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Advancing Knowledge on International Migration: Data and Research Needs

24

Philippe Fargues

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IUSSP

3-5 rue Nicolas, 75980 Paris cedex 20, France

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International Union for the Scientific Study of Population

ISBN 978-2-87108-074-9

Advancing Knowledge on International Migration: Data and Research Needs

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IUSSP ■ Policy & Research Papers n° 24

This paper benefitted from discussions held in the framework of IUSSP's Ad Hoc Panel on "Strengthening migration data and research, in the context of the global compact for safe, orderly and regular migration" which the author had the honour to chair in October-December 2017. The panel was composed of: Marla Asis (Scalabrini Migration Center, Philippines); Mariama Awumbila (University of Ghana, Legon); *Panel chair*: Philippe Fargues, (European University Institute, Florence, Italy); Bela Hovy (United Nations Department of Economic and Social Affairs); Marcella Cerrutti (Centro de Estudios de Población, Argentina); Mohammad Jalal Abbasi-Shavazi (University of Tehran, Iran); Fernando Lozano (Centro Regional de Investigaciones Multidisciplinarias, México); Keiko Osaki (United Nations Department of Economic and Social Affairs, New York); Ellen Percy Kraly (Colgate University, United States); Emilio Zagheni (University of Washington, United States). The author wants to thank the entire panel and, in particular, Ellen Kraly, as well as Mary Kritz from the Center for Demography and Ecology, University of Wisconsin, Madison for their comments on a first draft of the paper. The author wants to express his special gratitude to the Population Division of the United Nations for supporting the study and organizing a special session of the International Population Conference held in Cape Town, South Africa on 30 October 2017.

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3-5, rue Nicolas
75980 Paris cedex 20 France

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International Union for the Scientific Study of Population
ISBN 978-2-87108-074-9

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EXECUTIVE SUMMARY

From the sheer numbers of migrants to the complex processes that set people on the move and the multiple changes they bring to both origin and destination countries, international migration suffers considerable deficits of knowledge. As international migration connects each country of the world with all the others, addressing knowledge gaps will require international consensus on definitions and methods of data collection. There is a long way to go before this most challenging objective will be reached. The current study describes some of the steps that need to be taken.

Defining international migration

A proper assessment of international migration data at the world level must be based on a systematic inventory of what exists and what does not in each country. For lack of such an inventory, this report provides an overview assessment of the various criteria used by public administrations to define and produce data on international migration.

Documenting international migration

Data are generally collected by national administrations to serve their own needs and not those of scientific research or evidence-based policymaking, with the result that data on international migration are too often insufficient and lacking in quality. Policymakers often lack the minimal statistical evidence necessary to make informed decisions, while academics lack the basic data needed for scientific research. This report identifies key issues that should be addressed to improve migration data for policymaking and scientific research. These include: disentangling migrants from travellers and differentiating between short-term mobility and migration; matching entry and exit data; counting emigrants, i.e. absent individuals; counting circular, seasonal and temporary migrants; and measuring irregular migration. These issues often require ad hoc measurement methods such as specialized surveys.

Mapping research on international migration

Research addresses the causes of international migration, the process of migration itself as well as its consequences; it does so in the countries of origin and destination, as well as in the transnational space spanning origin and destination.

This paper outlines 7 priority areas for research on international migration:

- *Determinants of migration in countries of origin,*
- *Pull factors in countries of destination,*
- *Linkages between countries of origin and destination,*
- *Migration stages,*
- *Emigrants, as actors of change in countries of origin,*
- *The inclusion of migrants and their contribution to development in destination countries,*
- *And finally, the global consequences of migration.*

Conclusions

To significantly improve our understanding of international migration, including its multiple determinants, complex processes and diverse impacts, the following challenges need to be addressed:

- All countries should acknowledge that international migration is defined by border crossing. Equating immigrants with foreign citizens confuses a geographic notion with a legal one and indirectly serves policies of exclusion.
- All countries should agree on producing population data by detailed country of birth using the same unified list of world countries.
- International organizations should make all possible efforts to extend the coverage of migration surveys to all the countries that host sizeable migrant populations in the Global North as well as in the Global South.
- The scientific community should organize itself at a global level to develop and disseminate methodologies to fill the huge knowledge gaps that are the result of the currently patchy, mostly administrative data.

INTRODUCTION

In any country, migratory movements (inward and outward international migration) combine with components of natural increase (births and deaths) to determine the reproduction of the population as well as its composition according to a wide range of individual and collective characteristics. However, there are at least four fundamental differences, all of them relevant for the purpose of this paper, between migratory movements and natural increase. First, while birth and death can only occur once in the life of every individual regardless of social and other conditions, international migration concerns just a small (and selective – non-representative) minority of the world population and these people can migrate more than once in their lifetimes.¹ Second, while births and deaths are in the first instance biological facts, migration is an exclusively social fact and, as such, the subject of contrasted interpretations and political positions. Third, while births and deaths occur within a country's national boundaries, international migration establishes a link between any country and all other countries of the world, thereby lending itself to expressions of nationalism and tensions between and within nations. Fourth, while birth and death are unequivocally defined and increasingly well-registered events, international migration lacks both a universally accepted definition and efficient measurement procedures.

Because of the fourth point, international migration suffers considerable deficits of scientific knowledge. From the sheer numbers of migrants and their basic characteristics to the complex processes that set people on the move and the multiple changes they bring to both origin and destination countries, scientifically validated results are indeed scarce. Because of the first three points, the lack of knowledge in the field leaves it open to ideology and passion.

1. At the end of 2017, international migrants are estimated at 258 million worldwide, representing 3.3% of the 7.6 billion world population.

“Hostility towards migrants is unfortunately growing around the world”, United Nations Secretary-General António Guterres warned on the occasion of the 2017 International Migrants Day.² Indeed, the way international migrants are viewed and dealt with has polarized in recent years. There seems to be a clear-cut divide between those who regard human mobility and diversity as a benefit for economies and a necessity for human progress and the advancement of societies and cultures, and those who regard them as a challenge and see immigrants as competitors to citizens and a threat to national identity and security.

