Comparative Methodological Note on TEMPER Origin Surveys with returnees and non-migrants

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1. Introduction

The overall objective of the TEMPER project consists of providing a comprehensive assessment of the pros and cons of recent initiatives to promote temporary and circular migration as an alternative to more traditional forms of permanent migration, not only among prospective migrants but also among current and past residents in the EU. These initiatives usually rely on a poor understanding of the ultimate reasons why some migrants spontaneously return to their country of origin while others do not, and why some of them re-migrate after return. More importantly, it is far from being clear that circular migration actually responds to the needs and expectations of many (potential) migrants from third-countries, and entails for them and their families more benefits than alternative forms of mobility.

With the intention to contribute to improve our knowledge on these issues, the TEMPER project has conducted a survey among returned migrants in selected countries of origin (Argentina, Romania, Senegal and Ukraine) and a comparable sample of non-migrants that allow us to:

(1) to identify the main drivers of return and circulation decisions of migrants recently involved in temporary, circular and permanent migration,
(2) to assess the impact that different types of temporary, permanent and circular mobility have for migrant and non-migrant workers and their families.

The fieldwork of these surveys initiated in summer/autumn 2017 depending on the country and ended in the summer of 2018, at the time of writing this report.[1] The goal of this report is providing a detailed and fully transparent information on all the methodological aspects potentially affecting the obtained data, emphasizing the usual gap between sampling design and actual implementation of such design during the fieldwork, challenges found and responses given to each of them.

2. Pre-existing official data on returnees in our TEMPER origin countries, and possibilities for a proper sampling frame

It is not new to anybody interested in return migration the multiple difficulties to run surveys on this type of migrant population. Often, most official statistical sources do not include returnees or, at best, do not include all of them. In principle, Censuses are the best source to assure full coverage of any kind of population. However, until very recently Census questionnaires did not include any specific questions to identify them.

[1] Exact dates of the fieldwork in each country are the following:

- Senegal: 16 Oct 2017-3 Jan 2018; 3 April- 22 May 2018
- Ukraine: 18 Oct 2017-3 July 2018
- Romania: 8 Nov 2017- 2 Mar 2018; 5 May 2018- 15 Aug 2018
- Argentina: 11 July 2017- 15 Aug 2018

In the Table 1 below, we have listed the type of information available on returned migrants in each of our TEMPER countries, by type of source: Census, Register and Survey. As can be seen, even in the case when Census included them, the Census information was not recent enough to be fully reliable as a good guidance for sampling design, as in Ukraine and to a lesser extent Romania and Argentina. In Ukraine, a new Census was planned for 2011, then it was delayed several times and it remains uncertain if it will be run in 2020. The previous one had been completed in 2001 and, thus, too old to be trusted as a reliable source on how many returnees were living in Ukraine at the time of TEMPER fieldwork (2017). In the cases of Argentina and Romania, the latest Census was more recent, 2010 and 2011 respectively; however, they are partially outdated to fully captured the expectedly larger population of returnees in 2017, after the peak years of the crisis in the major destinations in the EU including Spain and Italy, and to a lesser extent also France, Germany, the UK or Poland. Only in the case of Senegal, the date of the latest Census, 2013, could be considered close enough to the date of the fieldwork to work as a reliable guidance when deciding on which areas of the country the fieldwork should focus to be both successful and representative of the total population from major EU destinations (France and Spain in this case).

Table 1. Pre-existent official statistical information on returnees in TEMPER origin countries by type of source (Census, Register, Survey).

	SN	UA	RO	AR
Source: Census	Census 2013 (RGPHAE)	Latest one in 2001 with very low registration of migrants; next repeatedly postponed from 2011 until 2020	Census 2011	Census 2010
Source: Register	Databases of the voluntary repatriation programmes run by the IOM, OFII, the *PAISD,* the local branches of the *Bureaux d'Accueil, d'Orientation et de Suivi des Sénégalais de l'Extérieur.* Contacts were provided by the IOM for the TEMPER survey.	State Employment Service of Ukraine collects statistics on legal labour migration provided by employer & recruitment agencies with very partial coverage	No available data	Argentina´s Consulates count only a small (and probably biased) portion of returnees, and it is not contained in a data base. Repatriation programs not only are biased (scientists or migrants in critical situations), but also capture a small portion of returnees
Source: Other Surveys	Different ad hoc surveys on international migration and general-purpose surveys with special modules on migration have been conducted over the years (*Enquête de Suivi de la Pauvreté au Sénégal* - 2005/6 ; 2011 ; *Enquête Structures Familiales et Pauvreté* 2008 and 2012 ; MAFE survey). However, they do not provide nationally representative data on migration, and count limited numbers of return migrants in their sample.	Modules from Labour Force Survey generating Labour Migration Surveys 2008 and 2012 (the one from 2017 became available only after starting the fieldwork). Returnees were only identifiable in LMS 2012 and 2017, not in 2008.	Temporary Living Abroad (LTS) The last national representative survey on Romanian population including information on returnees, that can be accessed in an open source regime, was completed in 2006. The survey included also two regional subsamples on migrants/returnees. The information is mostly outdated, as the migration fields from Romania changed a lot after the country's accession to the EU in 2007.	Multipurpose surveys as well as labour force surveys (Encuesta Permanente de Hogares or Encuesta Annual de Hogares Urbanos) that are collected regularly and also gather information on country of birth and country of residence 5 years ago, include very small samples of returnees, with large sampling errors, to be considered reliable as a sampling guide.

Source: Own elaboration

As can be seen in Table 2 below, the working definition of returnee in each of the 'best' official source available varied across countries: in Argentina, identifiable returnees were only people residing in Argentina in 2010 and who declared they were living abroad five years prior to the Census (that is, by 2005); in Romania returnees identified in the Census are persons that ever lived abroad for more than one year and had returned to Romania by 2010, which implies only the initial returnees from the crisis period are included in the official figures available; finally, in Senegal, the Census questions allowed to identified Individuals born in SN and living in SN at the time of Census 2013, whose country of residence 10, 5 or 1 year before (that is, in 2003, 2008 and 2012) was residing out of Senegal. In Ukraine, the definition or returnee differs quite a bit from the previous ones since Labour Migration Surveys, derived from the module on migration

included in the Labour Force Survey in years 2008 and 2012[2], instead of Census were the only available source for estimations. According to the LMS in 2008, returnees were household members aged 15–70 who had returned to Ukraine in the 2,5 years before the survey (since 2006 up to mid 2008, and between early 2010 and mid 2012, respectively) after having worked abroad (2008) or at least having searched a job abroad (2012). These definitions entail a clear focus and restriction to returned labour migrants which was completely absent in the other three countries, since the Census covered all returned migrants regardless of their initial reason for migration or labour behavior at destination.

In summary, the available information about returnees in our TEMPER origin countries differed across two main dimensions:

1) Period of migration and return. Just to give two examples, the Argentinean Census covered only migrants who had migrated before 2006 and had returned between 2005 and 2010; in contrast, in Senegal, the available information referred only to those who were abroad in 2003, 2008 or 2012 and were back in Senegal by 2013, but excluded all the rest (for instance, those who migrated and returned between 2004 and 2007, or between 2009-2011, or between 1990-2002, for example).

2) Type of migrant: while the information for Ukrainian returnees restricted mostly to labour migrants, in the rest of countries information available in the Censuses referred to all returnees regardless of whether they (intended to) work(ed) in their EU destination country, or not.

Table 2. Definition of returnees in the available official sources and accessibility of the data

	SN	UA	RO	AR
Most valuable source	Census 2013 (RGPHAE)	Labour Migration Surveys (2008, 2012, 2017)	Census 2011	Census 2010
Definition of RET on available source of official data	Individuals born in SN and living in SN at the time of Census 2013, whose country of residence 10, 5 or 1 year before was out of Senegal	2008 LMS: Household members aged 15–70 who returned to Ukraine within the specified reference period after having worked abroad (2008); or having searched a job abroad (2012, 2017) in the reference period. Reference period was 3,5 years before the date of the survey in 2008, and 2,5 years before for 2012 and 2017. LMS 2008/2012/2017 did not cover people who had left abroad for work before 2005/2010/2015 and people who had not returned yet at the time of the survey. And in any case, in 2008, RET were included but not distinguishable from emigrants.	Persons that ever lived abroad for more than one year and returned to the country (Census 2011 asked if one person lived at any time abroad and the date of the last return in Romania)	Person who were registered by the 2010 Population Census as living abroad five years prior to the Census. Note this implies that people who returned earlier and later than 2010 are not counted as returnees. In addition, the Census did not collect information about the specific country where the person was living while abroad five years ago.
Lowest level of geographical disaggregation of figures on RET	Département	Territorial zones (the country was divided into 5 zones), which implied certain limitations for making precise estimations at the oblast level.	Commune/Town (smallest TAD)	Theoretically, census track. However, due to data protection and very low number of returnees per census track, most likely only at municipality level.

Source: Own elaboration

[2] Results for 2017 were yet not available by the time of preparing the TEMPER fieldwork.

In addition, even if some information on returnees was available in each of the TEMPER origin countries, as described above, the extent to which this information was accessible varied greatly. In Senegal, the TEMPER team managed to obtain a 10% sample of the 2013 Census, which allowed to precisely identify the areas of the country with the highest number of return migrants from different destinations around the world, as well as some other of their relevant characteristics for the sampling design. In Romania, the TEMPER team also obtained authorization to access microdata for the entire Census, which represented a very valuable guidance for the preparation of the fieldwork. However, the microdata were anonymized in both cases and no nominal individual sampling was possible or authorized in any case. Moreover, even if these are census data, those referring to Long-term Emigration (LTE) should be considered as a sample (of about 780 thou persons) due to the problems that were faced in the Census data collection. The data file on LTE is not integrated into the general census file and the available socio-demographic information is poorer than for the case of Short-term Emigrants (STE) or Returnees (RET).[3]

In contrast, in Argentina, none of this was available. In Ukraine microdata from the LM Surveys were not available but only tables indicating the absolute number of migrants and returnees (all mixed together) and their distribution by countries of destination. Moreover, the reliability of the LMS at the Oblast level is low (since sampling was based on 5 territorial zones rather than oblast), the obtained indicators were used for guidance only utilising general threshold such as "high level", "overwhelming majority", and so forth, instead of precise numerical value.

Table 3. Accessibility of the official data sources

	SN	UA	RO	AR
Most valuable source	Census 2013 (RGPHAE)	Labour Migration Surveys (2008, 2012, 2017)	Census 2011	Census 2010
Micro-data available?	Only for 10% sample	Yes	No	No
Personal addresses available for research goals?	No	No	No	No
Type of info available to TEMPER team on RET	Random sample 10% of Census 2013 (at commune-level) and full database of return migrants (at départemental level), to identify stocks of return migrants from Spain and France in each Department in the country	Tables with the aggregate number of (migrants and) returnees from the main receiving countries (including Poland and Italy)	Census data available to identify stocks of returnees, short term and long-term migrants, their distribution by country of destination and county of origin, and basic socio-demographic characteristics constructed from the microdata available to the TEMPER team, with some limitations[4]	Disaggregated info was never requested since country of residence when abroad was not available and information will be only for all returnees (not only the ones from Spain)..

Source: Own elaboration

[3] Partial analysis of microdata on LTE and STE is available at Dumitru Sandu,Destination Selection Among Romanian Migrants in Times of Crisis: an Origin Integrated Approach , 2017, Romanian Journal of Population Studies, XI, 2).

[4] Aggregated data on Short-term and Long-term emigration by destination country and counties of origin are publicly available at http://www.recensamantromania.ro/rezultate-2 (tables 19 and 20 and also in VOLUMUL I: POPULAŢIA STABILĂ (REZIDENTĂ) – STRUCTURA DEMOGRAFICĂ). In addition, a 10% microdata sample from the total population recorded at the 2011 census, short-term emigration and returnees are available on the IPUMSI site at https://international.ipums.org/international/, Minnesota University.

