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INTERNATIONAL MIGRATION STATISTICS
AND MEASUREMENT ISSUES IN ARAB COUNTRIES

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CONTENTS

I. INTRODUCTION

Studying international migration in the Arab region is, quantitatively speaking, problematic. In most cases, data are not collected or not disseminated. When data are made available, their interpretation may be challenged on the grounds of reliability and comparability.

This study aims to provide an exhaustive comparative analysis of migration data collection systems in three Arab countries, namely Jordan, Morocco and Qatar, which are considered representative of three Arab subregions that have long been characterized by the following international migration patterns:[1]

(a) The Mashreq subregion: immigration of labour and forced migrants; and emigration of labour migrants, especially to the Arabian Gulf region;

(b) The Maghreb subregion: emigration to Europe of workers, of family members of former emigrants, of students, etc; and immigration of Sub-Saharan migrants who, in part, aim to reach Europe;

(c) The Gulf Cooperation Council (GCC) subregion: immigration of labour migrants who represent an extremely high proportion of the labour force in GCC countries.

There is scarce knowledge of the real magnitude, characteristics, determinants and consequences of these movements. This is, in part and to a certain extent, due to the lack of an adequate statistical framework in all Arab States.

The objective of this paper is twofold: it first offers an analysis of international migration data collection systems in Jordan, Morocco and Qatar in terms of data availability, reliability and comparability. Taking international recommendations as a benchmark,[2] it presents an exhaustive comparative analysis of data sources on international migration using a stock-flow approach. Particular attention is devoted to definitions, target populations and data collection methodologies. Their coherence with international recommendations is verified, and their limits and advantages are pointed out. The paper then recommends tools and methods for improving Jordanian, Moroccan and Qatari migration statistics. In so doing, it also draws some more general lessons for the whole Arab region. Specific adjustments and feasible concrete improvements are proposed, taking into account the specific needs of countries and areas. As argued by experts, "a century of largely ignored recommendations cannot be reversed overnight", and "using data collected according to national practices is better than having no information at all".[3]

The approach adopted in this paper is fully in line with the United Nations two-stage approach, which stipulates that, in order to improve international migration statistics, the main issues of availability and comparability should first be tackled; then, in a second stage, attention should be paid to devising country mechanisms to improve data quality and the exchange of information.[4] Data collection improvements are thus proposed from a concrete viewpoint, using ad hoc tools rather than creating new tools and responding to countries' needs. Indeed, existing sources should be fine-tuned and improved, and costs should be kept low.

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[1] The Mashreq subregion includes Egypt; Iraq; Jordan; Lebanon; and the Syrian Arab Republic; the Maghreb subregion includes Algeria; Libya; Mauritania; Morocco; and Tunisia; and the GCC subregion includes Bahrain; Kuwait; Oman; Qatar; Saudi Arabia; and the United Arab Emirates. Among Maghreb countries, the case of Libya is particular, as it is a major country of immigration rather than emigration.

[2] United Nations Department of Economic and Social Affairs (DESA), 1998; 2007a; 2007b; and 2007c.

[3] Santo Tomas and Summers, 1990.

[4] DESA, 1998.

II. CHALLENGES OF INTERNATIONAL MIGRATION MEASURMENT

A. JORDAN

Jordan is a country that witnesses important movements of immigration and emigration. Mass emigration started there in the 1970s, when oil price increases led huge numbers of Jordanian citizens, namely the highly skilled and of Palestinian origin, to emigrate to oil-producing States. Today, these States still represent the most common destination for Jordanians, which hinders the accurate measurement of Jordanian emigration. Indeed, GCC countries are reluctant to provide estimates of their residents by citizenship and data on Jordanian migrants, as retrieved from destination countries' statistics, are scarce and fragmentary. This means both a large underestimate in terms of size and a biased profile. Similarly, estimates made by Jordanian institutions located in the GCC subregion are unreliable.[5] For these reasons, Jordanian statistical authorities have long tried to indirectly estimate the size of Jordanian migrants by using statistics collected at home.[6] Among other limitations, they however failed to include whole households that had emigrated.

Also since the 1970s, Jordan became the recipient of unskilled and semi-skilled workers destined to fill shortages in the agrarian, construction and service sectors. Furthermore, being at the crossroads of two major areas of instability and prolonged conflicts, Jordan has received several waves of forced migrants from Palestine–the majority of whom were granted Jordanian citizenship—but also from Lebanon, Iraq and, more recently, the Syrian Arab Republic. In spite of some notable improvements,[7] the Jordanian immigration data collection system still suffers from inaccuracy. Labour migrants are only captured through a few incomplete sources, while forced migrants—especially Iraqi and more recently Syrian refugees—are difficult to trace for a variety of reasons. Some Iraqi refugees fled to Jordan in the 1990s and the rest after the United States-led invasion of Iraq in 2003. In Jordan, Iraqis are not considered as 'refugees' but as 'guests' with, consequently, no clear legal status. They have never been counted and due to the political sensitivity of the issue, estimates have to be taken with caution.[8]

Moreover, the influx of Syrian refugees, beginning in March 2011, has definitively called into question the capacity of Jordanian authorities to provide reliable estimates of forced migration. According to the United Nations High Commissioner for Refugees (UNHCR), as of 5 September 2013, there were 492,526 registered refugees, while another 27,150 were awaiting registration, thus a total of 519,676 individuals were in need of international protection. Registered refugees are classified into those who live in camps (25.5 per cent) and those who are 'dispersed in Jordan' (75.5 per cent). While the former group can be easily captured by UNHCR statistics, it is hard, if not impossible, to monitor the second. At the time of writing, registered refugees had contacted UNHCR at least once. However, it is unclear how many have moved to another country since that contact, or simply returned home. Their living conditions in Jordan also remain unknown.

B. MOROCCO

Morocco is a major emigration country, with the large majority of flows still directed towards Europe, especially France, Belgium, the Netherlands and, more recently, Italy and Spain. Since the 1990s, Morocco

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[5] The 'labour attachés' recording system managed by the Jordanian Ministry of Labour only registers labour emigrants who use official recruitment schemes to find a job. Consular records also have limitations, including the fact that registration is voluntary and that data are not disseminated.

[6] The emigration modules attached to the 1994 and 2004 censuses, and to the 2010 Jordan Labour Market Panel Survey, are some examples of such statistics.

[7] De Bel-Air (forthcoming) presents more details on the topic.

[8] According to UNHCR, there were around 452,000 Iraqi refugees in Jordan in 2012, among which, however, only 30,000 were registered. Similarly, high estimates are given by the Jordanian Government, without any clear data foundation. It is worth mentioning that, in 2007, the Norwegian research centre Fafo suggested a much lower number (161,000), an estimate which was later revised upwards to 450,000-500,000 (Di Bartolomeo, 2013).

has also evolved into an important transit and immigration country, receiving migration flows particularly from Sub-Saharan countries. The number of these immigrants is unknown, due to their irregular status.

Their country being a country of emigration with a consolidated diaspora, Moroccan authorities have long been interested in assessing emigration benefits, especially since the 1990s.[9] Measuring emigration and detecting its basic characteristics is thus more straightforward than in Jordan. Moroccan emigrants have been historically concentrated in relatively few European countries, which provide routine statistics on immigrant populations. However, apart from remittances, looking at emigration benefits implies, to a large extent, focusing on the link between migration and development, which necessitates detailed data on the educational level of migrants,, on their occupation and on return migration patterns, all of which are hardly captured or monitored by European statistics.

