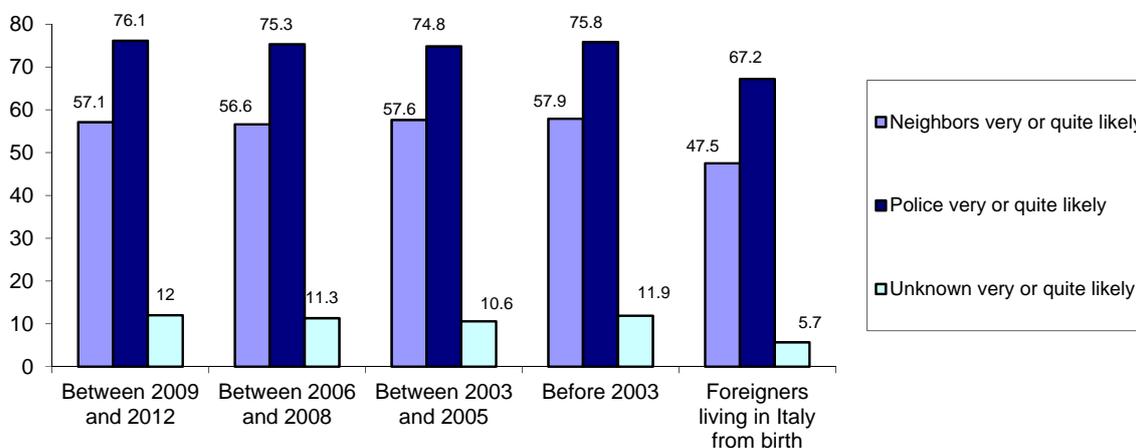


Note: Foreign citizens refer to people who are not Italian and resident in Italy in 2011-2012. Irregular immigrants are not included as well as those who are regular but not resident in Italy. People with foreign background who acquired Italian citizenship are also excluded.

Source: Italian National Institute of Statistics, "Condition and social integration of foreign citizens-SCIF" Survey – Year 2011-2012

Figure 4.4.13

Foreign citizens (14 and older) who trust in neighbors, police, unknown people in returning the lost wallet with money inside, by year of arrival in Italy, Year 2011-2012



Note: Foreign citizens refer to people who are not Italian and resident in Italy in 2011-2012. Irregular immigrants are not included as well as those who are regular but not resident in Italy. People with foreign background who acquired Italian citizenship are also excluded.

Source: Italian National Institute of Statistics, “Condition and social integration of foreign citizens-SCIF” Survey – Year 2011-2012

203. While indicators relating to crime and feelings of safety can be viewed as negative indicators, they are, nonetheless, important in determining the level of integration and well-being of migrants.

204. The same measures or indicators that are applicable for the foreign born for discrimination, feelings of safety and trust, can also be used for the second generation.

Intermarriage/ Mixed Unions

205. Another topic regarding the social incorporation of migrants that the Task Force briefly discussed is the formation of mixed unions (either through marriage or common-law partnerships) of migrants and their descendants who were of different ethnic background, country of birth, religion or nationality/citizenship, etc. This topic is relevant to an understanding of cultural diversity especially in the context of family or household, social cohesion, and social distance between groups. The formation of mixed unions can also be relevant to understanding different economic outcomes of various groups. Individual countries have done some work using various definitions of mixed marriages or unions. For example, Switzerland used data from vital statistics and stock survey data to estimate proportion of mixed marriages (Office Fédéral de la Statistique, 2014) and Canada used stock household survey data (Maheux, 2014). There was also comparative work among European countries by Eurostat (Lanzieri, 2012).