3. Rare and hard-to-reach population

Based on the previous sources, some basic estimations of the size of the returnee population in each of the TEMPER origin countries can be made in order to provide the reader with an idea of how small the target populations of the TEMPER Origin Surveys were. In Argentina, returned migrants from all over the world represented in 2010 less than 0.2% of the total population in the country (even it should be emphasized that this estimation covered only those who migrated before 2006 and returned between 2005 and 2010, which obviously represent only one fraction of all returnees in the country by the time of the Census). In Romania, in 2011, the Census estimated returned migrants from all over the world represented approximately 0.5% of total population, although In this case persons who migrated at any time were included as far as they had resided for one year abroad. In Senegal, the number of returnees from abroad was slightly higher, 0.56 % of the population in 2013 although, again, some returned migrants were excluded from this estimation due to the particular formulation of the Census question that did not cover returnees who had migrated and returned between 2004 and 2007, between 2009 and 2011, or between 1996-2002. Finally, the estimate of labour returned migrants in Ukraine in 2012 was 0.97% of the total population, and 1.32% of the total population in 2017.

In other words, in all our four origin countries returnees were very small populations. Their size became even smaller when additional requirements concerning their country of destination abroad were imposed. Since experience of migration and return is expected to be strongly dependent on the country of destination, and TEMPER project is focused on the experience of migrants to and returnees from EU countries, our interest was on sampling returnees from specific countries in the EU. Even if we selected the major destinations in the EU for Senegalese, Ukrainians, Romanians and Argentineans, this additional restriction made our target populations even smaller.

In Romania, for instance, returnees from Spain represented approximately 0.05 percent of the total population in Romania in 2011, and returnees from Germany amounted to approximately 0.015 percent by that time. Even If these numbers are likely to have slightly increased during the crisis, it remains clear that our target population were statistically rare. In Senegal, returnees from Spain were estimate to be only 0.02 percent of total population and the ones from France 0.05 percent. In this case, the large reduction in the percentage from these two countries in comparison to the overall one for returnees from any other destination in the world reflects the importance of African destinations for Senegalese migrations, as it is the case for migration in almost all African countries. In Argentina, the corresponding percentage cannot even be calculated since the Census did not collect information on country of residence abroad; however, it is very likely that returnees from Spain, the EU destination selected in this case, are not even one fourth of total population (returnees from Italy, the US, and other Latin American countries are definitely many) and, thus, the size of our target population won't be larger than 0.04 percent of total population in 2010. Finally, in Ukraine returnees from Poland represented 0.16% of the total population in 2012 and 0.48% of the total population in 2017. The share of returnees from Italy was 0.08% in 2012 and 0.11% in 2017.

Table 4. Estimated size of the returnees' population in TEMPER origin countries according to official sources

	SN	UA	RO	AR
RET of any kind in the whole country	In 2013, according to the Census, the number of returnees in Senegal amounted to approximately 75,000 individuals, out of 13,5 million, which represents **0.56% of total population in Senegal.** However, this figure excludes, for instance, those returnees who had migrated and returned between 2004 and 2007, between 2009-2011, or between 1996-2002, all of which were potential TEMPER target population as far as they returned from the selected EU countries	**In 2012**, according to LMS the number of returnees in Ukraine ammounted to 441,700 individuals in 45,6 million population, **0.97% of the total population in Ukraine.** However, this figure does not include the persons that had a previous residence abroad and returned before 2010. **In 2017** according to LMS the number of returnees in Ukraine ammounted to 562,800 individuals in 42,3 million population, **1.32% of the total population.** However, this figure does not include the persons that had a previous residence abroad and returned before 2015.	In 2010, Aprox. 100.000 out of the total stable population of the country of 20 million people (INS 2013), which represents **0.5% of total population in Romania.** However, this figure does not include the persons that had a previous residence abroad but came in reference locality from another locality by internal migration, since they cannot be identified in the Census data as they are.	In 2010, returnees as defined by Census amounted to 70.645 in a 40 million population, **0.17% of total population in Argentina.** However, this figure does not include the persons that had a previous residence abroad and returned before 2005, or after 2010, who were also part of the TEMPER target population as far as they returned from the selected EU countries
RET from TEMPER Selected Destinations in the EU	**In 2013, RET from ES represented approx. 0.02 % of the total population in SN, and RET from FR would be approx. 0.05 % by that time.**	**Returnees from Poland represented 0.16% of the total population in 2012 and 0.48% of the total population in 2017. The share of returnees from Italy was 0.08% in 2012 and 0.11% in 2017.**	Romanians that settled in locality after 1999 and who had the previous residence abroad (TEMPER target population) – were 49 thousand (0,25% of total population). The share of returnees from Italy, Spain and Germany was of about 30%, 20% and 6% respectively, out of the total returnees arrived to Romania since 1999. T **In 2010, RET from ES represented approx. 0,05% of the total population in RO in 2010, and RET from DE would be approx. 0'015% by that time.**	Unknown (Census does not collect info on previous country of residence)
% women among RET from TEMPER countries	27% of RET from FR & 14% of RET from ES	Unknown (gender structure of different categories of migrants was not published)		Unknown (Census does not collect info on previous country of residence)

Source: Own elaboration

A rare population is generally defined as a small proportion of a total population that possesses one or more specific characteristics. Although there is no precise definition of rare or small in this context, researchers have proposed proportions of .10 or less to identify rare populations. When this proportion is larger, standard sampling techniques can usually be used efficiently. In addition, sampling frames are often nonexistent or incomplete for most rare populations, which implies serious challenges for designing a sampling procedure able to guarantee maximum representativeness of the obtained results.

The rest of this document is precisely aimed at clearly defining our target population, as well as describing as carefully as possible the sampling procedures followed in each country in order to provide the user of the Temper Origin Surveys the best information to properly asses their results.

4. Eligibility

As explained in the previous section, the experience of migration and the decision and experience of return is very context-specific. Should TEMPER have defined returnees as migrants who come back to their country of origin from any country in the world, the possibility to understand the role of those contextual factors would be lost. Moreover, the possibility of studying the determinants of the return decision by merging our data on returnees with pre-existent data on current migrants in destination countries would not be feasible.

The selection of the destination countries in the EU for each migrant flow included in TEMPER was the first one made when defining the target populations for the survey in each origin country. To make the selection two main dimensions were taken into account: the size of the migration flow to that particular destination within the EU, and the diversity of destinations within the EU in terms of labour makets and immigration policies in cases where up to two destinations were selected (all countries with the exception of Argentina).

Returnees from the selected countries were requested to have returned since 2000 onwards, in order to allow the inclusion of migrants who made their return decision before the economic crisis but also during the crisis. At the same time, returnees were allowed to have migrated to the selected EU destination since 1996 in order to guarantee the possibility to have long enough migration histories for individuals who had returned a long time ago (e.g. 2000 or 2001).

Returnees had to be **born in the country of survey**, which implies that children of migrants born in our EU destination countries who returned with or without their parents to the country of survey were always excluded from our samples. With regard to age at the time of the survey, interviewees were required to be at least 20 years old since we wanted to have returnees who had had at least the opportunity to have entered the labour market abroad. Thus, the minimum age at return was also 20 years old. The upper bound for age at return was initially established at age 60, since TEMPER focuses on returnees who are still of working age at return and are likely to keep active in the labour market, launching their own businesses, for instance. However, the particular circumstances of the labour market in our countries of origin indicated that many people often continue working beyond this age (e.g. Romania and Senegal) and the upper limit was increased up to 65 years old.

Finally, a crucial eligibility condition in TEMPER surveys for returnees was that returnees had to have spent a minimum of 3 months in both their last country of destination in the EU, and also in their country of birth at the time of the survey. Even if an internationally accepted definition of return migrants does not exist, most studies available have tended to require one year of stay in the country of origin to define someone as a returnee. Since TEMPER research goals included particular attention to temporary and circular migrations, the limit of one year would have seriously damaged the possibility to study these phenomena. Moreover, in the case of Ukraine, the limit of 3 months of minimum stay had to be reduced to 2 months in order to guarantee that repeated and circular migrants often travelling to (especially) Poland more than once in the year, or every year for very short periods, were not lost from the survey. However, in order to make sure that simple ‘visitors’ were not confounded with short-term migrants, the additional requirement that the returned had worked or studied in the EU destination was imposed for the Ukrainian fieldwork.

Table 5. Definition of the target population of returnees and non-migrants in TEMPER origin surveys

	RETURNEES				NON-MIGRANTS			
	SN	**UA**	**RO**	**AR**	**SN**	**UA**	**RO**	**AR**
Country of birth	Senegal	Ukraine	Romania	Argentina	Senegal	Ukraine	Romania	Argentina
Sex	Only males	NA	NA	NA	Only males	NA	NA	NA
Current age	20-75	20-75	20-75	20-75	20-75	20-75	20-75	20-75
Min. length of period abroad	3+ months	2+ months	3+ months	3+ months	Never abroad	Never abroad	Never abroad	Never abroad
Last country of migration in EU* (with min. length)	France / Spain	Italy/Poland	Germany / Spain	Spain	NA	NA	NA	NA
Year of last migration to EU	1996 or later	1996 or later	1996 or later	1996 or later	NA	NA	NA	NA
Activity during last EU migration	NA	Worked/studied	NA	NA	NA	NA	NA	NA
Age at return (last EU migration)	20-65	20-65	20-65	20-65	NA	NA	NA	NA
Year of return (last EU migration)	2000 or later	2000 or later	2000 or later	2000 or later	NA	NA	NA	NA
Direct return to country of birth**	Yes	Yes	Yes	Yes	NA	NA	NA	NA

* EU member states as of 2017

** Without intermediate stays longer than 3/2 months in another country

With regards to the non-migrants sample, only 'pure' non-migrants were eligible. This means selected persons for the NM sample could not have any international migration experience, not even outside our selected countries, outside Europe, or in periods outside our defined time-frame for RET. By allowing only 'pure' non-migrants into the sample we homogenize the sub-sample, simplify the controls needed in the questionnaire, and avoid blurring the distinction between non-migrants and returnees. It seems also important to note that left-behinds (i.e. persons who remain in the country when the partner, parents or other close relatives migrate abroad) are not excluded from the non-migrant sample. Defined as persons with no migratory experience of their own, but having people around with such experience (i.e. indirect experience of migration), they are considered eligible and the information contained in the questionnaire will allow to know whether they belong to this category (in the same way that returnees may have also belonged at some point of their lives to this category).

5. Geographical coverage: area approach (see Annex I for distribution of ideal and achieved sample by geographical unit)

In order to draw a national representative sample of returnees, a sample frame is needed. Unfortunately, such a frame is almost never available. An alternative procedure consists in utilizing information on the location of returnees -if available- and search for this specific population in those locations where the probability of finding them is higher. The main advantage of this procedure, considering the limitations previously explained with regard to the size of these populations and the lack of proper official data on them, is that a random sample of returnees might be potentially contacted if enough returnees are found.

All four countries in TEMPER implemented this 'area approach' except Argentina, where the lack of proper information in the Census (no registration of last country of residence abroad), the crime rate in Buenos Aires as well as the high rate of refusals obtained in most face-to-face surveys conducted by different firms and public institutions like INDEC in the area, made such strategy highly costly and risky. Additionally, INDEC would have refused to provide information in all census tracks with very low numbers of returnees, due to data protection and statistical secret rules. For those census tracks where the information could have been obtained, it would have been difficult to find a case in densely populated areas, especially one adjusting to the

eligibility requirements for TEMPER Survey. However, a geographical quota was imposed in this case to guarantee some diversity that reflects the location of returnees across the country, according to the information available in the Census.