This situation has gradually led to the reinforcement of traditional Moroccan migration data sources, such as consular records, and to the implementation of other indirect tools for estimating the size and, particularly, the characteristics of potential and actual Moroccan emigrants. These indirect tools include new questions in the national census; the insertion of a migration module in the national survey of household living conditions (*Enquête nationale sur les niveaux de vie des ménages*); and ad hoc surveys on return migration. As for the other main migration phenomenon in Morocco, namely transit migration, little progress has been made in the related statistics.

C. QATAR

Just as other GCC countries and due to the unprecedented scale of development projects that were undertaken during the 1973 'oil boom', Qatar is mainly a country of immigration. It is characterized by a strong dual labour market, with foreign workers employed in the private sector and Qatari nationals employed in the public sector. Notwithstanding rising unemployment among nationals and the call for labour force nationalization policies, this division is still a reality.[10] According to the national Labour Force Sample Survey, foreign workers represented around 94 per cent of the total labour force in 2012.

Qatar faces several challenges in the area of labour immigrant statistics. The country has always refused to release population census data disaggregated by citizenship. Main surveys feature only two related classifications: Qataris versus non-Qataris, without a reporting of the country of origin for the latter. Statistics are also not widely disseminated. Other challenges concern the lack of records for accompanying family members, who usually do not have the right to work; the substantial number of irregular migrant workers;[11] and the difficulty in comparing the statistics of Qatar with those of other GCC countries.

In summary, labour immigrants, Jordanian labour emigrants, as well as Iraqi and, more recently, Syrian refugees are the three main categories of interest for Jordan. Data reliability is undermined by the following three challenges: (a) an undefined but large number of Jordanian migrants are not captured by GCC statistics; (b) labour immigrants are only captured by a few sources; and (c) few reliable estimates are available on Iraqis and Syrian refugees. As for Morocco, Moroccan nationals living abroad, and return and transit migrants are the main categories of interest. Challenges are: (a) the limited access to destination countries' statistics; (b) lack of data on the link between migration and development; and (c) no data sources on transit migration. In Qatar, the main category of interest is that of foreign workers employed in the private sector, including domestic workers who are a growing but almost unknown category.

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[9] Khachani, forthcoming.

[10] Winckler, 2010.

[11] Baldwin-Edwards, 2011. As also noted by Gardner and others, 2013, "although possession of the passport remains a predominant issue for migrants, sponsors and their proxies also fail frequently to document, properly and legally, the workers they bring to Qatar under the sponsorship system. Small sections of the foreign workforce are partly undocumented, in the sense that they have never received a residence permit or that a previously valid residence permit was never renewed" (p. 9).

III. MIGRATION MEASUREMENT: CRITERIA AND METHODS

When measuring international migration, three key questions should be addressed: *whom*, *what* and *how* are we measuring?

According to the United Nations, an *international migrant* is "any person who changes his or her country of usual residence". The *country of usual residence* is:

> "that in which the person lives, that is to say, the country in which the person has a place to live where he or she normally spends the daily period of rest. Temporary travel abroad for purposes of recreation, holiday, business, medical treatment or religious pilgrimage does not entail a change in the country of usual residence."[12]

This definition allows us to make a distinction between *migrants* and *visitors*, by so addressing a primary necessity in demographic studies, which is to individuate where people will demand and consume services (their place of usual residence). Using the *previous country of usual residence* criterion for identifying international migrants has, however, several limitations, including the fact that it is difficult to ascertain and standardize the related information.[13] Most importantly, this criterion is useless for addressing specific policy concerns as it does not, for example, distinguish between those who have immigrated for the first time and return migrants.

Another two criteria are widely used to identify international migrants: the *country of birth* and the *country of citizenship*, which are associated with, respectively, the born-abroad and the foreign population. The former is a univocal category—except when political borders are contested or have changed[14]—and consequently is the most commonly used on a global comparative basis.[15] The latter helps addressing specific policy concerns: it allows stakeholders to identify the specific category of foreign nationals, who do not necessarily have equal social, economic and political rights in the destination country. But this depends, to a great extent, on countries' naturalization regulations and limits cross-country comparability. Consequently, the United Nations recommends collecting both pieces of information,[16] which can be used either separately or in combination, according to the country and the objective.[17]

Given that Arab States have not recently experienced significant border changes and that, save in few specific cases, borders are not contested, the *country of birth* seems the most suitable criterion. However, in the GCC migration system where naturalization procedures are practically lacking, the *country of citizenship* may also be seen as a valid alternative, except for the fact that the foreign population likely includes immigrants' children.

The second question to be tackled is: *what* are we measuring or, in other words, are we interested in migration *stocks* or *flows*? Given that migration is a movement, primary statistics should deal with flows, which actually reflect simultaneously entries on one side and exits on the other. Stocks only reflect part of the story, that is the net result of entries and exits over a given period of time, i.e. the cumulated numbers of net lifetime migrants.[18] However, from a policy viewpoint, the stock concept acquires importance when designing multicultural and integration policies, and when trying to understand the link between migration and development. The present paper will thus give equal importance to stock and flow measures.

Once the target population (*whom* are we measuring?) and the event of interest (*what* are we measuring?) are defined, the next step is to search for the best source to measure international migration, thus tackling the question of *how* to measure international migration.

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[12] DESA, 1998, p. 17.

[13] DESA, 2007a.

[14] Fargues, 2005.

[15] Bilsborrow and Lomaia, 2011.

[16] DESA, 1998.

[17] Fargues, 2005.

[18] Ibid.

Data sources on international migration may be classified according to several criteria. However, one of the theoretical questions one faces when dealing with migration is deciding where data on migrants should be collected: at the country of origin or the country of destination? By definition, an international migrant is a person moving from country X (origin) to reside in country Y (destination) for a certain period of time. The same person is recorded at both the point of origin (as an emigrant) and the point of destination (as an immigrant). Nevertheless, there is a certain asymmetry between data availability and reliability as collected at the point of origin or the point of destination, international migration data being strongly biased toward immigration rather than emigration for the following two sets of reasons. Concerning *flow* data, departure records tend to underestimate migration outflows because migrants are not incentivized to notify the authorities of their departure, as they are not provided with any benefits.[19] With respect to *stock* data, "counting who is in" is certainly more straightforward than counting who is absent, at least by direct enumeration.[20] Indirect measures have, indeed, several drawbacks. Among other methods, a widely used indirect technique for counting migrants at the place of origin is obtaining information from emigrants' household members who did not emigrate and who are still residing in the country. However, when the entire household emigrated, which is often the case for long-term or permanent emigration, there is nobody left to report emigration and this means an important underestimation of emigration.[21] The same limitation applies when former emigrants' households have ceased to exist. This method is also subject to a high degree of subjectivity since it implies that the reported absentees are still felt as being somehow part of the interviewed household members.[22] Additional information gathered by proxy respondents cannot be as detailed or reliable as information obtained directly by respondents.[23] Because of the above-mentioned limitations, the United Nations has, after decades of failed attempts, recognized that information on emigrants as provided by household members "even if perfect ... will likely underestimate emigration levels". It is thus "not recommended such questions be used to estimate emigration via censuses or household surveys".[24]

Accordingly, this paper will discuss data on international migration as collected at the destination end (direct approach). In fact, when dealing with migration to Jordan, Morocco and Qatar, only sources which collect data in these three countries are discussed. As for the analysis of emigration from Jordan, Morocco and Qatar, those sources that collect data in the "rest of the world" are used. In what follows, sources will be analysed and compared in detail, by looking at their accordance with international recommendations.

IV. INTERNATIONAL IMMIGRATION STOCK

A. STATISTICAL SOURCES

1. *Population censuses*

Population censuses have been considered the ideal statistical source to measure international immigration stocks, including the size and main demographic, social and economic characteristics.[25] Specifically, they allow users to identify the five population stocks that are relevant for the study of international migration:[26]

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[19] United Nations and Statistical Office of the European Union (Eurostat), 2010.

