Analysis of existing migratory data production systems and major data sources in Hungary

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Content

List of acronyms, abbreviations and their English translation

Acronym/ Abbreviation	English translation	Endonym
BSZJ	Data on Legal relations of Registered Persons	Bejelentett Személyek Jogviszonyadatai (BSZJ)
COAEPS	Central Office for Administrative and Electronic Public Services	Közigazgatási és Elektronikus Közszolgáltatások Központi Hivatala (KEK KH)
DRI	Demographic Research Institute	Népességtudományi Kutatóintézet (NKI)
EEA	European Economic Area	Európai Gazdasági Térség (EGT)
EIF	European Integration Fund	Európai Integrációs Alap (EIA)
EU	European Union	Európai Unió
ETR	Unified Educational Register	Egységes Tanulmányi Rendszer (ETR)
HCSO	Hungarian Central Statistical Office	Központi Statisztikai Hivatal (KSH)
ILO	International Labour Organization	Nemzetközi Munkaügyi Szervezet
IMS	Institute for Minority Studies	Etnikai-nemzeti Kisebbségkutató Intézet (EnKI)
LFS	Labour Force Survey	Munkaerő-felmérés (MEF)
MHR	Ministry of Human Resources	Emberi Erőforrások Minisztériuma (EMMI)
NDA	National Development Agency	Nemzeti Fejlesztési Ügynökség (NFÜ)
NES	National Employment Service	Nemzeti Foglalkoztatási Szolgálat (NFSZ)
NHIFA	National Health Insurance Fund Administration	Országos Egészségbiztosítási Pénztár (OEP)
NLO	National Labour Office	Nemzeti Munkaügyi Hivatal (NMH)
NTCA	National Tax and Customs Administration of Hungary	Nemzeti Adó-, és Vámhivatal (NAV)
OECD	Organisation for Economic Co-operation and Development	Gazdasági Együttműködési és Fejlesztési Szervezet
OH	Education Office*	Oktatási Hivatal (OH)
OIN	Office of Immigration and Nationality	Bevándorlási és Állampolgársági Hivatal (BÁH)
CANPI	Central Administration of National Pension Insurance	Országos Nyugdíjbiztosítási Főigazgatóság (ONYF)
OSAP	National Statistical Data Collection Program	Országos Statisztikai Adatgyűjtési Program (OSAP)
TAJ	Social Insurance Identifier	Társadalombiztosítási Azonosító Jel (TAJ)
TeIR	Territorial Information System*	Országos Területfejlesztési és Területrendezési Információs Rendszer (TeIR)

** Translations marked with an asterisk (*) cannot be deemed as official translations of Hungarian endonyms.*

Executive Summary

The main aim of this report is to contribute to a better understanding of migration related statistical data, data sources and data collection practices in order to reveal pros and cons that influence the scope and the quality of migration statistics indicators. The expected results of gathering this information set are the recommendations to be formulated in order to improve the data collection system in an international context.

The migration statistics in Hungary was established at the beginning of 1990s. During the previous years, mainly due to political reasons, migration statistics did not exist at all. There were no migratory data sources at the disposal of statistics. The situation changed fundamentally at the turn of the 1980s and 1990s when Hungary suddenly became part of international migration flows. This resulted in the need for a comprehensive consolidated and coherent information system on migration at different levels of political and economic decision-making, public administration and the civil society including researchers.

The Hungarian Central Statistical Office (HCSO) undertook the responsibility of compiling international migration statistics. The population register and the foreign register were the first data sources used. Since then attempts of the HCSO to improve migration statistics has received increased acceptance and legal support. More and more administrative data sources have been at the office's disposal and the chance to validate statistical interests when designing or modifying administrative data sets has slowly been increasing, too. At the same time the range of data collections where migrants can somehow be identified increased and more and more registers containing migration-related information are in operation.

As in most countries there are three basic kinds of data sources used for migration statistics in Hungary: (1) administrative registers; (2) population census and (3) full-coverage statistical data collections and sample surveys.

The first and fundamental type of migration data sources in the Hungarian practice is the register. As registers have been designed for supporting administrative processes the use of them for statistical purposes is only an additional feature.

The Office of Immigration and Nationality (OIN) regularly collects and provides the widest range of migration data on various groups of foreigners coming and staying in Hungary: citizens of the European Economic Area (EEA), third-country nationals, illegal migrants and asylum seekers. Based on these data, the HCSO produces data on the number of foreigners immigrating in and emigrating form Hungary (flow) as well as the number of foreign citizens residing in the country (stock). The Central Office for Administrative and Electronic Public Services (COAEPS) is another important contributor of the Hungarian migration statistics system keeping the population register covering not only Hungarian citizens residing in Hungary but foreigners with permanent residence and persons with refugee status in the country. This data source provides data on the flow of emigrating and returning Hungarian citizens, on persons acquiring Hungarian citizenship, as well as on the stock of refugees. Besides these main organizations, there are other institutions having migration-related data sources like tax, health insurance, educational databases which can also be used to enhance the range and quality of migration statistics. The HCSO uses data of the National Tax and Customs Administration of Hungary (NTCA) and the National Health Insurance Fund Administration (NHIFA) on foreigners paying tax or having a Social Insurance Identifier (TAJ code). Until 2010, the HCSO also received aggregated data from the National Employment Service (NES) on foreigners having work permits.

The census is the other among the most important and at the same time one of the most reliable sources of information for migration statistics. Censuses give the possibility to provide extensive information on the total population residing in the country with a migration background, since data on foreign citizens and foreign-born population can be selected. However, collected migration-related data are different in each census round and since the census is only carried out every ten years, it is not suitable to describe short-term migratory processes. The full potential of this tool is not utilized due to time restrictions that should be taken into account in each data collection and due to limited financial resources.

Full-coverage statistical data collections and sample surveys represent a third type of data source. Data collections on foreign citizens acquiring Hungarian citizenship (since 2002) and on foreign citizens applying for/receiving settlement document (since 2003) are two examples for the former, both conducted within the National Statistical Data Collection Program of the HCSO. Sample surveys have the biggest potential for providing information on the migration, integration and discrimination of migrants as they can be designed for a specific purpose. In a country where the rate of immigrant population is so low and unevenly distributed (like in Hungary), data of sample surveys representative of the whole population should be handled with special care because migrants are usually under-represented. The Labour Force Survey, having a relatively large sample, is a sample survey that has the most potential in the Hungarian migration statistical practice. However, migrant population being suspicious about authorities and language difficulties of respondents with migratory background significantly decrease the number of foreign citizens covered by this sample, too.

Available data sources provide a rather fair picture on migration inflow and the most important characteristics of immigrants, although many important indicators (educational level, economic activity, occupation) essential for migration analyses are incomplete. The enumeration of outflow, however, has even more shortcomings: not only do they lack basic characteristics of emigrant population, stock data are not reliable either (various estimations have been published about the number of Hungarian citizens staying abroad).

As the fundamental data sources of the Hungarian migration statistics are administrative registers the short-term goal of the development of the statistical system is to improve the quality of administrative data. *Improving the quality of data collections* (including the revision of process and the scope of data collection, the revision of templates and questionnaires, as well as the revision of the data record), and *increasing the consistency of data* from different sources are among the primary goals. Considerable improvement should be made in order to be able to use data that are presently lost during the data processing. The *creation of a meta-database* is also included among the proposed development. This means that all migration-related data collected by various institutions would be transferred to one ‘common’ database where these data could be arranged by unique identifiers. With the help of this meta-database, migration-related data of different data sources could be harmonised and by eliminating inconsistencies wider range of data could be processed.

For the long-term improvement of migration statistics the main path is to *link migration-related administrative data sources*. For such development in data processing, a change in legal background is needed in order to eliminate limitations in the use of administrative data for statistical purposes. Integrated databases would enable statisticians to examine the migrant population more deeply than today. The most effective way of linkage would be achievable if a *unique identification number* could be used in all administrative datasets. Such a change in the legislation seems to be considered by government bodies as an action that is going against their interest. A continuous and substantive cooperation between all actors (data collectors/data owners) is necessary for achieving results in the modernisation process of the migratory data system in Hungary.

The introduction of additional information beyond citizenship and country of birth into migration-related datasets is highly recommended. The information collected should be presented in the most detailed breakdowns available to ensure comparability which is now hindered by different categorisations. Second, data collected for administrative purposes should be made more easily accessible to researchers in order to allow for exhaustive utilisation of existing information. Third, further efforts are required from the HCSO and its partners to build/create a consistent, integrated migration database by eliminating major differences in the definitions used for describing migrants and their descendants. Moreover, a better and closer co-operation between statistical institutions and data owners both on the national and international level is an important element of improving data availability and comparability on a European level. Fourth, oversampling of target populations in surveys is an important step toward improving the tools to measure migration, integration and discrimination issues. Finally, general awareness-raising activities regarding the importance of reliable data collection could improve the willingness to provide the desired information.

Available data sources having relevance or potential in migration statistics must be regularly overviewed due to the changing legal background and the changing interest around the migrant population expressed by policy makers, researchers and the pubic. Some data collections must be newly included among the data sources while others are worthy to be excluded. E.g. since free access to the labour market, work permits for EEA citizens are not needed any more. Thus the coverage of work permit register is much narrower. The registers of the NHIFA and of the NTCA might provide the missing information on labour migration.

As far as the improvement of migration statistics are concerned, the HCSO has to function as the main coordinator of quality issues. By obtaining more reliable, accurate, timely data complying with national and international standards, the HCSO can support policy makers and economists on the one hand, and researchers on the other. Reforms and improvements would make it easier to prepare internationally comparable analyses.

1. INTRODUCTION

The main aim of this country report is to provide insight into migration-related data production processes and to reveal the strengths and weaknesses of different data sources in Hungary. The analysis of migration-related data production systems focuses on those peculiarities of data sources and data production processes that lie beyond the problems of availability, reliability and comparability of migration-related data. The country report delivers essential information about the quality of data, helps in better understanding the various aspects of data availability, reliability and comparability. The report also serves as input knowledge for a South-East European (SEE) level comparative analysis and for building up a SEE level statistical database containing relevant indicators defined for the measurement of migratory processes and their effects on human capital, socio-economic development and the labour market processes (identified in the *SEEMIG Data Requirement Paper*).

The analysis on the national level consists of describing and evaluating different types of migration-related data sources: administrative (register-based) data sources, statistical data sources, census, sample surveys using international standards, and national surveys; data collection activities as well as data production processes and the institutional framework of data collection and data production. It aims to reveal all positive features of the presented data sources that promote and those inadequacies that hamper meaningful comparative analyses from a longer term developmental perspective.

The country report presents the description of current data production systems with a critical perspective and highlights the changes that have occurred since 2001, identifying the breaks in the time series due to change of methodology.

Besides the national level analysis, a case study on local level about the use and accessibility of migration-related data sources is provided by the Hungarian local level partner (Municipality of Pécs), focusing on three main topics: datasets relevant for SEEMIG; SEEMIG data availability by themes; and target audience for SEEMIG data, chief stakeholders.

Reform attempts to improve migration statistics have been made a number of times since the change of regime in 1990. The Hungarian Central Statistical Office initiated the cooperation of all organisation involved in migration-related data production already in the mid-1990s. The Interministerial Migration Committee set up in 2004 formulated recommendations to improve the system of migration statistics. Hungary's accession to the European Union further required the production of comparable data regarding international migration.[1] Over the past few years, a number of projects were implemented, funded by the European Integration Fund (EIF), with the objective to provide an overview of migratory data sources and to improve migration statistics. Analyses regarding the collection and use of data were also prepared within these projects.

Developing the system of immigration and integration statistics was a project in 2009 with the long-term goal to formulate a statistical system which provides more reliable data in terms of registration and integration of immigrants (Gárdos et al., 2009). *MIGRINFO – online information system of migratory data sources* was also a project implemented in 2009 with the aim to create a meta-database including the description of databases and researches concerning migration and the

[1] Regulation (EC) No 862/2007 of the European Parliament and of the Council establishes common rules for the collection and compilation of Community statistics on immigration to and emigration from the Member State territories (including also flows to and from third countries); and on the citizenship and country of birth of persons usually resident in the territory of the Member States.

integration of migrants (Juhász et al., 2009). Building also on the results of the previous projects, the Hungarian project *Development possibilities of migration statistics* was implemented in 2012, aiming to explore the yet unexploited potentials of Hungarian migration statistics (Tóth et al., 2012). Although the above mentioned projects have great achievements in mapping the quality of migration-related statistical data and data sources, an integrated statistical system (as a long-term goal) is still hindered by various factors. Registers and databases containing migration-related data exist separately from one another, they are not linked in any way, data collections are not harmonised, and different definitions are used by various data collectors.

Besides the above mentioned projects with national scope, Hungary has also been involved in a number of international projects aiming to provide an overview of migratory data sources. THESIM (Towards Harmonised European Statistics on International Migration) completed in 2005 and PROMINSTAT (Promoting Comparative Quantitative Research in the Field of Migration and Integration in Europe) completed in 2009 are of special interest, since they include the description of national data production systems of the participating countries, among them Hungary.

Drawing on the expertise accumulated in the above national and international projects, this country report gives a more comprehensive description of the aforementioned data sources and data production systems providing more detailed and up-to-date information about the content of migratory databases as well as the quality and usability of data in a comparative manner. Various actors (institutions) involved in data collection and data production, the legal background, definitions, changes in methodology since 2001 are also described.

For providing data on migratory processes (to decision makers, researchers and other users) administrative data sources are fundamental in Hungary at present. The Office of Immigration and Nationality (OIN) plays a crucial role among administrative data owners regarding migration, since this institution regularly collects and provides the widest range of migration data on EEA citizens, third-country nationals, illegal migrants and asylum seekers. The Hungarian Central Statistical Office (HCSO) produces statistics on foreign immigrants and emigrants (flow), and on foreign residents (stock) using these data of the *Central Immigration Register* and *Refugee Affairs Information System* of the OIN. The Central Office for Administrative and Electronic Public Services (COAEPS) is another important contributor of the Hungarian migration statistics system, keeping the *Central Population Register* on Hungarian citizens, foreigners with permanent residence and persons with refugee status in the country. The COAEPS transfers data for the HCSO on internal and international movements (outflow and inflow) of Hungarian citizens, on stock of refugees and on persons acquiring Hungarian citizenship. Beside these main organizations there are other institutions which have migration-related data sources: the database of the National Health Insurance Found Administration (NHIFA), educational databases, the register of foreign workers, the register of pension insurance, the database of National Tax and Customs Administration (NTCA). These data sources can also be used to enhance the range and quality of migration statistics.

In order to complement statistical data gained from administrative data sources, the Hungarian Statistical Office conducts further statistical data collections among various groups of migrants (*Statistical survey on people acquiring Hungarian citizenship* and *Statistical survey on people with settlement document)*. Furthermore, other statistical data sources in which foreign or foreign-born population can be identified (like the demographic database, educational statistical databases), and sample surveys (the *Labour Force Survey* and some national surveys) are also presented in the country report. The population census is also described from a migration-related aspect, since it is also an important migratory data source covering the whole population and containing detailed, information on various migrant groups, with variables comparable to those of the total population.

