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**EXCHANGE OF MIGRATION DATA AMONG COUNTRIES: EXPERIENCES, ISSUES AND
CHALLENGES**

Comparing international data on migration between Sweden and the Netherlands

Note by Statistics Netherlands and Statistics Sweden *

I. INTRODUCTION

In theory, data on international migration between two countries are recorded in similar ways in the sending and the receiving country. In practice there are large differences between the two (Poulain et al. 2005). These incongruities are due to differences in registration systems and in the definitions used for international migration. Another commonly recognized problem is the underreporting of emigration caused by unclear rules or the absence of incentives to individuals to deregister. The United Nations and Eurostat have long been working on harmonising the definitions of migration (UN, 1998). The recent Eurostat regulation on migration and international protection (Eurostat, 2007) is one example of the steps taken towards better comparability. Other initiatives to solve the problem of emigration data quality include gaining insight in immigration data in order to improve the receiving countries' emigration data (UNECE, 2009a/b). Various bilateral initiatives have been taken to compare migration flows between countries in detail (e.g. Van Agtmaal-Wobma et al. 2008).

In this paper, we look into details of the migration flows between the Netherlands and Sweden and analyse the differences found. Both countries have fully computerized register-based population statistics that will make comparison possible. Migration flows between the Netherlands and Sweden have increased in the past five years. Emigration to Sweden was between 1 and 1.5 percent of the

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total emigration flow from the Netherlands. The same figures apply for emigrations from Sweden to the Netherlands.

We expect to find differences in registered migration between the countries. The definitions used for immigrants and emigrants are not the same, so we expect this to explain a substantial part of the difference. After controlling for this, the remaining difference is expected to be due to unreported emigration. It can be estimated that some of the unreported emigrations have Sweden or the Netherlands as their destination, using information on country of birth or citizenship. Using the immigration data of the receiving country will shed even more light on this group. After the analysis, we expect to have suggestions for improving of the migration statistics in both countries, and for how other countries may learn from this.

II. DATA AND METHOD

Migration flows between the Netherlands and Sweden are first compared at an aggregated level on data published by both Statistical Offices. We describe migration flows by age, sex, country of birth, and citizenship. Secondly, the flows are recalculated using the same definition for migrants in both countries. Thirdly, unreported migration is estimated by using data on country of birth and/or citizenship.

III. DEFINITIONS

Sweden

In Sweden, a Nordic citizen is recorded as an immigrant if he or she intends to stay in the country for at least *twelve months* and reports this to the Tax Agency. If the migrant is a non-EU citizen, nor a citizen of Norway or Iceland, he or she will need a residence permit valid for at least one year. A non-Nordic EU-citizen must have a “proof of registration” from the Migration Board before being registered at the Tax Agency.

People leaving Sweden with an intended stay abroad of at least *twelve months* must report this to the Tax Agency and will then be registered as emigrants. There is an exception for people who move from Sweden to Norway or Denmark with the intention of staying abroad at least three to six months. This is because of the inter-Nordic agreement on migration where someone can only be registered in one Nordic country at a time.

Asylum seekers are not considered migrants, no matter how long they stay in Sweden. Asylum seekers who obtain the right to stay in Sweden (a permit of at least one year) will be registered at the Tax Agency and the year of registration will be considered the year of immigration.

The Netherlands

In the Netherlands, everybody who intends to stay in the Netherlands for at least *four of the forthcoming six months* should notify the population register immediately after arrival in the country. So, *immigration* relates to all individuals arriving in the Netherlands of whom the arrival is recorded in a municipal population register. Asylum seekers are considered immigrants after they have received a residence permit or after six months of legal stay in the Netherlands.

People leaving the Netherlands with an intended stay of at least *eight of the forthcoming twelve months*, should notify the population register and are registered as *emigrants*.

These definitions are different from the UN and EU definitions, where an (intended) stay or absence of at least 12 months is used as a criterion for both immigration and emigration. The 12-months criterion can only be determined on an *ex-post* basis. Calculations show that about 90 percent of all registered emigrants from the Netherlands do not return within 12 months, so they are considered emigrants by international criteria.

IV. UNREPORTED MIGRATION

Sweden

A person can be registered, by the Tax Board, as absent from Sweden if he or she has had no known address for the last two years but has the right to stay in the country. The registration will be made as an emigration to the country “absent”. The amount of corrections has varied between 338 and 1 892 during 2005–2008, that is between 1 and 4 percent of all emigrations.