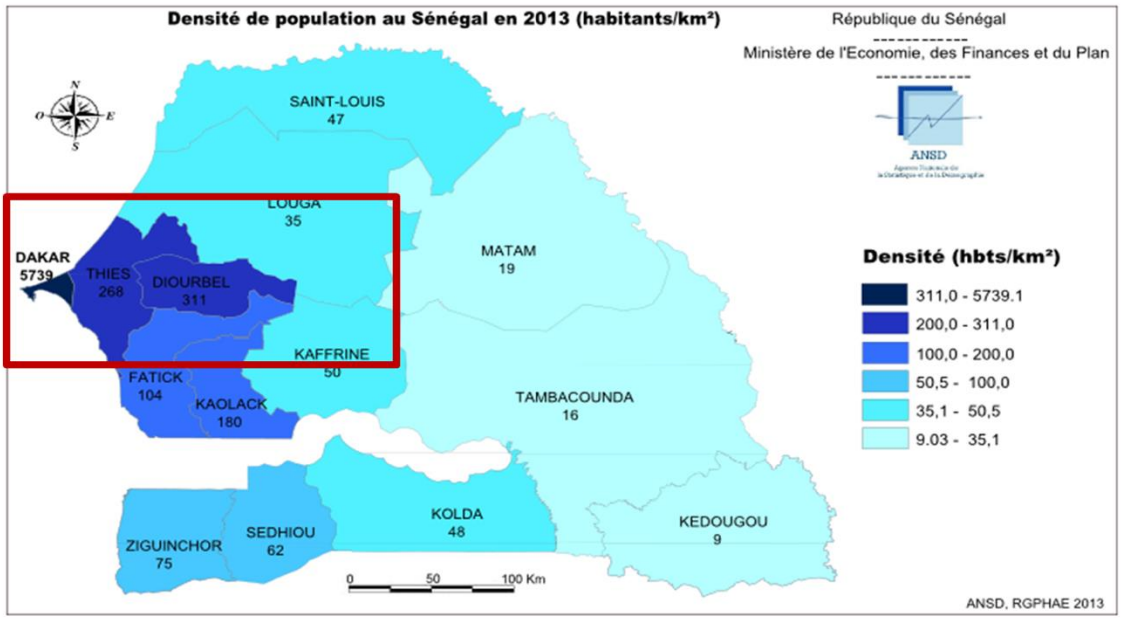
The basic rationale behind the area approach consists of selecting areas of high incidence of return (or migration if data on return not available) from (to) the selected destination countries, in order to maximize the probability of finding eligible interviewees at the same time as some contextual factors are controlled for, making more comparable samples of returnees and non-migrants. If the areas selected are small enough, a random selection of both returnees and non-migrants should be possible to obtain without putting at risk the numerical targets of the survey. However, to guarantee this, areas should be as small as possible, and then expanded if needed, including the possibility of moving to the next geographical level.

In TEMPER surveys, the primary sampling unit (PSU) chosen has been the commune in Senegal, the commune/town in Romania, and the district in Ukraine. The term "communes" in Senegal designates three different types of local authorities in Senegal: the communes, the communes d'arrondissement (CA) in cities and the communes rurales (CR) in rural areas. They are subdivisions of the départements and vary very much in size. There are for instance 19 CA in the département of Dakar, with population ranging from almost 19000 in the CA of Fann/Point E/Amitié to 1,6 millions inhabitants in the CA of Parcelles Assainies in 2013 (excluding here the very small commune of Gorée island, with just under 1,700 inhabitants). Most communes have between 10,000 and 100,000 inhabitants. In Romania, the commune/town is the smallest administrative-territorial units (TAD), as defined by national nomenclators. The country is divided into 42 counties, with 320 municipalities and 2861 communes/towns. 80 percent of those communes/towns has less than 5000 inhabitants, representing 65 percent of the total population of the country. The rest lives in settlements larger than 5,000 inhabitants. In Ukraine, type of settlement is defined according to population size (main criterion) and employment structures (auxiliary criterion).

To identify the actual PSUs that should be part of the fieldwork so that numerical targets were achieved while respecting both time and budgetary constraints, each local team examined the best available information on the geographical distribution of our target population in their countries.

The selection of the final PSUs was made in two steps. In the first step, Senegal selected the nine departments with the highest percentage of returnees from France and Spain in the country according to the information in the Census 2013, all of them located in four regions (Dakar, Thiès, Diourbel and Louga), as shown in the map below.

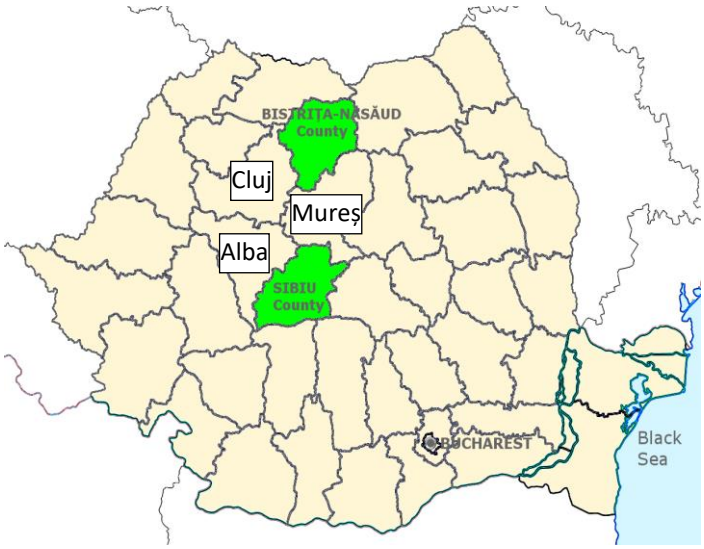
Figure 1: areas of survey fieldwork in Senegal



Source : ANSD. RGPHAE 2013

In Romania, the two counties (judeţe) with high percentage of temporary and long-term migrants (as proxy for returnees) to Spain (Bistrita-Nasaud) and Germany (Sibiu), respectively, in the Census 2011, were selected; since the total number of returnees from Spain could not be fully achieved in Bistrita-Nasaud, neighbouring judets with similar migration flows profiles (Alba, Cluj and Mures) had to be added at the end of the fieldwork period in order to achieve the numerical objective of 300 returnees from that country, as shown in the map below.

Figure 2: areas of survey fieldwork in Romania

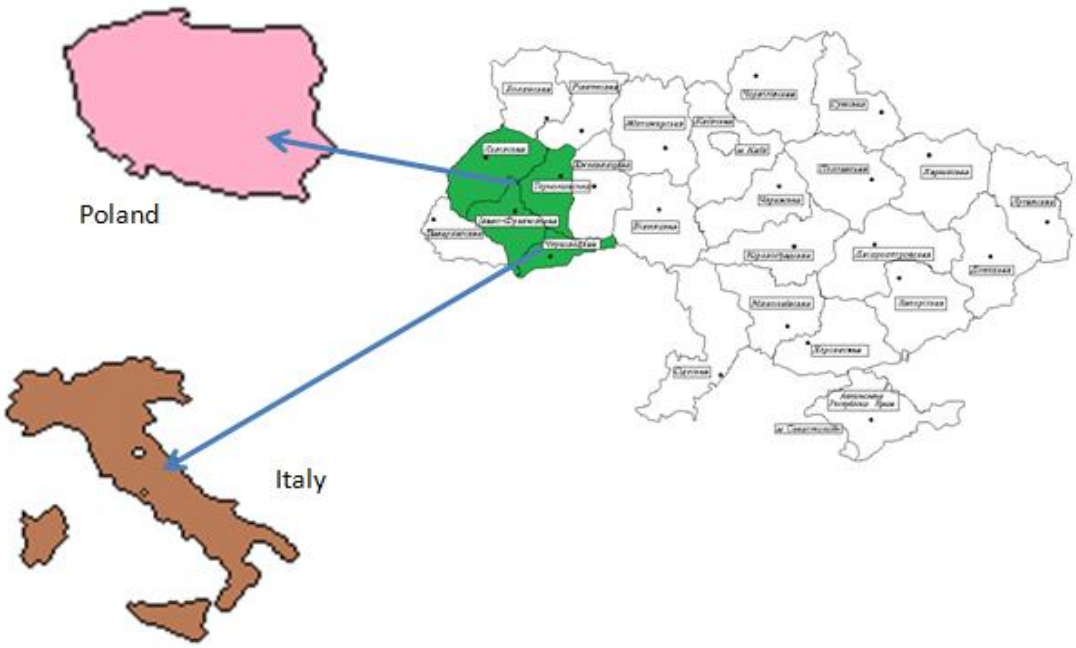


Source: Own elaboration

Finally, Ukraine selected four out the five oblasts with the highest percentage of migrants – including both emigrants and returnees – in 2012 according to the LMS (Lviv, Ternopil, Ivano-

Frankivsk and Chernivtsi)[5]. The reason to make the selection on the basis of the population of migrants instead of only returnees in Ukraine was the following: information on the target population was based on surveys, instead of on an exhaustive census, which implies sampling errors that increases as the geographical level for which estimates of returnees are calculated decreases (returnees represented only 43 percent of total emigrant population in the LMS 2012, which was obviously lower when restricted to the ones who returned in particular from Italy and Spain). In addition, Labour Migration Surveys only covered a particular segment of the total returnee population (the ones returned since 2010). By considering the estimates for the entire migrant population (still abroad or returned), the Ukrainian team intended to better reflect the potential distribution of total returnee population from our two selected countries in the EU by 2017, date of the beginning of the fieldwork.

Figure 3: areas of survey fieldwork in Ukraine



Source: Own elaboration

In Senegal, the four départements selected within the region of Dakar are by far the most populous and have the highest concentration of returned migrants. Accordingly, half of the returnees sample (250) was drawn from them, and the other half from the départments selected in the other three regions (250, with a similar target per region: 73 returnees in each). In Ukraine, the same numerical target was assigned to each oblast (63 returnees from each destination country, that is, 125 per Oblast). In Romania, since only one judet was initially selected for returnees from each destination country, the entire target was assigned to each of them.

[5] Ivano-Frankivska, Lvivska, Ternopilska and Chernivetska oblasts take 2nd-5th places among the all 27 regions of Ukraine by intensity of labour migration according to LMS 2008 and 2012. Approximately 40% of all external labour migrants from Ukraine come from these four regions, and approximately 80% of migrants to Italy and 70% of migrants to Poland. Zakarpatska oblast takes the first place, however, there is almost no flows to Poland and Italy in this Oblast. Migrants from this region work mostly in Czech Republic, Russia and Hungary. So Zakarpatska oblast was not chosen for TEMPER survey in Ukraine.

Table 6. Selection criteria and first level geographical units utilized for the area approach in the TEMPER origin countries

	SN	UA	RO	AR
1st & 2nd level units	Department & Commune	Oblast & District	County (Judet) & Commune/Town (comuna/oraş) – lowest TAD)	Provincia
Criteria for selection of 1st level units	Departments with most international migration & high % of returnees from France & Spain, according 2013 Census; geographically close to each other to reduce survey cost	Oblasts (regions) with high rates of external labour migration and the highest percentage of migrants to Poland and Italy according to LMS 2012	The selected counties (judete) were those with a migration profile dominated by Spain and Germany as destinations. Additional counties will be selected in the case of an extension of fieldwork that might be required to obtain the targeted sample	Provinces of origin of largest percentage of emigrants to Spain as of 2007
List of units of selected for1st level	DAKAR: Dakar, Pikine, Rufisque, Guediawaye; THIES: M'bour, Thiés, Tivaouane; DIOURBEL: M'Backé; LOUGA: Louga	LVIV Oblast TERNOPIL Oblast IVANO-FRANKIVSK Oblast CHERNIVTSI Oblast	For returnees from Spain, the county (judet) of Bistrita-Nasaud was sleected, and for returnees from Germany, the county (judet) of Sibiu. Fieldwork was finally extended to the counties of Alba, Mures and Cluj in face of the difficulties to find returnees from Spain.	Buenos Aires and rest Córdoba, Mendoza
Target sample in 1st level units	Region of Dakar: 500 itws (250 RET/250 NM), consisting in: 390 in Dakar department 60 in Guediawaye 30 in Rufisque 30 in Pikine Region of Thiès: 250 (125 RET/125 NM), consisting in: 90 in Thiès department 120 in M'Bour 60 in Tivaouane Region of Diourbel: 150 itws (73 RET/73 NM), consisting in: 150 in Mbacke Region of Louga: 150 itws (73 RET/73 NM), consisting in: 150 in Louga departement	Approx 63 RET from Italy + 63 RET from Poland per Oblast, and 125 NM per Oblast	300 RET from Spain + 300 NM in Bistrita-Nasaud; 300 RET from Germany + 300 NM in Sibiu. Finally, 88 RET from Spain in Alba, Cluj and Mureş were also needed since the number found in Bistrita-Nasaud was not sufficient to complete the target of RET from Spain	According to the information available in the Census 2010, most returnees lived in densely populated metropolitan areas (60.4% in Buenos Aires, 9.1% in Cordoba and 8.6% in Mendoza). Following this information, TEMPER Survey will interview 70% of returnees in Buenos Aires city and Province of Buenos Aires, and 30% in Cordoba, Santa Fe and Mendoza by this order (declining % without pre-established amount).