Summary

206. The social and civic dimension covers the extent to which migrants’ and their descendants are accepted by the wider society and included in a society’s democratic process and community organizations. For migrants, this inclusion can be a lengthy process of adaptation. For their

descendants, lack of incorporation can indicate significant issues in host countries' institutions or problematic intergroup relations. The Task Force acknowledged that there are many concepts and potential indicators within this dimension. A few indicators, such as citizenship, voting, volunteering, experience of discrimination, sense of trust and mixed union, and their relevance were briefly discussed by the Task Force. However, the Task Force acknowledged that there is a significant data gap in this dimension, in terms of standard concepts and availability of multiple cross-sectional or longitudinal data sources.

5. Conclusions & Recommendations

207. The Task Force identified indicators deemed most relevant and important for a basic understanding of migrant socio-economic characteristics and demonstrated their use in longitudinal analysis. The Task Force focused on four key socio-economic dimensions, including demographic, education, economic, and social and civic indicators.

- **The Task Force recommends that countries collect information on the following indicators on migrants and their descendants: share of migrants in the total population, knowledge of host country's language(s), educational attainment, employment rate, citizenship acquisition, voting participation, social participation and volunteerism.**

208. The availability of longitudinal surveys on migrant population is limited. This poses a major challenge to the more comprehensive study of the longitudinal nature of immigrant settlement process. In the absence of longitudinal household surveys, the Task Force used cross-sectional survey data, time-series administrative data and data from record linkages to fill longitudinal data gaps. Examples of longitudinal analysis using the different data types, interpretation of the indicators and limitations of each example were presented.

- **If only single cross-sectional data are available, the Task Force recommends the collection of time-related information, such as year of migration, age at migration (which could also be derived by combining information on year of migration and age), and duration of residence in receiving country (which could also be derived by combining information of year of migration and the time of data collection or reference period).**
- **If comparable cross-sectional data are collected at multiple times, the Task Force recommends their use for analysis of change over time.**

209. Countries which traditionally rely on surveys are increasingly looking at data linkage approaches to further develop data. There are challenges with this approach, such as how to evaluate and improve data linkage quality, and how to interpret indicators derived from linked files.

- **The Task Force recommends that statistical agencies continue to develop data linking methodology to improve migration data and collaborate at the international level by sharing their experiences.**

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Appendix A: Proposed list of socio-economic indicators

1. Based on comments received at the UNECE-Eurostat Working Group on Migration Statistics in October 2012 and prior work of the Task Force in developing the Labour, Social, Demographic and Education dimensions, Task Force members identified a list of indicators relevant for each dimension.

2. In order to provide a list both comprehensive and concise enough to be of practical use, a questionnaire was developed and distributed among each Task Force member to rank every prospective indicator from each of the four dimensions on a priority scale (i.e. “1 - High priority”, “2 - Medium priority” or “3 - Low priority”). Thirteen of seventeen members (both countries and international organizations) responded to the questionnaire. After tabulating the results, each indicator was given an average score. The final indicators were chosen based in part on their ranking relative to the other indicators in their dimension, and in part on their average score. The following table shows the definitions, the average score and the final ranking of the indicators for each of the dimensions.

3. After the survey was conducted, some new indicators were also proposed, discussed and deemed relevant. They were added to this list with the symbol NI, but were not given a rank nor an average score.

Indicators	Average score	Rank (May 2013)
DEMOGRAPHY		
Age	1.1	1
Knowledge of host country's official language(s)	1.1	1
Sex	1.2	3
Country of birth	1.3	4
Country of birth of parents	NI	NI
Location of usual residence	1.4	5
Citizenship	1.4	6
Country of citizenship	NI	NI
Work eligibility	1.5	7
Age of children	1.6	8
Fertility rate	NI	NI
Household type	1.7	9
Family/Household composition	1.7	9
Eligibility for social benefits	1.7	11
Marital status	1.8	12
Household or Family Status	1.8	13
Self-rated health	1.9	14
Dwelling owned or rented	1.9	15
Children born alive	2.0	16
Ability to speak host country's official language(s) at home	2.0	16
Other language(s) spoken at home	2.1	18
Proportion requiring visa, and type of visa	2.2	19
Household deaths	2.8	20
EDUCATION		
Highest educational attainment (in host country and outside)	1.1	1