A person who has been administratively removed from the register, but shows up again, can only be inserted to the register by an administrative immigration. These immigrations will include the information that the person was previously removed administratively.

Further, the country of destination is not clear for around 4 to 12 percent of all reported emigrations in the years 2005–2008. Two reasons for this lack of information on country of destination can be found. Firstly, persons who have informed the Tax Board that they will be emigrating but have not told to what country of destination they are moving. Secondly, it can also be that checks at the Tax Board have found persons in the register who no longer have the right to stay in Sweden. These persons have therefore been removed as emigrants and no information on country of destination is available.

The group consisting of persons that have emigrated administratively together with persons emigrating to an unknown country of destination is generally older than the persons emigrating to a known country. In 2008 the first group had an average age of 39 years compared with 30 for the group moving to a known country. The share of males is also higher in the first group compared to the second.

All administrative emigrations and administrative immigrations are in the official statistics counted as emigrations to the country “absent” and immigrations from the country “absent”.

The Netherlands

In the Netherlands, unreported migration is registered by administrative corrections, either removals or entries. An administrative removal takes place when a municipality decides to no longer include a person in its population, once it has established the address of the person is unknown, the person cannot be contacted and probably no longer resides in a municipality in the Netherlands. Once a person is removed administratively, in general he or she can only be included in a municipal population register by means of an administrative entry (arrival with unknown country of origin) or immigration (arrival with known country of origin).

When a municipality decides, at the request of the person concerned, to add that person to its population register while it has no knowledge of birth, immigration or establishment of that person from another municipality in the Netherlands, an administrative entry takes place.

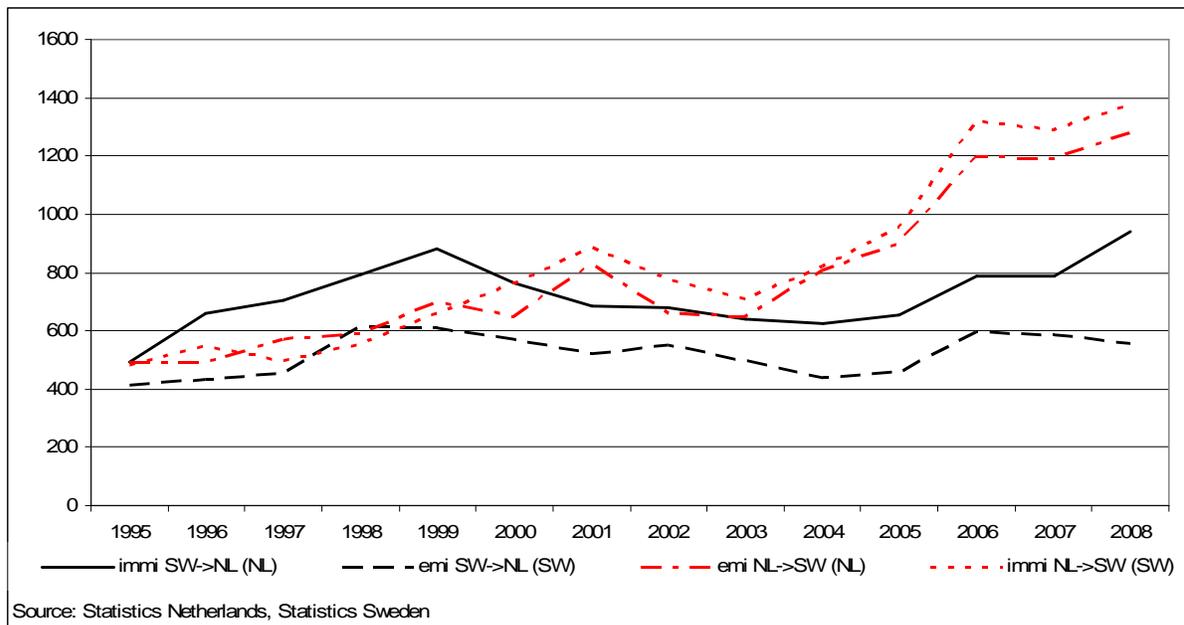
The net administrative corrections (administrative entries minus administrative removals) relate to persons who have been removed from the population registers administratively without ever being registered by means of an administrative entry or immigration afterwards. In the migration statistics of Statistics Netherlands, net administrative corrections are dealt with as non-reported emigration and are added as such to the ‘real’, registered emigration in order to get an overall picture of the total number of departures from the Netherlands.