[20] Fargues, 2005; and United Nations and Eurostat, 2010.

[21] DESA, 2007b.

[22] Camilleri, 2006.

[23] DESA, 2007c.

[24] DESA, 1998, p. 35. There are, at least, two other indirect methods for estimating emigrants at origin, which are worth mentioning: the "residence of children" and the "residence of siblings" methods. Such tools overcome some of the most common limitations resulting from indirect enumeration, but they also have strong drawbacks. For more details, see DESA, 2007b.

[25] The broad scope of population censuses, however, does not allow researchers to further investigate specific migration issues (such as determinants and consequences) because adding so many migration-related variables is unfeasible. For such purposes, household surveys are recommended instead (DESA, 2007c).

[26] DESA, 2007a.

(a) The *immigrant stock*, which, according to the United Nations definition, corresponds to *the set of persons who have ever changed their country of usual residence*, meaning those who have spent at least one year of their life outside the country in which they live at the time the data are gathered. In order to capture this population in a census, the following questions should be included: "place of usual residence" (to identify the usual resident population); and "ever lived or not in the country for at least one year" (to identify who changed his/her country of usual residence);

(b) The *born-abroad* population, which is captured by the variable *country of birth*. In addition, the *date of arrival* variable should be collected in order to distinguish between long-standing and recent migrants;[27]

(c) The *foreign population*, which is captured by the *country of citizenship* variable. In addition, for addressing naturalization and multiple citizenship issues, it is necessary to collect further information on *stateless*, *additional citizenship/s* and *modes of acquisition*;

(d) *Second generation "migrants"*, who are identifiable through the variable *parents' country of birth*;

(e) *Return migrants*, who are captured by the questions "ever lived in another country" and "length of residence abroad" to be asked only to the native population.

Table 1 features the comparative framework of the most recent population censuses in the three countries of interest.

TABLE 1. POPULATION CENSUSES IN JORDAN, MOROCCO AND QATAR:
A COMPARATIVE FRAMEWORK

	Jordan (2004)	Morocco (2004)	Qatar (2010)
Type of source and periodicity	Primary statistical source Decennial basis Stock data	Primary statistical source Decennial basis Stock data	Primary statistical source 6/7-year basis (since 1997) Stock data
Institution which collects data	Department of Statistics (DoS)	*Haut Commissariat au Plan*	Qatar Statistics Authority
Target population	*De facto* population	*De jure* population	*De facto* population
Data collection methodology	Universal coverage		
	Face-to-face interviews		
Pros (+)/Cons (-)	(+) In the absence of a population register, it is the main source of immigration data (+) Detailed country of birth/citizenship (+) Return migrants are identifiable (+) Possibility of serving as a comprehensive sampling frame (+) Coverage of collective households (-) No second generation "migrants" (-) No language questions (-) Ten-year interval (outdated info) (-) Expensive	(+) In the absence of a population register, it is the main source of immigration data (+) Detailed country of citizenship (+) Return migrants are identifiable (+) Possibility of serving as a comprehensive sampling frame (+) Language questions are included (-) No country of birth variable (-) No second generation "migrants" (-) Ten-year interval (outdated info) (-) Expensive	(+) In the absence of a population register, it is the main source of immigration data (+) Coverage of labour camps (+) Return migrants are identifiable (+) Possibility of serving –to a limited extent– as a comprehensive sampling frame (-) No country of birth variable (-) No detailed country of citizenship (-) Statistics are scarcely disseminated (-) No language questions (-) No second generation "migrants" (-) Expensive

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[27] Alternatively, one may use the variable *age at arrival* combined with the *current age*.

As for migration-related variables, table 2 shows if and to what extent these countries follow international recommendations, or in other words whether or not the five above-mentioned immigrant population stocks are identifiable.

TABLE 2. MIGRATION-RELATED VARIABLES IN THE POPULATION
CENSUSES OF JORDAN, MOROCCO AND QATAR

Immigration stock	Questions/variables	Jordan (2004)	Morocco (2004)	Qatar (2010)
Immigrant population	Country of usual residence	X	X	X (to Qataris)
	"Ever lived abroad for a period of at least 1 year"	-	-	-
Born-abroad population	Country of birth	X	-	X (to Qataris)
	Date of arrival or age at arrival	X	-	-
Foreign population	Country of citizenship	X	X	X
	Mode of citizenship acquisition	-	-	-
	Other country(ies) of citizenship	-	-	-[a]
Second generation	Birthplace of parents	X	X	X
Return migrants[b]	"Ever lived abroad"	X (place of previous residence)	X (place of residence 5 years ago)	X (place of residence 5 years ago)
	"Length of residence abroad"			

a/ In Qatar, dual citizenship is not recognized.
b/ These questions are to be asked only to natives or the country's own citizens.

The immigrant population stock, as defined by the United Nations, is not identified in any of these countries. This confirms that this category is of little interest and practical use for Governments in general.

Regarding the born-abroad and the foreign population, significant differences are observed between countries. Only Jordan collects the country of birth variable together with the date of arrival.[28] As for Morocco and Qatar, they simply excluded this variable from their most recent censuses, hindering any comparison over time and with previous censuses where such questions were included. The variable country of citizenship is found in all of the censuses. No additional information on additional citizenships and mode of acquisition are, however, collected.

All censuses identify return migrants though, given the fact that the coverage of the censuses extends to the whole population, neither determinants nor consequences of return migration patterns could be detected in detail. Finally, second generations are not identifiable in any of these countries.

To sum up, in terms of the analysis of population censuses in the three countries of interest, both opportunities and critical challenges emerge. The 2004 Jordanian census seems to be the best equipped census, as it covers three out of five population stocks related to immigration, with detailed additional information, namely on the born-abroad and foreign populations as well as return migrants. Crucially, in all of these populations, it is possible to detect the country of origin for migrants. With respect to the two categories of interest for immigration to Jordan (refugees and labour immigrants), the census should, however, be substantially improved. Concerning refugees, the census failed to register the Iraqi ones, as the vast majority are in a semi-irregular position; and—obviously—it could not count recent Syrian refugees. Regarding the labour immigrant population, the census could, in principle, cover all foreign workers, mostly because it was sent to regular but also collective households, where labour immigrants are disproportionately

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[28] Specifically, the date of arrival is computed from the number of years spent in the country by a given person. As the census took place on 2 October 2004, such information does not map precisely to the calendar year of arrival. Approximately 25 per cent of cases should be classified in the earlier year (See the IPUMS - Integrated Public Use Microdata Series - website for further information).

concentrated. However, it has likely underestimated the real number of migrant workers due to its organizational procedures. For instance, domestic workers may not have been counted, though they were present in the household at census time; irregular migrants may not have been captured as well since census takers, typically women employed at the Ministry of Education, are often reluctant to visit areas with a high percentage of non-Arab speaking foreign nationals.[29]

In Qatar, only the foreign population and return migrants are captured, while no information is collected on the country of birth and time of arrival. Here, as noted above, using the foreign population as a proxy for the international immigrant population is an acceptable compromise. However, a major drawback is the lack of dissemination of census results by detailed country of nationality. On a positive side, the last Qatari census included an additional questionnaire on labour camps, where most labour migrants live. As a whole, the main category of interest in Qatar – labour immigrants – is covered by the census, but the reticence of Qatari authorities to disseminate data by country of nationality represents a serious constraint.