Post-migration highest educational attainment	1.3	2
Economic status by educational attainment and generational status (income, labour force status, occupation, industry)	1.5	3
Proportion in education or training post-migration, through time	1.6	4
Proportion dropping-out of secondary school	1.8	5
Proportion graduating secondary school	1.8	6
Proportion graduating post-secondary school	1.9	7
Proportion dropping-out of post-secondary education	2.0	8
OECD PISA combined reading scale	2.0	9
Median time until first job after graduation	2.0	9
Types of problems in accessing education or training	2.0	11
OECD PISA combined mathematics scale	2.1	12
Proportion with proficient computer literacy	2.3	14
Grades in secondary education, through time	2.3	14
Grades in post-secondary education, through time	2.3	16
Proportion returning to full-time schooling after leaving for the labour market	2.4	17
Proportion repeated grade in elementary/secondary school	2.5	18
Teacher-student ratio	2.8	19
ECONOMIC		
Employment rate	1.1	1
Part time/full time, employed/self-employed	1.1	1
Unemployment rate - short term/long-term unemployment	1.1	1
Participation rate	1.1	1
Employment by occupation	1.2	5
Employment by sector/industry	1.3	6
Education-job mismatches (Over-qualification)	1.4	7
Multiple job holder	1.9	8
Proportion with credentials recognized	2.0	9
Proportion with credentials assessed	2.2	10
Employment income	NI	NI
Household income	NI	NI
At risk of poverty rate	NI	NI
Property ownership	NI	NI
SOCIAL AND CIVIC		
Citizenship take up	1.4	1
Path/ways to citizenship	NI	NI
Time to acquiring citizenship	1.6	2
Visa category	1.8	3
Voting participation	1.9	4
Single/dual citizenship	2.0	5
Volunteering participation	2.3	6
Participation in social activities (art, cultural, sport, religious, cultural, community)	2.3	7
Type of volunteering	2.5	8
Access to services	NI	NI
Ability to access support	NI	NI
Discrimination, victimisation and feeling of safety and trust	NI	NI
Cultural diversity (mixed marriage/relationship, language proficiency, religious affiliation)	NI	NI

Appendix B: Country's data table inventory (Latest update: December 29, 2014)

DEMOGRAPHY DIMENSION

	Fig.	Titles	Fig. provided by:	Data sources	Similar chart from other countries?
Size	4.1.1	Number and share of the foreign-born population in Turkey, 1935 to 2011	Turkey	Turkist Statistical Institute, population censuses, 1935-2000; and 2011 Population and Housing Census	<ul style="list-style-type: none"> Spain : 1991-2001 censuses and 2002-2013 Intercensal Estimation Norway: Yes Canada: 1901 to 2006 censuses and 2011 National Household Survey Italy: Census 2001-2011 UK: Census 1951- 2011
	4.1.2	Share of persons with immigrant background in Denmark, 1980 to 2014	Denmark	Population register	<ul style="list-style-type: none"> Australia: censuses Canada: censuses 1971, 2001 and 2006, 2011 National Household Survey Norway: Yes Italy: Census 2011
	4.1.3	Size of various cohorts of immigrants in Canada, by census year	Canada	Statistics Canada, censuses of population, 1981 to 2001 and National Household Survey, 2011	
	4.1.4	Annual flow of immigrants to Canada, 1901 to 2011	Canada	Citizenship and Immigration Canada	<ul style="list-style-type: none"> Spain: Spanish Migration Statistics for the period 2008-2012 Italy: Statistics on migration based on Population Register for years 2007-2012. Statistics on residence permits for extra-UE citizens, years 2007-2013.
Knowledge of official languages	4.1.5	Mother tongue and knowledge of official languages of recent immigrants in Canada, by census/survey year	Canada	Statistics Canada, 1971 and 1991 censuses; 2011 National Household Survey	<ul style="list-style-type: none"> Italy: Yes, with "Condition and social integration of foreign citizens" Survey– Year 2011-2012 (referring to foreign citizens)
	4.1.6	Ability to speak English for migrants who speak a language other than English or Irish at home, by year of arrival in Ireland	Ireland	Central Statistics Office, 2011 Census	<ul style="list-style-type: none"> UK: 2011 census Italy: Yes, with "Condition and social integration of foreign citizens" Survey– Year 2011-2012 (referring to foreign citizens)
	4.1.7	Foreign citizens in Italy aged 6 years and over, by proficiency in host country's language and age at arrival	Italy	Italian National Institute of Statistics, "Condition and social integration of foreign citizens" Survey – Year 2011-2012	