This paper intends to contribute to setting an agenda for improving the collection of evidence on which scientific knowledge on international migration can be built. It targets migration studies scholars and statisticians as well as a wider audience comprising all those who want to reach an informed opinion about one of the most debated issues of the present day. It is part of population scientists’ rising engagement in the measurement and analysis of international migration and human mobility. The first section of this paper discusses the criteria used by data producers to define and describe international migrants and the categories they generate in both origin and destination populations.³ The second section reviews the data required for addressing research needs. The third section offers a frame for the multiple aspects of scientific research on migration that data must document.

2. <http://www.un.org/en/events/migrantsday/messages.shtml>

3. A third category, transit countries, is often taken into consideration. At this stage, transit countries can be considered to be successively destination and origin countries of migrants.

PART I. ASSESSING THE CRITERIA USED TO COLLECT DATA ON MIGRATION

Every country has both immigrants and emigrants and most governments show an interest in the matter. Universal questions include their numbers, where they live, their characteristics and what they do. From counting the migrants to collecting information that makes it possible to describe them, a myriad of public administrations provide direct and indirect data on migration. But apart from a few well-standardized procedures (mainly population censuses), each country does it in its own way and according to its own needs. As a result, migration data are characterized by a high level of heterogeneity across countries and between administrative sectors within each country. Even more importantly, these data are affected by considerable gaps that keep in the dark entire aspects of the phenomenon, and make it impossible to make informed comparisons over space and time.

A proper assessment of international migration data at the world level must be based on a systematic inventory of what exists and what does not in each country. For lack of such an inventory,⁴ the present chapter will focus on a preliminary but necessary step, which is a critical review of the various criteria used by public administrations to define and produce data on international migration. It will show that, while migrants, immigrants, emigrants, migrations, etc. are terms used every day by the media, governments, non-governmental organizations (NGOs), central statistical offices (CSOs) and ordinary citizens,

4. The United Nations Global Migration Database collects empirical data on international migration provided by various national sources, including population censuses, population registers, national surveys and other official statistical sources from more than 200 countries and territories. While the database is neither comprehensive nor fully updated, it provides important evidence on the heterogeneous and patchy nature of migration data that hampers time and space comparison. <http://www.un.org/en/development/desa/population/migration/data/empirical2/index.shtml>

their definitions are neither self-evident nor universal. The section below examines eight criteria commonly used to define or characterize international migration.

1. Border-crossing

Migration is by definition space mobility.⁵ When it is *international*, migration is a move from one country to another. By essence, international migration refers to mobility across national borders. Based on this fact, statisticians have offered a potentially universal definition. In an effort to produce data on migrant flows that can be compared and aggregated at the world level, the United Nations (UN) defines an international migrant “as any person who changes his or her country of usual residence. A person’s country of usual residence is that in which the person (...) normally spends the daily period of rest” (UN 1998, p.17).

As at any moment in time, a person can have one and only one country of residence, this definition should prevent omissions and double counting. In reality, however, the country of residence does not always correspond to the country where an individual actually lives, for example in the case of seasonal or temporary migration, or when states continue to register their citizens abroad as residents more than a year after their emigration (Thierry et al. 2005).

2. Country of birth

The UN also defines the “international migrant stock [as] the number of people living in a country or area other than that in which they were born” (UN 2009). It must be noted that this second definition, which applies to the population of migrants, is not fully consistent with the previous definition of an international migrant. Indeed, persons who return to their country of birth after a period of residence abroad are counted as international migrants using the first definition, but they are not part of the migrant stock according to the second. In other words, migrant stocks measured as the population born-abroad miss

5. The noun migration is derived from the Latin verb *migrare* (to move from one place to another).

all return migrants, which are an important category in countries with large flows of temporary emigration. This is the case of South Asian countries from where millions of temporary contract workers employed in the Arab Gulf States originate. As a general rule, numbers of current emigrants are smaller than numbers of persons who have migrated at one point in their lives, whether currently abroad or returned.

A second issue emerges. Using the country of birth criterion and considering migrants as persons born-abroad as opposed to natives is theoretically non-ambiguous, since every individual has only one country of birth. But it presupposes that international borders do not move. Dividing a nation's territory into smaller nations "creates" international migrants. For example, people born in Juba (Southern Sudan) and residing in Khartoum (Northern Sudan), who were internal migrants before Sudan split into two parts, became international migrants after the secession in 2011.⁶ Symmetrically, uniting nations into a single territory (a rarity in our times) "removes" international migrants. For example, people who migrated from Sana'a to Aden before 1990 ceased to be international migrants once the two Yemen's became one nation in 1990; the re-unification of the former two Germany's in 1990 is another example.

3. Country of citizenship

Acknowledging that "many of the concerns related to international migration are citizenship-specific", the UN recommends that data be made available on the two subpopulations of foreign-nationals and foreign-born persons (UN 1998, p.84). Considering the country of citizenship as a defining criterion *per se*, the International Organization for Migration (IOM) once defined immigration as "a process by which non-nationals move into a country for the purpose of settlement" (IOM, 2004).

6. The Russian Federation is a textbook case of international migration created by moving state boundaries. "According to the 2002 population census, Russia had 12 million natives of other countries. UN and World Bank experts consider them as international migrants. At the same time, they make a reservation – internal migrants in the former Soviet Union became international ones without traveling anywhere, just as a result of the emergence of new boundaries." (Vishnevsky, 2013).

While the dichotomy nationals / foreign-nationals (or, citizens / foreign citizens) established by this criterion is meaningful regarding a number of legal and sociological issues, it does not always correspond to actual cross-border migration. Indeed, not all foreign nationals were born abroad and people who never moved can be foreign nationals in the country where they were born and still live. This is the case of children of migrants born in countries where the right of citizenship is not granted to all who are born in the territory (predominant *jus sanguinis*). Similarly, not all foreign-born are foreign nationals and persons who moved can be nationals of a country where they were not born. Naturalized immigrants and returned born-abroad nationals illustrate this case.