However, Statistics Netherlands does not know for sure whether the total number of net administrative corrections has to be considered as non-reported emigration. It is possible that part of the net administrative corrections relates to persons who, without being registered, reside in the Netherlands. So, net administrative corrections can be interpreted in a broader way: persons who have been removed from a population register (apart from death) and whose place of residence is unknown. The place of residence can be either within the Netherlands or abroad. The share of unreported emigration in the total emigration figure has been around one quarter in the past two years. The group of non-reported emigrants differs from the registered emigrants on several demographic variables: the first group has a higher share of males, people between 15 and 30 years and never-married (van Agtmaal-Wobma et al. 2008).

V. COMPARING THE MIGRATION FLOWS BETWEEN THE NETHERLANDS AND SWEDEN

First, we compare the migration data as published by the Statistical Offices, as shown in Figure 1. The data on the migration flow from the Netherlands to Sweden – Dutch emigration and Swedish immigration - are very similar. In most years, the difference between the two is less than 10 percent (of the mean of both figures). Data on the migration flow from Sweden to the Netherlands are further apart: the difference between them varies between 17 and 50 percent.

Figure 1. Migration flows between the Netherlands and Sweden



Based on differences in definitions, the better fit of the Netherlands-Sweden flow data as compared to the Sweden-Netherlands flow data was expected. The Dutch definition for emigrants (8 months) is closer to that of Swedish immigrants (12 months) than the Dutch immigrant definition (4 months) is to the Swedish 12 month's emigrant criterion.

Recalculated to meet 12 months criterion

In order to compare flows using similar definitions, the Dutch migration data are recalculated (on an *ex-post* base) to meet the 12 months criterion. It appears that almost 6 percent of emigrants to Sweden returned to the Netherlands within 12 months so are not considered to be emigrants by international criteria. On the other side, some 15 percent of immigrants from Sweden did not stay in the Netherlands for at least 12 months.

By recalculating the Dutch migration data, the data of the Netherlands and Sweden are better comparable. The differences between the data on the migration flow from the Netherlands to Sweden – Dutch emigration and Swedish immigration – have grown slightly after the adjustment. On the other hand, the fit between the data sets on migration flows from Sweden to the Netherlands is better than before the recalculation.

However, there are still differences and fluctuations over the years. We expect unreported emigration to play a major role here too. After adding estimates of unreported emigration from the Netherlands to Sweden to the registered emigration, total emigration rates will be higher and thus more in line with the immigration data of the receiving country Sweden. The same applies for Swedish emigration including estimated unreported emigration and Dutch immigration.

Estimated unreported emigration from the Netherlands to Sweden

In order to get a full picture of the total emigration to Sweden, Statistics Netherlands has made estimates of the unreported emigration to Sweden in order to attribute part of the net administrative corrections to emigration with destination Sweden. Migrant flows are highly selective for country of birth of the migrant: a majority of emigrants to Sweden is born in Sweden. Therefore, the calculation method takes into account the emigrants' country of birth in both the emigrant population with unknown destination, and the registered emigrants to Sweden. We assume that the share of unreported emigration to Sweden *by country of birth* is equal to the share of reported emigration to Sweden by country of birth. If, for example, 1 percent of the registered Dutch-born emigrants leave for Sweden, we assume that the same percentage of the Dutch-born unreported emigrants leave for Sweden too.

The calculations were made for 1995-2008. *Table 1* gives an example of this method for the year 2005. The results are presented in *Table 2* and in *Figure 2*. For convenience of the reader, the (negative) net administrative corrections are presented as absolute numbers. It turns out that for the period 1995-2008, some 1.1 percent of all registered emigrants left for Sweden, whereas the estimated, unreported emigration to Sweden accounts for 0.8 percent of the total unreported emigration. The difference is due to the population structure of the emigrant population.

Almost one quarter of the total emigration from the Netherlands to Sweden is unreported emigration. In the total emigration to all countries of destination this share is 27.5 percent, *table 2*). In the period 1995-2008, for Sweden this percentage has fallen slightly whereas for all countries it almost stabilised.