The country report can primarily be useful for researchers, decision-makers and other experts involved in the practical aspects of migratory data use, as well as national/regional/local authorities, institutions in charge of data production, international organisations and statistical bodies.

One of the objectives of the country report is to provide recommendations on how to improve data collection, and how to tackle the problems of availability, reliability and comparability of migration-related data. Therefore, conclusions are drawn and recommendations for data enhancement and usability are formulated at the end of the report.

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2. DATA SOURCES AND RESPONSIBLE AUTHORITIES

2.1. Administrative (register-based) data sources

2.1.1. Central Immigration Register, Office of Immigration and Nationality (OIN)

The main administrative data source on immigration to Hungary is the Central Immigration Register. The responsible authority and the data collector is the same institution: OIN, while the HCSO is the main actor responsible for creating official statistics from these data.

The aim of the data collection is to register every foreigner entering Hungary for more than 3 months apart from a few cases (e.g. diplomats and their family members) as well as to maintain the registry of the different permits and keep them updated. Data collection of the Immigration Office is primarily administrative, statistical aspects are considered as secondary purpose.

The scope of the collected data and their accessibility for statistical use is defined by *Act I of 2007* on the Entry and Residence of Persons with the Right of Free Movement and Residence and *Act II of 2007* on the Entry and Stay of Third-Country Nationals. *Act CXII of 2011* on Informational Self-determination and Freedom of Information regulates the handling of collected data from a data-protection point of view.

Changes that have occurred since 2001:
From 1 January 2002 the distinction between permanent and temporary residence permits have come to an end. From that date the authority may issue a permit in line with the purpose of the residence. Permanent residence permit was introduced instead of the previous immigration permit. Foreign citizens can apply for the permanent residence permit after three years of residence.

From 1 May 2004 – after Hungary joined the European Union – citizens of the European Economic Area are entitled to EEA residence permit.
From 1 July 2007 – related to the legal harmonization with the EU – two new laws on the administration of aliens entered into force. According to these:

- citizens of EEA are only obliged to register and they get a certification on that. Those third-country citizens who are family members of a Hungarian or an EEA citizen also have the right of free movement and residence, and they get a residence card. (*Act I of 2007*)
- third-country citizens are still entitled to residence permit. (*Act II of 2007*)
- EEA citizens and their third-country family members get permanent residence card (*Act I of 2007*), while third-country citizens still get different types of permanent residence permit (*Act II of 2007*).

The OIN and the current register was established in 2000, before that another register (’old-sub register’ closed in 2001) was maintained. Changes, however, had an influence on the comparability of data. Retrospective data are not comparable, since in 1995 the statistical data processing method was changed. The data recording method of OIN related to the registration of foreigners changed on 1 January 2000. A new register was established for EEA Nationals from 1 May 2004. The HCSO only received this data in November 2005, consequently the data for 2004 are incomplete regarding EEA citizens. Due to Romania and Bulgaria joining the European Union in 2007 and the new Hungarian

legal regulation coming into force on 1st July 2007, the two registers contain certain overlaps concerning 2008.

The range of data collected by the OIN is rather wide. The Central Immigration Register contains foreign citizens who have the permission to reside in Hungary for more than 3 months (except those with visa for residing more than 3 months, refugees, subsidiary protected persons and persons with tolerated stay). Foreigners are defined according to their legal status/permit in the register (see *Annex 1*). Data are stored in *several sub-registers* (according to the types defined by the legal background of registration):

EEA sub-register: (launched on 1 May 2004), contains data on EEA citizens as well as third-country relatives of Hungarian or EEA citizens. This file includes EEA persons with registration certificate, EEA residence permit, permanent residence card, residence card for third country family members.

Non-EEA sub-register: (launched on 15 February 2002) contains data on third-country nationals; includes applications and granted residence permits, certificates for temporary residence, interim, national and EU permanent residence permits.

The *old sub-register*: contains foreign nationals with immigrant and settlement permits. The register was closed at the end 2001. Since then it only contains the changes: permits can be still invalidated for some reasons (deaths, naturalisation).

There are several conditions to be registered (see in *Annex 1*). Ethnic nationals can apply for "*national permanent residence permit*", which may be issued to a third-country national holding a long-term visa, residence permit or an interim permanent residence permit for establishing residence in Hungary, if the applicant either was, at one time, formerly a Hungarian citizen and the citizenship was terminated, or one of his/her predecessors of any generations distance was proved to be a Hungarian citizen.

Since 2001 foreigners whose permission's validity has been expired if they have not applied for a new one or whose permission was invalidated by authority due to withdrawal are considered deregistered.

Data collected and included in the three databases are slightly different.

The *EEA data file* contains the following variables: personal ID, name, sex, mother's name, marital status, country and settlement of birth, date of birth, Hungarian address, citizenship, purpose of residence, legal basis of permit, type of document, state of document, legal status, date of record, information on appeal, reason for the annulment of permission for residence, state of legal process, date of permit, validity of permit, date and reason for withdrawal, type of insurance, degree of relatedness of family member, first permission.

The *non-EEA data file* contains the following variables: ID, name, name at birth, mother's name, sex, country and settlement of birth, date of birth, marital status, educational attainment, occupation, address abroad, Hungarian address, case ID, purpose of residence, date of entry, visa and travel document ID and expiry, data on previous permit, reason for withdrawal, data of hosting family member.

The *old sub-register* data file contains the following variables: ID, sex, name, country and settlement of birth, date of birth, name at birth, mother's name, citizenship, address abroad, address in Hungary, occupation, marital status, educational attainment, data of entry, type of visa, date of registry, expiry of permit.

The reference time is the *date of entry* (for flow), *1 January of the given year* (for stock) respectively. However, data that are registered only at the time of the entry (e.g. education, occupation) cannot be refreshed. Flow data are available since 1980, stock data since 1995, but retrospective data are not comparable due to the changes in the processing method.

The data owner, OIN, also produces statistics from their own data and these are available on the Office's own homepage: *http://www.bmbah.hu/index.html*

The *HCSO receives data* since 1993. Since 2009 there is an agreement between the two institutions which was renewed in 2011. In 2010 on the request of the HCSO the "previous country" of immigrants and the "next country" of emigrants were included among collected data. The Statistical Office obtains data from OIN twice a year in 3 separate data files. Using data received from the OIN the HCSO produces statistics on foreign immigrants and emigrants (flow), and on foreign residents (stock).

1. *immigrant flow data of foreign citizens*: those who obtained a permit during the year and did not have such document previously and *intended to stay in Hungary for at least 12 months*[2] (thus circular migrants are excluded). Data on basic demographic variables are sufficient, nevertheless information on the occupation, education, economic activity of EEA citizens are not available.
2. *emigrant flow data of foreign citizens*: those who deregistered and left the country for at least 12 months or who did not renew their expired permit
3. *immigrant stock data*: those who has a valid permit on 1st of January.

The transferred data of the OIN are provided in three different data files as described above and the different structure of the data files may cause inconsistencies, since the compilation of the data files are prepared partly by external stakeholders, making data processing more difficult. Due to the constantly changing legal environment, data files may change as well and this only turns out during processing data. A possible solution would be the introduction of a meta-description of data according to a standard form on the transferred data files containing the number of variables and records, which could make the scope and disaggregation of the received data more transparent. The formal agreement between the HCSO and the OIN renewed in 2011 does not cover such transfer report on metadata.

Due to the administrative purpose of data collection – though fully complying with legal requirements –, important data and variables (from a statistical point of view) are lost if we compare the content of the data collections and the transferred data files: e.g. information on education, qualification or last occupation of migrants are lost as well as data on income, economic activity and occupation. The main reason for these problems is that the OIN is not interested in these data; they can make decisions without them.

Data entry is a crucial step, in some cases essential information like citizenship is missing. Besides the regular training of the staff dealing with data entry, another solution to this problem would be the use of closed questions. This requires the design of new questionnaires, which demands additional resources; nevertheless data entry might become simpler and more reliable. A crucial modification should be done in the data entry programme. At present only those data are recorded which are required by legislation, the scope of these data should be widened with the information that are important from the aspect of migration statistics. One – bureaucratic – solution is the modification of legal regulations; another – simpler – one would be the change of data entry programme by the OIN on a voluntary basis.

Another important problem is that *the connection of the databases in different sub-registers* of the OIN is *not possible* yet. This means that the change in the legal status of migrants is not traceable, even though this could be an important indicator of the integration of immigrants. The difference between national and EU regulation also weakens data quality. In the 862/2007 regulation 12 months minimum residence is specified for migrants, while in Hungary migrants can apply for

[2] The intentions are not asked, only supposed on the basis of length of required permit.

residence permit after 3 months. However, surveys carried out in recent years show that almost each of those persons who apply for a permit resides in Hungary for more than a year.

Finally the stock of foreign emigrants is quite underestimated because it is based on the number of expired and not renewed permits, while several permits – like registration certificate or immigration permit – has no expiry. Another problem is the lack of data on the country of next usual residence in cases where the emigrants fail to report their emigration (most emigrants act like this).

The actual time of arriving at Hungary is originally unknown in the registers in numerous cases. In these cases the time of entry is estimated by considering the first time of registration. There is a fall of more than forty thousand in foreigner stock between 2000 and 2001, which only has administrative reasons. Since 1 January 2001 people with invalid residence document do not belong to foreign citizens residing in the country any more.

Concerning education and occupation the groups of classifications currently used are quite broad concealing important national peculiarities. The introduction of detailed systems e.g. international classifications like ISCED main levels, ISCO major groups could solve this problem. Providing certifications for education levels might enhance reliability, however, it might require additional work and resources- during the data collection process.

2.1.2. Refugee Affairs Information System, Office of Immigration and Nationality (OIN)

Data on refugees are stored in a separate Refugee Affairs Information System. The data collection is carried out by the OIN, data are transferred to the population register and the statistical office. The scope of the collected data covers the applications and the decisions on refugee and subsidiary protected status or temporary protection (persons authorized to stay).

The legal background is *Act LXXX of 2007* on Asylum, which defines the refugee, the subsidiary protected status as well as temporary protection. The following definitions refer to the three statuses:

1, Hungary shall recognise as a *refugee* a foreigner who, due to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside of the country of his/her origin or place of usual residence and is unable or, due to such fear, unwilling to avail himself/herself of the protection of that country. Refugees obtain a very similar status to that of Hungarian citizens, they can hold a passport, too, if necessary. Refugees have the same rights to Hungarian citizens except for the right to participate in parliamentary elections. After three years of consecutive residence they can apply for citizenship if they meet the requirements.

2, Hungary shall grant *subsidiary protection* to a foreigner who does not satisfy the criteria of recognition as a refugee (practically the country of origin is on a list of secure countries) but there is a risk that in the event of his/her return to his/her country of origin, he/she would be exposed to serious harm and is unable or, owing to fear of such risk, unwilling to avail himself/herself of the protection of his/her country of origin. Their legal status is very similar to refugees thus to Hungarian citizens.

3, Those foreigners who can not be sent back to their country of origin due to well-founded fear of being persecuted, tortured, humiliated or sentenced to death, but not entitled to refugee or subsidiary protected status can obtain *temporary protection* (i.e. persons authorized to stay). Temporary protection can be acquired for one year (it can be lengthened) and entails the authorization for work, but only with previously obtained work permit. Hungarian passports cannot be issued for temporary protected persons (even if they have no travel documents at all).

According to the law, the following variables are stored by the OIN on asylum-seekers: name, date and place of birth, sex, mother's name, current and previous citizenship(s) or statuses.

Data on the applications of asylum-seekers are transferred from the refugee register of the OIN to the HCSO quarterly since 2000. These are tables with fix disaggregation with the variables of citizenship, entry into Hungary (legal/illegal), the result of application process (granted any status/rejected), and male-female-child disaggregation. The latter one will be changed from 2013 in order to meet Eurostat requirements.

Data of asylum seekers who are granted any kind of status are transferred to the population register. HCSO obtains data files register on the refugees and subsidiary protected persons who obtained status from the population. These data files are available from 2001. Stock data are prepared from these data files.

Information on refugees and subsidiary protected persons transferred to the HCSO are the following ones: date of birth, sex, marital status, citizenship, place of residence, country of birth (since 2012). If the country of origin of the asylum-seeker is on the EU or Hungarian list of secure countries, the applicant has to prove that concerning his/her case the country does not meet the requirements of secure countries.

The formal agreement between the OIN and the HCSO does not cover the field of asylum-statistics. According to the National Statistical Data-collection Programme, the HCSO receives data from the OIN only on flow data of refugees and only stock data of refugees from the Population Register (see the next chapter). Data on refugees and subsidiary protected persons are internationally comparable and timely. However, accuracy of data related to illegal migrants is quite poor, data only available on those illegal migrants who were taken into custody.

2.1.3. Central Population Register, Central Office for Administrative and Electronic Public Services (COAEPS)

The population register is maintained by the COAEPS and contains the personal data and address of Hungarian citizens as well as immigrants with immigration or settlement permit, refugees, EEA citizens with residence permit, citizens with the right of free movement obtaining registration certificate or permanent residence card and persons granted international protection.

Act LXVI of 1992 on the registration of personal data and addresses is the related regulation in force. The register contains basic personal and address data which are necessary for persons living in Hungary to be identified by state organizations.

Concerning the international migration of Hungarian citizens the statistical office obtains data since 1993. Regular data transmission was established between the COAEPS and the HCSO since 2001, which is executed twice a year on CD. Data are sent in a way that persons are identifiable.

From these data files the HCSO produces flow data of emigrating and returning Hungarian citizens for the year before the year of publishing, data of persons who obtained citizenship, as well as of persons with refugee status in the following breakdown:

- number of foreigners with Hungarian address obtaining Hungarian citizenship by sex, age-group and marital status,

- number of Hungarian citizens born abroad by sex, age-group and country of birth,

- number of returning Hungarian citizens (as well as those who returned from temporary residence abroad) by sex and age-group,

- number of Hungarian citizens leaving Hungary permanently or temporarily by sex and age-group.

Persons with permanent address in Hungary are included in the population register. In case of foreigners:

- those residing in Hungary with immigration or settlement permit as well as refugees,
- EEA foreigners residing in Hungary with EEA residence permit since 1 May 2004,
- since 1 July 2007 foreigners with the right of free movement and residence if they spent at least 3 months in Hungary and obtained registration certificate or residence card,
- since 2008 foreigners with subsidiary protection status.

In case of Hungarian citizens;

- Hungarian (national) population,
- Hungarian citizens leaving permanently or temporarily,
- Hungarian citizens living abroad.

However, the population register does not cover third-country citizens residing in Hungary with residence permit.