As a result, the criteria “country of birth” and “country of nationality” can produce remarkably divergent estimates. Table 1 provides the ratio of foreign-nationals to foreign-born persons in the case of individuals originating from the Middle East and North Africa (MENA) and residing in North America or Europe. This ratio varies from a low 26 per 100 in Canada to a high 168 per 100 in Germany. Two main factors explain such differences between countries of destination. First, the rate of naturalization – an administrative practice by which migrants acquire the citizenship of the destination country – which for MENA migrants is the highest in Canada and the lowest in Germany. Second, the principle governing nationality at birth, which varies from an exclusive or dominant *jus soli* that confers citizenship of the country of birth to all individuals irrespective of their parents’ national origin (Canada, US, the Netherlands and France in Table 1), to a dominant or exclusive *jus sanguinis*, by which descent determines nationality (Germany before it revised its nationality law).

A second limitation with using the country of citizenship to assess international migration stems from the fact that citizenship is an unstable criterion (people can change) and is not unique (people can have zero, one, or several countries of citizenship). Statelessness can be a reason for omission and multiple citizenship for double (or more) counting. A dual citizen can be counted as a national by two nations at the same time. Let us take the population with a Moroccan origin currently living in the Netherlands as an example (Table 2).

Table 1: Ratio (per 100) of foreign citizens to born-abroad for migrant stocks originating from the Middle East and North Africa for selected countries.

Country of residence	Ratio
Canada 2001	26
United States 2000	43
The Netherlands 2005	50
France 1999	70
Germany 2001	168

Source: Fargues, 2013

In the Netherlands the population register provides only one country of citizenship for dual citizens, but at the same time keeps track of their origin: “All Dutch citizens are classified only as Dutch citizens, with additional nationalities neglected. Non-Dutch citizens who have two or more nationalities are classified by one of these nationalities. In this processing stage the demographic variable ‘origin’ is derived as well. This variable gives an indication of which part of the world a person is closely related with. [...] The ‘origin’ variable is composed of the country where a person was born and the parent’s countries of birth” (CBS-Statistics Netherlands, 2018). Using the same population statistics extracted from the population register (Table 2) and asked the same question “How many Moroccans reside in the Netherlands?”, Dutch and Moroccan representatives will probably respond with different numbers. For the Dutch representative, there are 51,008 Moroccan citizens in the Netherlands. For the Moroccan representative, it is seven times that figure, with a number of Moroccan (actual or potential) citizens ranging from 335,989 (all first-generation migrants plus all second-generation migrants with both parents born in Morocco), to 368,838 (the previous group plus second-generation migrants with only one parent born in Morocco). The exact number claimed by the Moroccan representative will depend on how many of the 32,849 second-generation migrants with one parent born in Morocco have a Moroccan-born father, since according to

Moroccan Law, citizenship is transmitted by the father. Who is correct and who is not? Both the Dutch and Moroccan representatives are right from their respective points of view and wrong from the other's point of view.

Table 2: Population of Moroccan Origin in the Netherlands on 1st January 2013		
<i>By Citizenship</i>		
A	Population with Moroccan citizenship	51,008
<i>By Place of Birth</i>		
B	1st generation	168,117
C	2nd generation: both parents born in Morocco	167,872
D	2nd generation: one parent born in Morocco	32,849
B+C+D	Total population of Moroccan Origin	368,838
<i>Numbers of Moroccan citizens according to:</i>		
Dutch authorities = A		51,008
Moroccan authorities = B + C + part of D		335,989 ; 368,838
Source of the data: Statistics Netherlands		

Table 3 illustrates the eight sub-populations with a migrant background that are defined by combining three binary criteria: place of residence (country of residence with a distinction between residents and non-residents); place of birth (country of birth with a distinction between natives and those born-abroad); and citizenship (country of citizenship with a distinction between citizens and foreign citizens or non-citizens). At any moment in time, the population with a migrant background that is of interest for a given country and potentially the subject of administrative records is comprised of residents with an origin outside the country and non-residents with an origin inside the country. Residents with an origin outside can be citizens, either born in the country from born-abroad parents (i) or born outside the country in the case of immigrants granted citizenship as well as of born-abroad children of returning nationals (ii). Residents can also be foreign-citizens, either born in the country but still holding the nationality of their foreign born parents (iii) or born outside the country in the case of immigrants

Table 3: Sub-populations with a migrant background defined by the combination of countries of residence, birth and citizenship

Country of residence		In - Residents with an immigration background		Out - Non-residents with an emigration background	
Country of birth		In	Out	In	Out
Country of citizenship	Citizens	(i)	(ii)	(v)	(vi)
		<i>Natives with born-abroad parent(s) (second-generation)</i>	<i>Naturalised immigrants & Returned nationals</i>	<i>Emigrants</i>	<i>Born-abroad from emigrant parents</i>
	Foreign-Citizens	(iii)	(iv)	(vii)	(viii)
		<i>Non naturalised natives with born-abroad parent(s)</i>	<i>Non naturalised immigrants</i>	<i>Born in the country from foreign-nationals who subsequently emigrated</i>	<i>Returnees and other re-emigrated former immigrants</i>

holding their nationality of origin (iv). Non- residents with an origin inside the considered country include citizens who were either born in the country and are now emigrants (v) or born abroad from emigrant parents (vi), and foreign-citizens who were either born in the country from migrant parents who re-emigrated (vii) or born-abroad in the case of re- emigrated former immigrants (viii).

4. Duration of stay

The duration of stay in a country of destination differentiates migration from simple mobility, and short-term from long-term migration. The UN recommends that a distinction be “made between short-term or temporary migration, covering movements with a duration between three and 12 months, and long- term or

permanent migration, referring to a change of country of residence for a duration of one year or more.”⁷ In contrast, the IOM “defines a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is” (emphasis added).⁸

It is only *ex-post facto* that a distinction can be made with certainty between a migrant and a simple traveller, or between a short-term and a long-term migrant. Because of possible discrepancies between the kind of visa used to enter a country and the actual nature and duration of stay, the distinction cannot be made at entry. Migration and other forms of mobility have neither the same magnitude nor the same legal, economic and social implications. Worldwide, migratory movements number in the tens of millions per year compared with over a billion border crossings annually. Moreover, long-term migrants are targets for integration and other policies, whereas travellers and short-term migrants are not.