Source: Own elaboration

In all the three countries, the selection of the geographical units of second level, also called here PSUs, was made following different procedures aimed at ensuring adequate coverage of the urban/rural divide. In addition, in Romania the selection of localities was made following a proportional to size of returnee population approach within the county (judet).

Namely, in the case of Senegal, half of the sample was drawn from the Dakarois departments, all of them urban, and the rest of the sample was obtained from a random selection of communes in the other non-Dakar departments, in order to include some variety along the rural/urban divide in our final sample. A perfect reflection of it could not be done, however, since the official

classifications of communes do not necessarily reflect the urban/rural nature of the commune anymore, e.g. Touba being classified as rural when it is clearly a city. In addition, return migrants live mostly in urban areas (73 percent of returnees from France and 58 percent of returnees from Spain, according to 2013 Census, compared to only 44 percent of the total population in Senegal). In each commune, 30 interviews were to be conducted: 15 RM (from France & Spain) and 15 NM. Once the target is reached in a unit, the interviewers have to start in another unit, in order to avoid the geographic concentration of interviewees. If this quota cannot be reached in a particular unit, the interviewers can go to another unit, after referring to their supervisor to make sure the rural/urban diversity is properly reflected.

In the case of Romania, 40 percent of the sub-sample of returnees from Spain had to be done in rural localities, while only the 25 percent had to be from this type of localities in the sub-sample of returnees from Germany, reflecting the different rural/urban distribution of returnees in the two selected judets, according to Census 2010. Specific numerical target were assigned to each localitate within each judet in order to guarantee that rural/urban proportionality in the composition of the final sample per country of destination. If the total required number of returnees could not be identified in the specified localities, compensations could be made from other localities. Additional rural localities in Bistrița Năsăud were added in phase 2 of the fieldwork (see note in Annex 1, Table 5) since in some of the rural territorial units no returnees or not enough returnees were found.[6]

Finally, in Ukraine, in each oblast the capital city and three/four districts were selected. In the districts different types of localities have been chosen to reflect the urban/rural divide, namely: towns, urban villages, and villages.

[6] This was tried before extending fieldwork to the neighbouring counties of Alba, Cluj and Mures. Once it was clear that the initial expansion in Bistrita-Nasaud would not be enough to reach the objectives, the expansion to other counties was decided.

Table 7. Selection criteria and second level geographical units utilized for the area approach in the TEMPER origin countries (in blue: urban areas)

Geographical Coverage	SN	UA	RO	AR
1st & 2nd level units	Regions & Department & Commune	Oblast & District	County & commune/town (Judets & comună/oraş)	Provincia
Criteria for selection of 2nd level units	Adequate representation of the urban/rural divide for return migrants population, by selecting randomly Communes d'arrondissement (CA) and communes rurales (CR) with largest population & higher number of returned migrants from FR and ES according to Census 2013	Adequate representation of different types of settlement: at the urban level (administrative centers/capital cities, cities of district significance, towns) and at the rural level (urban villages and villages)	Randomly selected, stratified proportional to the number of returnees in the municipality in Census 2010*, respecting the urban/rural quota previously established for each county (40% in Bistrita-Nasaud and 25% in Sibiu).	N.A.
List of units of selected for 2nd level	• DAKAR: Colobane/Fass/Gueule Tapee, Golf Sud, Grand Dakar, Grand Yoff/ Hann Bel Air, Keur Massar, Medina, Mermoz/Sacre Coeur, Parcelles Assainies, Patte D'oie, Plateau, Point E/Dieupeul Derklé, Rufisque Ouest, Sicap Liberte, Wakhinane Nimzat/Notaire, Yoff, Hlm, Goree/Ouakam • LOUGA: Louga, Nguidile, Nguer Malal, Gande, Ndiagne • DIOURBEL: M'Backe, Touba Mosquee, Touba Mboul, Nghaye/Touba Fall/Taif • THIES: Mbour, Khombole, Meouane, Thies Ouest, Cayar, Ndiaganiao, Saly Portudal, Sandiara, Noto Gouy Diama	• LVIV: Lviv oblast center, Gorodok, Yavoriv, Brody • TERNOPIL: Ternopil oblast center, Ternopil, Kozelsky, Lanovetsky, Borisovsky • IVANO-FRANKIVSK: Ivano-Frankivsk oblast center, Kalush, Kosiv, Gorodenkivsky, Galitsky • CHERNIVTSI: Chernivtsi oblast center, Khotynsky, Kitsmansky, Glybotsky	•BISTRIȚA NĂSĂUD: Municipiul Bistrita, Oras Beclean, Oras Nasaud, Oras Sangeorz-Bai, Caianu Mic, Branistea, Budacu De Jos, Budesti, Cosbuc, Dumitra, Dumitrita, Feldru, Galatii Bistritei, Ilva Mica, Lechinta, Mariselu, Nimigea, Prundu Bargaului, Rebrisoara, Sieu-Magherus, Sintereag,Teaca, Telciu, Uriu, Bistrita Bargaului, Cetate, Ilva Mare, Josenii Bargaului, Lesu, Livezile, Magura Ilvei, Maieru, Parva, Rebra, Romuli, Salva, Sanmihaiu De Cimpie, Sieut, Silivasu De Cimpie, Spermezeu, Tiha Bargaului, Zagra • SIBIU: Municipiul Sibiu, Municipiul Medias, Oras Cisnadie, Oras Avrig, Oras Agnita, Oras Saliste, Oras Miercurea Sibiului, Oras Dumbraveni, Oras Ocna Sibiului, Selimbar, Laslea, Mosna, Cristian, Slimnic, Sura Mare, Chirpar, Nocrich, Rosia, Sura Mica, Darlos • ALBA: Alba Iulia, Câmpeni, Cugir, Aiud, Arieșeni, Cetatea De Baltă, Galda De Jos, Ighiu, Jidvei, Mihalț, Râmeț, Valea Lungă • CLUJ: Cluj-Napoca, Apahida, Băgaciu, Bonțida, Costești, Gilău, Măguri-Răcătău, Mărișel, Rusești • MUREȘ: Cucerdea, Ganesti, Tirnaveni	N.A.
Target sample in 2nd level units	30 interviews among which 15 return migrants and 15 non-migrants per Commune	15-16 RET from Italy, 15-16 RET from Poland and 31-32 NM per oblast center/district in Lviv and Chernivtsi oblasts; 12-13 RET from Italy, 12-13 RET from Poland and 25 NM per oblast center/district in Ternopil and Ivano-Frankivsk oblasts.	Between 5 and 120, proportionally to the number of returnees identified at census	N.A.

For the non-migrants samples, the geographical distribution was designed to mirror the geographical distribution of returnees. Unfortunately, in Romania for the returnees in Spain this goal could not be finally achieved due to the difficulty to complete the sample in the counties (judete) initially selected. In Argentina, for non-migrants sample no geographical stratification was necessary or meaningful since these were primarily sought on the basis of kinship ties and referrals.

6. Recruitment strategy for returnees

Snowball sampling, frequently known as chain-referral sampling, is a non-probability (non-random) sampling method. The method involves respondents nominating other potential respondents to be included in the sample, that is: initial subjects make referrals of additional subjects, making a chain of referrals. This sampling method is used in research when adequate sample frames are not available and the target population is a rare population, as it was the case for the TEMPER returnees in our origin countries. Accordingly, all TEMPER countries participating in the origin surveys applied snowball sampling to recruit returnees, using country-specific strategies adapted to their particular contexts and aimed at maximizing the representativeness of our samples.

The main components of a snowball sampling are the following:

a. Sources of contacts: sources that provide/facilitate contact with the first respondents (called "seeds" or "entry points" into the targeted population), i.e. the initial respondents, who will in turn nominate other potential respondents.

The TEMPER surveys have used a variety of sources to find the seeds or entry points for the RET sample (see in Table 8 below a list of which ones were used in each country).

- Key informants, i.e. gatekeepers and stakeholders with knowledge of and access to the targeted population. These range from migrant associations, international organizations, or embassies, to village or religious leaders
- Social networks. Social networks were used passively (creation of a Facebook page and posters for attracting attention of potential respondents) and actively (contacting Facebook groups and web forums of potential respondents to explain the project and establish appointments)
- Door-to-door/street recruitment. Going door-to-door or to community hubs in order to identify potential respondents in the selected areas.
- Word-of-mouth. Seeds can be obtained not directly through the methods/sources described above, but as an indirect consequence of these. These are persons who reach (or are reached by) the survey team after they hear about the study from the people who were directly contacted through key informants, social networks or going door-to-door (but who were not referred by these persons as part of the snowball).
- Interpersonal networks. Members of the TEMPER teams (including the coordination team in Europe and the local teams in the survey countries) activated their interpersonal networks to locate potential RET respondents.
- Other: seeds were also obtained in some countries during the NM sampling (i.e. persons found in the process who met the RET eligibility criteria, and referrals provided by NM respondents); potential respondents that could not finally be interviewed also provided referrals in some countries (these referrals amount to "seeds" because the source is not a sampled respondent).

b. Seeds: These are the initial respondents obtained through the sources above. The seeds (or "entry points") nominate other potential respondents, initiating the snowball process.

c. Snowballing referrals: these are the potential respondents nominated by the seeds and subsequent respondents who have already become part of the sample.

Table 8. Sources of seeds in the snowballing procedure utilized in each TEMPER Origin survey[7]

Sources of seeds	SN	UA	RO	AR
Key informants	Primary source	Primary source	Primary source	Primary source
Social networks	Supplementary source	NA	NA	Primary source
Door-to-door / on the street	Primary source	NA	Supplementary source	NA
Word of mouth	Supplementary source	NA	Supplementary source	Supplementary source
Inter-personal networks	Supplementary source	NA	Primary source*	Primary source
RETs found when sampling NM	NA	Supplementary source	Supplementary source	NA
Interviewed NMs	Primary source	Supplementary source	Primary source	Primary source
Non-eligible/ non-interviewed RETs	Supplementary source	Supplementary source	Supplementary source	Supplementary source
Non-eligible/ non-interviewed NMs	Supplementary source	Supplementary source	Supplementary source	Supplementary source

Note: Primary sources are the one that were foreseen to be key in obtaining the target objectives and/or in diversifying them. Supplementary sources were either not foreseen as major contributors to these goals, even if included in the original design, or added later on in order to supplement existing sources in the face of difficulties to meet the target objectives with the original design.
* Incl. interviewees from previous research projects
Source: Own elaboration

Snowball sampling is prone to a number of biases. First, persons tend to provide referrals for other persons of similar social backgrounds, which can lead to oversampling a particular network of peers and biasing the sample towards specific traits (e.g. high or low educational levels). Second, persons who are more socially connected (i.e. who have many social contacts) are more likely to be referred and to be recruited into the sample, producing unequal probabilities of inclusion that should be controlled for in order to obtain a representative sample.