As in Qatar, the 2004 Moroccan census covers only the foreign population and return migrants. Surprisingly enough, the Moroccan census has several advantages in terms of immigration stock data collection: the country of citizenship is included, as well as some questions on language abilities (reading and writing) allowing in-depth analyses. With respect, though, to the two populations of interest in terms of immigration—return migrants and transit migrants—the census only gives partial information. Return migrants are captured by combining the question on "place of residence five years ago" with the question on either "country of citizenship" or "country of birth". Unfortunately, this captures only a subset of return migrants, and transit irregular migrants are not captured.

There are, finally, a number of drawbacks found in all three censuses: second generation "migrants" are not covered; no migration-specific questions are included; data are quickly rendered out-of-date; census implementation is very expensive; and irregular migrants remain largely uncovered. Nevertheless, the quality of census data and the use of some specific variables to identify the immigration stock do not only have a value per se, namely revealing the size and main characteristics of the population in focus; they also help enhance comparability with other international migration data sources, such as household surveys. One of the most important role of censuses is, indeed, that they provide a comprehensive and accurate listing of migrants or migrant subgroups. They are crucial in these three countries since none of them currently have a complete population register, which would be a valid alternative.

2. *Household surveys*

Household surveys represent another major statistical source for capturing the international immigration stock. Unlike population censuses, they allow getting to grips with specific migration topics and detecting migration determinants and consequences, given their high level of flexibility and potential depth of detail. In order to guarantee sample representativeness and produce a useful source of information on international immigrants, at least one of two following criteria should be fulfilled: (a) the survey should be done on a large (random) sample; and (b) the country should have a high prevalence of international migrants.[30]

Household surveys include already existing surveys and migration-specific surveys. The former can be used for deepening some migration-specific aspects, which would be connected with the primary aim of the survey, such as immigrants' labour market outcomes in labour force surveys. Migration-specific surveys are, instead, useful for studying punctual migration topics. Because of the high costs of conducting new surveys, detecting useful information by adding new modules or questions to already existing surveys is an option worth exploring.[31]

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[29] De Bel-Air, 2014.

[30] DESA, 2007c.

[31] For more information, see Bilsborrow and Lomaia, 2011.

3. *Labour force surveys*

Among existing surveys, labour force surveys are potentially an excellent tool for the study of international (labour) migration. To this end, they must include a minimum set of information, namely country of birth (and date of arrival) and country of citizenship. Moreover, to the already rich set of available information, namely on employment, work status, occupation, sector, wages, etc., it would be useful to add specific questions that do not drastically lengthen the questionnaire. In order to identify key characteristics *before* migration (analysis of consequences), the following questions are proposed:

(a) What level of education did you have when you (last, if more than once) arrived?

(b) What was your work status? If employed, what was your occupation and income level? If unemployed: for how long had you been seeking work?

With a view to identifying the reason and type of move (analysis of determinants), these questions should be added:

(c) What was the main reason that made you decide to leave your country of origin to come here?

(d) With whom did you come? Did anyone join you here later?

(e) Did you have close relatives or friends living here before you came (the last time)? Who?

(f) Do you have close relatives or friends still living in your origin country or elsewhere?

These questions put special emphasis on key individual characteristics before departure and serve to understand the consequences of migration and its determinants. This should enable the detection of some factual evidence on the link between migration and development.

Investing in labour force surveys is to be considered a feasible and low-cost tool with strong potential for understanding labour immigration dynamics, especially in Jordan and Qatar, for two sets of reasons. First, labour immigrants are core categories of interest in both countries. Second, technically, both have a high prevalence of labour immigrants, so sample representativeness is guaranteed (also, potentially, by country of birth and citizenship).[32] Table 3 presents a comparative overview of labour force surveys in Jordan and Qatar.

While the Jordanian survey allows the distribution of the population by main countries of nationality (Jordan, Egypt, Syria, Iraq, other Arab countries, and non-Arab countries),[33] the Qatari survey only reflects the Qatari and non-Qatari classification. Moreover, a serious drawback of the Jordanian survey is that it covers only individuals living in *regular* households but not in *collective* ones, resulting in a large underestimate of labour immigrants.[34] Important numbers of unqualified labour migrants live, indeed, in collective households, characterized by high density, lack of basic amenities and an unsafe environment.[35] Therefore, "the accurate estimation of the role of foreign workers in the Jordanian labour market ... remains a challenge".[36]

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[32] In Qatar, employment data from household surveys are better than censuses for capturing information from non-Qataris and give useful information on employment and unemployment dynamics (Baldwin-Edwards, 2011).

[33] Grouping non-Arab nationals also has a major limitation, as this large group includes a wide range of nationalities, which are acquiring more and more importance in the Jordanian labour market, such as Asian workers in Jordan's free trade zones and migrant domestic workers (mostly from Indonesia, the Philippines and Sri Lanka).

[34] Assaad, 2012.

[35] United Nations, 2013.

[36] Assaad, 2012.

	Jordan (Employment and Unemployment Survey)	Qatar (Labour Force Sample Survey)
Type of source and periodicity	Primary statistical source By quarter/annual data Stock data	Primary statistical source Annual data Stock data
Institution which collects data	Department of Statistics	Qatar Statistics Authority
Target population	Usual resident population (present and absent) living in regular households	Usual resident population (present and absent) living in regular and collective households[a]
Data collection methodology	*Two-stage stratified sampling* - Variables used for stratification: geographic region, urbanization, population size of locality, socioeconomic characteristics - Number of sampling stages: two - Ultimate sampling units: dwellings - Sampling frame: population census - Sample size: 13 360 ultimate sampling units - Sample fraction: 1.4 per cent of the total population	*Two/three-stage stratified sampling* - Variables used for stratification: geographic region - Number of sampling stages: two[b] - Ultimate sampling units: household - Sampling frame: population census - Sample size: 6 920 ultimate sampling units - Sample fraction: 3.3 per cent of the total population Note that independent samples drawn from distinct frames of specially constructed Primary Sample Units are used to guarantee Qatari and non-Qatari statistical representativeness
Migration-related variables	Country of nationality (Jordan, Egypt, Syrian Arab Republic, Iraq, other Arab country, non-Arab country)	Nationality (Qatari versus non-Qatari)
Pros (+)/Cons (-)	(+) Detailed info on labour market outcomes (-) Large underestimation of the foreign population (-) No country of birth (-) Small sample (-) No longitudinal design (comparison over time impossible) (-) Collected data are only partially published	(+) Detailed info on labour market outcomes (+) High-quality sampling design, which takes into account the geographic distribution of non-Qataris (-) No detailed country of nationality (-) No country of birth (-) No longitudinal design (-) Collected data are only partially published (-) Microdata are not available even upon request

a/ Collective households are those where unrelated persons share living arrangements in a residential unit, such as labour cohabitations (group of workers), students in dormitories, nurses in hospitals and others. Both small (with less than seven persons) and large (with seven or more persons) collective households are included in the survey.

b/ A three-stage stratified sampling is employed for collective households.

The survey in Qatar instead covers both regular and collective households, resulting in reliable estimates. This is due to its well-sampled design that takes into account two major peculiarities of Qatari residents: the high proportion of non-Qatari workers living in dispersed areas, generally distinct from Qatari residential areas; and the existence of many collective housing quarters where non-Qatari workers live in

multiperson units provided by employers or where they rent directly from landlords.[37] These two aspects were taken into account with the introduction of a special sample design, in which independent samples are drawn from distinct frames of specially constructed primary sampling units, each set covering the entire nation and designed to include a target number of households of a given type. More specifically, four types of households have been identified: Qatari households; non-Qatari regular households; small collective households; and large collective households. The household sample was then selected in two stages, with primary sampling units selected for the first stage and households selected within those units for the second stage, following a field listing operation. In the case of large collective households, a third stage of selection was included, that of persons within households. Such sample design makes the Qatari labour force survey a unique tool, which can be potentially replicated in other countries with similar geographic and population distribution, particularly other GCC countries.