4.1.8	Percentage of immigrants who arrived between 1991 and 2000 that know at least one official language in Canada, by age at immigration, 2001 and 2011	Canada	Statistics Canada, 2001 Census and 2011 National Household survey	<ul style="list-style-type: none"> Italy: Yes, with “Condition and social integration of foreign citizens” Survey– Year 2011-2012 (referring to foreign citizens)
4.1.9	Overseas migrants who arrived in Australia between 2001 and 2006, Proficiency in spoken English in 2011, as a proportion of all people who spoke English 'Not well' or 'Not at all' in 2006	Australia	Australian Bureau Statistics, Australian Census Longitudinal Dataset, 2006-2011	
4.1.10	Proportion of immigrants aged 15 years and over, by level of spoken English at each wave, Canada	Canada	Statistics Canada, Longitudinal Survey of Immigrants in Canada, 2005	

EDUCATION DIMENSION

Fig.	Titles	Fig. provided by:	Data sources	Similar chart from other countries?
4.2.1	Highest qualifications of UK-born population, and non-UK born population by length of residence amongst the population aged 16+, United Kingdom, 2011	UK	Office for National Statistics, 2011 Census	<ul style="list-style-type: none"> Canada: censuses Spain: censuses Italy: censuses Ireland: censuses
4.2.2	Proportion of university degree among males and females aged 25- 54 in Ireland, showing migration status and period of arrival, by census year	Ireland	Central Statistics Office, censuses of population in Ireland, 2002, 2006 and 2011	<ul style="list-style-type: none"> Canada : censuses Spain: censuses Italy: censuses UK: censuses
4.2.3	Change in the proportion of highly educated males and females among recent immigrants and the native-born population between 2000-01 and 2009-10	OECD	OECD, "Settling in – OECD indicators of immigrant integration 2012 "	
4.2.4	Participation rate in tertiary education among immigrant, Norwegian-born to immigrant parents and total population, aged 19 to 24 years, by sex, 1999-2009	Norway	Nygaard, Geir (2010). “3.1 Education”, <i>Immigration and immigrants 2010</i> , Statistics Norway.	
4.2.5	Proportion of population having at least a university degree, by age group and age at immigration, Turkey, 2011	Turkey	Turkstat, 2011 Population and Housing Census	<ul style="list-style-type: none"> Canada: censuses and 2011 National Household Survey Italy: Yes, with “Condition and social integration of foreign citizens” Survey– Year 2011-2012 (referring to foreign citizens) UK: censuses
4.2.6	Proportion whose highest post-secondary education was obtained in Canada amongst the population aged 25 to 54 years and with a post-secondary	Canada	Statistics Canada, Canadian Census Longitudinal Dataset, 2006-2011.	