The simplified naturalisation process was established mainly for those foreign citizens who live abroad but could be considered Hungarian nationals. *Act XLIV of 2010* modified *Act LV of 1993* on Hungarian citizenship introduced simplified naturalisation and made the acquisition of citizenship possible for those who could prove Hungarian predecessors of any generations distance, even without address in Hungary. Thus the criteria of living in Hungary for a certain period of time before obtaining Hungarian citizenship were ceased. According to the new legal regulation a person might move to Hungary at the moment of obtaining Hungarian citizenship, thus no other permit/card is necessary before naturalisation (so the person does not appear in any immigration register).

In case of leaving Hungary for more than 3 months, migration must be reported. Persons with expired permits are also deregistered (if there is expiration; see the chapter on the Office of Immigration and Nationality). Since March 2013 the liability of reporting the temporary (more than 3 months but less than 12 months) residence abroad was ceased (in case of nationals and foreigners too). Leaving the country permanently still must be reported, but it can be performed at consulates or via the internet as well. Those leaving Hungary permanently are transferred to the data file of Hungarian citizens living abroad.

Data files on Hungarian and foreign citizens participating in international migration contain demographic variables (sex, age, marital status, citizenship, country of birth, address) as well as other information concerning personal and address data (e.g. number of ID card).

Data on the international migration of Hungarian citizens are available since 1993 and the stock data for refugees are at our disposal since 2001. The data owner produces statistics from these data which are published on its own website:

http://nyilvantarto.hu/letoltes/kiadvanyok_tablazatok2010.xls
http://nyilvantarto.hu/letoltes/statisztikak/szemelyi_2012.xls

The HCSO has not been involved in the design of the data collection or modification. There is no cooperation agreement with the COAEPS, although data transmission is included in the National Statistical Data Collection Programme since 2012.

Currently only underestimated data are available on the emigration and return of Hungarian citizens. The coverage is quite poor, due to low rate of registrations, however data on persons who reported their movement's data are accurate and timely. Regarding the immigration of Hungarian citizens the high number of unaccompanied immigrants between 0-4 years of age seems to be false. These records are presumably not actual migration movements but Hungarian citizens living abroad

arrange the citizenship of their children this way. The poor quality of migration data obviously effects the calculation of population data as well.

Third country nationals with residence permit should also be included in the register. At the moment, data on previous citizenship of naturalised persons are not transferred (HCSO estimates this variable from the country of birth), although this data is available. Data on the time of change of the title of registration would also be necessary, since persons naturalised abroad and moving to Hungary could be identified this way.

2.1.4. Database of the National Health Insurance Found Administration (NHIFA)

The social insurance register of the NHIFA includes foreign citizens as part of the full database containing the country's population. One part of this register contains the Social Insurance Identifier (TAJ) and the accompanying personal data, while the other part contains Data on Legal relations of Registered Persons (BSZJ). Foreigners residing in the country are included only if they have gained insurance entitlement in some way and (themselves or their employer) apply to be included in the register. The termination of entitlement does not mean that the foreigner has left the country.

From the point of view of national insurance, the NHIFA considers all people **domestic** who have a registered place of residence (address) in the territory of Hungary. Thus, besides Hungarian citizens, domestic population includes people with the legal status of settled immigrants, persons who have been granted refugee status and persons who live in Hungary with the right of free movement for a period exceeding three months, as well as stateless persons. Individuals who do not meet the above criteria are considered **foreigners** by the NHIFA. Thus not all foreign citizens are considered foreigners from a social insurance point of view. At the same time, since the register also includes data on *citizenship* and *place of birth*, it is possible to select persons who are migrants according to both criteria.

According to international regulations and agreements, if a native or foreigner starts to work and pay social insurance abroad he/she must notify the fund of the country of previous residence (in this case Hungary) in order to avoid double registration in the health insurance system.[3] Thus data on Hungarian and foreign citizens who had moved abroad and on those who returned to Hungary appear in the NHIFA database. Persons who stop paying social insurance (or their employee) are marked as such, but not deleted, and thus remain in the database. Based on the above, conclusions may be drawn regarding the number of emigrants, too, but these figures are also underestimated, as people leaving the country do not always deregister from the NHIFA.

§40 of *Act LXXX of 1997* appoints the NHIFA as the data handler of the social insurance register. This law determines the range of data that may be handled by or accessed through these registers. Accordingly, the register of the NHIFA includes the following data: personal data (name, year of birth, mother's name, date and place of birth); sex, marital status, citizenship; place of residence; occupation, place of work, position, activity; health care data which are required to determine social benefits, data on income; Social Insurance Identifier (TAJ).

This list, however, does not mean that the NHIFA's register actually contains all of these data for all the people concerned. The law only gives authorisation and provides the necessary legal framework for the register system, uploading the data is optional, depending on whether the form of welfare support in question requires any particular data. For instance, since 1999 social contribution has been collected by the tax authority and not by the NHIFA, this way they do not have data on income.

The previous system regarding TAJ Codes had been in operation since 1995. Modernisation of the system began in early 2000, as part of which the NHIFA aimed to establish a unified system based on

[3] This regulation only refers countries specified by bilateral agreements and the EC regulation.

a central database which would meet all data protection and other legal requirements. The new TAJ Code system has been in operation since 15 April 2002.

The Hungarian Central Statistical Office (HCSO) has been receiving data provided by the NHIFA since 2003, based on No 2197 of the National Statistical Data Collection Program. Data are provided for statistical purposes in forms which do not allow personal identification, in completed excel sheets and determined data content. These include the following main variables: sex, age, marital status, citizenship, country of birth, place of residence (county, region), legal status (entitlement to welfare support). Since the HCSO is unable to connect the data with other data files (OIN, COAEPS), they have not been published up to the present. Since 2014, however, the HCSO will be granted full data files from the NHIFA with record level data (which allows for their linkage to other data sources). This is expected to be used to produce international migration statistics of Hungarian people. The Office was not involved in the design of the data collection.

The NHIFA has published these data since 2009 in a Statistical Yearbook available on its homepage: *http://www.oep.hu/portal/page?_pageid=34,44234443&_dad=portal&_schema=PORTAL*. As regards foreigners, however, the yearbook published by the NHIFA only includes the number of persons entitled to health care services by age groups. There is no other breakdown about this group of foreigners (e.g. by sex, citizenship, country of birth) or territorial distribution by regions or counties, although the data collected would make this possible.

An advantage of this data source is that the age distribution of returned Hungarian citizens seems to be much more realistic than the officially registered data by the COAEPS (e.g. the number of unaccompanied minors between 0–4 years of age is much lower). In general, data are less underestimated, although the figures that may be produced from this source are still lower than what we would consider to be realistic.

The health insurance database records data both by citizenship and country of birth. However, only one option can be chosen for the citizenship variable and therefore persons with dual citizenship are recorded as Hungarians, thus they are lost from the aspect of analysis on migration.

Nevertheless, the NHIFA data could be used to improve the quality of migration statistics, since information on migrants obtaining maternity leave or on the occupation of migrants with a registered workplace are also available. Furthermore, the NHIFA data source also contains detailed health care data with regard to foreigners (based on the data sheets of health service providers and health insurance payment centres).

At the same time, being linked to several data systems (including the data systems of COAEPS, CANPI, OH, NES) is a great advantage of the NHIFA's register (Tajti, 2012). Connecting the data included in these data sources, which could also mean interconnecting them through the NHIFA system, could open far greater possibilities for migration analyses than ever before.

2.1.5. Education Registers, Education Authority

The Education Authority as a central government body is responsible for the preparation and execution of entry and maturity exams in public education. In higher education it implements entry examination. Accreditation of qualifications, recognition of certificates and degrees, school reports and language exams also belong to its duties. The Education Authority is responsible for maintaining the Public Education Information System and the Higher Education Information System. However, education statistics in the scope of the registers are separately collected by the responsible ministry in the aggregate reports of schools.

According to the acts on public education (*Act CXC of 2011*) and on higher education (*Act CCIV of 2011*) the two information systems are kept for recording data of funding authorities, education

institutions, employees, children, pupils, students, teachers and masters needed for national economic planning. The register system was established in 2005. The education institutions and their funding authorities are responsible for providing data to the registers. Personal data are reported with relation to educational events. Educational identification numbers are attached to all employees as well as pupils and students participating in education and pupils and students keep it as long as they are in the Hungarian education system. Registered data of employees can be stored for five years following the secession unless repeated employment during this time, while data of pupils can be stored for thirty years after the notification of termination of pupil status, except for cases when the person is notified to the register again during this time. Students'data can be stored for eighty years.

The personal subregister of the public education includes the following data for employees: name, place and date of birth, ID number, place of residence, place of stay, education, professional qualification, details of the employer. Data collected on pupils: name, place and date of birth, identification number, place of residence, place of stay, citizenship, ID number of the student's card, data of the educational institution attended. Information related to migration are citizenship, country of birth, country of permanent residence. Citizenship is not included in the employees' subregister. For foreign students information on the grounds of stay in Hungary is also included.

The personal subregister of higher education include the following data for employees: name, place and date of birth, place of residence, place of stay, citizenship, ID number, education, professional qualification, data on employment status, details of the employer. Data on students: name, place and date of birth, identification number, citizenship, ID number of the student's card, data of the educational institution attended, details on the training.

Due to technical problmes data of this register are not used for statistical purposes yet . Instead, educational institutions provide aggregated data to the responsible ministry.

The HCSO has not been involved in the development of the register. Since the HCSO does not use the registered data, there is no information on data quality.

2.1.6. Register of foreign workers, National Employment Service (NES)

Until the country's EU accession, registers based on work permits was the main source of statistics on labour migration in Hungary. Since free movement of labour force has become possible, these registers cover a far smaller range of people. At present the register includes *individual work permits* issued to third-country nationals, as well as data on *notifications* of foreign employees with the right of free movement and residence, as well as on a special group of people from third countries.[4] It is also possible to employ persons from third countries by applying for an *EU Blue Card*. This permit enables highly qualified professionals to reside in the country and to fill in posts which require a high level of expertise.

Work permits issued to foreign nationals, as well as foreign employees with the right of free movement and residence are registered in the records of the National Employment Service (NES). Data are registered, both as regards permits and notifications, at the county-level employment centres and are then stored at the National Labour Office (NLO). The procedure for acquiring an EU Blue Card is handled by the Office of Immigration and Nationality (OIN), including the issue of the permit and keeping the register. Certain data of the applications (necessary for permitting employment) are sent by the OIN to the National Labour Office. The NLO collects data of the EU Blue Card from data sent by the OIN and on the basis of the employment application submitted to NES.

[4] This means people who are in a special legal position and thus do not require a work permit and are only obliged to send notification of their employment.

Data collection takes place in line with the legal regulations. Based on *Act IV of 1991* on Job Assistance and Unemployment Benefits and *Government Decree No 355/2007* third-country nationals can only be employed in Hungary (apart from certain exceptions defined in the legal regulations) based on a work permit issued by the state employment organisation. Work permits are not required for the employment of persons recognised as refugees, subsidiary protected persons and persons granted temporary protection, as well as for third-country nationals with immigrant or settlement permit. In their case, just as in the case of persons with the right of free movement and residence, the only obligation is that of notification. There are no special rules for ethnic nationals.

Important changes as of 2001 are the following ones:

- the range of individual work permits was extended in 2004 to *agricultural seasonal employment* and in 2010 to *family unification* categories;

- as of 1 May 2004, as a result of Hungary's accession to the EU the country no longer requires permits for citizens of countries which acceded at the same time, nor for citizens of those of the EU15 countries which opened their labour market to Hungarians. The permits were replaced by an obligation of notification;

- as of 1 January 2007, Hungary has partially acknowledged free employment of citizens of two new EU members;

- as of 1 January 2008, work permits are no longer required in the case of other EU member states;

- as of 1 January 2009, employment in Hungary is entirely free of permission for citizens of the EEA and their family members[5], they only have an obligation of notification;

- the EU Blue Card has been available to applicants since 1 August 2011.

The administrative register of NES contains data mainly about work permits and notifications of employment, while the number of people applying for EU Blue Cards is not significant, to date.[6] While the registration of work permits is relatively accurate and reflects the real number of employees obliged to hold permits, data about the group obliged to make a notification of employment are inaccurate. There is usually a notification about the beginning of employment, but notification about its termination is usually neglected. As regards the employment of foreign citizens with the right of free movement and residence, (i.e. those with a valid notification), only estimates can be made, due to the inaccuracy of notifications (Székács, 2013). Therefore the register of foreign employees, while it remains an important source of data for the analyses of labour migration, is not suited to offer a full picture about the presence of foreign citizens in the Hungarian labour market.

Individual work permits are issued for a maximum of two years, but it is possible to apply prolongation. According to a regulation introduced in 2010, employers are obliged to report within five days to the relevant employment centre if the employment recorded in the work permit has terminated. In this case the permit is cancelled from the list of valid work permits. As regards simple notifications, the duration of the employment of a foreigner does not need to be registered; only the definite or indefinite term of the employment has to be declared. The law does, however, stipulate that even in these cases the employment centre must be notified of the termination of employment. (Compliance with this rule cannot, however, be controlled.)

The range of data that may be collected is also regulated by law, as is the fact that these data can only be delivered in forms that do not allow for identifying the person in question. As regards

[5] Persons considered as family members in the case of the EEA are the citizen's wife, dependent persons (or descendants aged under 21) supported by the EEA citizen or his/her spouse, and their dependent parents.

[6] Since 2009 10–11,000 work permits have been issued in Hungary every year (most of them to citizens of non-European countries), while the number of foreign employees that employers have sent notification about dropped from over 18,000 in 2009 to under 8,000 by 2012. As regards EU Blue Cards, only one card was issued in 2012 (and two were valid at the end of 2012) (Székács, 2013).

individual work permits, there are two different types of data accessible: data about *permits issued during the given period* and those *valid at the given time*. The reference duration is to be calculated from the date noted in the application. However, if certain conditions fail to apply, employment may start considerably later than the date noted in the application.

The range of data collected and the range of accessible data are not, however, quite identical. Accessible data on issued or valid *work permits* are the following: citizenship, area (county and region), sector of the national economy; main occupational group, age group (under 19; 20-24; 25-34; 35-44; 45-54; 55 and older); educational attainment (less than 8 years of primary school; 8 years of primary school; vocational school; technical school; comprehensive, grammar school; polytechnic, college, university). As regards *notifications* of foreign employees with the right of free movement and residence, the same data may be found in the records with the difference that these are reported in an aggregated form by employers. Furthermore, we only have data about the foreign citizens announced in notifications in a particular period of time, but not about the number of notifications valid at the given point in time.

The accessible data listed do not represent the full range of data recorded. As regards permits, the form also includes the following information (which is recorded afterwards): sex, name of settlement, part time or full time employment; weekly working hours; basic monthly wage; term of employment definite or indefinite; qualification; type of business; manner of termination of employment. In the case of notifications, further data recorded are: name of settlement, legal status of person declared; legal form of employment; type of business.