Please note that by calculating unreported emigration to Sweden in the abovementioned

way, the total number of net administrative corrections is considered to be unreported emigration. As explained above it possible that part of the net administrative corrections relate to persons who still reside in the Netherlands and are not to be considered as emigrants. So, the estimates presented here can be looked upon as an upper limit of unreported emigration to Sweden.

Table 1
Estimate of unreported emigration from the Netherlands to Sweden based on registered, reported emigration to Sweden, by country of birth, 2005

Country of birth	Registered, reported emigration			(Estimated) unreported emigration		
	total	of whom to Sweden		total	of whom to Sweden	
		<i>absolute</i>	%		<i>absolute</i> (calculated)	%
Total	83399	901	1,1	36326	287	0,8
Netherlands	45291	571	1,3	8438	106	1,3
Germany	3256	10	0,3	1096	3	0,3
United Kingdom	2151	8	0,4	1479	6	0,4
Turkey	1565	7	0,4	1307	6	0,4
Belgium	1313	6	0,5	313	1	0,5
Former Yugoslavia	851	10	1,2	688	8	1,2
Iraq	845	23	2,7	811	22	2,7
China	711	4	0,6	1134	6	0,6
Afghanistan	535	4	0,7	614	5	0,7
Sweden	280	199	71,1	95	68	71,1
Iran	278	4	1,4	519	7	1,4
Other countries	26323	55	0,2	19832	48	0,2

Source: Statistics Netherlands.

Table 2
Emigration from the Netherlands by country of destination (reported and unreported emigration), 1995-2008

	All countries				Sweden			
	Registered (reported) emigration	Net administrative corrections (unreported emigration)	Total emigration	Share of unreported emigration in total emigration (%)	Registered (reported) emigration	Estimate of unreported emigration	Total emigration	Share of unreported emigration in total emigration (%)
1995	63313	18874	82187	23.0	494	138	632	21.8
1996	65318	26620	91938	29.0	491	159	650	24.5
1997	62206	19755	81961	24.1	572	138	710	19.4
1998	60433	18848	79281	23.8	592	198	790	25.1
1999	59013	19756	78769	25.1	698	184	882	20.9
2000	61201	17776	78977	22.5	651	188	839	22.4
2001	63318	19248	82566	23.3	826	228	1054	21.6
2002	66728	30190	96918	31.2	659	371	1030	36.0
2003	68885	35946	104831	34.3	648	311	959	32.4
2004	75049	35186	110235	31.9	809	305	1114	27.4
2005	83399	36326	119725	30.3	901	287	1188	24.2
2006	91028	41442	132470	31.3	1194	424	1618	26.2
2007	91287	31289	122576	25.5	1189	314	1503	20.9
2008	90067	27712	117779	23.5	1280	255	1535	16.6
1995-2008	1001245	378968	1380213	27.5	11004	3500	14504	24.1

Source: Statistics Netherlands.

Estimated unreported emigration from Sweden to the Netherlands

The same method for estimating unreported emigration from the Netherlands to Sweden has been applied for estimating unreported emigration from Sweden to the Netherlands. The results are presented in table 3 and figure 3.

Table 3
Emigration from Sweden to the Netherlands, reported and estimates of unreported emigration, 1995-2008

	Registered, reported emigration	Estimated unreported emigration	Total emigration	Share of unreported emigration in total emigration (%)
1995	415	37	452	8.1
1996	431	38	469	8.1
1997	452	40	492	8.1
1998	615	54	669	8.1
1999	610	54	664	8.1
2000	571	34	605	5.6
2001	521	26	547	4.7
2002	551	45	596	7.6
2003	499	49	548	8.9
2004	440	42	482	8.7
2005	457	39	496	7.8
2006	598	67	665	10.0
2007	584	74	658	11.2
2008	556	47	603	7.7
1995-2008	7300	644	7944	8.1

Source: Statistics Sweden.

Figure 2 summarizes the effects of adjustments to Dutch emigration data on the comparability with Swedish immigration data. Three lines show (1) registered emigration (2) emigration recalculated to meet the 12 months criterion, and (3) emigration including estimated unreported emigration. For most years, the Dutch registered emigration data have the best match with Swedish immigration data. So, the adjustments did not improve the fit of both datasets.