Circular migration, a fashionable though not well specified concept deserves particular mention. The European Union (EU) recognizes two main forms of circular migration, one applying to “third-country” nationals settled in the EU and giving them an “opportunity to engage in an activity in their country of origin while retaining their main residence in one of the Member States”; and the other applying to persons residing in a “third” country who are granted an opportunity to go “to the EU temporarily for work, study, training or a combination of these, on the condition that, at the end of the period for which they were granted entry, they must re-establish their main residence and their main activity in their country of origin.”⁹ In an attempt to conceptualize circularity, a distinction between four types of migration was made according to whether emigration and return are permanent or temporary (Agunias and Newland, 2007).

7. United Nations, Refugees and Migrants website

8. IOM, Key Migration Terms, <https://www.iom.int/key-migration-terms> retrieved on 17 Dec 2017

9. Commission of the European Communities, Communication on circular migration and mobility partnerships between the European Union and third countries, COM(2007) 248 final

5. Migrant background

Migration is recognized to have possible long-term impacts on the descendants of migrants. ‘Second’ and ‘third generation migrants’ and ‘diaspora’ are terms commonly found in the academic literature as well as in the political discourse. While ‘second generation’ is ambiguous (the same individual can belong to generation x from his mother’s side and to generation y from his father’s) and ‘diaspora’ refers to an ill-defined and non-measurable population, both are important notions for understanding how migration durably affects the lives of individuals and societies. Collecting variables that make it possible to track the origins of individuals (e.g. countries of birth and/or nationality of each of their parents) provides a way to delineate such sub-populations. Other variables such as ‘ethnicity’ cannot be part of a universal system of collection, because their existence and the categories they define differ by population.

6. Voluntary versus forced migration

A fundamental distinction, both legal and analytical, is between voluntary and forced international migration or between migrants and refugees. Migrants are defined as persons changing country of residence and refugees as persons who reside outside their country of nationality for fear of being persecuted. Most refugees therefore belong to the broader population of international migrants, and it is the motivation for leaving their country that makes them a specific population. The distinction is not always clear-cut, however.

Indeed, there is a global discrepancy between the position of states regarding international refugee law and their actual commitment to hosting (and often protecting) refugees: on January 1st, 2016, 46.6% of the world’s refugees (UNHCR) were residing in countries that are not signatories of the 1951 Refugee Convention or that have a geographic limitation to Europe which de facto excludes from its provisions any refugee originating from outside Europe (Table 4). As a result, many refugees are sheltered in countries where the status of refugee does not exist and are dealt with either as voluntary migrants or as travellers or ‘guests’. Moreover, identifying refugees is not straight-

forward: many of them cross borders as migrants and soon after become asylum seekers, and it is only after the lengthy refugee status determination process is completed in their country of asylum that those who receive a positive decision become refugees and cease being migrants with an irregular or temporary legal status.

Table 4: Convention status of the countries hosting more than half a million refugees end of 2015

Country of asylum	Refugees	Convention status
Turkey	2,541,352	Not full-party (limitation to Europe)
Pakistan	1,561,162	Not party
Lebanon	1,070,854	Not party
Iran	979,437	Party
Ethiopia	736,086	Party
Jordan	664,118	Not party
Kenya	553,912	Party

Source of the data: UNHCR

7. Irregular versus regular migration

Irregular migration is a category that demands to be effectively addressed. Migrants in irregular situations can be found everywhere, but what makes their situation irregular varies from one country to another. Migrants find themselves in an irregular situation as soon as they fall into one or more of the following non-exclusive situations: unauthorized entry (lacking a visa or bypassing border checkpoints); unauthorized stay (over-staying a temporary entry visa); or unauthorized employment (working with a non-work visa). Irregularity is not a permanent status but a transient situation susceptible to change in both directions: from regularity to irregularity (e.g. when a visa expires) or vice versa (e.g. after regularization). It can either be the migrant that breaches the law or the law that changes and affects the migrant's status. In any case, terminology matters: terms such as “unauthorized migrant”, “irregular migrant” or “illegal

migrant” should be avoided as these are demeaning to migrants as human beings. An action, a situation or a status can be unauthorized, irregular or illegal, but not a person.

8. Reasons for migrating

Finally, other categories such as those defined by the cause of migration, or the justification for entry, must be taken into account, albeit with caution for the three following reasons. First, a person’s stated motivation to migrate may change over time. For example, a migrant can be admitted under a scheme of family reunification and automatically be granted access to the labour market in conformity of the local law, thereby shifting from a status of family dependent to migrant worker. Second, categories of entry do not have uniform definitions. The same individual may be accepted as a family dependent in country A but not in country B according to how a family is defined in the two countries. Third, for migrants themselves, categories of entry are not mutually exclusive. For example, there is not always a clear-cut distinction between individuals seeking to protect their lives and those seeking to secure a livelihood, as the same person can seek both protection and a job. The notion of “mixed migration flows” refers to complex processes, with the result that separating refugees from economic migrants too often is arbitrary.

PART II. DOCUMENTING MIGRATION: KEY ISSUES

As with many other domains, information on migrants is collected by state administrations to serve their own needs and, when statistics are extracted from the data, it is first and foremost for the purpose of policymaking, not scientific research. Because international migration deals with highly sensitive and high stakes issues related to nationhood, more often than not states conceal statistics on the topic. Moreover, since migration refers to moves by individuals from one country to another, statistics on migrants are produced from data routinely collected by administrations of different states that are not coordinated with one another.¹⁰ As a result, data on migration are inconsistent between countries of origin and destination. Policymakers often lack the minimal statistical evidence necessary to make informed decisions, while academics lack the basic data needed for scientific research.