Data about work permits have been accessible since 1996 (although the oldest set of data are incomplete), the data about employee notifications since 1 May 2004 (the date when the obligation of notification was introduced). Accessible data are used by the National Labour Office partly in its activity as an authority and partly for producing analyses and providing data service. The NLO produces quarterly and annual analyses and statistics which are published on the website of the Office (*www.munka.hu*). Quarterly analyses are published before the 30th day of the month following the quarter, while annual analyses appear before 30 January 30 after the year in question. Public access to data has changed a great deal – the quality and content of the data has been improved. Data processed for statistical purposes are accessible (in a table form) to the general public, but the database itself is not public and individual records are not accessible. Access to data which require special selection are provided on written request by the National Labour Office.

Data from the register of foreign citizens working in Hungary with a work permit was transmitted to the HCSO from 1998 till 2010. The Statistical Office received the data twice a year electronically in an (excel sheet) table which did not enable personal identification. Due to the fact that since 2011 the register only contains data about a smaller group of employees, data are no longer required by the Statistical Office.

The National Labour Office also has the obligation to regularly provide data to the OECD. Since 2000 the NLO has provided data about the issued individual work permits once a year.[7] Data must include the number of individual work permits issued (the number of seasonal agricultural permits are shown separately), broken down by citizenship in the given year. This must also be provided by sex, but the present search system does not make this accessible. The OECD does not require data about notifications of the employment of foreigners who have the right of free movement and residence.

The present data base query system of NLO limits the kind of data that the user may access in the system. Any of the data recorded are accessible but while certain pre-determined cross-tables are easy to access, if the user requires different types of data, a special request has to be made and the

[7] Each year the OECD requests data from the Ministry of the National Economy (and, previously, its legal predecessors), and the request is forwarded by officials of the Ministry to the National Labour Office.

datasheet will be compiled by the technical staff of the database owner (only upon request). This is a shortcoming of the database query system.

Moreover, the system does not enable access to certain basic data included in the application forms, such as the applicant's marital status, qualification(s), weekly working hours, expected basic wage and the previous employment or activity in Hungary. Although these data are stored in the system, they are not accessible through the data access surface. All in all, this means that a considerable portion of the information content provided within the current legal framework does not get to be utilised.

There are a number of other limitations that make it difficult to use these data. Comparison across time is hindered, among other factors, by changes in legislation.[8] Moreover, the statistics available through NES's website offer data where individual and seasonal work permits are in the same category with regard to their number or their various characteristics (because both are handled as individual permits), even though their term of validity is different. While individual work permits allow employment up to twelve months, seasonal work permits allow for a maximum of 150 days of employment within 12 months.

The information contained in the applications for different types of work permits is very similar but not identical. While the applicant's nationality, sex, age, place of birth and educational attainment are included in all forms, their *marital status, mother tongue, competence in Hungarian or in other languages* only appear in certain types of permits. As regards educational attainment, however, the application form for the permit does not include pre-defined categories, and so the true content of the data provided is inaccurate, as educational systems differ from country to country. The applications for work permits also include data about previous employment in Hungary (while notifications of foreign employees with the right of free movement and residence do not), but there are no data about the applicant's labour market status/occupation in the country of origin, even though from the point of view of migration the labour market career of these migrants is of interest. Although from an administrative point of view this kind of information has no significance, if the data source is expected to be improved with regard to migration, it is recommended to incorporate these data.

The main limitation of this data source is that, as we mentioned previously, it does not provide an accurate picture about foreign employees who are under the obligation of notification (moreover, data are only in an aggregated form).[9] Since the omission of notification about the start or termination of employment entails no practical consequences, it is quite hard to determine to what extent this group is actually represented. Thus, we can only gain information about a part of the foreign employees actually present in the Hungarian labour market.

2.1.7. Register of pension insurance, Central Administration of National Pension Insurance (CANPI)

The Central Administration of National Pension Insurance is a national office controlled by the Minister of Human Resources and authorized by the government to manage the pension fund and the central pension insurance. The CANPI manages several sub-registers. Social security charges and service duration are recorded in the KELEN, the determination of the new pensions in the NYUGDMEG and the payment of pensions in the NYUFUR database. The primary purpose of pension records is to collect data and information that are necessary by legal regulations to determine the entitlement of persons to be included in the pension scheme.

[8] At the same time, changes of the nomenclature (FEOR, TEAOR etc.) also make comparability more difficult.
[9] This kind of registration shows the same problem in other EU countries as well, and is thus not specific to Hungary.

Although the scope and detail of recorded data and the frequency of data provision depending on the legislation in force were slightly different in the consecutive periods, data necessary for determining pension benefits were always included. The data collection is regulated by *Act LXXX of 1997* on the Eligibility for Social Security Benefits and Private Pensions and the Funding for These Services in case of secured people and by *Act LXXXI of 1997* on Social Security Pension Benefits in case of those who are provided with pension in their own right or as a survivor.

The register includes the following personal identification data:

- Name
- Name at birth
- Citizenship (recorded only since 2004)
- Place and date of birth,
- Mother's name,
- Place of permanent residence (up to 2004)
- Social Insurance Identifier (TAJ).

None of the above mentioned regulations include citizenship as criteria in terms of insurance obligation and entitlement for pension benefits. Out of those not having pension insurance Hungarian citizens, immigrants, people with residence permit, with refugee status, with the right to free movement and residence and stateless persons may start a procedure for the entitlement to pension benefits. Consequently, citizenship only has minor importance with regard to the administration of pension issues. Due to the fact that citizenship has only been available in the pension register since 2004, there is no information about foreign citizens receiving pension from Hungary before that time. Moreover, if the pension is transferred to a bank account, which is mostly the case, information on the place of residence may be missing and the change is not traceable. The scarce information on citizenship and uncertainty about the county of residence led to a weak estimation on the stock of immigrants and emigrants having acquired Hungarian pension benefit.

Content of the pension sub-registers:

Reference date to be used for determining the amount of the pension (KELEN): Social Insurance Identifier (TAJ), name, date of birth, marital status, citizenship, permanent (temporary) place of residence, occupation, employment, earnings, income, paid-in and deduced contributions, service duration.

Register of determined pensions (NYUGDMEG): TAJ, name, date of birth, marital status, citizenship, permanent (temporary) place of residence, occupation, employment, earnings, degree of disability and impairment, professional working capacity, the possibility of rehabilitation, health status (if the pension will be determined with regard to the health status), data on the cohabitant and dependent relatives (if the pension will be determined with regard to cohabitation or relationship).

Register of pensioners (NYUFUR): TAJ, name, date of birth, marital status, citizenship, permanent (temporary) place of residence, occupation, employment, earnings, type and amount of pension, annuities and pension-type benefits, service duration, year of the retirement.

Pension-related data of different content and quality, recorded in different registries have been available since 1945. A significant change was introduced on 1 January 1997 integrating the several forms that had been used for collecting basic pension-related data. The Pension and Health Insurance Individual Registration Form was introduced including all data necessary for the determination of pension benefits. From that date, employers are obliged to provide annual information on continuous, 'active' legal employment statuses. From 1^{s} January 1998 this form was replaced by a new one including data only for the pension insurance.

The CANPI regularly produces statistics from the register data and publishes them on its website: *http://www.onyf.hu/en/?module=news&fname=onyf_en_left_kozlemenyek&root=ONYF*.

According to legal regulations data may be used for statistical purposes and may be transmitted for statistical purposes in a personally unidentifiable form. However, there would be little use of pension data with these limitations, that is why the HCSO has not required them yet.

The HCSO has not initiated a cooperation with the CANPI in the designing the pension related data collections yet. However, there is continuous contact between the experts of the two institutions looking for the possibilities of statistical use.

Although pension data are certainly accurate since they determine financial processes and there are many actors who are interested in accurate data, because of the above mentioned reasons, pension data with the present conditions can hardly contribute to migration statistics. Nevertheless, data could be appropriate as a source of supplement information to the currently used data in international migration statistics if they were accessible in a personally identifiable form that would make them possible to link them to other data sources. Since the status of migrants is not recorded in the register, migrant categories cannot be retrieved and this hinders their comparison with several other migration indicators. The above described data collection system and its objective probably guarantees that data are available in due time but we have no real experiences in this issue.

The most important condition for the proper use of pension data for migration statistics is the accessibility of data on personal level in order to link data with other migration related data. It would be advisable to have access to all the datasheets used by the pension insurance to be able to overview all collected but electronically not recorded information that can be significant for migration analysis.

2.1.8. Database of National Tax and Customs Administration (NTCA)

The data collector of taxation data is the National Tax and Customs Administration (NTCA), controlled by the Ministry of Economy. The NTCA collects data on income and revenue from single persons as well as companies. Data on VAT, purchases, real estates are also available here.

Act CXXII of 2010 on the National Tax and Customs Administration serves as a legal background for the NTCA. Due to a recent restructuring, the National Customs Agency is also a part of the Administration since 2010. *Act CXII of 2003* on the Rules of Taxation serves as a legal background for the use of taxation data for statistical purposes.

The tax register has data on persons with registered address or place of usual residence in Hungary, or persons not residing in the country having properties or income in Hungary. The database contains those foreigners who pay their personal income tax in Hungary, thus migrants who have a registered job in the reference year are included in the register

Persons who start to work in Hungary in the reference year and meet legal obligation to register their job and to provide income data are registered. EEA citizens are authorized to work in Hungary, as well as those third-country citizens who have work permit or EU blue card. Work permits are valid for maximum two years which can be lengthened. Work permit is not necessary in cases of refugee status, immigration or settlement permit.

Migrants are included in the register if they meet legal obligations and pay their personal income taxes in Hungary, therefore deregistration is not connected to permits (migrants with valid permit but no taxable income are not included in the data).

The following data are collected concerning migrants: personal ID, name, mother's name, date and country of birth, citizenship, place of residence, date of entry to tax register. Since the reference year of 2013 personal data of dependents are also expected to be received.

The personal income tax was introduced on 1 January 1988 in Hungary. Data on the income tax of migrants have been available since 2005.

Publications are available on the website of NTCA: *http://www.nav.gov.hu/nav/kiadvanyok/nav_vilaga*. However, no information on migrants are published.

The HCSO receives data since 2005 once a year. The HCSO and the tax authority have yearly meetings to discuss the use of taxation data for statistical purposes. Following the request of the HCSO data for migration statistics are accessible, other migration-related requests have not been formulated.

The statistical office has had a formal agreement with the tax administration since 2005, which clarify the details of data transfers on several statistical fields, including migration statistics. The received data are personally identifiable.

Taxation data are accurate and timely, although they cover only a part of the migrant population, i.e. those who have registered income in the reference year. Since legal regulations are specific to the different countries and can change in time quite frequently; comparability is a serious issue concerning these data. However, taxation data can be used to improve or supplement data from other sources, e.g.: the number of tax payers in the country can provide a solid base to estimate the number of people residing in Hungary.

2.2. Statistical data sources, sample surveys

2.2.1. Microcensus 2005, Hungarian Central Statistical Office (HCSO)

The microcensus is a national periodical data collection executed by the HCSO who is the data owner as well. Following the 1960 Census, microcensuses were carried out between the subsequent censuses, the last one – the 5th of the series – had been executed at the reference date of 1 April 2005. The representative survey covered 2 percent of the Hungarian dwelling stock and the population respectively.[10] It covered similar domains with similar details as the 2001 Census. The sampling frame of the microcensus has two parts: the population living in private households from 2001 complemented by the number of newly built houses between February 2001 and March 2004; and the population living in institutions (the basis of the sample was a research in 2003 which covered the whole population in institutions).

The implementation of the Hungarian microcensus is regulated by law; at the last microcensus *Act CXXI of 2004* was effective. This obliged the occupants of the dwellings – as data providers – to participate in the survey.

Data providers were all Hungarian citizens living in the area of the country or having permanent address as a residence or temporary address as a place of stay in Hungary; and all foreign citizens and stateless persons living in the area of the country for a period of more than 3 months, respectively refugees. The *citizenship* was the only variable along which migrants could be distinguished (the country of birth was not included in the questionnaire). The status of immigrants

[10] In 847 towns, villages of the country 83 000 dwellings and persons living in the chosen dwellings were listed.

in Hungary was not a criterion for selection; therefore refugees, asylum seekers or immigrants with permanent or temporary residence could be in the sample, too. *Mother tongue* was also included in the questionnaire, therefore ethnic Hungarian immigrants (as the major group) can be distinguished. However, answering this question was not obligatory.

Data collected: characteristics of the population and housing, like data on economic activity[11], employment status, fertility, household types, family forms; the typical activity of the employer or enterprise and foreign direct investment; dwellings, housing conditions; daily travel, educational attainment; number of children. Data can only be used for statistical purposes.

Statistics are published electronically and in hard-copy version too. Publications are available in Hungarian and in English on the HCSO website: *http://www.mikrocenzus.hu/mc2005_eng/index.html*

As a result of the survey a comprehensive picture on the demographic, educational, employment, occupational and family characteristics and housing conditions of the population living in the different territories (regions, counties, individual parliamentary constituencies) and types of settlement (the capital, towns, villages) is presented in detailed tables. However, data are not published by citizenship.

The importance of the microcensus for migration-related issues lies in its relatively large sample size (2 per cent of the population). Considering the relatively low number of foreigners in Hungary it is nearly impossible to get relevant information on immigrants through general population surveys with smaller sample size. The microcensus includes a group of immigrants who legally reside in Hungary, (their proportion was 1.4 per cent of the total population in 2005), although they were slightly underrepresented in the sample (1.27 per cent). Nevertheless, the microcensus together with the census data gives the basis for getting a real view on the demographic structure, composition by employment, occupation, education of migrant population.

However, the microcensus does not include information about emigrants at all. In addition to this, it would be important to harmonize the questions of the census and microcensus (the Census 2011 refers to emigrants first).

2.2.2. Demographic database, Hungarian Central Statistical Office (HCSO)

The Hungarian vital statistics are registered on a territorial basis. This means that all events that occur in Hungary are registered while those that occur to Hungarian citizens out of the country are not. Data provision is mandatory.

Vital events statistics are available since the end of the 19th century and the contents of the collected data have been stable for decades. Individual data records from the reference year of 1970 are kept in electronic database.

The rules related to the collection and processing of demographic data are included in the Statistical Law (*Act XLVI of 1993*). The HCSO collects personal information that are specified by law and that has to be provided by competent registrars, health organizations, courts and competent services of the Ministry of Interior. Registrars provide data on births, deaths and marriages. Health organizations supply data on birth and death directly to the HCSO on the one hand and through registrars on the other. Divorce data are provided by courts. The data collection system of demographic statistics has been developed and operated by the HCSO in the cooperation with ministries responsible.

[11] Regarding the categories of the economic activity the microcensus applied the recommendations of the International Labour Office (ILO) though the category of the unemployment is only partially compatible.