In order to minimize these biases, specific restrictions were put in place in each country (see Tables 10, 11 and 12 below for country-specific details) with the following aims:

(1) Maximize the number and heterogeneity of sources and/or seeds obtained.
(2) Limit the number of seeds that each particular source could provide.
(3) Limit the number of referrals that respondents (seeds and subsequent respondents) could provide.

Additionally, information was registered for each respondent about the size of his/her returnee network (and in Ukraine also for each potential respondent contacted), in order to assess how varied is the RET snowball sample in terms of the degree of connectivity of its members (see Table 9 below). In each country, RET respondents were asked whether how many returnees did they know (who had returned from the same European country as himself/herself) currently residing in selected reference areas. This information was collected with the aim to produce a

[7] See Annex X for details on sources of seeds in each country

basis for the potential calculation of weights in the RET sample. However, at the time of writing this report discussion with statisticians is still ongoing on this aspect.[8]

Table 9. Size of returnees' network among interviewed RETs

How many returnees do you know currently living in…	SN		UA		RO		AR
	Département (level 1)		District (level 2)		Commune/town (level 2)		The whole country
... who returned from…	FR	ES	IT	PL	DE	ES	ES
Mean	3.5	4.1	2.6	3.6	11.8	7.6	3.8
(Std.Dev.)	(4.9)	(5.2)	(2.4)	(3.7)	(20.2)	(14.3)	(4.9)
% who knew none	28%	29%	19%	20%	24%	28%	22%
25% percentile	0	0	1	1	1	0	1
50% percentile (median)	2	2	2	3	3	2	2
75% percentile	5	5	4	5	15	10	5
99% percentile	20	21	10	20	100	60	30
Max.	52	35	20	30	100	60	40
Nr respondents	280	273	364	372	284	287	193

Source: Own elaboration

As mentioned above, each country established specific protocols and restrictions to minimize biases. The first level of such protocols concerned the selection and use of sources in order to maximize their number and heterogeneity (as well as that of the seeds they provided). The selection of relevant sources varied across countries in response to the different return contexts and migration dynamics. A full description of how sources were selected, contacted and managed can be found in Annex 2, Table 1. In contrast, the details on the rules applied in each country are listed in **Table 10** below.

[8] The area of reference is country-specific and it was agreed with the local teams (see in Table 9).

Table 10. Restrictions applied for the use of sources

Rules for SOURCES OF SEEDS	SN	UA	RO	AR
Use of multiple sources	**At the commune level:** Fieldwork managers were required to use key informants and door-to-door recruitment	**At the district level:** Fieldwork managers were required to use key informants and interviewers had to ask NM respondents about potential returnee respondents*	**At the commune/town level:** Fieldwork managers were required to use key informants; and interviewers were to ask all NM respondents (sampled first following random routes) about potential returnee respondents* By the end of fieldwork, given the difficulty to locate RETs from Spain, the NM sample in the Bistrita-Nasaud county was finalized before finalizing that of RETs. After that, interviewers could not longer take advantage of recommendations obtained from random routes (the sources included not only NM respondents, but also RETs found along and people who could not participate in either samples). In other words, in the last stage of fieldwork the seeds were solely obtained from key informants and interpersonal networks.	**At the country level:** Maximize the types of sources not only to ensure heterogeneity but also foreseeing low numbers of seeds provided, low contact rates, high refusal rates and high attrition rates in the snowball process . These were all expected as a result of the heavy concentration of returnees in the big urbe of Buenos Aires, with low levels of interpersonal trust, and very high refusal and non-contact rates in other surveys in that context (see section 5 above).
Key informants*	**At the commune level:** Fieldwork managers were required to multiply and diversify the key informants in each commune. Key informants were to be found and contacted during a preparation phase before the start of fieldwork.	**At the district level:** Fieldwork managers were asked to obtain 3 key informants per district (although this was not always possible) while considering different possible types (see list in Annex 2, Table 1)	**At the commune/town level:** Interviewers were asked to try multiple/heterogeneous key informants (see list in Annex 2, Table 1)	**At the country level:** Maximize key informants, and target specific ones, to ensure the representation of difficult-to-find and diversified profiles: e.g. IOM lists provide very vulnerable profiles (assisted return programs); Raíces lists provide highly skilled profiles (scientists)
Social networks	Selected Facebook as the most widely used social network.	NA	NA	Selected Facebook as the most widely used social network by Argentinians. Facebook groups facilitate identification and maximize efficiency of contacts
Door-to-door / on the street	During the preparation phase, two interviewers per commune went door-to-door (census-like) in the neighbourhoods of residence of RETs (identified by key informants). All houses were selected, respecting the limits of the commune. Interviewers also took opportunities to discuss with people on the street and in community hubs in particular. Additionally, RETs were also recruited if found during the door-to-door search of similar NMs (see below)	RETs were also recruited if found during the random routes to sample NMs (see below)	By the end of fieldwork, given the difficulty to locate RETs, and once the fieldwork had to be extended to the counties of Alba, Cluj and Mures, the interviewers were requested to go door-to-door in the search for RETs when trying to locate contacts provided by key informants or using the key informants' tips about the areas with returnees or migrants.	NA
Word of mouth	Accepted	NA	NA	Accepted
Inter-personal networks	All team members could contribute (see rules for seeds below)	NA	All team members could contribute (see rules for seeds below).	All team members could contribute (see rules for seeds below)
RETs found when sampling NM	**During the door-to-door search of similar NMs** (see below)**:** if RETs were found they were selected as potential respondents instead of the NM	**During random routes to sample NMs:** when ahousehold is selected, if a returnee from Poland or Italy is present, s/he will be the respondant from that household	**During random routes to sample NMs** (see below)**:** when ahousehold was selected, if a returnee from Germany or from Spain was found, that person became the respondant from that household.	NA

Interviewed NMs	Referrals for potential returnees were asked from all NM respondents	Referrals for potential returnees were asked from all NM respondents	Referrals for potential returnees were asked from all NM respondents	Referrals for potential returnees were asked from all NM respondents
Non-eligible/ non-interviewed RETs or NMs	Referrals for potential returnees were asked from all potential RET & NM contacted, even if not interviewed	Referrals for potential returnees were asked from all potential RET & NM contacted, even if not interviewed	Referrals for potential returnees were asked from all potential RET & NM contacted, even if not interviewed	Referrals for potential returnees were asked from all potential RET & NM contacted, even if not interviewed

* Note that referrals provided by RETs are not seeds but already further respondents down the snowball process
Source: Own elaboration

The second level of protocols and restrictions on RET recruitment affected the provision of seeds by the different sources, as detailed in **Table 11** below.

Table 11. Restrictions applied for the provision of seeds by sources

Rules for SEEDS from:	SN	UA	RO	AR
Key informants	1) A key informant's referrals could not represent more than half of the sampling in each PSU (where only 15 respondents could be selected). If a key informant provided more than 7 names, only up to seven were randomly selected for interviewing 2) If the total list of seeds obtained from the different key informants in each PSU contained 15 contacts or less the whole list was used. If it contained over 15 contacts, only 15 were randomly selected.	Up to 3 contacts per key informants were initially used. If during the field stage of the study the recruitment chains break or recruitment rates were low, additional seeds could be incorporated, up to 5 per key informant. If necessary, interviewers returned to the previous key informants to obtain this maximum of 5 referrals, or alternatively looked for new key informants.	All contacts provided were tried	All contacts provided were tried
Social networks	All contacts obtained could be tried (no contacts were finally made)	NA	NA	All contacts obtained were tried
Door-to-door / on the street	All houses were selected to locate any eligible returnees, not only in the household but also among relatives and friends of the persons contacted that could be eligible (even if those persons were living on different areas within the selected ones) During the door-to-door search of similar NMs (see below in this table), if RETs were found they were selected as potential respondents.	NA	All houses were selected to locate any eligible returnees.	NA
Word of mouth	All contacts obtained were tried (this amounted to a supplementary source making a welcome addition but with little weight). It happenned only a couple of times.	NA	All contacts provided were tried	All contacts obtained were tried
Inter-personal networks	All contacts provided were tried	NA	All contacts provided were tried	1) The TEMPER team members had to concentrate efforts in looking for contacts outside their personal networks, by asking for contacts to acquaintances (in particular from other socioeconomic backgrounds) 2) Limit of 5 referrals per person (some exceptions were allowed for team members with networks of several degrees and high diversity; most team members provided less than 5 referrals, and only 3-4 were allowed to provide more) 3) Interviewers could not interview a relative or a friend, but pass it on to other interviewers.

RETs found when sampling NM	**During the door-to-door search of similar NMs** (see below)**:** if RETs were found they were selected as potential respondents instead of the NM	**During random routes to sample NMs:** when ahousehold is selected, if a returnee from Poland or Italy is present, s/he will be the respondant from that household. If several were found in the same household, the youngest was selected for interviewing	**During random routes to sample NMs:** when ahousehold was selected, if a returnee from Germany or from Spain was found, that person became the respondant from that household. If several, the one whose birthday is closest to the month of the interview is chosen (if several birthdays coincide, one of them is randomly chosen)	NA
Interviewed NMs	All contacts provided were tried	A maximum of 5 contacts could be used	All contacts provided were tried	A maximum of 5 referrals per respondent could be provided and used. None of them could be part of his/her origin family
Non-eligible/ non-interviewed RETs or NMs	All contacts provided were tried	A maximum of 5 contacts could be used	All contacts provided were tried	A maximum of 5 referrals per respondent could be provided and used. None of them could be part of his/her origin family

Source: Own elaboration

Finally, the third level of protocols and restrictions on RET recruitment affected the provision of referrals by either seeds or respondents further down in the snowball process, as detailed in Table 12 below. A full description of how contacts with RET and further referrals were realized can be found in Appendix 2, Table 2. It is important to note that, in all cases, only one individual was interviewed in each household.

Table 12. Restrictions applied for referrals by seeds and further respondents, and selection of RET respondents

Rules for REFERRALS	SN	UA	RO	AR
Limits to snowball referrals	Each RET respondent was asked to provide referrals for other RETs from either France or Spain living in any of the selected areas	Each RET respondent was asked to provide referrals for other RETs in any of the selected areas from either Italy or Poland	Each RET respondent was asked to provide referrals for other RETs in the same community/town (in Sibiu, for RETs from Germany; in Bistrita Nasaud, for RETs from Spain). After the expansion of fieldwork, referrals were accepted for RETs in any of the selected areas.	Each RET respondent was asked to provide referrals for other RETs from Spain living anywhere in the country.
	1) Each respondent could provide as many referrals as s/he could	1) Each respondent could provide as many referrals as s/he could	1) No limit to nr of referrals per respondent	1) A maximum of 5 referrals per respondent could be provided. None of them could be part of his/her origin family
	2) Only 2 referrals by respondent could be used (in practice, respondents never provided more than one contact)	2) A maximum of 3 referrals by respondent could be used. But if the person's returnees network (nr of RET from Poland/Italy s/he knows living in the same district) was smaller than 10, only 2 or 1 referral could be used (if the person knew 6-9 returnees, or less than 5, respectively). Any extra referrals provided could be used if the sample quotas were not reached, but never more than 5	2) All referrals provided could be used	2) All referrals provided could be used
Selection of respondent following a referrals	The final respondent is selected among the eligible RET in the household of the referred person through last birthday rule	The person referred/contacted in the 1st place is interviewed (if eligible)	The person referred/contacted in the 1st place is interviewed (if eligible)	The person referred/contacted in the 1st place is interviewed (if eligible)

Source: Own elaboration

7. Recruitment strategy for non-migrants

The sample of non-migrants will be used to establish comparisons with returnees. Two different methodological approaches were used by the country teams:

a) Romania and Ukraine: non-migrants constitute **a representative sample of individuals from the selected regions and sampling units**, so the comparison will be established between returned migrants and the general population.

b) Argentina and Senegal: non-migrants constitute **a control group of non-migrants for the RET sample**. This methodology emulates an experiment (quasi-experiment), seeking to assess the impact of a "treatment" (in this case the migratory experience and the return) on other outcomes (e.g. family formation and dissolution, fertility, educational attainment, occupational achievement, wealth).