		degree in 2006, by immigrant status and period of immigration and two different census/survey years			
	4.2.7	Location of highest educational attainment transitions from 2006 to 2011, amongst the population with a post-secondary degree aged 25-54 in 2006, Canada	Canada	Statistics Canada, Canadian Census Longitudinal Dataset, 2006-2011.	
Intergenerational mobility	4.2.8	Comparing children and fathers' educational attainment, by source regions, Canada, 2002	Canada	Statistics Canada, Ethnic Diversity Survey, 2002	<ul style="list-style-type: none"> • Canada : General social survey and PIAAC • Australia: General Social Survey and PIAAC • Italy: Yes, with “Condition and social integration of foreign citizens” Survey– Year 2011-2012 (referring to foreign citizens)
	4.2.9	Proportion of post-secondary education among the males and females aged 25 to 54 years in Spain, by generation status, 2011	Spain	National Statistics Institute of Spain, 2011 Census	<ul style="list-style-type: none"> • Canada : Census or National Household Survey • Italy: Yes, with “Condition and social integration of foreign citizens” Survey– Year 2011-2012 (referring to foreign citizens)
	4.2.10	Proportion with university degree among immigrants who were parents and were aged 25-44 in 1986 and the second generation aged 25-44 in 2011, Canada	Canada	Statistics Canada, 1986 Census and 2011 National Household Survey	

LABOR MARKET and ECONOMIC DIMENSION

	Fig.	Titles	Fig. provided by:	Data sources	Similar chart from other countries?
Employment rate	4.3.1	Employment rate of person aged 35 to 44 years in Canada, by generation status and age at immigration, 2011	Canada	Statistics Canada, National Household Survey, 2011	<ul style="list-style-type: none"> • Italy: Yes, with “Condition and social integration of foreign citizens” Survey– Year 2011-2012 (referring to foreign citizens)
	4.3.2	Evolution of the employment rate for immigrants and non-immigrants in Spain by sex, 2002 to 2013	Spain	National Statistics Institute of Spain Labour Force Survey (LFS), 2002-2013	<ul style="list-style-type: none"> • Canada : LFS • Norway: Yes • Italy: LFS, 2005-2013
	4.3.3	Employment rate of person aged 25 to 54 years in Canada, by immigrant status and period of immigration, 2006 to 2013	Canada	Statistics Canada, Labor Force Survey, 2006 to 2013	
	4.3.4	Employment rate in Turkey, by age group, period of immigration and two censuses year	Turkey	Turkstat, 2000 Population Census and 2011 Population and Housing Census	<ul style="list-style-type: none"> • Australia: censuses • Canada: censuses • Spain: censuses • Italy: censuses • UK: censuses

	4.3.5	Labor force transition for the population aged 25 to 54 years, by migrant status and period of migration	Canada	Statistics Canada, Canadian Census Longitudinal Dataset, 2006-2011.	
	4.3.6	Proportion of immigrants aged 25 to 44 who had any employment, by weeks since landing, for selected immigration categories in Canada	Canada	Statistics Canada, Longitudinal Survey of Immigrants to Canada	
	4.3.7	Employment rate of immigrants ¹ aged 25 to 54 years in 2011, by admission category and length of stay in the country	Canada	Statistics Canada, 2011 National Household Survey linked with Immigrant Landing File	
	4.3.8	Share of employed refugees in Norway, 17-36 years old, by cohort and income year	Norway	Statistics Norway, Population and Income Statistics	