Data providers report the data for the population register and the HCSO at the same time. However, while data of administrative purpose include only official information, those collected for statistical purpose include information declared by the subjects of the demographic events.

Collected data:

Marriages: Identification codes, place and date of marriage, husband's and wife's name, date of birth, marital status before marriage, permanent and temporary place of residence, citizenship, serial number of the marriage, termination date of the previous marriage, number of live births and surviving children, educational level, economic activity and occupation.

Divorces: Identification codes, place and date of marriage, court that legally terminated the marriage, date of the judgment of legal force, husband's and wife's name, marital status before marriage, date of birth, permanent and temporary place of residence, citizenship, serial number of the divorce, number of live births and surviving children, number of common surviving children under the age of 18, education, economic activity and employment data, decisions in the lawsuit.

Live births: Identification codes, the child's date and place of birth, sex, citizenship, name; mother's name, marital status; parents' marriage date, father's and mother's date of birth, permanent and temporary place of residence, citizenship, education level, economic activity, employment information; previous pregnancies, number of babies from the current birth, serial number of the newborn at birth, place of birth, assistance at birth, pregnancy duration, the child's weight, length, development and health status.

Deaths: Identification codes, place and date of death, sex, name, date of birth, marital status, permanent and temporary place of residence of the dead, date of birth of the surviving spouse, date of last marriage, citizenship of the deceased, number of all live-born and number of those born in the last marriage of the deceased female or of the surviving spouse of the deceased male; educational level, economic activity, occupational data, causes of death; data on the birth and the mother in case of infant death. Data by country of birth are available since 2010, however, only Hungarian-foreigner distinction is uploaded in the database.

Vital data can contribute to migration statistics as citizenship is included, too. Nevertheless, neither the migratory status nor the county of birth of foreign citizens is included in the data collection.

Demographic data are annually published in the Demographic Yearbook and the unidentifiable micro data are continuously accessible in the dissemination database on the website of the HCSO: *http://statinfo.ksh.hu/Statinfo/themeSelector.jsp?page=1&theme=WN&lang=en*.

Anyone can access the database and make queries.

Quality of data:

From a migratory perspective demographic data have big potentials, but they are hardly utilised. Data are accurate; they are generally complete and reliable, with some exceptions. Information related to the occupation is rather poor (in case of deaths the rate of missing data reaches 20 per cent). Due to the high rate of extramarital births, a significant part (10-20 per cent) of fathers' data is missing from the dataset of live births.

Long time series of vital statistics have been available at any NUTS level for decades. However, we have to note that in order to improve the quality of data and as a consequence of the developments required by international technical and methodological needs, a number of changes occurred in 2005, related to the process of data collection and data processing. This caused a break in the time series of causes of death.

Since internationally accepted nomenclatures are applied in vital statistics, data are consistent in time, by territory and with other statistical domains, too.

If, besides the person's current citizenship, previous citizenship would be included in the data collection, a more complete picture could be formed about the demographic behaviour of immigrants in Hungary. Information about the country of birth of those participating in the population movements of Hungary would further enrich this picture.

2.2.3. Educational statistical databases, Ministry of Human Resources (MHR)

During the 1990s, the education system was fundamentally changed (founding new schools, closing old ones, changes and expansion of profiles of schools,), and statistics based on the previous structure were less and less able to keep track of the changing processes. Data requirements of international organizations have also speeded up the reform of the Hungarian statistical system of education.

Both the content and the method of statistical data collection system of education was changed in the 2000/2001 school year, following the instructions for organizational and management system of education regulated in *Act LXXIX of 1993 on Public Education* and *Act LXXX of 1993 on Higher Education*. The observation unit of data collection is the institution. The date of data collection is October each year.

The Ministry of Human Resources is responsible for the process of data collection as a whole, while data collection and data handling is carried out by the Educational Authority. The statistical system was developed in cooperation with the HCSO. The data collection is included in the National Statistical Data Collection Program (OSAP), its implementation is compulsory. Data providers are the educational institutions.

The educational statistical databases are of national scope, and are in line with international (EU) methodological requirements of education at the same time. One of the main considerations in the design of data collection was to take international standards into account.

Data collections related to public and higher education include information about maintainers, institutions, employees, children, pupils, students, teachers and masters. Migration-related data collected are citizenship and country of residence, except in case of employees in public education.

Data from the new data collection system are accessible from year 2005. The HCSO receives the data once a year.

Pupils by citizenship (Hungarian and non-Hungarian) by completed second level attainment, pupils by classes and individual citizenship, pupils by the country of residence, those maturated by sex and citizenship, successful professional examination by profession and citizenship (Hungarian and non-Hungarian) are covered by the public education data collection. Number of foreign students studying at several institutions of higher education and the number of those in student's hostels are collected in the higher education data collection. Data are processed by the data collector and a yearbook is published each year.

The concept of foreign students covers those who study in Hungary and have non-Hungarian or double (Hungarian and other) citizenship.

In higher education statistics, besides citizenship, the number of students is available by the country of permanent residence, as well as the country of the previous educational attainment.

The response rate is 100 per cent as the Ministry closes the data set only if it is complete. There is a need to introduce a set of new indicators into the education statistics (e.g. dropout rates, movement between school types) which development is underway. From migration perspective it would be reasonable to have information on the distribution of foreign pupils by age, country of birth, residence in Hungary and of the distribution of students by sex, age, individual citizenship, country of

birth, country of residence and residence in Hungary. These data are collected in the education registers. Therefore, if these were used for statistical purposes, the above mentioned categorisations would be accessible.

The statistical data collections of public education and higher education are included in the National Statistical Data Collection Program (OSAP) and data have not been produced from the education registers, yet. However, the statistical data collection of public education uses register data for setting up the frame of the data collection and in the case of higher education, statistical data collection is expected to be done from the register. There is an ongoing consultation and inspection between the owners of the registers and the statistical databases.

2.2.4. Statistical survey on people acquiring Hungarian citizenship, Hungarian Central Statistical Office (HCSO)

The *Statistical survey on people acquiring Hungarian citizenship* is a national full-cover survey (covering all newly naturalised persons), which has been carried out since 1 January 2002 continuously, as a part of the *National Statistical Data Collection Program* (OSAP 1960). Data are collected by the HCSO, and the aim is to obtain more detailed information on new citizens and on the background of acquiring Hungarian citizenship.

As participating in a population survey is obligatory only if it is prescribed by law, data provision of new citizens is optional, based on the Government decree about the National Statistical Data Collection Program enacted by the Statistical Law.

Data providers are **persons who took either a citizenship oath or pledge of allegiance**.[12] They can be immigrants as well as persons who entered the country as asylum seekers or refugees. Following the new legislation on acquiring Hungarian citizenship, in 2011 a new questionnaire was designed in the framework of the survey for new citizens who do not have a permanent address in Hungary. The new legislation means that from 1 January 2011 *simplified naturalization* is offered to non-Hungarian citizens who or whose ancestors were Hungarian citizens or whose Hungarian origin is probable, and whose Hungarian language knowledge is proved. Furthermore, these applicants do not have to have a residence, or subsistence in Hungary, and a test on the knowledge of the constitution is not required either.

The questionnaire is available only in Hungarian. New citizens receive the questionnaire from the registrar after the citizenship oath and they fill it in at the venue. The response rate is about 80 per cent.

Data collected: In addition to the information provided by the administrative register on naturalisations (like basic demographic data: sex, age, marital status), the survey provides data on mother tongue, number and birthdates of children under the age of 18, educational attainment, economic activity and occupation before entering Hungary and at the time of naturalisation. The following migration-related data are also included: *country of birth, previous/other citizenship* (in addition to the newly acquired Hungarian), current place of residence, *previous place of usual residence abroad*, *the date of obtaining usual residence in Hungary* and reasons of application for the Hungarian citizenship.

Completed questionnaires are transferred to the HCSO where data are recorded. Local governments send the completed questionnaires on a quarterly basis; questionnaires completed abroad (in consulates) are sent to the Ministry of Foreign Affairs and then transferred to the HCSO.

[12] Criteria are used according to *Act LV of 1993 on Hungarian Citizenship*.

Data of this survey supplement administrative data of the population register of the COAEPS. Data from the register and data from the statistical survey are linked once a year using statistical linkage (RAS method). Basic data on citizenship have been available since 1993, while information from the statistical survey on people acquiring Hungarian citizenship have been available since 2003.

Annual statistics based on the integrated data source are available on the HCSO website and are published in the "Statistical reflections" from 2004. The main users of data are government bodies, international organizations (Eurostat, OECD), research institutes, education institutes, etc.

The comparability of data in case of some indicators is problematic, due to the classification used. For example, the classification of educational level attained is quite broad, which can cause inaccuracy due to the different educational systems in the countries of origin (although the number of completed classes can provide additional information in this topic). Moreover, the question regarding the number and the birth date of children concerns only children under the age of 18 which also causes a significant loss of data. In addition, we have no information about the (permanent) residence of the children (whether is it Hungary, the country of origin or other country) either. However, this survey could give more detailed information about new Hungarian citizens (regarding their socio-economic, labour market status) than administrative databases.

2.2.5. Statistical survey on foreign citizens with settlement document, Hungarian Central Statistical Office (HCSO)

The *Statistical survey on people with settlement document* is a national survey that has been carried out since 2003 continuously, as a part of the *National Statistical Data Collection Program* (OSAP 1970). Data are collected by the HCSO, and the aim is to obtain more detailed information on foreign citizens who settled down in country.

As participating in a population survey is obligatory if it is prescribed by law, data provision of foreign citizens with settlement document is optional, based on the Government decree about National Statistical Data Collection Program enacted by the Statistical Law.

At present, data providers are **foreign citizens having residence card, permanent residence card or settlement permit**.[13] Until 2011 data providers were persons who applied for settlement document (the name of the questionnaire was: "*Statistical questionnaire of foreigners asking for permanent settlement permit*"). Since 2012 data providers are those who obtained these documents (the name of questionnaire: "*Statistical questionnaire for foreigners having any type of settlement permit*"). They receive the self-response questionnaire at the regional directorates when they gain the residence card or settlement permit.

Data collected: The survey gathers data about socio-demographic, economic, labour market and human capital characteristics, like basic demographic data (sex, age, marital status), number of children, educational attainment, last economic activity prior to moving to Hungary, current economic activity, current employment status and occupation.

[13] According to *Act I of 2007 on the Admission and Residence of Persons with the Right of Free Movement and Residence*) permanent residence status shall be granted to:
a) EEA nationals who have resided legally and continuously within the territory of the Republic of Hungary for five years;
b) family members who have resided legally and continuously within the territory of the Republic of Hungary for five years;
c) persons who have retained the right of residence in connection with their relationship to an EEA national or a Hungarian citizen, and who have resided legally and continuously within the territory of the Republic of Hungary for five years; and
d) the children of a parent who has the right of permanent residence in the territory of the Republic of Hungary
Criteria of obtaining a permanent residence card: EEA nationals, their third-country family members or third-country family members of a Hungarian citizen. It is valid for 10 years.

Significant changes have occurred in the content of the questionnaire since 2012. In 2012 some questions were deleted: other citizenship (in addition to the current one); previous place of residence abroad (name of the country and settlement); questions concerning marital status (living with or apart from the spouse; living in cohabitation); and the last occupation abroad. Concerning the number of children, only children under the age of 18 are taken into account from 2012.

Until 2012 the questionnaire was available only in Hungarian, then it was translated into English, and since January 2013, a Hungarian-English questionnaire is available. During the Hungarian-English translation, not only the language of the questionnaire has changed, but its length too. In order to increase the response rate, the questionnaire became shorter (only one page instead of the previously two) and questions were simplified, thus becoming clearer for foreign citizens. In January 2013, due to the change in legal background the scope of data providers changed as well. Since that, EU citizens also belong to the scope of the survey, which made the modification of the title necessary: "*Statistical survey on foreign citizens having (permanent) residence card or settlement permit*".

The current survey includes the following migration-related data: citizenship, country of birth, mother tongue, current place of residence, country of residence before coming to Hungary**,** reasons for coming to Hungary, the planned period of staying in Hungary and the length of the period already spent here; the intention of applying for Hungarian citizenship.

Gathering these data provide more information about immigrants than administrative databases. The command of Hungarian language and the mother tongue variables are notable, since they are not asked in the administrative data collection process. The results of the survey could be very useful to elaborate and develop the "Zaragoza indicators" as well.

Due to the changes in the scope of data providers and the decrease in the number of questions, it is difficult to compare data after and before 2012.

The response rate is lower than in the case of the other data collections, especially in recent years. First of all, the reason for this is originated in language difficulties. Before Romania's accession to the EU, data providers of the survey were mostly ethnic Hungarians with Romanian citizenship (who were registered at the Office of Immigration and Nationality as third-country nationals). Since 2007 Romanians are EU citizens, so they do not belong to the scope of the survey any more (until 2013 when the scope of the survey changed again, as mentioned before). Consequently, after 2007 data providers are mostly third-country nationals who do not speak Hungarian well (or at all): Chinese, Ukrainians, and Russians, which can be the reason for lower response rates. As a result of this, the necessity of a non-Hungarian questionnaire became urgent.

Inappropriate circumstances of the survey could be another reason for the low response rate. Respondents do not have supporting information (instructions on how to fill in the questionnaire or "Frequently Asked Questions") and in some cases instead of completing it in on the spot, they take the questionnaire home without filling it in (although they are asked to provide it when they receive the residence card/permit). In some cases respondents did not receive the questionnaire (when they had their residence card request filled out by a lawyer). Properly trained staff providing assistance for migrants could significantly increase the response rate. It would be also useful if the questionnaire was published on the website of the OIN; online availability could increase the number of completed questionnaires. At present questionnaires are available only in Hungarian and in English, therefore persons who do not speak either of those languages (well), are not able to complete it. It would be useful to translate it into other languages suiting the language needs of data providers (Russian, Chinese). Nevertheless, the response rate from this year will be hopefully higher due to the availability of an English version of the questionnaire.

Completed questionnaires are continuously transferred from regional directorates of the Office of Immigration and Nationality to the HCSO. But due to the low rate of completed questionnaires, data have not been published until now.

2.2.6. Labour Force Survey (LFS), Hungarian Central Statistical Office (HCSO)

The Labour Force Survey (LFS) is a representative international household survey which provides information on the economic activity of persons aged 15–74 in the EU, EFTA and the Candidate Countries. The aim of the survey is to observe employment and unemployment according to the international statistical recommendations based on the concepts and definitions of the International Labour Organization (ILO), independently from the existing national labour regulations or their changes.