Figure 2. Emigration to Sweden from the Netherlands (registered, recalculated to 12m, and including estimated unreported) , compared to Swedish data on immigration from the Netherlands

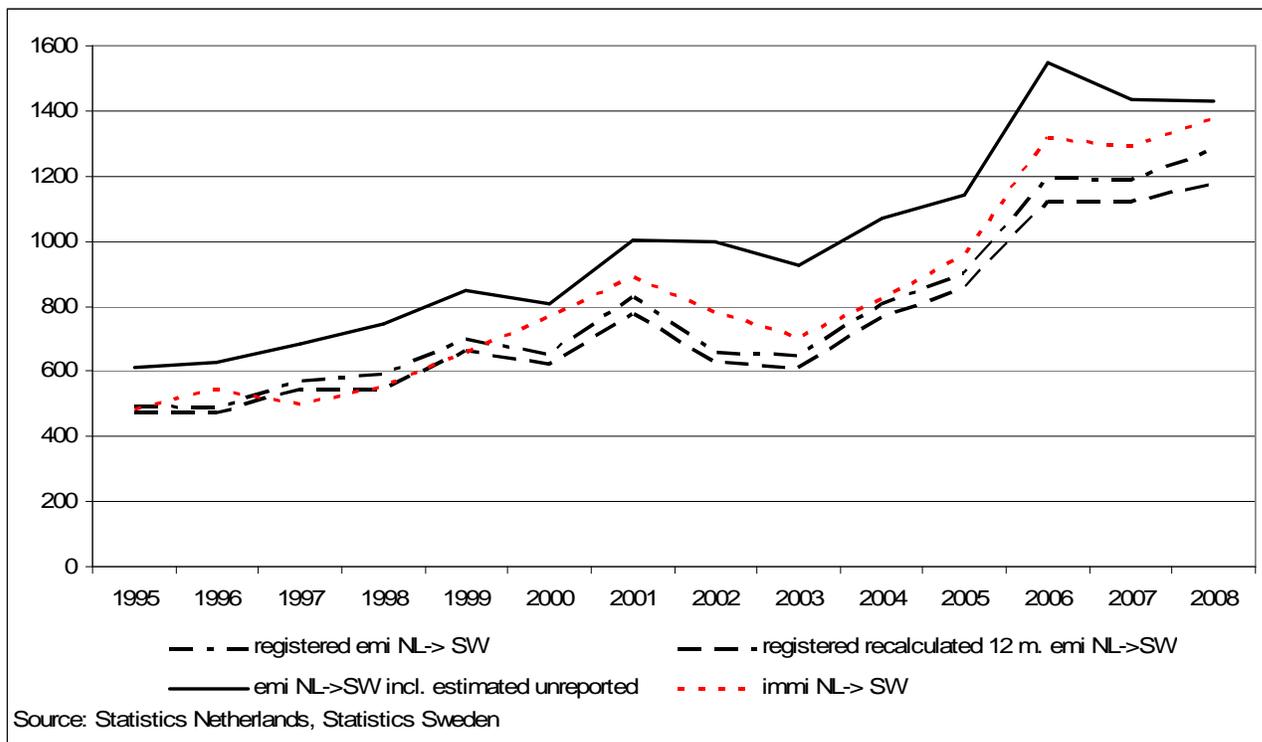


Figure 3. Emigration to the Netherlands from Sweden (registered, and including estimated unreported), compared to Dutch data on immigration from Sweden