In all cases, only one individual was interviewed in each household.

Table 13. NM recruitment and sampling design

	SN	UA	RO	AR
Definition of NM as…	Control group for RET	Representative of general population in selected areas (oblasts)	Representative of general population in selected areas (counties)	Matching/Control group for RET
Criteria of similarity between NM and RETs	Same sex, +-2age difference, same street/neighbourhood	NA	NA	I) Kinship tie / childhood background II) Same sex, minimum age difference (-1, +2 years), and similar backgrounds (father education and geographical location at age 15)
Type of sampling	Door-to-door (in the street/neighbourhood of each RET interviewed)	Random routes in the same selected districts as RET sample	Random routes in the same selected localities as RET sample	Contact provided by each RET interviewed
Sampling sequence	**Individual NM sampling follows sampling of each individual RET**. After interviewing a RET, a similar NM is looked for, resulting in a RET-NM pair. Both samplings are conducted overall during the same time span	NM sampling is conducted during the same time span as RET sampling, but **independently** of each other	NM sampling is conducted during the same time span as RET sampling. **The start of the random routes was determined, whenever possible, by the RET addresses/local areas** pointed out by sources The RET snowball sampling continued after the NM semi-probabilistic sampling was completed, until the numbers of RET respondants were fulfilled	**Individual NM sampling follows sampling of each individual RET**. After interviewing a RET, a related/similar NM is looked for, resulting in a RET-NM pair. Both samplings are conducted overall during the same time span

Source: Own elaboration

Table 14 below provides the details on the implementation of the "control group" strategy in Senegal and Argentina. Ideally, the comparable sample should be as similar as possible to the returnee population prior to its treatment. The best methodological design would be to match people sharing all their relevant characteristics –observable and unobservable- and who differ only in the existence or not of relevant migratory and return experiences. Argentina approached this methodology the most, although restrictions on the matching strategy had to be relaxed at the end of the fieldwork to attain the objectives:

Argentina (I) used primarily pairs of siblings (or cousins or childhood friends if siblings were not available) in which one of the siblings had migratory experiencee (meeting the eligibility criteria) and the other sibling did not have any international migratory experience. The value of this strategy is that it can be assumed that siblings (typically) share socialization contexts, including the socio-economic status of the origin family, and that they are therefore most similar in relevant

observable and non-observable characteristics. “That is, a research design based on sibling pairs (or n-tuples) permits a decomposition of the cross-sibling variance-covariance matrix into `between- family´ and `within-family´ components” (Hauser and Sewel, 1986 p.S84). If fraternal differences in the probability to migrate lead to differences in other previously defined outcomes, the association of migration-return and these outcomes will not be the result of the socioeconomic level and the context of socialization. Statistical analyses will have to control for non-independent observations (cluster effects).

As a supplementary strategy (II) to ensure reaching the numeric targets, when siblings,[9] cousins or childhood friends were not available for RETs already interviewed, or if they refused to participate, the Argentinian team members searched then for an unrelated non-migrant who was nonetheless of the same sex, of a similar age (-1, +2 years), and of similar backgrounds (father education and geographical location at age 15).

In Senegal, the team opted for building RET-NM pairs by looking for non-migrants in the same street/neighbourhood of each RET already interviewed, of the same sex (men) and within the same age range (+-2 years).

Table 14. Details of NM recruitment and in Senegal and Argentina

NM matching	SN	AR
Looking for a NM to match interviewed RETs	Once the interview with the RET is completed, the interviewer leaves the dwelling, and proceeds to a systematic screening of the households in the same street, starting with the closest dwelling to the right. The NM must reside in that area, not just work or study there (thus excluding men who may be easier to contact on the field, such as shop keepers, craftsmen or passersby who do not reside on the street) The interviewer searches for the «migrant twin» until he finds an eligible candidate. The screening is done using the contact sheet for NM households (listing all household members). The first NM meeting the eligibility criteria has to be interviewed.	I) NM are selected with the assistance of each RET respondent among his/her siblings. If there were no NM siblings available, respondents could refer then a childhood/adolescence friend or cousin from similar socio-economic backgrounds II) If no available NM siblings, childhood friends or cousins, the team members in Argentina activated their inter-personal networks to look for a same sex NM, with similar age (-1, +2 years), and similar backgrounds (father education and geographical location at age 15). The TEMPER team members had to look for contacts outside their personal networks, and in particular ask for contacts to acquaintances (and from other socioeconomic backgrounds). The first person found meeting the criteria was interviewed.
Selection	If more than one eligible «migrant twin» is found at one household, the respondent is randomly selected using the selection grid.	I) If several NM siblings: interviewers were asked to prioritize siblings of the same sex and closer in age. During fieldwork these criteria were not easy to implement, and if several NM siblings, the respondent suggested which one to contact. In this case, particular efforts were made to match by sex and similar age II) The first NM found that meets eligibility and similarity criteria is selected
Substitution	If the selected person was not at home at the moment, up to 4 attempts at contacting this person had to be made, at different days and times, the first one having to be done in person. Two attempts of contact by phone have to be followed by an attempt in person.	I) At least 3 phone calls had to be made to attempt contact before moving to any alternative relative/childhood friend, or to searching for a similar unrelated NM II) At least 3 phone calls had to be made to attempt contact

Source: Own elaboration

In Romania and Ukraine, random routes were selected as the method to obtain a representative sample of NMs from the selected local areas. In Ukraine, these random routes were totally independent from the sampling of RETs, with the exception of taking place in the same selected areas (level 1 and level 2 of sampling). In Romania, the random routes to sample NMs were interconnected with the RET sampling in two steps. First, the addresses of identified RETs and neighbourhoods with high concentrations of migrants were used as starting points for the random routes to sample NMs. Second, the random routes were used as a source of seeds and referrals for

[9] The low fertility levels in Argentina significantly reduced the possibility to find an available sibling, who furthermore had to meet the additional eligibility requirements (i.e. no international migration experience).

RET sampling: if any RET was found in the selected households, the RET was interviewed and not a NM; and NMs respondents, as well as other persons contacted who did not take the interview, were also asked for RET referrals.

Table 15 below provides the details of the implementation of the random routes used to sample non-migrants in Ukraine and Romania.

Table 15. Details of NM recruitment and in Ukraine and Romania

Random routes	UA	RO
Start of random routes	In the selected districts, polling stations were randomly selected within urban areas (capital cities and towns) and rural areas (urban villages and villages)	If the address of a returnee has been obtained through the key informants, the starting point for the random routes for NMs was that same street, and specifically the address/street number with the smallest number of residences in that street. Alternatively, the neighbourhood or micro-zone where the random route would start was selected based on discussions with key informants or based on pre-existing information on neighbourhoods with the highest concentration of migrants (in cities). The starting point was then the address with the smallest number on the street on which one identified returnee in the area lives. If in the locality there are various neighbourhoods with possible migrant concentrations (persons currently abroad or returnees), then more than one start point/routes can be considered
Selection of addressed/ households	The random routes were constructed using the list of streets attached to the selected polling station. Within each urban route, 8-12 households could be interviewed; within rural routes, up to 15-17 households could be interviewed. From the polling station starting the route, the first address is selected following a set of rules: the total number of the residential buildings in the street was divided by the number of respondents with whom the survey should be conducted, and then divided by 2 (adding 1 first if odd number) to obtain the selected street number. To choose the first apartment: the total number of apartments in the selected building was divided by 3. For example: there are 123 apartments in the building, therefore, 123/3 = 41 - this will be the number of the first apartment. If we obtain not a whole number as a result of the calculation, it should be rounded to the whole according to the rules of statistical rounding. The next apartment/building is selected applying the same step. For instance, if an interview is successfully conducted in number 41, for the next selected appartment the interviewer must add up 41, and appartment nr 82 would be selected. In case of non-fulfillment of the quota task defined within the route, the interviewer must go to the adjacent parallel street turning to the left. For streets where the number of households is equal to or greater than 250 (apartment buildings), the interviewer may return to the beginning of the street, calculating the step and extending the quota set.	The random route is conducted on the street side with the smallest identifiable number of residential buildings/units. When the street ends, the walk is continued on the first street to the left, inside the same neighbourhood. The interviewer must select every second building, in ascending direction and considering every block entrance as a building. If the neighbourhood is a zone with scattered houses, without any visible number displayed, and without a clear road to follow, this rule is adapted by considering the access/communication route connecting the houses (trail/alley etc) to be the route to follow. If the selection has to be done on a block entrance, a maximum of 3 apartments may be visited within the same block (using a random numbers table and following specific rules), and a maximum of 2 questionnaires can be filled (only 1 in very small neighbourhoods) in each building.
Substitution of addressed	If there is no one home at the address at which the interview should have been conducted (or no one is eligible or meets the quota requirements) the interviewer goes to the next apartment/house. If none of the residents meets the eligibility/quota requirements or if a refusal is received, the interviewer goes to the next apartment/house. The interviewer continues following his/her route until all quota requirements are fulfilled	If there is no one home at the address at which the interview should have been conducted, a second visit must be conducted at a different day and time before discarding the address. If in some household the interview cannot be conducted (at first attempt or later ones), the walk is continued with stops at every second address (building). If none of the residents meets the eligibility/quota requirements, the interviewer goes to the next apartment/house. (Very low probability of this happening, no reported occurrences)
Selection of respondent	At each selected household, the interviewer will look for a non-migrant based on the eligibility criteria and quota targets. Guests, acquaintances, relatives of the hosts, family members that study or work in other towns and have their own residences there do not qualify.	At each household, the interviewer will select the adult (over 20 years old) whose birthday is closest to the month of the interview. If there are several non-migrants meeting the criteria, one of them is randomly chosen

	If several eligible people meeting the quotas requirement were found in the same household, the youngest was selected for interviewing	
Substitution of respondents	If the person qualifying all quota requirements is not at home, the interviewer goes to the next apartment following the rules of the random route	If the person qualifying all quota requirements is not at home or a refusal is received, the household is skipped.

Source: Own elaboration

8. Socio-demographic quotas

For most countries in the study, with the exception of Ukraine, socio-demographic quotas were not (strictly) imposed on the RET sample given the lack of accurate and comprehensive information of the target population, particularly at the most disaggregated levels. Senegal and Romania did not impose any quotas, and Argentina did so in a flexible and approximative manner in order to ensure heterogeneity in sex and/or age.

Argentina

Approximate sex quotas for RETs were established based on data from the Padrón Municipal from Spain (people born in Argentina who were erased from it since 2006 onwards): among those who left Spain, the number of males and female each year since 2007 is relatively similar. Taking into consideration these facts, we establish a sex quota of 50/50 was established, with about 5% flexibility.

Age quotas for RETs based on Padrón might under-sample young people with short stays in Spain. Since representation of all ages was pursued, the objective was established that the vast majority of the sample should be about 30 and 55, but it should also have some representation of older and younger people. The initial objectives established were: age 20 to 34 (30%), 35 to 49 (40%), 50 and + (30%)

No quotas or objectives were established for NM

Ukraine

Specific demographic quotas were established for both RET and NM samples.