To conclude, the main advantage of the Jordanian labour force survey is the possibility of having detailed information on labour market outcomes by main countries of nationality. Unfortunately, this potential strength is undermined by the lack of data for individuals residing in collective households and by the small sample size (around 1.4 per cent of the total population). As for the survey in Qatar, the main advantage is high-quality sampling design, taking into account the distribution of the non-Qatari population across the country. However, the lack of information by detailed nationality strongly constrains its potential. In addition, both surveys are limited by the following: collected data are only partially published; microdata are not made available upon request; and data do not have a longitudinal design.[38]

4. *Migration-specific surveys*

Migration-specific surveys are an appropriate vehicle for analysing the determinants and consequences of international migration, as well as migrant integration in the host country. To achieve this, they should have a strong methodological basis. In fact, "there appears to continue to be confusion in the research literature regarding the data needed to properly investigate the determinants and consequences of international migration, and hence failure to recognize the serious limitations of most existing microlevel empirical studies".[39]

To correctly design a specialized migration survey on the determinants and consequences of international migration, some crucial conditions should be fulfilled. First, migrant conditions should be comparable before and after migration in order to draw factual evidence of determinants and consequences.[40] Accordingly, the longitudinal approach – implying a follow-up to a selected sample of migrants before and after the migration event – or retrospective surveys – which only imply the addition of some questions for investigating the conditions of migrants before departure – are ideal tools. However, while the first approach is often too expensive, the second has some important drawbacks, such as memory recall errors or deliberate distortion of information.

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[37] Qatar Statistics Authority, 2006.

[38] It is worth signalling that in 2010, the Jordanian statistical authorities implemented the first wave of the Labour Market Panel Survey, in collaboration with the Economic Research Forum and the National Centre for Human Resources Development. The survey collected data on labour market outcomes in an improved manner with respect to the Employment and Unemployment Survey: first, it was longitudinal, allowing researchers to follow the sample over time; and second it contained a wide range of migration-specific information, such as remittances, financial transfers, return migration, migration history of surveyed individual household members, and – indirectly – characteristics of Jordanian expatriates abroad. Unfortunately, its sample design, based on that of the Employment and Unemployment Survey, again excluded individuals living in collective households.

[39] DESA, 2007c.

[40] For instance, we cannot say that a specific individual outcome, such as human capital accumulation, is the result of migration unless we are aware of how the situation – the level of education, for example - was in the origin country before migration.

Second, it is crucial to select the correct group for comparison.[41] For instance, the analysis of determinants implies that we must know what determines the fact that some people migrate and that others do not. To understand consequences, we also need to be sure that some effects are observed in those who migrated rather than people who did not. In both cases, the correct group of comparison is the non-migrant population (population at risk). Information should thus be collected at both origin (with non-migrant individuals) and destination (with migrant individuals). On the contrary, when looking at the integration of international migrants in a given country, the correct group of comparison is no longer the population at home but the non-migrant population living in the receiving country. In that case, data can only be collected at destination.

To date, few international migration surveys have adopted this approach. Some notable examples are the survey conducted by the Netherlands Interdisciplinary Demographic Institute (NIDI) and the Statistical office for the European Union (Eurostat), in which Morocco was included, and the Migrations between Africa and Europe (MAFE) initiative, which does not include any of the countries considered in this paper.

Nevertheless, a number of migration-specific surveys have been carried out in Jordan, Qatar and Morocco in the last two decades. In Jordan, two main surveys respectively targeted Iraqi refugees in 2007[42] and Syrian refugees in urban Jordan.[43] In the first, the team itself recognized their failure in estimating the real number of Iraqis, given the lack of a consistent listing frame; and the qualitative approach of the second survey was not designed for providing general conclusions but, rather, a better knowledge of specific groups of recent Syrian refugees living outside the Zaatari and Mrajeeb camps. As for Morocco, transit migrants have never been targeted by any quantitative surveys. To this aim, alternative methods dealing with 'hidden populations', defined as those who do not appear in any listing frame, are needed in both countries.

In Qatar, a notable attempt at assessing migrants' conditions was the "Annual Omnibus Survey: A survey of life in Qatar", which was conducted by the Social and Economic Survey Research Institute of Qatar University for three consecutive years, starting in 2010. The 2011 survey targeted Qataris, expatriate residents and migrant labourers, who were interviewed face to face in one of six languages about a range of issues, namely their attitudes and activities relating to parenting, charity, politics, gender issues, the media and labour migrants. The sample design was well constructed,[44] as the Qatar General Electricity and Water Company provided a comprehensive sampling frame covering all households in Qatar. The information provided included the location of each household, whether it was private or collective, and the nationality of its residents. In this sense, despite its small sample size (992 Qatari nationals; 1,008 resident expatriates; and 854 migrant workers), the survey had two main advantages: migrants were classified by single country of nationality and a comparison group (Qataris) was included. The survey did not include domestic workers though, which can be considered as a major drawback.

B. Administrative sources

Compared with statistical sources, administrative sources have several major drawbacks: they are limited by national regulations, which affect definitions and covered populations, and by bilateral state agreements granting special rights to some citizens. Nevertheless, a major advantage of such sources is that data are continuously collected at a cheaper cost, providing efficient cooperation between statistical authorities and state ministries.

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[41] We cannot assume that observed human-capital accumulation is associated with the act of migrating if we do not compare the educational trajectories of both the migrant and non-migrant populations.

[42] Fafo and United Nations Population Fund (UNFPA), 2007.

[43] Cooperative for Assistance and Relief Everywhere (CARE) Jordan, 2013.

[44] For more details, see Social and Economic Survey Research Institute (SESRI), 2011.

1. *Population registers*

Centralised population registers are a primary administrative source, updated on a continuous basis and used to cover the legal resident population (*de jure* population). They keep track of all vital events and changes of residence, thus ensuring a continuous update of individual records, and they allow for the measurement of the immigrant stock at any given point in time.

The main advantages of population registers are as follows: (a) a population registry can be statistically used as continuous censuses and is maintained at a cheaper cost than implementing censuses or surveys; (b) each individual is provided with an identification number so that the development of advanced statistical approaches, such as the analysis of migrant life history, is feasible; and (c) the centralisation of population registers helps to overcome two of the main limitations of local population registers, namely double counting and lack of comparability between local registers.

Some limitations of population registers are, however, worth noting: (a) they only cover the *de jure* population, which is the more stable population of migrants, thus underestimating irregular migrants or those who, despite having a residence or work permit, do not reside in the country; (b) being an administrative source, the definitions, coverage and availability of population registers depend on legislation, administrative rules and interests/incentives to register-deregister; (c) there is a limited amount of information beyond demographic characteristics, which are not migration-specific; (d) registration is usually delayed compared to the time of the actual migration event; and (e) emigration events are underreported since, in many cases, people are not incentivized to deregister while there are benefits for registration, which entails an overestimation of immigrants relative to emigrants. Regarding this last point, population censuses represent an important check against register data to verify the scale of the foreign population.