The Hungarian Labour Force Survey was introduced by the HCSO in 1992 as a quarterly survey. Since then it has been the most comprehensive data source on employment. The concepts and definitions used in the survey follow the guidelines of the ILO. The survey covers the whole country. Sampling units are dwellings, and all *private households* residing in the selected dwelling units are surveyed. Labour market information is collected on each household and on each person aged 15–74 living there. The demographic questions refer to all household members without age restrictions. Household members temporarily absent and persons living abroad less than a year (12 months) are included if they have common income/consumption with the surveyed household. The institutional and unsettled population is excluded, as well as conscripts (HCSO, 2012a). Participation in the survey is voluntary.[14]

From 2003 the LFS sample is a multi-stage stratified sample of dwellings based on the 2001 Population and Housing Census. The sample design strata were defined in terms of administrative units (i.e. capital city and counties), size categories of settlements and area types (such as city centres, outskirts, etc.). The sample has a simple rotation pattern: any household entering the sample at some time is expected to provide labour market information for six consecutive quarters and then leaves the sample for good. The quarterly sample is made up of three-monthly sub-samples. Yearly results are obtained as annual averages of quarterly results. Since 1998[15], the number of addresses selected for the sample in every quarter is about 38 thousand, and some 70 thousand persons are interviewed. The average response rate in 2012 was 78 per cent (between 1998 and 2005 it was 82–87 per cent).

The LFS, as mentioned before, provides some socio-demographic information on the whole sample and detailed labour market information on those aged 15–74. The economic activity, occupation, branches of employment, educational attainment and professional qualification are among the major elements of information involved. The main labour market indicators calculated are: employment rate, unemployment rate and participation rate.

Data collected in the LFS are valuable from the point of **immigration**, too. As *citizenship* and *country of birth* of household members are included in the survey since 1997, the LFS is the most comprehensive data source on the employment and educational characteristics of foreign national and foreign born population. In addition, since 1999 the *country of residence one year before* has been asked. In the first years of the survey *mother tongue* (1992–1994) and *nationality* (1992–1993) were also included, but since then these indicators have been left out.

[14] The survey was done via paper-and-pencil interviewing till the first quarter of 2012. Afterwards, the continuous transition to computer aided data collection began. The first interview is face-to-face, while subsequent interviews can be carried out by telephone.

[15] This year the sample was boosted by 40 per cent.

Although it is possible to study longer time series (from 1997 up to now) with regard to foreign country of birth and citizenship, there is only access to anonymized data, that is, only grouping according to EU and non-EU country of birth and citizenship (which includes different countries over times, with the process of EU enlargement).

The other deficiency of the LFS regarding foreigners is that dual citizenship is not recorded, though most of the new Hungarian citizens kept their previous citizenship, too.

In 2008 the LFS was supplemented by additional questions (so called ad-hoc module) devoted to people with migration background: *duration of continuous stay in Hungary (in years)*[16], *total number of years of residence in Hungary*, *father's country of birth, mother's country of birth*, and in case of naturalisation the *year of citizenship acquisition*. This ad-hoc module was kept since then.

The possibility to studying **emigration** based on the LFS is much more limited than that of immigration. In case the respondent is working abroad at the time of the survey, *country of the employment abroad* is recorded. This indicator has been included in the survey since 1999. In case of a special group – those who are currently not working but who had their last employment abroad – the country of the last employment is also registered. (At the same time, immigrants who had their last employment in the sending country can also fall into this category.)

Questions about intentions of being employed abroad were also included in the Hungarian LFS from 2002 to 2009. Questions referring to the *plans for working abroad in the next 5 years*, and the *target country*, the *type of job*, *method of looking for a job, expected advantages of being employed abroad*, and whether *further steps were already taken for this purpose* were also asked.

Besides ad-hoc modules (included in all countries, conform to EC regulation), the LFS has regular supplements with specific topics (included only in Hungary). The supplement in the 2009 forth quarter questionnaire on 15–64 aged persons was devoted to the topic of *being employed abroad and circumstances of employment* with questions: ever worked abroad, how many times, when, how long, country of destination, the type of job.[17] Another supplement in 2010 and in 2012 referred to the position of young people (aged 15–29) in the labour market. This also included a question about the *willingness to work abroad*.

Based on the above, it might seem that the LFS is relatively rich in data for migration analyses. However, though the sample of LFS is large enough, the use of LFS as a basic resource for migration research is hindered by the low number and under-representation of immigrants in the sample. The proportion of foreign citizens in general is lower than their proportion in the total population. Only in case of foreign-born population is the sample size sufficient.[18] This is due to the fact that access to immigrants is more difficult than it is to local population. Establishing contact or accomplishing the interview is hindered by language problems, cultural mismatches. As a consequence, large groups of immigrants might remain seriously underrepresented, or totally neglected (mainly those who are less integrated). This problem could be diminished by careful sampling and controlled realisation of survey focusing on proportional representation of immigrants. Furthermore, LFS only provides limited opportunities for drawing conclusions about emigrants. In case of labour force out-migration, cautious interpretation of the results is also required because of the special sub-sample and low sample size.

One serious methodological problem of the LFS is that due to insufficient number of migrants in the sample, most often statistical data can only be generated for unified categories (eg: in the case of citizenship, EU and non-EU citizen), which again provides limited opportunities for analysis and

[16] The question referring to the duration of stay in the country was included between 1999 and 2007 too, with the following response possibility: "if 10 years at most: number of years; more than 10 years".

[17] The question *"Have you ever worked abroad?"* (yes/no) was included in 2003, 2005, 2006 and 2007 as well.

[18] From 1998 to 2012 the number of foreign citizens in the sample varied between 300–400 persons, while the number of foreign-born people was mostly 1100–1300.

research. Sufficient numbers could be reached by a well-constructed ad-hoc module or by arranging separate waves of the LFS into a panel (see: Hárs 2012). Only this way could data be used to study the employment status of foreign citizens.

The HCSO publishes the LFS results on a monthly basis in the news release "Employment" and "Unemployment" containing so-called "rolling" quarterly data (average of the last three months), and quarterly comprehensive report. The main annual and intra-annual tables are published on the HCSO homepage, in Tables (STADAT) and also in the Internet series called "Statistical reflections" under "Publication Repertory". However, these publications do not contain data by citizenship or country of birth at all. Non-published results and micro data can be accessed on request.

2.2.7. Immigrants 2002–2006 survey, HCSO Demographic Research Institute (DRI)

Immigrants 2002–2006 was a two-wave representative panel survey in Hungary conducted by the Demographic Research Institute of the Hungarian Central Statistical Office (DRI). The questionnaire-based survey was carried out on a representative sample of immigrants aged 18 and over who arrived from neighbouring countries and were granted immigrant satus in Hungary in 2001.[19] The questionnaire was prepared by the DRI, the sample selection and the data collection was conducted by the Survey Unit of TÁRKI (an independent research organisation). The first wave of the survey was carried out in 2002, the second wave in 2006.

The reason of narrowing down the sample for immigrants arriving from neighbouring countries was the fact that they represent the largest immigrant group in Hungary: between 1987 and 2001, 70 per cent of immigrants arrived from these countries, and their vast majority was ethnic Hungarian. The following characteristics of the examined population – those who were granted immigrant status in 2001 – were known: sex, age, marital status, country of origin and place of residence (settlement type and region) in Hungary, thus the sample was representative on these criteria.

Multistage sampling method was applied with two stages during which households were selected first, and then persons from the households were chosen randomly. In the first wave of the research (in 2002) the sample included 1015 persons, during the second wave 681 persons could be interviewed, i.e. two-thirds of the first wave's respondents. Participation in the survey was voluntary.

The *Immigrants 2002* survey centred around three main topics: what the composition of the examined group of immigrants in Hungary is; why they decided to emigrate (motivations and goals of migration) and why they chose Hungary as a destination country; and how they could integrate into different segments of the host society.

Besides exploring immigrants' *socio-demographic characteristics* in depth, questions also discovered *their situation before migration*: *living conditions, economic and cultural background* thoroughly, including their *position on the labour market and occupation before migration, previous experiences of unemployment, family situation.* In addition to the open and closed questions on *migration motivations*, the survey intended to examine those micro-environmental characteristics which led to making the decision on migration, for instance the *attitudes of the direct environment towards migration,* and their *migrant network* (family members, relatives, friends who emigrated previously or live in the host country). Finally, the research discovered the different dimensions – economic, social, and psychological – of immigrants' integration into the host society collecting detailed data on their *labour market positions, housing and living conditions, cultural practices, satisfaction, sense of feeling at home, keeping contact with the homeland* and *personal social networks.*

[19] The sample was based on the year of acquiring immigrant status (not of the arrival), thus including immigrants who arrived in different years – covering the immigration around the turn of the millennium.

The second wave, *Immigrants 2006* focused on the changes that occurred in the meantime in different dimensions of integration: labour market status, occupation, housing and living conditions, social networks, satisfaction.

As a result of the surveys, a rich database and great deal of knowledge was collected about the examined group of immigrants providing information about basic characteristics, like ethnic background (mother tongue, ethnicity), educational attainment and labour market position, which were completely missing from official statistics.

Analyses based on collected data are available in several publications on the website of the DRI in Hungarian and in English (*http://www.demografia.hu/english/index.php/publications-in-english*), as well as in other scientific journals. The database is available for scientific research; it can be requested from the data owner DRI or from the TÁRKI Data Archive.

2.2.8. Small sample surveys that focus specifically on migration

Several small sample surveys were conducted in Hungary in the last ten years, with special focus on migration, on different migrant groups; most of them based on snowball sampling method. These are important complementary data sources, although due to the small sample size and mostly the lack of representativity their usefulness in general is limited.

2.2.8.1. Immigrant Citizens Survey, 2011–2012

The survey was funded by the European Integration Fund (EIF) and jointly coordinated by the King Baudouin Foundation (KBF) and the Migration Policy Group (MPG). It was conducted in 2011 and 2012. The research objective was to describe the effects of integration policy in EU member states on the lives of individual immigrants and their communities. Seven member states were involved in the research; a total of 7,200 immigrants were surveyed in 16-18 cities.

In Hungary the survey was conducted in Budapest (the capital of Hungary) and covered 1,200 immigrants. The Institute of Ethnic and National Minority Studies (at present the Institute for Minority Studies) of the Hungarian Academy of Sciences and Menedék Hungarian Association for Migrants were participating partners of the project.

The topics included questions related to integration policy issues falling into five main themes: employment, language, civic and political participation, family reunion, long-term residence and citizenship. Immigrants were asked about their background; integration goals; awareness of current policy; trust in implementing actors; reasons for/against participation, levels of satisfaction; observed benefits; and recommendations.

The target population of the survey was defined as: all persons not born in the country (i.e. first generation migrants) who were citizens of third-countries or stateless at the time of the interview or who had acquired citizenship after birth, had been resident in the country of investigation for more than a year, held or were renewing any type of legal immigration status at the time of the interview, and who were aged 15 or older. The sample also covered humanitarian migrants (asylum seekers, recognized refugees and beneficiaries of subsidiary protection) and irregular immigrants.

More details are available on the project website: *http://www.migpolgroup.com*

2.2.8.2. LOCALMULTIDEM. Multicultural Democracy and Immigrants Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level, 2006–2009

The project was funded by the European Commission and implemented in six European cities: Lyon (France), Budapest (Hungary), Milan (Italy), Madrid (Spain), Zurich (Switzerland), and London (United

Kingdom). The main question for research was to what extent immigrants (foreign-origin population) from different ethnic groups are politically integrated in the local life of their cities, and what explains the difference in the extent of political integration of various ethnic groups.

The partner institution from Hungary was the Institute of Ethnic and National Minority Studies (at present the Institute for Minority Studies) of the Hungarian Academy of Sciences. The sample of Budapest included 900 immigrants (ethnic Hungarians from neighbouring countries, Chinese, and immigrants from Muslim countries) who were reached by snowball sampling.

The research is internationally **comparative** in three respects: on the level of **countries**, on the level of **cities,** and on the level of the **ethnic groups** studied. More details are available on the Localmultidem website: *http://www.um.es/localmultidem/index.php*

2.2.8.3. Hungarian employees on the Austrian labour market, 2008–2009

The research was carried out in 2008–2009 in Hungary, conducted by the Kopint Foundation for Economic Research.

The research focused on Hungarian employees in Austria, their status, migration strategies, and perspectives. The main goal of the research was describing the status and position of Hungarian employees on the Austrian labour market.

Data providers were Hungarian persons who have ever worked in Austria legally or illegally since 1989 or who were working in Austria at the time of the survey (legally or illegally). There were persons in the sample who were still working in Austria; persons who were not working in Austria at the time of the survey but they had worked there at some point and they wanted to return; and persons who had worked in Austria but did not want to return. The comparison between these different groups became possible.

Snowball and "respondent driven sampling" were carried out as sampling methods. The sample included 417 persons.

Results are published (in Hungarian): *http://expak-at.hu/expak/display/publication/88*

2.2.8.4. Immigrants in Hungary, 2009

The research project financed by the European Integration Fund (EIF) investigated the composition, economic and cultural situation, and integration strategies of six immigrant groups in Hungary in 2009, using a questionnaire survey.

The survey was conducted by the Institute of Ethnic and National Minority Studies (at present Institute for Minority Studies) of the Hungarian Academy of Sciences. The target population of the survey was defined as third-country nationals living in Hungary for a period of more than 3 months (except refugees). The sample included six different immigrant groups in Hungary (ethnic Hungarians from neighbouring countries, Ukrainians, Chinese, Vietnamese, Turkish and Arabians), a total of 1,244 persons. A special snowball sampling was applied and only certain immigrant groups with equal sample size were taken into account. Then the sample was weighted according to age, sex (in the case of ethnic Hungarian, the Ukrainian, the Arabic, and the Turkish subsample), and according to age, sex, occupation (in the case of the Chinese and Vietnamese subsample), therefore the structure of the sample was suited for the structure generated from immigrant statistics.

The research report on the results is published (only in Hungarian) on the website:
http://www.solidalapok.hu/sites/default/files/mtaki_iccr_bevandorlok_magyarorszagon.pdf

2.3. Census databases

2.3.1. Population census 2011, Hungarian Central Statistical Office (HCSO)

Censuses have been conducted since 1870 in Hungary every ten years. The last census round was the 15th census of Hungary and according to *Act CXXXIX of 2009* (Census Act) it was carried out between 1 and 31 October 2011, with a reference date of 1 October 2011. The census implementation was in line with the recommendations of *Regulation (EC) No 763/2008* of the European Parliament and of the Council of 9 July 2008 on population and housing censuses.

The census was conducted by the Hungarian Central Statistical Office (HCSO). The whole process was supervised by the statistical office including preparatory tasks and implementation, online data collection, technical support as well as data processing and the publication of data.

Census 2011 was a traditional census with the options to fill in online the internet questionnaires, or fill in self-fulfilled paper-based questionnaires, or responding with the help of an enumerator. The method of data provision was selected by the respondent. Online fill-in was an option for the first time in the census history of Hungary.

The census covered

1) all *Hungarian citizens* living in the area of the country or staying temporarily abroad for a period of less than 12 months, and having registered place of residence or place of stay in Hungary; and
2) all *foreign citizens* (both EEA citizens and third-country nationals) and *stateless persons* living in the area of the country for a period of more than 3 months, except diplomats and their family members. Asylum seekers were included only if they met the criteria.