- RET sample. According to LMS 2008 and 2012 there are differences in gender and age structure of Ukrainian migrants in different destination countries: women dominate in migration flows to Italy while the proportion of male and female migrants is similar in Poland. In Italy there is also a higher percentage of migrants in older age groups. Quotas reflecting these disparities were established (to be applied with flexibility) at the overall level of the RET sample.[10]

Table 16. Sex and age quotas in Ukrainian RET sample

	Sex	**Age**		
		20-39	40-59	60-74
RET from Italy	60-80% female	50%	40%	10%
RET from Pol	40-60% female	60%	35%	5%

[10] Any indicators at the level of oblast can be used for guidance only. In 2008 and 2012 the presentation of material at the level of oblast relied on the use of qualitative characteristics of indicator values ("high level", "overwhelming majority", and so forth) without specifying any concrete numerical value.
Some indicators are available at the level of geographical zones (they are 5 in Ukraine) including sex structure but excluding age structure.

Source: Own elaboration

- NM sample. The NM sample represents the general population of the selected oblasts according to the following socio-demographic parameters: type of settlement (city/village), gender and age. These quotas are based on the information of State Statistics Survise of Ukraine about sex-age structure of population of selected oblasts.[11]

Table 17. Sex and age quotas in Ukrainian NM sample

	Sex	**Age**			
		20-29	30-39	40-59	60-74
NM	53% female	21%	22%	39%	18%

Source: Own elaboration

[11] Database of the State Statistics Service of Ukraine: http://database.ukrcensus.gov.ua/MULT/Dialog/statfile_c.asp

Annex 1

Table 1. Distribution of sample in Senegal at region, department and commune levels

Department	Commune	Urban/rural	RET				NM	
			Objective*	Obtained			Objective*	Obtained
				Total	ES	FR		
DAKAR REGION			*250*	*260*	*114*	*146*	*250*	*241*
Dakar	Colobane/Fass/Gueule	U	15	17	4	13	15	15
	Fann/Point E/Amitié	U	15	5	1	4	15	3
	Goree	U	15	0	0	0	15	0
	Grand Dakar	U	15	19	8	11	15	12
	Grand Yoff	U	15	9	5	4	15	9
	Hlm	U	15	15	6	9	15	15
	Medina	U	15	12	3	9	15	12
	Mermoz/Sacre Coeur	U	15	14	3	11	15	15
	Parcelles Assainies	U	15	20	14	6	15	15
	Patte D'oie	U	15	12	4	8	15	12
	Plateau	U	15	14	3	11	15	14
	Sicap Liberte	U	15	16	3	13	15	16
	Yoff	U	15	15	5	10	15	15
	Dieupeul Derklé**	U	**	10	3	7	**	12
	Hann Bel Air**	U	**	8	8	0	**	6
	Sam Notaire**	U	**	4	2	2	**	0
	Ouakam**	U	**	8	3	5	**	8
Guediwaye	Golf Sud	U	15	19	9	10	15	15
	Wakhinane Nimzat	U	15	14	8	6	15	16
Pikine	Keur Massar	U	15	13	7	6	15	15
Rufisque	Rufisque Ouest	U	15	16	15	1	15	16
DIOURBEL REGION			*73*	*70*	*39*	*31*	*73*	*60*
M'Backe	M'Backe	U	15	18	9	9	15	15
	Nghaye	R	15	4	1	3	15	6
	Touba Mboul	R	15	19	13	7	15	12
	Touba Mosque	R	15	20	15	4	15	15
	Taif**	U	**	9	1	8	15	10
	Touba Fall**	U	**	0	0	0	15	2
LOUGA REGION			*73*	*88*	*39*	*49*	*73*	*75*
Louga	Gande	R	15	18	7	11	15	15
	Louga	U	15	19	8	11	15	15
	Ndiagne	U	15	17	9	8	15	15
	Nguer Malal	R	15	17	4	13	15	15
	Nguidile	U	15	17	11	6	15	15
THIES REGION			*125*	*136*	*81*	*55*	*125*	*127*
Thies	Cayar	U	15	14	12	2	15	14
	Khombole	U	15	13	9	4	15	14
	Thies Ouest	R	15	12	9	3	15	15
M'Bour	M'Bour	U	15	15	11	4	15	14
	Ndiaganiao	R	15	14	8	6	15	14
	Saly Portudal	U	15	17	7	10	15	14
	Sandiara	R	15	16	9	7	15	14
Tivaouane	Meouane	R	15	17	14	3	15	14
	Noto Gouy Diama	U	15	18	2	16	15	14

TOTAL	*521*	*554*	*273*	*281*	*521*	*503*

* The objective per commune was 15 RET and NM. The addition of these objectives is higher than 250 as a result of both a purposeful design (foreseeing the objectives could not be met in all communes) and from the inclusion of the supplementary communes (which were finally used)

** Added to complete objective numbers from Grand Yoff, Point E, Wakhinane Nimzat and Goree (where no interviews could be conducted despite the team efforts) in Dakar, and N'ghaye from M'backé.

Source: Own elaboration

Table 2. Proportion of urban population of sample in Senegal (and comparison to census data)

	All RET	ES	FR	NM*
Census 2013 (national level)	59%	58%	73%	45%
Sample: by type of commune	na	71%	79%	76%
Sample: by interviewer's categorization	na	66%	74%	68%

* The data from census refers to the general population. However, the NM subsample is not a representative sample of this population, but a control (comparable) group for the RET sample

Source: Own elaboration

Table 3. Distribution of sample in Ukraine at oblast and district levels

District	Urban/rural	RET				NM	
		Objective	Obtained Total	IT	PL	Objective	Obtained
IVANO-FRANKIV OBLAST		*125 (63 IT+63 PL)*	*184*	*93*	*91*	*125*	*126*
Ivano-Frankivsk center	capital	31-2	18	9	9	31-2	15
Kosivsky	Town	31-2	50	26	24	31-2	37
Galitsky	Urban village	31-2	62	32	30	31-2	36
Kalushsky	Village	31-2	43	22	21	31-2	24
Kalush	Town		11	4	7		14
LVIV OBLAST		*125 (63 IT+63 PL)*	*186*	*94*	*92*	*125*	*129*
Lviv oblast center	capital	31-2	67	37	30	31-2	30
Drohobych	Town	31-2	18	9	9	31-2	21
Yavorivsky	Urban village	31-2	27	11	16	31-2	30
Sokalsky	Village	31-2	33	15	18	31-2	29
Samborsky**	Urban village	**	1	1	0	0	0
Borislav ***	Town	***	4	1	3	0	0
Skolivskyi district***	Mixed	***	6	3	3	0	0
Stryjskyi district***	Mixed	***	1	0	1	0	0
Truskavets***	Town	***	2	2	0	0	0
Drohobych district***	Mixed	***	27	15	12	0	18
TERNOPIL OBLAST		*125 (63 IT+63 PL)*	*186*	*91*	*95*	*125*	*128*
Ternopil oblast center	capital	31-2	35	23	12	31-2	16
Borshchivsky	Town	31-2	38	18	20	31-2	41
Ternopilsky	Urban village	31-2	86	43	43	31-2	28
Lanovetsky	Village	31-2	18	4	14	31-2	43
Chortkivsky*	Town	**	2	0	2	0	0
Kozelsky**	Town	**	5	2	3	0	0
Terebovlyansky***	Town	***	2	1	1	0	0
CHERNIVTSI OBLAST		*125 (63 IT+63 PL)*	*188*	*92*	*96*	*125*	*126*

Chernivtsi oblast center	capital	31-2	57	27	30	31-2	19
Kitsmansky	Town	31-2	36	17	19	31-2	44
Khotynsky	Urban village	31-2	44	26	18	31-2	41
Glybotsky	Village	31-2	34	15	19	31-2	22
Novoselitsky**	Village	**	14	7	7	0	0
Kelmenetsky***	Urban village	***	3	0	3	0	0
TOTAL		*500 (250 IT+250 PL)*	*744*	*370*	*374*	*500*	*509*

* Added in second phase (instead of Borshchivsky)
** Added in third phase (instead of Chortkivsky, Yavorivsky and Glybotsky)
*** Added in third phase to ensure numeric objectives when it was not possible to find respondents who met the criteria in the previously included areas

Source: Own elaboration

Table 4. Urban/rural distribution of sample in Ukraine

	Distribution obtained by type of district*				Distribution obtained by categorization of interviewers			
	All RET	IT	PL	NM	All RET	IT	PL	NM
Urban	46%	48%	45%	47%	26%	38%	35%	49%
Rural	49%	48%	51%	50%	64%	62%	65%	51%

* The percentages exclude 7 cases recruited in districts of mixed character

Source: Own elaboration

Table 5. Distribution of sample in Romania at judet (county) and commune/town levels

Commune/town	Urban/rural	RET				NM	
		Objective	Obtained Total	ES	DE	Objective	Obtained
BISTRIȚA NĂSĂUD		*300*	*212*	*212*	*0*	*300*	*309*
Bistrita (municipality)	U	130	71	71	0	130	131
Beclean (town)	U	20	24	24	0	20	20
Nasaud (town)	U	15	7	7	0	15	13
Sangeorz-Bai (town)	U	15	7	7	0	15	15
Branistea	R	6	0	0	0	6	6
Budacu De Jos	R	6	0	0	0	6	6
Budesti	R	6	0	0	0	6	8
Caianu Mic	R	6	1	1	0	6	6
Cosbuc	R	6	4	4	0	6	6
Dumitra	R	6	0	0	0	6	6
Dumitrita	R	6	1	1	0	6	6
Feldru	R	6	7	7	0	6	6
Galatii Bistritei	R	6	0	0	0	6	6
Ilva Mica	R	6	6	6	0	6	7
Lechinta	R	6	0	0	0	6	6
Mariselu	R	6	0	0	0	6	12
Nimigea	R	6	6	6	0	6	6
Prundu Bargaului	R	6	2	2	0	6	6
Rebrisoara	R	6	1	1	0	6	6
Sieu-Magherus	R	6	3	3	0	6	6
Sintereag	R	6	2	2	0	6	6
Teaca	R	6	1	1	0	6	7
Telciu	R	6	4	4	0	6	6

Uriu	R	6	2	2	0	6	7
Bistrita Bargaului*	R	≈ 5	13	13	0	0	1
Cetate*	R	≈ 5	2	2	0	0	0
Ilva Mare*	R	≈ 5	3	3	0	0	0
Josenii Bargaului*	R	≈ 5	2	2	0	0	0
Lesu*	R	≈ 5	3	3	0	0	0
Livezile*	R	≈ 5	1	1	0	0	0
Magura Ilvei*	R	≈ 5	2	2	0	0	0
Maieru*	R	≈ 5	1	1	0	0	0
Parva*	R	≈ 5	4	4	0	0	0
Rebra*	R	≈ 5	6	6	0	0	0
Romuli*	R	≈ 5	1	1	0	0	0
Salva*	R	≈ 5	7	7	0	0	0
Sanmihaiu De Cimpie*	R	≈ 5	1	1	0	0	0
Sieut*	R	≈ 5	1	1	0	0	0
Silivasu De Cimpie*	R	≈ 5	5	5	0	0	0
Spermezeu*	R	≈ 5	2	2	0	0	0
Tiha Bargaului*	R	≈ 5	3	3	0	0	0
Zagra*	R	≈ 5	3	3	0	0	0
Micestii De Cimpie*	R	-	1	1	0	0	0
Sieu -- Bistrita-Nasaud*	R	-	2	2	0	0	0
SIBIU		*300*	*287*	*0*	*287*	*300*	*307*
Sibiu (municipality)	U	120	119	0	119	120	121
Medias (municipality)	U	20	19	0	19	20	28
Cisnadie (town)	U	20	18	0	18	20	19
Avrig (town)	U	20	19	0	19	20	20
Agnita (town)	U	10	10	0	10	10	10
Saliste (town)	U	10	10	0	10	10	10
Miercurea Sibiului (t.)	U	10	12	0	12	10	9
Dumbraveni (town)	U	8	6	0	6	8	9
Ocna Sibiului (town)	U	7	7	0	7	7	7
Selimbar	R	7	4	0	4	7	4
Laslea	R	7	6	0	6	7	7
Mosna	R	7	5	0	5	7	9
Cristian	R	7	0	0	0	7	5
Slimnic	R	7	9	0	9	7	8
Sura Mare	R	7	8	0	8	7	6
Chirpar	R	7	4	0	4	7	7
Nocrich	R	7	8	0	8	7	7
Rosia	R	7	8	0	8	7	7
Sura Mica	R	7	8	0	8	7	8
Darlos	R	5	7	0	7	5	7
*ALBA***		-	*29*	*29*	*0*	*0*	*0*
Alba Iulia	U	-	22	22	0	0	0
Aiud	R	-	0	0	0	0	0
Cetatea De Baltă	R	-	3	3	0	0	0
Jidvei	R	-	2	2	0	0	0
Mihalț	R	-	2	2	0	0	0
*CLUJ***		-	*10*	*10*	*0*	*0*	*0*
Cluj-Napoca	U	-	8	8	0	0	0
Mărișel	R	-	2	2	0	0	0
*MUREȘ***		-	*41*	*41*	*0*	*0*	*0*
Ganesti	R	-	1	1	0	0	0
Tirnaveni	U	-	40	40	0	0	0

TOTAL	*600*	*579*	*292*	*287*	*600*	*616*

* Added after exhausting previous communes/towns in Bistrita-Nasaud to complete objectives of RETs from Spain

** Added after exhausting all communes/towns in Bistrita-Nasaud to complete objectives of RETs from Spain. No numerical objectives per county or commune/town were set in this last stage of fieldwork expansion.