So far, none of the three countries considered in this paper—and very few Arab States—hold a population register. Discussions on the establishment of a population register have only recently started in Morocco.[45]

2. *Residence and work permits*

Another major administrative source for measuring the immigration stock is residence and work permits. Individual data are annually updated for both, thus allowing for the measurement of the immigrant stock at a given point in time. Usually, beyond the country of nationality, they feature a limited amount of additional information, such as demographic characteristics (sex, age) and migration characteristics (reason for staying, duration of permit, etc.). Nevertheless, they present the following main advantages: (i) they cover almost the whole foreign population, only excluding irregular residents; (ii) specific groups, such as students and workers, are covered; and (iii) their statistical exploitation is very cheap. There are, however, some major drawbacks to these two administrative sources: (i) their value added depends on national regulations, for example some groups of foreign nationals are not included as they simply do not need a residence/work permit, or they enjoy special regulations, due to bilateral agreements; (ii) the date of permit issuance and date of immigration rarely coincide, and the statistical exploitation of these sources depends, in large part, on a high degree of collaboration between ministries (of interior or labour) and statistical agencies; and (iii) there is a widespread falsification of these records in Arab countries, especially in GCC countries, where employers undertake visa trading.

Unlike population registers, residence and work permits are adopted in most Arab countries. In Jordan, residence permits are administered by the Residence and Borders Department, while the decision to issue them is taken by the Ministry of Interior. In the case of working migrants, residence permits are granted only after a work permit is issued. A major limitation is that they are not required for Egyptians, Syrians and

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[45] Cantisani and others, 2009.

Palestinian refugees, making the major migrant communities invisible. As for work permits, they are under the responsibility of the Ministry of Labour, which processes and publishes these data on a regular basis in some detail: country of citizenship, sex, age, governorate, plus socioeconomic characteristics (including salary level). All categories of foreign workers fall under the same work permit so that, in principle, all workers are covered, including the many domestic workers, who can be hired only via private employment agencies authorised by the Ministry of Labour.[46] However, the system also has serious drawbacks. Syrian nationals who have fled from the civil war are not allowed to ask for work permits; and neither Egyptians nor Syrians are obliged to ask for a visa or for a residence permit. This means, in effect, that many who entered the country as visitors work without permission. Then, by definition, the system only covers workers.

In Morocco, residence permits are administered by the General Directorate for National Security and issued by the Ministry of Interior. They provide foreign nationals with the right to work (no additional work permit is required) and attend school, but not the right to vote. Residence permits are issued to foreign nationals who live in Morocco for more than three months for visiting, study or work. They last from 1 to 10 years depending on the nationality of the requester.[47] Stateless persons and refugees who wish to settle in Morocco must be recognised as such by the Ministry of Foreign Affairs before being given the opportunity to hold a travel document valid for two years. Irregular migrants are, obviously, not captured. Major limitations of administrative records thus emerge: the most relevant group of foreign nationals in Morocco do not need to renew their permits for 10 years, which calls the records reliability into question, as it proves hard to check whether these foreigners remain in the country or not. Moreover, minors are not covered and irregular migrants, who are the main category of interest in Morocco, are not captured.

As in Morocco, foreign workers are required to have a residence permit to live and work in Qatar. Permits are also required for family members. Workers who apply for a residence permit must have a Qatari sponsor (*kafeel*), on whom they depend for their continued employment and who is responsible for their residency status. Once a worker receives the residence permit, he/she may then sponsor family members to come to Qatar. Applicants may not leave the country during the period of visa-to-permit conversion. Women who are in the country on family sponsorship may register to work in the country without obtaining a separate work permit. Migration statistics by detailed nationality are largely dependent on these kind of Qatari administrative sources. These have, however, several limitations in providing reliable estimates on the number of foreign nationals: (a) accompanying family workers are not counted, being without an individual permit; (b) a large portion of workers do not receive any resident permit as their sponsors frequently fail to document, properly and legally, the workers they bring to Qatar under the sponsorship system; and (c) collected data contain little information and are rarely disseminated by detailed country of nationality.

V. INTERNATIONAL EMIGRATION STOCK

The approach for international emigration measurement considered in this paper is counting migrants at destination, i.e. using immigration data in receiving countries. Morocco and Jordan have different potentialities in adopting this approach.[48] Due to their country's long history of emigration to European countries, Moroccan emigrants are largely traceable for two set of reasons: (a) European statistics collect, process and diffuse most immigration data; and (b) the high number of Moroccan emigrants makes them easily identifiable in most European sample surveys. As for Jordanian emigrants abroad, they are far less in numbers and tend to be dispersed over different countries, with a significant majority working in GCC countries. This implies that using immigration data from receiving countries would lead to an overall

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[46] MEDSTAT II, 2009.

[47] Bourchachen, 2006.

[48] Being a net immigration country, Qatar is not considered in this section, even if the proposed methods can – to a large extent – be generalized.

underestimation of Jordanian emigrants, due to the scarcity of information available in GCC countries and to Jordanian emigrants' already scarce presence in sample surveys, in comparison to Moroccan emigrants.

Other minor limitations apply to both countries:

(a) Available variables are usually biased towards destination countries rather than emigration countries' needs in terms of contents;

(b) Microdata sets are usually difficult to access;

(c) Sources and collected information are not fully comparable for large differences in, for example, surveyed populations (foreign nationals versus born aboard, *de jure* versus *de facto*, etc.) and classifications used (such as occupation, level of education, etc.).

To address these drawbacks, secondary sources from destination countries' statistics can be considered to enhance comparability and the relevancy of collected information. There are indeed a number of international databases that have gradually allowed better access to detailed immigration data and have thus considerably enhanced knowledge of international migration. With respect to Jordan and Morocco, four main data sets are: (1) the Database on Immigrants in OECD (Organisation for Economic Co-operation and Development) Countries (DIOC); (2) the Eurostat database; (3) the CARIM (Consortium for Applied Research on International Migration)-South database; and (4) the IPUMS (Integrated Public Use Microdata Series)-International data sets.

Developed by OECD, DIOC provides information on a broad range of demographic (sex, age), socioeconomic (education, occupation, etc.) and migration (length of stay) characteristics for immigrants living in OECD countries, detailed by country of birth and residence as derived from the 2001 round of OECD censuses and other sources, such as the 2005-2006 DIOC database. The Eurostat database on immigration stock provides information on the demographic characteristics of immigrants living in European Union member States, as derived from national sources. Data are updated annually. The CARIM-South database provide a wide range of detailed demographic, socioeconomic and migration-related information on migration from, to and through, the Southern and Eastern Mediterranean countries and countries in Sub-Saharan Africa, by country of birth and/or citizenship. Statistics are collected both in countries of origin and destination from a large variety of national sources and are continuously updated. Finally, the IPUMS-International data sets, developed by the Minnesota Population Centre, feature the world's largest archive of publicly available census samples from 74 countries at different dates. Most of them contain the variables country of birth, and/or country of citizenship, and/or country of previous residence, and are disseminated as microdata sets, allowing data processing.

Dealing with a large number of countries, all of these datasets have systematically had to face comparability issues, due to the use of different methodologies, as well as problems in providing clear metadata. Efforts were exerted to convert national variables into international classifications in the OECD database, such as the International Standard Classification of Occupations (ISCO) and the International Standard Classification of Education (ISCED). The Eurostat database has provided national statistical offices with a unique list of recommendations; and the CARIM-South database relies on a standardized list of 70 indicators on flows and stock. As for the IPUMS-International project, it codified all available census variables into internationally recognized standards.

Finally, notwithstanding its age and its irrelevance in geographic terms for the Arab region, it is worth signalling the project conducted by the Latin American and Caribbean Demographic Centre (CELADE), developed in the 1970s by the United Nations Economic Commission for Latin America and the Caribbean. A migration module was inserted in the censuses of all Latin American countries to gather information on migration-related variables (country of birth and date of arrival/citizenship/previous residence) and all other demographic, social and economic characteristics. These data were then integrated into a unique

regional matrix, allowing users to detect useful and comparable information on migration within the Latin America region, thus adopting a system-approach to such statistics. This project probably constitutes the best example of cooperation between origin and destination countries in providing information on international migration stocks.