Differently from earlier practice during the 2011 census each person was enumerated in one address, where he/she habitually lives. This forms the basis of the *'resident population of the census'*. The household members who live elsewhere (due to studying, working or other reason), but return home weekly, every second week or monthly, were asked to fill in questionnaires in both addresses. These *'persons returning home periodically'* are included only once in the resident population: in the locality of the address used habitually (HCSO, 2012b).

The census also took the complete spectrum of housing units into account including flats and housing units providing communal accommodation in the whole territory of the country.

The criteria of *citizenship* and *country of birth* can be used to identify the foreign and foreign-born population. Both data were also registered in the 2001 Census (the 2001 Census was the first since 1960 when citizenship was asked), consequently the whole cross-sectional database of foreign citizens and foreign-born persons is available since then.

The definition of *emigrants* was first applied in the 2011 Census, based on implementing *Regulation (EC) No 763/2008* of the European Parliament and of the Council. The same personal questionnaire was completed for *persons staying abroad temporarily* (those having their permanent place of residence at a given address but staying temporarily abroad for a period expected to be less than 12 months) as for persons staying in the country. As regards *persons staying abroad permanently* (those having their permanent place of residence at a given address but having stayed or expected to stay abroad for a period of more than 12 months) only the number of them was recorded on the dwelling questionnaire and no other data was collected about these persons.

The census collected data on the social, demographic and economic characteristics as well as on the housing conditions of the population in Hungary. Two questionnaires were used: a personal

questionnaire and a housing questionnaire. The *personal questionnaire* included the following data: sex, date of birth, place of residence, legal title for and start date of using the dwelling, legal marital status, year in which current marriage began, cohabitation, household status (status within the household), data on live-born children; school attendance, educational attainment, major field of study; language competences; current economic activity, occupation, employer and place of employment, daily travel related to studies or work; health status, disability; nationality (ethnic belonging), mother tongue, most frequently used language, religion. Data provision on health status, disability, religion, mother tongue and nationality was voluntary. In the case of questions related to ethnicity, mother tongue and usually used language, the questionnaire included pre-defined categories. As a special feature in Hungary, in answer to the question regarding nationality (ethnic belonging), it was possible to give a secondary ethnicity.

Besides, migration-related questions were also included in the census with regard to *citizenship* (second citizenship if relevant), *country of birth*; *previous place (country) of usual residence* and *date of arrival in the current place*; additional address (could be abroad) to the address provided on the dwelling questionnaire; *ever resided abroad* (at least one year long) and the country, *date of arrival (or return) in Hungary*. The place of usual residence one year (or five years) prior to the census was not asked in 2011, although in the previous census in 2001 the place of residence one year ago was still included. The date of arrival in the current place, question on ever living abroad and the year of arrival (return) in the country of those who ever resided abroad were added to the questionnaire in 2011.

Based on data collected on the *dwelling questionnaires* (purpose/type of dwelling, year of construction, type of wall, form and regularity of use, type of ownership, number of rooms, floor-space, public utilities, equipment, number of persons and households living in the dwelling) living circumstances and dwelling conditions of the population could be revealed.

Publications of data are available free of charge on the HCSO website in Hungarian and in English: *http://www.ksh.hu/nepszamlalas/detailed_tables*. Besides publishing the results of the census, the Census Department of the HCSO is responsible for the provision of required census data to international organisations (e. g. Eurostat). Nevertheless, only few data are published by citizenship or by country of birth.

The census can be considered as the most important data source with regard to migration for many reasons. It is a comprehensive data collection and the only one which covers the whole population, thus the whole foreign population as well. Census data have a unique significance concerning the analysis of immigrants' integration: it enables researchers to create a rich picture on the social-economic situation, household structure and living circumstances of foreign and foreign-born population in comparison with the receiving population (which is not possible on the basis of other databases). Indicators of structural and cultural integration could also be calculated from census data. The census is the only source that provides us information on the ethnic, cultural and linguistic background of immigrants. Analysis could also be made according to the date of arrival of immigrants, which is important in terms of integration.

The census can also be an adequate instrument to assess the reliability of inter-census migration registration. The size of foreign citizens residing in Hungary enumerated by the Census 2011 (143,197) was 62,000 less than the foreign stock according to the population register. Therefore, in 2013 a revision of the database of foreign citizens residing in Hungary was conducted, and the newly published number of foreigners has been adjusted to the 2011 census data.

Nevertheless, census data have some shortcomings, too. One main deficiency is that the census does not cover the whole population of *emigrants*. On the basis of Census 2011, 143,000 Hungarian citizens stayed abroad for a period of more than a year on 1 October 2011 and another 70,059 person stayed abroad for less than a year. However, according to the HCSO this can be considered

the minimum number of Hungarians living abroad because the census is not able to measure the exact number of people already being away (abroad). Even though we have data on emigrants (which information have not existed before), we have detailed data only on those persons who live (or intend to live) abroad for less than one year. The number of those who live abroad for more than one year is also included (without any other data about them), but only the minimum number of emigrants can be calculated by this, because we do not have data in case the whole household left the country or in case the person permanently staying abroad does not have their permanent place of residence at a given address or he/she is not enumerated as a household member by the respondent providing data. The same problem emerged regarding return emigration: we only have data on those persons who have lived abroad for more than one year before return.

Another general disadvantage of the census is that it is carried out in every ten years, so it is not an appropriate tool to reveal short-term processes/changes.

Considering data that is not collected, providing the *year of acquiring Hungarian citizenship* would be useful in cases where the data supplier is not a Hungarian-born citizen. Acquiring citizenship is an important step during the integration process, since immigrants gain other entitlements as well, which make the integration easier. *Parents' place of birth* or *previous citizenship of parents* would be useful for analysing the situation of second generation migrants. It would also be essential to know the *legal status* of third-country nationals and the date of acquiring the given status, since different legal statuses grant different integration chances.

3. CASE STUDY ON LOCAL LEVEL ABOUT USE AND ACCESSIBILITY OF MIGRATION-RELATED DATA SOURCES: The Municipality of Pécs

The local case study focuses on three main topics: datasets relevant for SEEMIG; SEEMIG data availability by themes; and target audience for SEEMIG data, chief stakeholders.

When we started to look into existing data production systems and major data sources relevant for trends in migration, long-term demographic change, human capital and labour market patterns, we discovered that the municipality itself is not an actor in data production in any of these areas. (The areas in which it does act as data producer seem exclusively to be areas where it acts as service provider, i.e. in the fields such as social provisions, social care, education – the latter apparently had just been lifted from among the obligations of municipalities.) Its position vis-à-vis administrative services (such as the OIN, the NTCA or the NHIFA), the University of Pécs, or the HCSO is that of a more or less regular data user. Instead of producing data, the municipality persistently needs data but it does not seem to have the appropriate capacities either for accessing or for storing and synthesising it (e.g. in a spatial informatics framework). The case study focuses on where and how SEEMIG data is available for the municipality, what special arrangements have to be made to make access possible and once collected, how it would be possible for the municipality to systematically store, use and re-use data extracted from the various sources. We also discuss the chief fields in which SEEMIG data can be utilised by the municipality and other local actors: outstanding among these are various evidence-based strategy making activities.

Another realisation we made at the start was that comparing local SEEMIG indicators to the data collected on the national level will not always constitute an appropriate reference value in relation to which we could interpret local values. We decided therefore to seek not only local (NUTS5 level) but also county (NUTS 5 level) data: the county represents not only the most immediate social context of the city but it is also the terrain in which the newly envisioned role of cities as city regions should play itself out. Also, counties in Hungary have recently been positioned as central actors in regional development and as such Baranya County is a major partner for the City of Pécs in practically all evidence-based strategy making activities.

In the course of doing research for tasks of the dynamic historical analysis and the present country report of SEEMIG, we consulted the following data sources that, to our knowledge, contained relevant information on NUTS 3 and 5 levels in general, and for Baranya County and the City of Pécs in particular.

Hungarian Central Statistical Office databases

First of all, we consulted the various data sources serviced by the Hungarian Central Statistical Office (HCSO).

- The database STADAT (*www.ksh.hu/stadat*) deals with many of the demographic data relevant for SEMMIG on NUTS 3 and 5 levels but it offers preset tables and is a static database.
- The Information Database (Tájékoztatási Adatbázis) (*http://statinfo.ksh.hu*) is a dynamic database where the user gets to define the dimensions of tables. This database covers a great deal of the information that is in the centre of attention in SEEMIG but it lacks chief indicators such as citizenship.

- The TSTAR database offers time series datasets for all cities and villages and seemed ideal for accessing SEEMIG data. Even though it features restricted access, professional local user knowledge is accessible for us as a local HCSO person is involved in extracting SEEMIG data from this database under an arrangement worked out the Lead Partner of the SEEMIG project.
- The census is a crucial resource for data on NUTS 3 and 5 levels and especially for those who work on issues that pertain to territorial units below the NUTS 5 level. The fact that the most recent census data for 2011 becomes available at the end of March 2013 in Hungary and around this time in many other SEEMIG countries raises the question whether SEEMIG can wait for these data to become available and use them to the fullest extent in its data gathering exercises. For previous censuses, data can be accessed via *www.nepszamlalas2001.hu*, with the limitation that NUTS 5 level data is available only for 2001. Published county yearbooks from 1949, 1960, 1970, 1980 and 1990 serve as resources for census data for the historical dimension of SEEMIG analysis for Pécs and Baranya County.
- The dataset that is most well-fitted for the purposes of SEEMIG activities is DEMO, a comprehensive demographic and migration database that is offered even within HCSO on restricted terms (registration and user training is required). Our access to professional local user knowledge was again made possible under an arrangement worked out by the Lead Partner: a local HCSO person is involved in extracting SEEMIG data from DEMO.

The territorial information system (TeIR) of VÁTI

Another terrain which we explored for SEEMIG data was VÁTI's TeIR (territorial information system, *https://www.teir.hu*), whose mission it is to assist regional and local authorities in their strategy building, development and management efforts. Many scholars also use the datasets that TeIR channels into one online data resource – we consulted the version that is offered under unrestricted access for registered research organisations as well as for municipalities.

A note is in order here about a peculiar feature of access policy to this version of TeIR: a research organisation or a municipality can only be registered via a natural person who has to use her/his own personal username at magyarorszag.hu, the central website for citizens' administrative affairs to get access for the organisation. This obviously also implies that in case any other person than the one whose personal information was used to get unlimited access rights needs to use the dataset, the registered natural persons access information has to be shared among members of the organisation which is highly problematic both in terms of personal data protection but also in very practical terms of collegial solidarity. Municipalities should be able to have access to TeIR on their own, not just via a natural person working for the municipality.

The various sources of data processed by TeIR include HCSO's TSTAR, NTCA personal income tax data, and National Development Agency (NDA) data on area based strategies. No matter how rich this dataset is (especially as regards income conditions with respect to which no other data sources come even close to what TeIR has to offer), this is a static database, with predefined categories that allow no further dimensions to be added.

The University of Pécs

Since educational migration has come to play a central role in the local international migratory profile, the University of Pécs as data producer and provider has become a central local actor for migration related data. Not only does the university stand at a major junction point of migration in the local urban context, the university is also the chief employer of the whole region and deserves as a consequence special attention for the local perspective of NUTS 3 and 5 data in the Hungarian country report's local case study on Pécs.

Migration data for the local urban context positions Pécs as a migratory transit site: migration flow data shows that since the 1980's, an increasing portion of foreign citizens registered as incoming population is also leaving the city. The background of migrant groups shifted from having a chiefly Eastern and Central European profile (dominated by Poles, Romanians and the Czech) to a much diverse composition that increasingly is shaped by educational migration within the European Union (with Germans, Romanians, Norwegians, Croatians constituting the largest groups), but mobilising also citizens of Iran, China, Korea, the United States and Japan.

The University of Pécs introduced the Unified Educational Register (ETR) in 2001 and upgraded it in 2008 (ETR3), containing from this point detailed information on both national and foreign students pursuing short or long term studies (degree seeking students). Three faculties have degree seeking foreign students, with the medical faculty's English and German programs attracting by far the largest foreign student body. There are also alumni databases for national graduates (DPR, alumni carrier following system) as well as for international students – in both regards it needs further clarification as to how much information is available on where students go. The university is dedicated to pursuing a policy of attracting more and more foreign students in testimony to which just recently several new degrees (i.e. various arts such as pottery, musical instruments, or new professional degrees such as architecture or health care professions) were offered by the university in foreign languages, chiefly in English.

In the framework of SEEMIG we requested ETR data from the Educational Directorate of the University of Pécs for the period of 2001-2012. Given that this database serves administrative purposes, its structure reflects the needs of higher educational administration: the individual records are students and a multidimensional variable system is filled out on them from the time they register until they complete their studies which is also entered into a variable. In between, practically everything administrative that happens to a student in the course of her/his studies at the university is noted in the system from course registrations, to grades and course emails by instructors. At the time of entering students into ETR, administrators fill out information on their year of birth; home country, county, settlement; gender; permanent address, citizenship; program of study; name of faculty, place of instruction. A detailed analysis of ETR data is in order in SEEMIG's dynamic historical analysis local case study sections of the Hungarian Country Report.

El/Away Project

Another element of local specialty is the El/Away Project. Pécs was European Capital of Culture in 2010 and the El/Away Project was developed and funded under the framework of this large scale urban project. This web-based project (*www.elprojekt.hu*) features qualitative data on motivations of professionals for emigration, return migration, decision on not migrating, i.e. the actors' perspectives of push and pull factors of migration.

Other data producers

We also consulted two regional offices of national administrative organisations for migration-related data on the NUTS 3 and 5 levels, i.e. for Baranya County and for the City of Pécs. The South Transdanubian Office of the OIN and the regional office of the national health insurance service offer no access to their databases. The data that is created in the course of their administrative activities is transmitted exclusively to their national headquarters where data is processed and transmitted in a way that is usable by the HCSO for producing NUTS 3 and 5 level data gathered by these two organizations. It is in the end HCSO that channels their data into various databases of its own.

SEEMIG data availability by major thematic areas for Baranya County and the City of Pécs

Population, Migration trends, Migrations stock

- Data for usually-resident population, emigrant stock, immigrants, emigrants is available from DEMO and the census for the period 1960-1980
- Limitations:
  - Country of birth since 2007
  - No country of birth of parents
  - Persons who work in a location different from their residence – available only from census
  - No data for: asylum applications, persons granted international protection status

Human capital

- Data is not readily available but can be calculated for total fertility rate, population growth rate and life expectancy at birth.
- Educational attainment is available only in the census but not according to ISCED categories and also not for migrants
- Ethnicity is only available in the census

Labour market

- Data on activity status and employed persons that is available from the Labour Force Survey which is not representative on NUTS 3 and 5 levels, thus only census can offer data for our purposes.