Source: Own elaboration

Table 6. Urban/rural distribution of sample in Romania

	Objective		Distribution obtained		
	RET from ES	RET from DE	RET from ES	RET from DE	NM
Urban	60%	75%	54%	76%	67%
Rural	40%	25%	46%	24%	33%

Source: Own elaboration

Table 7. Distribution of sample in Argentina at province level

Provincia	RET (ES)			NM		
	Objective	Obtained		Objective	Obtained	
CIUDAD DE BUENOS AIRES	*175*	*92*	*194*	*175*	*46*	*163*
BUENOS AIRES PROVINCIA		*102*			*117*	
CORDOBA	*75*	*50*	*57*	*75*	*50*	*58*
CORRIENTES		*1*			*1*	
ENTRE RÍOS		*0*			*1*	
JUJUY		*1*			*1*	
LA RIOJA		*1*			*3*	
SAN JUAN		*1*			*0*	
SANTA FE		*3*			*2*	
TOTAL	*250*		*251*	*250*		*250*

Source: Own elaboration

Table 8. Urban/rural distribution of sample in Argentina

	Distribution obtained by categorization of interviewers	
	RET (ES)	NM
Urban	99%	99.6%
Rural	1%	0.5%

Source: Own elaboration

Annex 2. Details of RET recruitment and snowball implementation

Table 1. Finding sources and seeds

Finding sources and seeds	SN	UA	RO	AR
Key informants	At least one week before starting the fieldwork in a given commune, fieldwork managers travelled to that commune to start contacting key informants • Village chiefs and mayors • Religiuos leaders • Migrant associations • Fishermen and persons acquainted with smuggling networks These key informants were asked to identify local returnees from France or Spain. Typically the number of contacts provided was very low or null. IOM was also contacted to obtain lists of beneficiaries of return programs. Persons from the selected sampling areas were selected for contact, and assigned to interviewers who tried the contact, checked eligibility and established appointments.	The interviewers first identified and contacted key informants within the established sampling units (oblasts) among a large list of possibilities: • Govt employment centres • Pension funds • Law enforcement agencies • Local communities (community members / neighbors) • Migration services • Village councils / local authorities • NGOs working with people who travel abroad and prevention of trafficking The key informants were asked to name local returnees from Italy or Poland. The interviewer got then in contact with each potential respondent personally or through the key informant to establish appointments.	The interviewers first identified and contacted key informants within the established sampling units • Local authorities and administration (from the town hall, the school, the parish, medical establishment, associations, etc.) • Local NGOs The key informants were asked about names of local returnees from Spain or Germany. If the key informants were unable to offer such names, they were asked to point out a possible zone in the locality in which there were more new houses built with money sent home by migrants, irrespective of their country of destination. These areas and the areas of residence of the returnees referred were used as starting points for the random routes to locate NMs (and possibly RETs), who would then identify potential returnee respondents (see below in this table).	Several gov't, non-gov't and int'l organizations were contacted before and during the field stage in order to obtain listings of returnees from Spain • Argentina´s Consulate in Madrid • Argentine associations in Spain • Raíces (program of Repatriation of Scientists)* • IOM (beneficiaries of return programs) • OEI (beneficiaries of return programs) These organizations provided lists of returnees that were contacted via phone by the survey coordinator. Contact information and appointments were then distributed among interviewers.
Social networks	At the beginning of the field stage, a Facebook page and poster were set up. No contacts were finally made this way.	NA	NA	At the beginning of the field stage, a Facebook page and poster were created to publicize the project. Using the Facebook page, a TEMPER team member reached out to Facebook groups of Argentinians in Spain (e.g. Argentinos en España; Argentinos en el Exterior; Casa Argentina en España) and established contact with individual members through private messaging and emails. Contacts agreeing to participate were distributed among interviewers, who then set appointments to conduct the interviews (if needed, via Skype)
Door-to-door / on the street	Key informants provided very few contacts, so during the recruitment week, two interviewers per commune went door-to-door (census-like) in the neighbourhoods of residence of RETs (identified by key informants). All houses were selected, respecting the limits of the commune. Interviewers also took opportunities to discuss with people on the street and in community hubs in particular The interviewers then returned to the firm's headquaters and shared the list of potential returnees with a Quality Team, which checked the eligibility of those contacts and prepared a final list to contact. Interviewers received assignments and called	NA	By the end of fieldwork, given the difficulty to locate RETs, and once the fieldwork had to be extended to the counties of Alba, Cluj and Mures, the interviewers were requested to go door-to-door in the search for RETs when trying to locate contacts provided by key informants or using the key informants' tips about the areas with returnees or migrants.	NA

	by phone to check again the eligibility and availability of the person, and making an appointment for the interview.			
Word of mouth	Contacts not directly made through the above sources, but indirectly through them (i.e. persons who approach the team as a result of hearing about the initiative from people directly reached through key informants or door-to-door), and who are not referrals either. It happenned only a couple of times.	NA	NA	An email address was set up to receive information requests and word-of-mouth contacts (contacts not directly made through the above sources, but indirectly through them: i.e. persons who approach the team as a result of hearing about the initiative from other people directly reached through Facebook). Contacts agreeing to participate were distributed among interviewers, who then set appointments to conduct the interviews (if needed, via Skype).
Inter-personal networks	During the whole field stage, the TEMPER team in SN activated their interpersonal networks looking for returnees from France and Spain	NA	During the whole field stage, the interviewers activated their interpersonal networks looking for returnees from Germany and Spain. In particular, having interviewers in the selected towns/communes proved very helpful.	During the whole field stage, interviewers and TEMPER team members in Spain and Argentina activated their interpersonal networks looking for returnees from Spain. When the potential respondents were NOT part of the interviewer's personal network, the interviewer directly checked eligibility and set appointments to conduct the interview. The contacts of eligible and available RETs that were acquaintances of some interviewer were distributed by the coordinator among other interviewers, who then set the appointments to conduct the interview (if needed, via Skype).
RETs found when sampling NM	NA	**During random routes to sample NMs:** when ahousehold is selected, if a returnee from Poland or Italy is present, s/he will be the respondant from that household. If several were found in the same household, the youngest was selected for interviewing	**During random routes to sample NMs:** when ahousehold was selected, if a returnee from Germany or from Spain was found, that person became the respondant from that household. If several, the one whose birthday is closest to the month of the interview is chosen (if several birthdays coincide, one of them is randomly chosen)	NA
Interviewed NMs	After finalizing an interview with a NM, the interviewer asked the respondent to nominate returnees who have lived in France or Spain from the selected areas	After finalizing an interview with a NM, the interviewer asked the respondent to nominate returnees who have lived in Poland or Italy from the selected areas	After finalizing an interview with a NM, the interviewer asked the respondent to nominate returnees who have lived in Germany or Spain from the selected areas	After finalizing an interview with a NM, the interviewer asked the respondant to nominate returnees who have lived in spain. If some referral was provided, the interviewer established contact to check the eligibility and, if met, set an appointment to conduct the interview.
Non-eligible/ non-interviewed RETs or NMs	The interviewer asked the person to nominate returnees before ending the communication if the situation allowed doing so.	If a respondent is ineligible or rejects participation s/he is asked in that moment to provide referrals of returnees who have lived in Poland or Italy	The interviewer asked the person to nominate returnees before ending the communication if the situation allowed doing so.	The interviewer asked the person to nominate returnees before ending the communication if the situation allowed doing so. If some referral was provided, the interviewer established contact to check the eligibility and, if met, set an appointment to conduct the interview

* At the end, this list was not available (nonetheless, the team managed to reach many respondents with such a profile, mostly through interpersonal networks).

Source: Own elaboration

Table 2. Contacting seeds and obtaining referrals (from RET respondents)

Contacting seeds and referrals	SN	UA	RO	AR
Contact and interviewing	When an interviewer received the **contact and address of a potential returnee**, the interviewer went to the address or contacts the person to check his eligibility and availability. If the contact seems eligible and available, a callback was then organized by the quality team to double-check eligibility and to confirm an appointment When the interviewer arrived at the address of a contact **following an appointment**, they had to list on their "paper contact sheet" all the men in the household and highlight the eligible ones. If more than one was eligible, a "selection grid" was used to select the respondent. If the selected person was available, the interview was conducted, otherwise an appointment was made.If an appointment couldn't be made, the interviewer had to realize 3 more attempts in total (via phone or visit). In total, up to 4 contact attempts had to be tried with the selected returnee, the first one in person. Any 2 attempts of contact by phone had to be followed by an attempt in person. These attempts had to be made on different days and at different times of the day.	When interviewers **got in contact with potential RET respondents** (in person or by phone) they had to fill in the "survey passport" (located in a "management questionnaire") to determine the eligibility of the person, regardless of her/his full participation in the survey. If the respondent met the eligibility criteria, the full management questionnaire had be filled in to confirm the absence of family/friendly ties between the interviewer and respondent; to document the number of returnees from a respondent's social network and his/her contact information; and to record the respondents' informed consent to research participation. The interviewer had to make up to five attempts on the phone **to set an appointment**. The attempts had to be maed on different days of the week and at different times. If attempts to contact a potential respondent in the telephone mode proved useless, the interviewer conducted at least one visit to the respondent (if the address was available)	Interviewers had to come to the address of the identified returnees, and if no one was available, they had to come back at the address at least two more times at two different hours of the day. They were nonetheless allowed to go back and visit more than 2 times in order to find the subject at the address. When interviewers **got in contact with potential RET respondents** (in person or by phone) they first had to check the eligibility. If the criteria were met, **appointments were organized**. In the appointment, eligibility was double-checked before proceeding to the interview.	When the interviewer arrived at the address of a contact **following an appointment,** they fulfilled the contact sheet in the application in order to double-check eligibility before proceeding to the interview.
Snowball referrals	After finalizing an interview with a RET, the interviewer asked the respondant to nominate other returnees (snowballing) from either France or Spain living in any of the selected areas	After finalizing an interview with a RET, the interviewer asked the respondent to nominate returnees (snowballing) from either Italy or Poland living in any of the selected areas	After finalizing an interview with a RET, the interviewer asked the respondent to nominate other returnees (snowballing) in the same community/town (in Sibiu, for RETs from Germany; in Bistrita Nasaud, for RETs from Spain). After the expansion of fieldwork, referrals were accepted for RETs in any of the selected areas.	After finalizing an interview with a RET, the interviewer asked the respondant to nominate other returnees (snowballing) from Spain living anywhere in the country. The answer to the question about RET networks' size was taken as reference (no referrals asked if the respondent declared not knowing any returnee)

Source: Own elaboration