SOCIAL AND CIVIC DIMENSION

	Fig.	Titles	Fig. provided by:	Data sources	Similar chart from other countries?
Citizenship	4.4.1	Oaths taken in 2011 for the acquisition of citizenship for residence by year of application for the top 10 nationalities in Italy	Italy	ISTAT processing of Ministry of the interior (administrative data)	
	4.4.2	Trends in number of naturalizations per year, 2000-10	OECD	OECD (2012). Settling in – OECD indicators of immigrant integration. 2012.	
	4.4.3	Percentage of immigrants who are Canadian citizens, by period of immigration, Canada, 2011	Canada	Statistics Canada, National Household Survey, 2011.	
	4.4.4	Percentage of immigrants who are Australian citizens, by time since arrival and selected census years	Australia	ABS, 1986 to 2006 censuses	• Canada: censuses
	4.4.5	Percentage of foreign-born who are citizens of host country, population aged 15 years and over, 2000-01 and 2009-10	OECD	OECD (2012). Settling in – OECD indicators of immigrant integration. 2012.	
Voting	4.4.6	Participation in local elections in Norway – all voters and voters with immigrant background, 1987-2011.	Norway	Statistics Norway	
	4.4.7	Voting participation rate for persons aged 18 years in Canadian federal elections in May 2011, by migrant status	Canada	Statistics Canada, Labor Force Survey, May 2011	
Volunte	4.4.8	Volunteer rate by length of stay in Canada, 2010	Canada	Statistics Canada, Canada Survey of Giving, Volunteering and Participating, 2010.	

	4.4.9	People who volunteered in 2006 and/or 2011 as a proportion of all people who volunteered in 2006, 2011 or both, Australia	Australia	Australian Census Longitudinal Dataset	
Discrimination	4.4.10	Foreign citizens (15 years and older) who perceived to discriminated against because of their foreign origin by year of arrival	Italy	Italian National Institute of Statistics, "Condition and social integration of foreign citizens" Survey – Year 2011-2012	
	4.4.11	Trends in officially recorded racist crime, 2000-2009.	FRA		
	4.4.12	Foreign citizens (14 and older) who trust/distrust people by year of arrival	Italy	Italian National Institute of Statistics, "Condition and social integration of foreign citizens" Survey – Year 2011-2012	
	4.4.13	Foreign citizens (14 and older) who trust in neighbors, police, unknown people in returning the lost wallet with money inside, by year of arrival, Italy, Year 2011-2012	Italy	Italian National Institute of Statistics, "Condition and social integration of foreign citizens" Survey – Year 2011-2012	

Appendix C

Example of conceptual challenges using linked databases: Our experience analyzing education attainment change

4. We were interested in analyzing post-migration upgrade of education amongst immigrants using records from linked censuses. More specifically, we were interested in examining who upgraded and how the upgrade might be related to improved labour market outcomes. However, while considerable work is done to make individual censuses internally consistent, this does not mean a linked database using two or more censuses will have consistent information for the same person across censuses.

5. Our analysis indicated that a significant percentage (around 8%, but depended on how educational upgrade is defined) of respondents had lower educational attainment in 2011 compared to 2006. Note that educational attainment is a derived variable based on an implicit ranking of different educational certificates, diplomas, and degrees. There are a number of different possibilities for this pattern of invalid transitions: respondent self-selects out particular qualifications that were not recognized by employers; error due to proxy answers; recall errors, etc. Another important possibility is that the linked database included individuals who were incorrectly linked. This type of inconsistency is a limitation of linked databases that analysts will need to increasingly contend with as this type of data becomes more widespread.

6. Another issue we encountered when examining education change was that there was not a clear-cut way of defining education upgrade. This has largely due to the fact that, although there is an implicit ranking of in the educational attainment variable (see table below), it is not always clear what constitutes an increase in education. For example, should an individual's educational attainment which changes from a Masters degree to a medical degree be considered an upgrade, downgrade, or no change? As linked databases and longitudinal administrative sources become increasingly available, there will be a need to develop standardized longitudinal concepts in order to allow for international comparison.

Educational attainment variable available in the 2006 Census and 2011 National Household Survey
None
High school graduation certificate or equivalency certificate
Other trades certificate or diploma
Registered apprenticeship certificate
College, CEGEP or other non-university certificate or diploma from a program of 3 months to less than 1 year
College, CEGEP or other non-university certificate or diploma from a program of 1 year to 2 years
College, CEGEP or other non-university certificate or diploma from a program of more than 2 years
University certificate or diploma below bachelor level
Bachelor's degree
University certificate or diploma above bachelor level
Degree in medicine, dentistry, veterinary medicine or optometry
Master's degree
Earned doctorate degree