Social and Economic Development

- GDP data is in HUF, not in USD
- Many of the indicators are not interpretable for NUTS 3 and 5 levels:
  - economic growth rate
  - informal economy's per cent of GDP
  - foreign direct investment
  - relative poverty and distribution of population by income groups, welfare expenditure (EU-SILC not representative on NUTS 3 and 5)
  - purchasing power of salary

Target audience, stakeholders

SEEMIG project partner City of Pécs itself

The Municipality of Pécs can make great use of SEEMIG data in two interrelated areas: in evidence-based strategy making activities and in a more general endeavour, in instituting a continuously updated system of "social reporting" to monitor social trends, including migration. Good practice in terms of the latter can be found e.g. in Hamburg, where the city uses a spatial informatics framework (essentially a digital map) where all vital infrastructural, institutional and social information is entered making the urban fabric readable and accessible for all local and other stakeholders, besides serving the purposes of self-monitoring and assisting planning activities. Pécs already has such a spatial informatics framework: although it is currently restricted to data on infrastructure, theoretically the system could be expanded to host data on social trends as well.

- Evidence-based strategy making:
    - The urban development concept, with a scope of 20-30 years, is currently under planning and SEEMIG data can be used in the analysis of historical trends, current situation and predictions. SEEMIG foresight exercises can contribute to the strategy building phase.
    - The planning of equality of chances strategy is currently under way to which SEEMIG can contribute with new perspectives as the nationally prescribed framework of the strategy does include migrant groups (with the exception of a single category, the social provision of kindergarten education for children without Hungarian citizenship).
    - The planning of the integrated urban strategy, with the scope of 7-8 years, will start in June 2013, in the course of which SEEMIG data as well as its strategy building activities can be utilised.
    - The planning of the anti-discrimination strategy is expected to start in June 2013 as well, in the course of which SEEMIG can contribute with new perspectives as the nationally prescribed framework does not include migrant goups.

Local project class

SEEMIG data and the results of foresight exercise will be made available to the public actors of the local project class. Professionals in the public sector will utilise SEEMIG data in their capacities as assistants to decision makers, as well as public "fund-raisers", most importantly in the context of competition for EU funds.

- Urban development experts and decision makers at the City of Pécs
- Pécs Urban Development Agency
- Regional development experts and decisions makers at Baranya County where a new evidence-based regional (county) development strategy is under planning
- South Transdanubian Regional Development Agency
- Experts and decision makers for university development strategy at the University of Pécs

As important stakeholders, also private actors of the local project class will have access to SEEMIG data and other project results. The local consulting firms regularly involved in strategy planning (MSB Ltd., Eco-Cortext Consulting, FACT Institute of Applied Social Research, etc.) already know about the project and are looking forward to new knowledge to be shared with them. Professionals in the private sector will utilise SEEMIG data chiefly in their capacity of contracted partners in evidence-based strategy making activities.

Local professionals

The City of Pécs is home to wide circle of potentially interested professionals working at various organisations.

- The University of Pécs has a wide range of academic areas, including doctoral schools for which SEEMIG data and other results might be of interests (e.g. Regional Economy and Politics, Geography, Political Science, Demography and Sociology)
- South Transdanubian Research Institute of Regional Sciences
- City Cooperation: organization of local professionals to facilitate participation in urban development processes
- El/Away readers

Further migration data that would be needed by the City of Pécs

Finally, there are two areas in which further data would be needed on the processes of emigration from the local societies. As international and internal migration ultimately have an impact upon local societies (as the places of usual residence and hence the sociological bearers of migration), any data improvement (either in registers or in surveys) should be able to account for changes in the overall composition of sending local societies on the level of persons and households. That implies a hitherto missing local system of population monitoring, preferably cast onto a spatial informatics framework, i.e. on map, readable and accessible for local stakeholders.

As emigration brings localities into contact with a web of settlements otherwise out of reach for them, local authorities might want to look upon these links as migration networks. These migration links position the City of Pécs onto the map of Europe in particular and the world in general, to at least as great an extent as business ties or other kinds of connections do. There needs to be thus a systematic way of keeping track of where the urban society receives populations from (not only in terms of what citizenship they have but also in terms of what cities they come from) as well as on where the urban society sends people out into the world. The latter has been known to be proverbially difficult to pin down statistically. There seems to be only one way out, and even that might be functioning only within the European realm: the utilisation of mirror statistics based on an upgraded system of registering incoming populations (either for job permits, resident permits, health care purposes), where not only citizenship but also the former place (city, village) of former residence would be recorded and reported into an EU database.

4. CONCLUSIONS AND RECOMMENDATIONS

In Hungary, data on migration mostly come from data collected for administrative purposes. At present, data on migration are collected by several institutions and authorities which organise and process them according to their own needs. This means that the administrative registers presented in this report were not originally created with a statistical purpose in view and the majority of the data available is a by-product of administrative and immigration procedures relating to migrants. The primary objective of collecting these data is to carry out the procedure in question, to judge the application, and it is only a secondary objective to record or make the data available for statistical purposes. Surely, this kind of priority has its impact on the quality of data available for migration analyses.

Data collected with an administrative purpose and by administrative staff have limited potential for migration statistics: these data usually only offer sufficient information about the most basic information about foreigners (gender, age, country of origin, citizenship, marital status), and a lot of important variables which could serve the research on migration (educational attainment, economic activity, occupation) are incomplete or missing. This is true despite the fact that the institutions involved in data collection on migration do their data collection activity in accordance with the relevant legislation.

A further shortcoming of Hungarian statistics on migration, similarly to all statistical domains that use administrative data for statistical purposes either in Hungary or in other countries, that various institutions have not *harmonised their data collection practice.* Various data sources cover various groups of migrants staying in the country at a given point in time and although the same foreigner may appear in several databases at one time, the overlaps are hard to keep track of (both as regards the range of migrants and the range of data) and there is no connection between the various databases. Besides the absence of connection or at least harmonisation among administrative registers, the *lack of co-operation among various data collector institutions/data handlers* also makes it difficult to use data provided by them. Increasing the coherence among different registers and accurately exploring overlaps and shortcomings are indispensable for creating an adequate data system on migration.

At present, even using the full range of data on migration collected with an administrative purpose is unresolved. A certain part of the data appearing in completed application forms or data forms

- is not recorded or only incompletely recorded in a computerised system;
- the data recorded are not always organised into data files or
- are organised into data files but are then not used because they are incomplete.

This means that these data, although collected in the first place, are ‘lost’ from the point of view of migration statistics. The reason for this is that these characteristics do not influence the outcome of measures or procedures by the authorities, and so from an administrative point of view they are of secondary importance.

It is a further difficulty that besides their quality and reliability, the accessibility of data on international migration is also more problematic in most cases than in other fields of demographic processes. In many cases, even the available data are only accessible in aggregated forms combined into tables, limiting the chance of scientific or statistical use. The main reasons for this are that the secondary use of the registration data of certain administrative areas represents a data protection

risk and also that the organisations responsible for the data at the time of the legislation did not or only partially wished to support their 'recycling'.

Taking into account all the points listed, in order for existing administrative data sources to provide data which are of more use for migration statistics, the following steps should be considered:

1. *improving the quality of data collection:* ensuring that various institutions provide the fullest possible range of data of the highest possible quality, recorded in the appropriate form, increasing the consistency of data and providing access to databases;

2. *connecting/linking migration databases* of various institutions: this would make it possible to combine data with each other and to track the migration career, changes in the legal status etc. of foreign citizens who appear in the various registers;

3. *creating a shared migration database*: which would mean that data with relevance to migration would all be forwarded by all relevant institutions to a shared 'collecting pool' (e.g. the Central Statistical Office) where, by using the appropriate identifiers (IDs), they would be organised into a common database. That way, missing data could be substituted in many cases by data collected in other institutions.

The *quality of data collection* may be improved by simplifying the administrative procedure; assisting non-Hungarian speakers with language issues and procedural law; providing administrative staff with adequate training; by using terminology which allows for comparison and having a unified code system for answers; and by guaranteeing that important data may be recorded. However, this would need significant extra resources at responsible administrative bodies. Administrative staff should be more qualified, they should speak languages, staff members should be regularly monitored and trained, but this could only be achieved with the support of a common government will.

The possibility of linking the databases would itself be a great improvement. One of the major shortcomings in the register of work permits, for instance, is that it is not interconnected with the immigration database. Linking the different databases could be done by using a unique identifier (ID) linked to a certain foreign citizen in all record systems. Even at present it would be possible to link various databases, without a particular ID, since the applications for a residence permit, for instance, submitted to the OIN, contain the visa number (and other particulars), or the number of other residence documents, if available, as well as the number (and other particulars) of the work permit. The National Health Insurance Fund Administration (NHIFA) also asks for the registration number of the residence permit (or other document about the residence) when the person applies for a TAJ code. Interconnecting the various administrative data sources is an important direction for possible further steps because the data of the various registers, when combined with each other, can offer a far more accurate picture of foreigners living in Hungary.

As regards creating a *common migration database*, the HCSO now receives data and databases on migration from a number of institutions involved. Linking the databases has been hindered in the recent years by the fact that in line with the relevant legislation of 2007 the HCSO could not receive a group of the data in a form which allows for personal identification (even though earlier, from the early 1990s, there was no such limitation). Due to a change in legislation, after the end of 2011 the HCSO began to receive the personal data of citizens in certain registers (for instance from the OIN and the COAEPS); while as of 2014, data from the NHIFA will also be handed over in a stock which allows for personal identification. Creating a common migration database would also be important in order to have different data stocks on migration pooled in a harmonised way in one place and to have them processed through resolving inconsistencies to the most complete extent.[20]

[20] We could see that most of the relevant authorities do in some form publish their own data with a migration aspect, even if this is only partial (and occasionally with a very poor data content), however, these are often inconsistent.

In most countries the primary data source for migration statistics is the population register. It's possible there where the file contains all the international migrants has, but this is not the case in Hungary, because people with resident permits are missing. However, this group of the foreigners represents less than one fifth of immigrants. So, with not too much extra work, such a register could be maintained, that would include the total population that officially lives in Hungary.

Based on the above, we may conclude that the present administrative data sources still contain much unexploited potential which could be used by improving the quality of data collection and 'filling up' existing data stocks to the most complete level possible. The role and responsibility of the data collecting institutions is indubitable from this respect. The striving to improve the quality of heir own administrative data stock from a statistical point of view is of crucial importance in order to make better use of migration data collected under the present circumstances.

Besides all of the above, naturally, it would be necessary to introduce data collections with other, non-administrative purposes, which would enable us to gain more detailed indicators to measure the integration of foreigners. In the case of already existing large-sample data surveys (like the LFS), the reliability of data and their suitability for migration analysis could be enhanced by providing a large enough sample of immigrants and by ending their under-representation. Going further, it would be important to introduce regular collection of data on special samples, because both administrative data sources and migration analyses created on the basis of LFS omit certain very important groups, such as the majority of those economic migrants who are in hiding and working in the grey economy or people who commute across the national border on a regular (daily, weekly or monthly) basis.

Owing to the shortcomings of data on foreign citizens who arrive in the country and live here, it is an even greater difficulty of migration analysis that *we have practically no reliable data about emigrants from Hungary*. We know neither their various characteristics, nor even their exact number. Instead of a formal obligation of de-registration (which does not work in practice), it would be important to have an administrative register regulated in a way that would motivate persons moving abroad to give notice of their departure. Instead, according to the latest regulations, as of 1 March 2013 it is only *final* departure from the country that people need to notify the authorities about. The obligation of notification regarding temporary departure from the country has been abolished, even though we know that most people who emigrate leave in the first instance with the intention of but a temporary departure.

Census is an important data source for migration analysis, because it covers the whole population, but since it is only conducted every ten years, it can only trace major demographic trends, which is a great drawback. A register-based census system complemented by large-sample statistical surveys would provide an opportunity to make up for this. From the perspective of migration analysis, however, the Census has some further disadvantages, too. It is only partially suited to 'measure' emigration (it offers no information about cases when the entire household moved abroad), and also has shortcomings as regards immigration. For instance, we still do not know the current legal status of foreigners (based on the 2011 census), nor the date when they acquired it. Also, as regards immigrants already nationalised, the date of acquiring citizenship in unknown, and the second generation immigrants cannot be identified. Taking into account the possibilities inherent in this otherwise rich database, it is recommended and worthwhile to integrate the above described developments.

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6. ANNEX

6.1. Residence permits and the conditions of acquire in Hungary

The Office of Immigration and Nationality registers every person entering Hungary for a longer period apart from a few cases, thus its registers can be considered the main sources of migration data. Information on EEA or third-country nationals who have to apply for any of the following permits and visas are stored:

- registration certificate: EEA citizens residing in Hungary for more than 3 months, no expiration
- residence card: third-country relatives of Hungarian or EEA citizens, it can be obtained for maximum 5 years
- permanent residence card: after 5 years of legal residence EEA citizens and third-country relatives of Hungarian or EEA citizens are entitled for this. In case of EEA citizens the card is valid for undetermined period, while in case of third-country nationals renewal is necessary in every 10 years (without examination of the application for renewal)
- residence permit: is an authorization to reside in Hungary for a limited duration of at least three months and not more than two years. The validity of the permit may be extended for two additional years. Residence permit may be issued to third-country nationals who have a valid long-term visa or national visa, or have a valid residence permit (in case of extension).
- national residence permit: may be issued under international agreement to third-country nationals seeking admission into the territory of Hungary:
  a) to engage in activities to preserve and maintain the Hungarian language;
  b) to engage in activities intended to preserve cultural and ethnic identity;
  c) for the purpose of learning and enlightenment in an establishment of secondary or higher education recognized by the State;
  d) for the purpose of furthering family ties, other than family reunification.

  The validity period of a national residence permit shall be five years maximum, and it may be extended by five additional years at a time.
- interim permanent residence permit: for third-country citizens entering Hungary for employment or education
- national permanent residence permit: may be issued to a third-country national holding a long-term visa, residence permit or an interim permanent residence permit for establishing residence in Hungary, if:
  a) he/she has lawfully resided in Hungary continuously for at least the preceding three years before the application was submitted;
  b) he/she is a family member of dependent direct relatives in the ascending line - other than the spouse - of a third-country national with immigrant or permanent resident status or who has been granted asylum, and he/she has been living in the same household for at least the preceding one year before the application was submitted;
  c) he/she is the spouse of a third-country national with immigrant or permanent resident status or who has been granted asylum, provided that the marriage was contracted at least two before the application was submitted;
  d) the applicant was formerly a Hungarian citizen and his/her citizenship was terminated, or his/her ascendant is or was a Hungarian citizen.
- EC permanent residence permit: may be issued for long-term residence in the territory of Hungary to third-country nationals having lawfully resided in Hungary continuously for at least the preceding five years before the application was submitted.
- Permits which still can be valid but not issued any more: immigration permit (until 2001), EEA resident permit and previous type permanent residence permit (until 2007).