1. Built-in problems in migration data

In an ideal world, flows and stocks of migrants would be countable at any point in time for any given origin and destination country. To achieve this ideal state, statisticians should address the following intrinsic problems.

i- Disentangling migrants from travellers

To accurately measure migration flows requires that cross-border mobility of people be counted in both directions, at entry and exit, and that migrants are distinguished from travellers. When visas or permits specify the authorized duration of stay, they theoretically allow for the distinction between long-term migrants (one year or more) and short-term migrants (between three months and one year) from travellers (less than three months). However, an actual stay

10. Regulations to harmonize data on migration are not in place at international level, and not even at EU level despite the adoption of common statistical categories on many other topics (Takle, 2017).

may be substantially shorter or longer than the stay provided for by the visa, meaning that detailed statistics of visas or permits do not provide reliable information on migration flows. Differentiating between short-term mobility and migration can be done only *ex-post facto*. In addition, not all migrants have a visa or a permit of stay, either because they are not requested to do so (various visa exemptions) or because they have entered irregularly with no visa, and information on them is missing in visa or permit statistics. Transit migration is a case in point.

ii- Matching entry and exit data

Both inward and outward movements matter. However, they are neither observed nor measured in similar ways and this fact affects the identification of individual migrants (as opposed to travellers) as well as the measurement of a migration balance (inflows minus outflows). In regions of free circulation, (such as the European Union) cross-border movements are observed at the external border of the region but not at internal borders between member states of the region, making it possible for a migrant or a traveller to be recorded at entry in country A and at exit in country B without recording any intervening cross-border movements. Moreover, exits are not recorded in all countries. In certain regions, cross-border ethnic ties have created a fertile ground for control-free mobility.

iii- Counting the absent

Measuring flows and stocks of emigrants pose particular problems (see for example Klekowski, von Koppenfels and Costanzo 2013). Migration statistics are obtained from data collected in the population. Yet emigrants are not physically present in their country of origin; they are distributed across countries over the world. Because a government can reliably enumerate only those people who reside in the country, but not those who reside elsewhere, stock data collected by governments typically refer to immigrants, not to emigrants who are absent from the country they left. Emigration has therefore to be reconstructed as the aggregated immigration originating from a given

country as enumerated in all other countries of the world. For this method to be applicable, all countries must agree to count immigrants by detailed country of origin (country of birth) and to publish such data. Attempts to circumvent this problem by estimating emigration directly using data obtainable in the country of origin – e.g. using questions asked in population censuses or surveys about (former) members of the household who currently reside abroad – are affected by several biases.

iv- Counting circular, seasonal and temporary migration

Traditional demographic methods are, at best, adapted to estimating permanent, but not temporary migration. Moreover, visa and contract statistics are notoriously inadequate in terms of coverage and reliability. Conventional definitions of international migrants (as residents, or persons intending to reside in their host country) and existing systems of data collection (based on population censuses usually taken every ten years and collecting no or little information on temporary residents) fail to capture temporary migration. In order to capture temporary migrations and circularity, longitudinal studies are needed.

v- Counting irregular migration

Finally, numbers and characteristics of migrants in irregular situations are difficult to estimate. Such migrants tend to elude administrative procedures and irregularity is often a transient situation (e.g. a person can enter with a regular visa then fall in irregularity by over-staying their visa; similarly a person who entered without permission may take advantage of an amnesty to regularize their situation, etc.). Migrants in an irregular situation can be occasionally and partially counted by public administrations on several occasions, such as in the case of apprehension by police, regularization by national authorities, or medical visits in countries providing access to public health facilities to every person irrespective of their legal status. In any case, *ad hoc* methodologies designed to address specific situations are necessary to fill the knowledge gap.

2. Data on stocks

Censuses are often the only source for data on immigrant stocks.¹¹ For this, they must include a question on the country of birth, possibly complemented with the country of citizenship, the country of residence five years prior to the census (useful to capture recent migration as well as return migration), and the immigrants' arrival date (to estimate immigration trends). These data allow for the estimation of immigrant stocks that can be broken down by all the socio-demographic characteristics collected in the census. However, they have two serious limitations. First, censuses are generally conducted once every ten years and therefore miss temporary migrations that take place between two consecutive censuses. Second, the way they are processed does not allow for the measurement of out-migration from the country. This requires aggregated immigration statistics from that country to all other countries across the world and then the application of methods for adjusting incomplete data (see for example De Beer et al. 2010).

The Organisation for Economic Co-operation and Development (OECD) compiles census data to produce migrant stocks by country of origin, country of destination and a few individual characteristics of migrants that are available and processed the same way in all OECD countries (e.g. level of education). This dataset does not provide a full, global picture of migration however. Indeed, OECD member states are the destination for most migrants from certain countries (for example from Mexico or Morocco whose migrants are mostly destined for the US and the EU respectively), but not for other countries whose migrants go primarily to non-OECD destinations (for example emigrants from India and Egypt go mostly to the Gulf States, those from Mali to Côte d'Ivoire, etc.). The United Nations estimates the international migrant stock by country of origin, destination, sex and age at regular intervals. This dataset however lacks the dimension of level of education, a crucial factor for studying linkages between international migration and development.

11. In the few countries in which population registers exist, these continuously updated registers theoretically offer the best source on migrant stocks.

Multipurpose household surveys are potentially another source of information on immigrants and their economic characteristics. They are currently the only source providing comparable data overtime to assess short-term trends. Small sample size is a limitation in countries where immigrant populations are themselves small. Household surveys have sometimes been used to estimate emigration through questions on households with members living abroad and remittances received (see for example Farid 2013; Bilsborrow, et al, 1997; United Nations, 1998; Cantisani, et al, 2009), but such estimates are affected by serious biases.

Post-census immigration surveys may provide representative information on immigrants and possibly their migratory and labour histories. Such surveys may include all the questions necessary for a longitudinal analysis of migrants' histories.