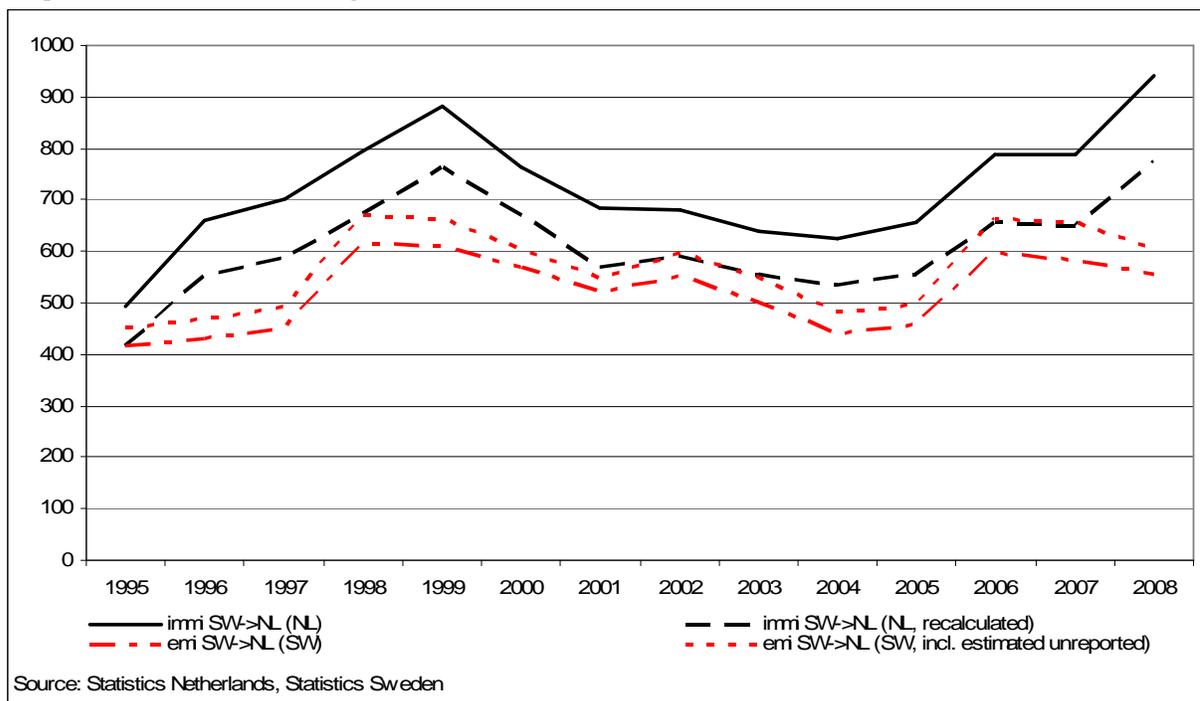


Figure 3 compares Swedish emigration data (registered and including estimated unreported emigration) to Dutch immigration data (as published and recalculated to meet 12 months criterion). The match between both datasets improved after adjustment of Dutch data to 12 months, and even more after adjustment of Swedish emigration data with estimated unreported emigration. So, in this case the adjustments did improve the fit of both datasets.

VI. CONCLUSION

Comparison of migration flow data between the Netherlands and Sweden, two countries with very good Population Registers, reveals important differences. The migration flows between the Netherlands and Sweden measured as emigration in the Netherlands and as immigration in Sweden, have a better match than the migration flows of both countries in the other direction. Variation in definition did not explain the difference: adjustment of the Dutch migration data to the 12 months criterion led to a slightly better match between Dutch immigration and Swedish emigration, but to a slightly worse match between the other flows.

Estimation of unreported emigration did improve the fit between Swedish emigration and Dutch immigration, but the other way round the fit became even worse.

A next step in our bilateral comparisons is the use of micro data of both countries in order to test the hypothesized underreporting of emigration. Did the immigrants registered in the receiving country not officially emigrate from the sending country? What other explanations can use of micro data give?

References

Agtmaal-Wobma, E. van, Nicolaas, H. and M. Poulain, 2008. Comparing international migration flows between sending and receiving countries: lessons of a recent cooperation between Belgium and the Netherlands. Invited paper presented at the Joint UNECE/Eurostat Work Session on Migration Statistics, Geneva, 3-5 March 2008.

Eurostat, 2007. Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community statistics on migration and international protection.

Poulain, M., N. Perrin and A. Singleton (eds.), 2005. THESIM: Towards Harmonised European Statistics on International Migration. Louvain-la-Neuve: Presses universitaires de Louvain.

UN, 1998. Recommendations on Statistics of International Migration. Revision 1, Statistical Papers, Series M, No. 58, Rev.1.

UNECE, 2009a. Guidelines on the use and dissemination of data on international immigration to facilitate their use to improve emigration data of sending countries. Conference of European Statisticians, 57th plenary session, Geneva, 8-10 June 2009, ECE/CES/2009/10.

UNECE, 2009b. Data exchange exercise to assess the feasibility of using immigration data of destination countries to improve emigration estimates of countries of origin. Conference of European Statisticians, 57th plenary session, Geneva, 8-10 June 2009, ECE/CES/2009/11.