Appendix D

Data linkage projects on migrant populations in Task Force member countries

There are a number of data linkage projects completed and ongoing:

Australia

- **Migrants Census Data Enhancement Project (CDE)**
 - SLCD: a 5% sample of the 2006 Census is linked to the 2011 and subsequent censuses. At each census, the dataset is augmented with an additional children that have been born and immigrants that are arrived since the last census.
 - *Enhanced* SLCD: **To gain additional information on migrants**, the 2006 Census was linked to the permanent visa holders on Department of Immigration and Citizenship (DIAC) Settlement Database (SDB);
 - Plan to add the person-level data from the 2011 and subsequent censuses
 - Output: the *enhanced* SLCD dataset, created from a 5% bronze link between the SLCD and the SDB
 - Linkage of DIAC Settlements Database (SDB) with Australian taxation Office (ATO) Migrant Personal Income Tax (PIT) data
 - Uses gold standard (names and addresses) probabilistic linkage

- **Migrant Personal Income Tax (PIT) Data Integration Project (*feasibility phase*)**
 - Linkage of DIAC Settlements Database (SDB) with Australian taxation Office (ATO) Migrant Personal Income Tax (PIT) data
 - Uses gold standard (names and addresses) probabilistic linkage
 - Expected to be complete Jan 31, 2014

Canada

- **Longitudinal Immigration Database (IMDB)**
 - The Longitudinal Immigration Database (IMDB) is an administrative database which links the landing records of immigrants with information from their tax returns. The IMDB is managed by Statistics Canada on behalf of a federal-provincial consortium led by Citizenship and Immigration Canada. The longitudinal Immigration Database (IMDB) links immigration and taxation administrative records into a comprehensive source of data on the economic behavior of the immigrant population in Canada. It covers the period 1982 to 2010.
 - Information from landing file: socio-demographic, education, admission categories (reason of migration), intended occupation and initial place of residence
 - Information from tax file: income, industry, place of residence, family and household characteristics in subsequent years

- **Linkage of 2011 National Household Survey and Immigrant Landing File**
 - Unit of analysis: person, family and household
 - Information at landing: human capital, admission categories (reason of migration), intended occupation and initial place of residence
 - Information in 2011: ethnocultural characteristics (e.g. Place of birth, languages, religion, ethnic origins, citizenship), education, labor, income, family and household characteristics (e.g. living arrangement, housing condition, tenure), place of residence and place of work

- **Linkage of IMDB to LSIC**
 - At feasibility stage
 - Information at landing: socio-demographic, education, admission categories (reason of migration), intended occupation and initial place of residence
 - Information on initial settlement experience in areas such as labor market entry, education, training, credential accreditation and accessing health care, acquisition of Canadian citizenship, etc.
 - Information on income, mobility, family and household in subsequent years
- **Linkage of Temporary Resident Database (TR) to the Canadian Employer Employee Dynamic Database (CEEDD)**
 - Information on temporary residents who were in the labour market, the industry in which temporary workers were employed
 - Could link the TR file with the IMDB to identify immigrants who were TR before landing
- **Linkage of IMDB to GSS (cycle on Social Identity)**
 - Over sample of immigrants
 - Information on immigrants at landing (socio-demographic characteristics, admission category, human capital) and measures on social identity, network, sense of belonging, etc.

Denmark:

- **Labour Market Account (LMA)**

A micro data register making it possible to describe the population's labour market attachment defined in different ways with detailed background information, including migrant information. In addition to measuring status and volume, it is possible to analyze flows between different groupings. Statistics have been published from this database for 2014.

Estonia:

- **System of Statistical Registers (SRS)**

SRS will integrate existing statistical registers (economic entities and agricultural holdings) and new statistical registers (persons, and buildings and dwellings) into a common system.