VI. INTERNATIONAL MIGRATION FLOWS

The most relevant tools for detecting international migration flows are of an administrative nature[49] and are only rarely used for statistical purposes, at least in our countries of interest. As already discussed in this paper, origin sources are good for detecting inward international migration flows, while destination sources serve for measuring outward migration flows, which correspond to the total inflows of receiving countries.

A. CROSS-BORDER MOVEMENTS

Reflecting actual moves with a high degree of certitude, the *registration of arrivals and departures* at the border is the most widely quoted source. However, this source of information has several limitations in all countries but those with specific geographic conditions (islands) and with extremely developed and efficient administrative systems. Among other issues, it can only estimate movements that occur through official border points. Moreover, the system often fails in distinguishing between international migrants and all other international travellers. Even in those systems where these two categories are separated (as in the Schengen area), individuals who enter a country as visitors may then re-enter another country as immigrants and thus end up being counted twice. Finally, the reliability of collected data may be low, as they reflect the conditions of entry (what is found on visas and permits) rather than real intentions (overstaying; working rather than staying as tourists; etc.).

While the first issue cannot really be addressed, the other two can be dealt with. In order to distinguish between international migrants and other travellers, some basic questions should be added, namely about the intended duration of stay; the country of usual residence; the country of citizenship; and the purpose of stay. Declared intentions of stay may then be checked against the validity of visas or permits. Much more significant efforts in terms of money and expertise are required for addressing the third issue. Data reliability, indeed, can only be improved by matching individual registrations at successive points in time and at different locations, implying follow-up on individuals.

Unfortunately, in our countries of interest, none of these issues has so far been addressed. The impossibility of distinguishing between international migrants and travellers, because key variables are not yet inserted, represents a major constraint there. Some improvements have, however, been achieved thanks to the MEDSTAT project. In Jordan, border cards have been abolished everywhere and the registration of border crossings operated by the Residence and Borders Department now feeds into a centralised system.[50] In Morocco, which was a pilot country for the improvement of border-crossing statistics, the MEDSTAT project envisaged the relevance of developing an integrated border card, allowing joint data collection and data processing for administrative and statistical purposes and for faster data processing.[51] At destination, similar issues strongly undermine the possibility of using border-crossing statistics as a valuable method to detect international migration outflows.

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[49] Statistical sources are sometimes employed to detect migration flows resulting, however, in a series of limitations (for more details, see DESA, 2007b).

[50] MEDSTAT II, 2009.

[51] Schoorl and others, 2006.

By keeping track of all residence changes through a continuous update of individual records, *population registers,* local or centralized, allow for the measurement of migration inflows as proxied by the annual number of individuals who register in a place of residence. However, as noted above, none of the three countries of interest currently hold a population register.

Residence permits can also be used for proxying migration inflows, provided that first permits are distinguishable from renewed permits. This is not the case in our countries of interest. Again, this kind of source is not exempt from limitations: (a) a first permit may be issued to a person already living in the country but receiving a new permit of a different kind, in cases when, for example, a student becomes a worker or a temporary migrant becomes a permanent one; and (b) the time threshold for receiving a residence permit may vary between countries.[52]

To summarize, measuring inflow movements is today a challenging issue around the globe. In addition, the low degree of comparability, which characterizes all flow measures, is a major issue when adopting the "counting migrants at destination" approach.

VII. RECOMMENDATIONS

Six ad hoc recommendations are here provided for addressing the above-mentioned limitations of Jordanian, Moroccan and Qatari international migration statistical systems. Some generalisations are made for the Mashreq, Maghreb and GCC subregions and also for the Arab region as a whole. Table 4 presents the proposed recommendations by migration direction (immigration versus emigration) and by migrant category of interest in each country analysed.

TABLE 4. RECOMMENDATIONS FOR IMPROVING DATA COLLECTION SYSTEMS

Migration direction	Category of interest	Recommendation
Jordan		
Immigration	Labour immigrants	**B**
	Iraqi and recent Syrian refugees	**C**
Emigration	Jordanian emigrants	**A**
Morocco		
Immigration	Transit migrants	**C**
Emigration	Moroccan emigrants	**D-E**
Qatar		
Immigration	Labour immigrants and family members	**A**

A. IMPROVING THE USE OF LABOUR FORCE SURVEYS IN QATAR
AND UNIFYING GCC SURVEYS

The first recommendation is to improve the use of the labour force survey in Qatar by enhancing its potential for measuring the international migration stock, as it already has strong methodological potentialities. These can be summed up as follows: (a) it fits with both criteria required for using a household survey for studying migration, namely sample representativeness, as Qatar has a very high prevalence of international immigrants, and sample size, as the sample is large enough in Qatar; (b) the survey is well designed in migration terms; and (c) both regular and collective households are covered.

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[52] Poulain and Herm, 2011; and Lemaitre, 2005.

Three specific steps are recommended here:

(a) First and foremost, two key variables should be added: country of birth and detailed country of citizenship;

(b) Some crucial questions should be added in order to understand the determinants (origin country viewpoint) and consequences (destination country viewpoint) of international migration in Qatar. They should enable interested parties to:

   (i) identify the key characteristics of immigrants *before* migration, thus revealing the consequences of migration, by including the following questions: what level of education did you have when you (last, if more than once) arrived to your country of residence? What was your work status? If employed, what was your occupation and income level? If unemployed, for how long had you been seeking for a job?

   (ii) identify the reason and type of move (determinants), by adding such questions as: what was the main reason that made you leave your country of origin to come to Qatar? With whom did you come? Did anyone join you here later? Did you have close relatives or friends living in Qatar before you came (the last time)? Who? Do you have close relatives or friends still living in your country of origin or elsewhere?

   (iii) identify the characteristics of labour immigration in Qatar, through adding questions on working and housing conditions; involvement with trade unions and/or professional associations; and domestic work.

(c) Collected data should be processed by detailed country of origin (birth and citizenship), and information should be disseminated. Microdata should also be made accessible to users.

From a migration-system approach, the second recommendation is to unify the labour force surveys of all GCC countries. After all, they share similar conditions in terms of labour immigration patterns and characteristics. This implies three additional steps:

(a) The above recommendations should be followed by other GCC countries;

(b) Definitions and variables codes should, to a large extent, be standardized;

(c) Authorities in GCC countries should permit the unification of individual records into a single, harmonized and annually updated dataset.

Recommendation A would have several positive outcomes for the countries involved. In Qatar, improving the use of labour force surveys would allow for the measurement of the size and characteristics of the labour migrant population (the main category of interest for Qatar) by country of origin, as well as for understanding integration patterns. For Jordan and, more generally, for all other Mashreq countries, improving the use of the Qatari labour force survey and unifying these surveys in GCC countries would allow interested parties to measure the size and main characteristics of the Jordanian emigrant population (first category of interest) in the GCC subregion. It would also allow for a better understanding of the determinants and consequences of Jordanian emigration. In so doing, it would solve the problem of underestimation of the Jordanian emigrant stock when using the "counting at destination" approach.

B. IMPROVING AND MAKING BETTER USE OF JORDANIAN STATISTICAL SOURCES

In Jordan, statistical rather than administrative sources should be privileged. The latter have major limitations that cannot be addressed: residence permits do not include – by law – Egyptian, Syrian and Palestinian refugees, the three nationalities being the main ones of interest there; work permits both fail to

count Egyptian nationals, not to mention recent Syrian inflows, and they only cover workers; and border statistics are limited per se.