3. Data on migration flows

Inward flows of international migrants should be counted by country of birth, country of citizenship, and previous country of residence. They respectively correspond to outward flows of natives, citizens and residents, counted by country of destination. All three types of data are important in their own right: to measure the contribution of migration to population change, to keep track of those who have rights as citizens, and to monitor changes in the composition of population at both ends. While visas, residence permits and naturalization decisions (events of which most countries keep records) could theoretically provide the information necessary to measure regular flows as well as integration, this is not the case for reasons already mentioned. Moreover, in most cases border statistics are not usable for the purpose of measuring migration. There are countries where passports are controlled at entry but not at exit (e.g. the United States), countries where passports are controlled at entry and exit in airports but not at land borders (e.g. Schengen member states), etc. Thus, entries and exits are not counted the same way and the resulting in-and-out balance can be affected by errors of a greater magnitude than the balance itself.

4. Big data

Big data including that from social media platforms contain a wealth of geo-referenced data that can provide information about the mobility of individuals (trajectories, timeframes etc.) and various forms of communication, from links between individuals to networks (see for example Hughes, Zagheni et al. 2016). Developing methodologies to disentangle migration and related phenomena from simple mobility and to deal with biases inherent in self-constructed databases would open new avenues and make it possible to observe migration-related issues in real time. However, at present this area of research remains largely embryonic. Significant scholarly contributions are needed to ensure that estimation methods under development are well-validated and robust, and that big data are used responsibly and do not contribute to the marginalization of underrepresented groups.

PART III. MAPPING EMPIRICAL RESEARCH ON MIGRATION

International migration is a process that brings together different countries at different moments in time. Table 5 summarizes the space and time frame in which research on migration takes place.

Table 5: Time and space frame for researching international migration		
Time \ Place	Origin countries	Destination countries
Causes	(1) Remote or contextual, and proximate or individual determinants	(2) Pull factors
	(3) Pre-existing links between origin and destination	
Migration	(4) Legal steps at departure & arrival; conditions of travel	
Consequences	(5) Migration and development	(6) Migrants' contribution and inclusion
	(7) Global consequences of migration	

Each of the causes of migration, migration itself and its consequences operate in origin and destination countries, as well as in the transnational space spanning origin and destination. Paragraphs in the section below are numbered the same way as cells in Table 5.

1. Push factors in countries of origin

Research on migration drivers in origin countries (“push factors”) could find inspiration in the conceptual framework developed in the context of epidemiology and adopted by demography, making a distinction between remote (or contextual) and proximate (or individual) determinants. In their effort to contain migration that is neither safe nor orderly and well-managed, policymakers pay much attention to tackling the so-called “root causes” of emigration, from poverty to bad governance, conflict, and increasingly

environmental factors. But, however compelling these explanations may be, the question remains if these causes *alone* can explain why people leave a country?

After all, international migrants constitute only 3.5% of the world's population. They are a small minority and not a randomly selected one: those who leave their country are usually amongst the fittest, both physically and intellectually. In this sense, they are 'exceptional' people (Goldin et al. 2011). Their migration cannot be explained *only* by circumstances that apply to all or at least to a majority of their fellow citizens. Individual circumstances must be factored in as well, in order to understand why certain individuals make a decision to move and others do not. From age and sex to family status, educational level, occupation and a myriad of other individual characteristics, migrants' pre-departure conditions must be taken into account by any meaningful analytical framework. For this to be possible, research needs detailed data from origin countries, as well as longitudinal data on individual migrants.

2. Pull factors in countries of destination

Migration is first and foremost motivated by people's drive to improve their own and their families' situations, and consequently most migrants seek to move to countries richer and/or safer than where they currently reside (no matter whether the move is from South to North, South to South, North to North or even North to South). Availability of jobs, level of income, the rule of law and other dimensions of well-being in countries of destination are key direct drivers of migration, of which detailed and comparable indicators must be available at world level (as is already the case in several other domains).

In-depth analyses of particular drivers require more specific data, however. Some of these data are directly related to migration. For example, understanding to what extent and how migration policies of destination countries contribute to determine actual numbers, the characteristics and the personal strategies of migrants requires a global database of such policies. Other data concerns factors that are only indirectly linked with migration. For instance, identifying

what particular procedural attributes or formal characteristics of the law makes a destination country more attractive than others for migrants and particularly refugees, requires detailed databases on national legislations and information on the protection of human rights, etc. The list of data which may enrich an analytical framework of migration pull factors is too long and diverse for the scope of this paper.

3. Linkages between countries of origin and destination

In the current period of globalized communication, international migration remains more regional than global.¹² Geographic proximity, but also other forms of proximity such as a shared history and a common culture or language, facilitate migration. Understanding the functioning of regional migration systems (e.g. Central America and North America; MENA and Europe; South Asia and Gulf States; etc.) and their relation to a global system requires the building and regular updating of a comprehensive worldwide origin-destination matrix of migration flows that would include a number of individual characteristics of the migrant. Regional analysis also applies to sectorial migration flows, such as the migration of mostly female caregivers and domestic workers generated by a fast-growing demand at international level and the specialization of a small number of countries on the supply side, for the study of which specialized origin-destination matrixes must be constructed.

Beyond solid facts, representations play a role in determining migration flows. 'Relative deprivation' (Merton, 1938), which is the feeling of a person that their lot is less that of peers (the 'reference group') is a driver of migration (Stark and Taylor 1989). People who feel that they do not receive at home rewards commensurate to their capacities may consider leaving their country for a foreign country where they think these rewards are available. Transnational networks spanning origin and destination countries are the reference groups that make migration desirable. They also provide a source of information on distant labour

12. See for example the diagram of global migration flows established by Abel and Sander (2014)

markets as well as the social capital that makes migration possible. In order to capture transnational factors, data on networks must therefore be gathered.

4. Migration stages

Three stages of the migrant's move must be distinguished: departure, travel, and arrival. At each stage, unless travel is irregular, several administrations collect data but for distinct reasons, leading to inconsistency between data collected by uncoordinated administrations, unavailability of border statistics, confidentiality of the data, etc. The resulting mass of information gathered on regular flows is difficult to transform into usable data for the scientific study of migration. The case of irregular migration is even more difficult, as it escapes most administrative proceedings except if and when a migrant in an irregular situation is apprehended.