Ireland:

- **Person Activity Register**

As part of its general work in developing administrative data sources, CSO are developing a Person Activity Register to summarise a person activity on key administrative data sources. While this is very much a work in progress, it may in the future be able to provide information on migrants.

Italy

- Register on residence permits are linked to the same register in different years to produce indicators from a longitudinal point of view and overcome limitations due to cross-sectional calculation of indicators, such as the number of long-term residents. This approach has been also used to provide indications on the strength of the roots of immigrants in the country and the dynamics of immigrants' mobility within the country.
- Cross sectional linkage of different sources has been done to produce data on the acquisition of citizenship. Data sets used are: municipal register of population, individual Ministry of Interior data sets, data from survey and calculations regarding foreign resident population and its movements.

Netherlands:

- **Social Statistics Database (SSD)**
Registers are linked to one another and to the Municipal Base Administration to produce cross-tabulations. They can also be linked to survey data and can be used to produce cross-tabulations or longitudinal analysis.
- **Dutch Virtual Census**
Compiled from available registers and surveys, has fewer variables than those in the Nordic countries.

Norway:

- **The Central Population Register (CPR)**
The CPS is the main source for Norwegian migration statistics, both on stocks and flows. All population statistics produced by Statistics Norway is based upon the CPR.
- **The Aliens Register**
The main purpose of the Alien Register is to support the immigration authorities in their case-processing.

These two products are coupled with surveys and the national census (census is also based on administrative data). As an immigrant coming to Norway it is the intended length of your stay (at least six months), or for most migrants the length and validity of the permit, that determines whether a person is registered or not. This information in the CPR is often based on information from the Aliens Register.

- **A decentralized system of about 10 longitudinal databases**
The plan is to develop a system of about 10 independent databases that are coordinated and organized in a way that would make it easy to select the necessary units and variables for a specified period. The record linking is to be organized by a menu. The 3 statistical base registers are organized as longitudinal databases.
 - The statistical CPR - some time series start in 1960
 - The statistical Business Register - some industries start in 1956, the coverage of all industries starts in 1995.
 - The statistical base register on land property, building, dwelling and address – the last component, the unit of dwelling, is operated from 2001. The Housing Census 2001 contributed to the initial file of the Dwelling register.

Turkey

- **Address Based Population Registration System (ABPRS)**
 - Turkstat established the system in 2007 and transferred to the Ministry of Interior to maintain it. All Turkish citizens and foreigners residing in Turkey are covered in the system.
 - The system is regularly updated and all governmental organizations and establishments use it in their administrative works.
 - Annual population statistics (population size by administrative division, age-sex structure, place of registration, nationality, literacy, educational attainment, legal marital status and internal migration in province level) are produced from this system
 - In order to update of the copied database of ABPRS, linkages are conducted annually with:
 - National Education Statistics Database (NED) which includes records related to students and graduates from Ministry of Education and all universities,
 - Residence permits and work permits,
 - Institutional places database
- **Population and Housing Census, 2011**
 - In 2011, for the first time, Turkey conducted population census with combined method by using ABPRS and conducting register based large scaled sampling survey. 2011 Population and Housing Census (PHC) was conducted in order to compile information which cannot be derived from Address Based Population Registration System, such as; labour force, employment and unemployment, reason for migration, disability and building and dwelling characteristics etc. at province/district level.

U.K.

- **International Passenger Survey (IPS)**

Utilized to provide better estimates of long-term immigration to England and Wales. Survey is based on multiple administrative sources to determine the most accurate estimates possible.

U.S.

- **Data provided by the Department of Homeland Security**

Administrative data on immigration and, to a limited extent, emigration is available from the U.S. Department of Homeland Security

UNECE

- UNECE has also published a set of best practices and recommendations for use of administrative registers (UNECE 2007). This publication lists examples and potential use of administrative registers for analysis of the general population, but also for the immigrant population.

Appendix E

Member list of the UNECE Task Force

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Notes:

1. Former member