Both the labour force survey and—especially—the Labour Market Panel Survey allow the identification of the immigration stock in Jordan and its labour market outcomes by detailed country of nationality. In addition, the Labour Market Panel Survey allows in-depth analysis, as it contains several migration-related variables and has a longitudinal design.

However, some steps are crucial for both surveys:

(a) A major technical issue concerns their sampling design. In order to guarantee migrants' representativeness, collective households should be included in the sample which should also be enlarged. To this end, adopting sampling methodologies similar to those used in the Qatari labour force survey is recommended (see recommendation A);

(b) In addition, adding a set of retrospective questions to establish the situation before migration would enhance our understanding of international migration determinants and their consequences;

(c) Given its longitudinal nature, there is a huge need to replicate the Jordan Labour Market Survey so that the time, money and efforts employed in designing this powerful tool are not wasted. In this sense, given its demanding nature, reorganizing it on a five-year basis (2010/2015/2020 and so on) is probably the best technical approach;

(d) Other core recommendations include: adding the country of birth variable; disseminating results by country of nationality/birth; and permitting access to microdata sets, at least upon request.

For the purpose of this paper, recommendation B would enable scholars to depict the size, characteristics and economic outcomes of labour migrants in Jordan.

C. DESIGNING ALTERNATIVE TOOLS FOR ESTIMATING HIDDEN POPULATIONS

In two out of our three countries of interest, there are major issues concerning a portion of migrants who might be defined as *hidden populations*, as they have never, for a variety of reasons, been counted by official sources. In Jordan, this applies to Iraqi and recent Syrian refugees, while in Morocco it refers to *transit* migrants.

Since little or only incomplete information is currently available on the hidden populations' size, characteristics and living conditions, common sources and methodologies do not help, as they can only cover individuals who have somehow been registered. Consequently, alternative methodologies should be explored. So far, a number of methods have been developed to deal with such populations. They can be classified in direct and indirect methods. Direct methods are based on data that "capture" the subject of research directly. For migration purposes, three main data sets are commonly used as they include a subset of the target population: immigration enforcement data (for apprehended irregular migrants), administrative records (those of regularizations, for example) and survey data (where migrants are identified through snowball sampling, for example). Indirect methods do not use any data set with the target population, being commonly based on residual approaches. For instance, the estimate of *hidden populations* equals the difference between the estimate of the total population according to census figures and that of the legally resident population as provided by another source.[53]

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[53] Jandl, 2011.

To capture Iraqi and recent Syrian refugees in Jordan and transit migrants in Morocco, we recommend using direct methods, since indirect methods implicitly assume that such populations are somehow covered in compared sources, such as censuses and population registers. On the contrary, we believe that in Jordan, as well as in Morocco, all official sources tend to seriously underestimate such populations. Among direct methods, those based on surveys are preferable to those that rely on apprehended irregular migrants and regularization records, because the latter sources cannot cover Iraqi nor Syrian refugees in Jordan, as they do not have a clear legal status. They also cannot cover refugees in Morocco, where apprehension statistics are weak and where regularisation programmes have never been implemented.

Among survey methods, *location sampling techniques* seem to best fit our purposes, as they are normally used when the target population is large and geographically concentrated.[54] Iraqis, recent Syrian refugees and transit migrants are, indeed, undoubtedly sizeable populations, who are believed to be mostly concentrated in urban centres, where they have access to informal jobs. This was already highlighted in previous studies.[55]

Specifically, the *Centre Sampling Technique* is here recommended. This method is based on the assumption that migrants keep, by necessity, a set of contacts with some centres or gathering places located in a given area. The first step is thus to identify all, or a sufficiently large set of, such centres. Once this primary list identified, *n* centres are randomly selected from which *n* individuals are also randomly chosen among those who regularly visit the centre. In order to randomly choose individuals, thus maintainng sample representativeness, the number of interviews in each centre should depend on centre size. A small number of interviews would thus correspond to small centres, while a large number of them would be conducted in big centres. Consequently, the probability of an individual's inclusion in the sample depends on: (a) the number of selected centres visited by the person, which is a direct link; and (b) the number of individuals from the population who also visit that centre, which is an indication about the size of the centre and an indirect link. This approach implies that the higher the number of visited centres, the higher the probability of inclusion will be; while the larger and more visited the centre, the lower the probability of being included in the sample. On this basis, the sample is then reweighted, becoming statistically representative of the target population.[56]

In summary, recommendation C proposes the adoption of the *Centre Sampling Technique* for the estimation of the size and characteristics of Iraqi and recent Syrian refugees in Jordan, and those of transit Sub-Saharan migrants in Morocco.

D. DESIGNING SPECIFIC TOOLS TO UNIFY INFORMATION ON EMIGRANTS AT DESTINATION

We further recommend improving cooperation between origin and destination countries in order to allow for data exchange on international migration. In this paper, we have argued that direct measurement has higher potentialities than indirect measurement; in other words, counting migrants at destination is more powerful than counting them at their point of origin.

In order to enhance such potentialities, a specific proposal is presented below for counting emigrants from Morocco and, more generally, from all Maghreb countries. This recommendation is specific to Moroccan migrants and, to a lesser extent, to other Maghreb migrants, for two main reasons. First, the vast majority are concentrated in Europe and especially in France, Belgium, the Netherlands, Italy and Spain. Second, in all of these countries, Moroccan migrants represent a very large portion of the migrant population, implying that national labour force surveys normally allow for sample representativeness.

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[54] Ibid.

[55] See, for example, CARE Jordan, 2013 on recent Syrian refugees; Fafo and UNFPA, 2007 on Iraqi refugees; and Cherti and Grant, 2013 on Sub-Saharan transit migrants.

[56] Baio and others, 2011.

We thus recommend a constant exchange of data between the national statistical authorities of selected European countries and Morocco, in terms of their national labour force surveys. This kind of data exchange could be further facilitated by recoding some variables for the sake of comparability. Much as was done, as previously mentioned, in the CELADE project. The added value here lies in the fact that Morocco-Europe can, to a large extent, be considered a closed migration system. A similar project may also function with other types of sources, such as the 2011 census. Recommendation D thus covers Moroccan labour emigrants.

E. ENHANCING MOROCCAN CENSUS POTENTIALITIES IN IDENTIFYING RETURN MIGRATION DYNAMICS

The fact that the Moroccan census already allows users to capture return migrants has already been noted. They constitute another main category of interest in Morocco, as return migrants are considered the primary channel through which the link between migration and development can be evaluated. However, to make full advantage of this opportunity, two actions are required:

(a)   First, the definition of "return migrants" should be fine-tuned. As previously mentioned, combining the question on "place of residence five years ago" with the question either of "country of citizenship" or "country of birth" captures only a limited portion of return migrants. To overcome this limitation, two questions might be added on "ever lived abroad" and "length of absence from Morocco" for the native population. In addition, asking for the year of return would allow for the distinction between recent and non-recent returnees;

(b)   Second, in order to really capture the effects of (return) migration, a specific module should be added on the situation of return migrants *before* their return. In this sense, the module should aim to cover the following dimensions: socioeconomic conditions before the return; and reasons for the return. In the approach advocated for in this paper, this module would be much more useful than any other modules. Recommendation E thus covers Moroccan return migrants and enables the detection of some factual evidence on migration and development dynamics in the country.

F. INSERTING KEY MIGRATION VARIABLES IN THE CENSUS

A final general recommendation that broadly applies to all categories and countries would be the inclusion of basic migration variables in the population censuses, in order to identify the immigrant population, namely country of birth, time of arrival, country of nationality and country of usual residence. In addition, the modes of acquisition of citizenship and eventual multiple citizenships should be included as well. Furthermore, all information should be published and made freely available.

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