Research on migrants' experiences, including abuse and exploitation at the initial stage of migration as when they fall victim to exorbitant charges, illegal recruitment, smuggling under inhuman conditions, human trafficking along the migratory routes, etc., is most often based on anecdotal evidence. Designing tools to systematically identify and measure the risks encountered by migrants during their journeys, including detention, abuse, disappearance and death while travelling by land or sea as well as the particular vulnerability of migrant women and children, is an unresolved challenge.

5. Emigrants: actors of change in countries of origin

Migration and development are linked in many ways, and a better understanding of the complex processes at work is needed in order to recommend actions to promote the positive impacts of migration and to mitigate its negative consequences. Migrants' financial remittances and investments sent to the country of origin are already well-researched topics, but more knowledge is needed on the positive or negative indirect effects of remittances. Moreover, social remittances, which are ideas and values conveyed by migrants to non-migrant communities in countries of origin, and the social, sociological and

political transformations they trigger have been identified as an important by-product of emigration (Levitt, 1998) but, for lack of data, research on the topic has not gone beyond local anthropological research. The impacts of diaspora policies being developed by states and non-state actors in countries of origin to foster ties with expatriate nationals is another important but under-researched topic. Ad hoc surveys seem to be the best adapted method for research of this kind.

To what extent and under which circumstances does the departure of highly skilled migrants deprive the sending countries of scarce resources necessary for their development? Can skills gained abroad and then brought back to the country by returning migrants and other compensatory mechanisms turn the “brain drain” into a ‘brain gain’? These old questions must be revisited in light of current developments, from rising unemployment rates among university graduates in countries of origin to growing movements of student migration. Moreover, a doctor originating from country A but working in country B does not represent the same transfer of education and skills depending on whether his tertiary education was completed before departure from A or after arrival in B.

‘Where did education take place?’ and ‘were skills acquired in the sending or in the host country?’ are crucial questions to assess the existence of a brain drain. Unfortunately, datasets combining individuals’ histories of mobility and education that would be necessary to answer these questions are rarely available. The similar question of ‘how much education is gained through migration?’ has not really been dealt with so far. Yet, Table 6 shows that half of the international migrants which the European Union receives arrive at school or university age, suggesting that international migration contributes to human capital building among migrants. Once again, longitudinal data is needed to fully address this issue.¹³

13. On the topic of migration and education, see Fargues, 2017.

Table 6: Distribution of migrant flows in the EU28 in 2010 by broad age groups

Age groups	Percentage of migrants
0-4 years = Preschool	4,75%
5-9 years = Elementary school	3,56%
10-14 years = Middle school	3,42%
15-18 years = High school	4,86%
19-27 years = University	36,43%
28 years and over= Education completed	46,98%

Source: EUROSTAT Data

6. The inclusion of migrants and their contribution to development in destination countries

Migrants' integration in the receiving countries and the impact of migration on social cohesion are probably the most popular topics in migration studies in North America, Europe and Australia. Three remarks on this topic must be made however.

First, integration is a multifaceted process combining economic, social, cultural and legal dimensions. To what extent do different dimensions work together or independently, and how do these processes vary by individual migrants' characteristics such as gender, age, national origin, religion, etc.? These are issues to be continuously monitored.¹⁴ For this, constructing an individual migrant integration index would help.¹⁵ Moreover, less studied aspects of migrants' integration (e.g. migrants' health; exclusion, discrimination and xenophobia; perceptions and the role of the media; etc.) require the development of specific data and *ad hoc* methodologies appropriate to the context.

14. The practice of certain countries to assign to every individual a personal identification number that is used for a variety of administrative steps should make such monitoring possible (see for example Steiner and Wanner 2015).

15. The needed index would go beyond MIPEX, the migrant integration policy index defined at country, not individual level (www.mipex.eu)

Second, while much knowledge has already been accumulated on the various dimensions of immigrants' (and their sons and daughters') economic, social, educational, cultural and political inclusion and the ways that migrants *adapt* to the receiving society, much less is known about the way they *bring* social change. The ways and extent to which migrants directly and indirectly *contribute* to economic outcomes, demographic growth in a context of population ageing, cultural production, the advancement of political models, the progress of human rights, and many other facets of development has hardly been researched in any systematic way. Data already exist to document such topics and a proper research agenda must be developed.

Third, the integration of migrants is not a universal objective. In a number of countries where the dominant pattern of migration is the temporary admission of contract workers, for example the case in the Arab Gulf States, the government's objective is on the contrary to limit, or even avoid migrants' integration into society for fear they would alter national identity and cultural values. While such a pattern of migration is common in parts of the world, research on migrants' living and working conditions in such contexts has hardly been conducted for lack of data. While most information needed is probably collected by states and firms, such information is neither organized nor made available to researchers.

7. Global consequences of migration

International migration transforms the world in many ways. Does it contribute to mutual understanding between peoples and nations? Does it produce a net benefit or cost at the world's level? Questions of this kind are many, as illustrated by the three following issues.

First, migrants often belong to two countries, where they come from and where they now reside. In what way do they contribute to increase the quantity and quality of links between these two countries? Do diaspora policies developed by states and non-state actors in origin countries to foster ties with expatriate nationals and at the same time the engagement of migrants with their

countries of origin, represent a sort of “soft diplomacy”? If so, what results does it bring? Measuring such impacts for all pairs of countries that are linked by significant migratory movements, and correlating the resulting matrix with an origin-destination matrix of migrant stocks and migration flows (still to be constructed) and other flows (trade, cultural goods, etc.) would bring added value to the understanding of international migration.¹⁶

Second, students, teachers and researchers comprise a fast-growing share of global migrants. How much educational migration does contribute to building human capital globally is another question which needs to be measured and periodically updated, should the necessary longitudinal data be collected.

Third, international migration and its impact on demographic reproduction affect the redistribution of the world’s population between (and within) countries. Integrating migration in world population prospects would shed light on the phenomenon. For this, conceptual frameworks and methods for projecting migration must be developed in two directions: determining migration scenarios to be incorporated in classical population projections by age, sex and other relevant variables (education, occupation, etc.); and projecting migration flows based on scenarios of determinants of migration.

16. For a recent example of a matrix of migrant stocks by origin and destination, see United Nations, Department of Economic and Social Affairs, Population Division (2017). Trends in International Migrant Stock: The 2017 Revision. (United Nations database, POP/DB/MIG/Stock/Rev.2017)

CONCLUSION

In the last quarter of the twentieth century, the measurement of births and deaths in most populations, and consequently the understanding of fundamental processes underlying fertility and mortality, made decisive progress thanks to two developments: the dramatic extension of public health and vital records in the developing world,¹⁷ and the development and fielding of statistical surveys conducted the same way in most parts of the world, such as under the unified banner of the World Fertility Survey, then the Demographic and Health Survey and a few other global initiatives. Inspired by the success story of fertility and mortality, a similar approach should be sought for in the case of international migration. The five following actions should be considered.

First, all countries (and organizations) should acknowledge that international migration is defined by border crossing. Equating immigrants with foreign citizens (as is often done) confuses a geographic notion with a legal one. It indirectly serves political attitudes, such as denying citizenship rights to part of the native population (individuals who are foreign-nationals though they were born in the country and never moved), and similarly denying cultural identities to part of the citizenry (naturalized immigrants). Countries should collect and organize data accordingly. The systematic inclusion of the country of birth in administrative forms is a precondition for the appropriate measurement of international migration and description of the migrants. Including also the country of citizenship provides additional key information for legal and scientific purposes.

Second, all countries should agree on producing the breakdown of all residents on their territory by detailed country of birth using the same unified list of world

17. In particular under the impetus of the World Health Organization and its unabating advocacy for primary health care (see: http://www.who.int/bulletin/primary_health_care_series/en/)

countries, and sharing such breakdown with the rest of the world. This is the only way for any country to piece together its own emigrant stock, and for the scientific community to construct a truly global origin-destination matrix of migrant stocks and their characteristics.

Third, organizations that have the mandate to undertake large international surveys comprising data on migrants should make all possible efforts to extend the surveys' coverage to all the countries that host sizeable migrant populations in the Global North as well as in the Global South. For example the Programme for International Student Assessment¹⁸ (PISA) developed by the OECD to measure school pupils' performance on mathematics, science, and reading could cover all the large migrant receiving countries beyond OECD members, in Africa, Asia and Latin America.¹⁹ In addition to extending existing surveys, constructing global databases (for example on migration policies²⁰) should be considered.

Fourth, the scientific community should organize itself at a global level to develop and disseminate methodologies to fill the huge knowledge gaps caused by patchy administrative data. Drawing on the experiences of mortality and fertility studies and the impact of widely disseminated tools such as the United Nations series of demographic and statistical manuals,²¹ the production of a compendium of methods aimed at making the most of existing data and developing *ad hoc* survey protocols regarding international migration must be recommended. Moreover, the community of migration scholars should design a World Migration Survey that would enrich knowledge at a given point in

18. <http://www.oecd.org/pisa/>

19. Another example could be the World Values Survey (www.worldvaluessurvey.org/)

20. The survey conducted from 1976 to 2011 by the United Nations Population Division on government views about migration (UN 2013b) could serve as a starting point for a more comprehensive database on migration policies. http://www.un.org/en/development/desa/population/publications/pdf/policy/InternationalMigrationPolicies2013/Report%20PDFs/z_International%20Migration%20Policies%20Full%20Report.pdf#

21. Manual X was particularly instrumental in spreading methodologies widely applied in the developing world: United Nations (1983). Manual X: Indirect Techniques for Demographic Estimation, http://www.un.org/esa/population/publications/Manual_X/Manual_X.htm

time, and also provide benchmarks for adjusting existing data and producing continuously updated knowledge out of administrative routines.

Fifth, the scientific community should prioritize methodological work on the analysis of big data, which provides new ways for understanding migration.

Each of the above actions presupposes that the world's nations are willing to cooperate with one another on technical matters that are necessary to better know the migration movements that link them all.

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Advancing Knowledge on International Migration: Data and Research Needs

This Policy and Research Paper is written in the framework of IUSSP's Ad Hoc Panel on "Strengthening migration data and research, in the context of the global compact for safe, orderly and regular migration", which the author chaired, and a special session of the International Population Conference held in Cape Town, South Africa on October 30th, 2017. This paper contributes to the agenda for improving the evidence base on international migration. It targets all those who want to reach an informed opinion about one of the most debated issues of the present day. It is part of IUSSP's engagement in the measurement and analysis of international migration and human mobility.

About the author

Philippe Fargues is a French demographer and sociologist and a Professor at the European University Institute (EUI). He was the founding Director of EUI's Migration Policy Centre and held senior positions at the French Institute for Demographic Studies (INED) and the American University in Cairo and has taught at Harvard and various universities in France, the Middle East and Africa. His recent publications include: *Migration to the Gulf. Policies in sending and receiving countries* (with Nasra Shah, GRC-Cambridge, 2018); *Skillful Survivals. Irregular Migration to the Gulf* (with Nasra Shah, GRC-Cambridge, 2017); *Mass migration and uprisings in the Arab countries: An analytical framework (International Development Policy, 2017); Migration from North Africa and the Middle East: Skilled Migrants, Development and Globalisation* (with Alessandra Venturini, IB Tauris, 2015); *International Migration and the Nation State in Arab Countries (Middle East Law and Governance, 2013); Demography, Migration and Revolt in the South of the Mediterranean* (Brookings, 2012); *International Migration and the Demographic Transition: a Two-Way Interaction (International Migration Review, 2011); The Demographic Benefit of International Migration: Hypothesis and Application to Middle Eastern and North African Contexts* (in Özden and Schiff, *International Migration, Economic Development and Policy*, Washington, The World Bank and Palgrave Macmillan, 2007).



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