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

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CONTENT

Overview on abbreviations, acronyms and English translations

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

Acryonm/ abbreviation	Endonym	English translation
AE	*Abgestimmte Erwerbsstatistik*	*Register-Based Labour Market Statistics*
AGH	*Asylgerichtshof*	*Supreme Court of Asylum*
AIS	*Asylwerberinformationssystem*	*Information System on Asylum Seekers*
AMDB	*Arbeitsmarktdatenbank*	*Labour Market Database State*
AMS	*Arbeitsmarktservice*	*Labour Market Service*
AOE	*Auslandsösterreicher Registrierung*	*Registration of Austrians Residing Abroad*
BAA	*Bundesasylamt*	*Federal Asylum Office*
BALI	*Budget, Arbeitsmarkt und Leistungsbezugsinformationen*	*Budget, labor market and performance related information**
BFA	*Bundesamt für Fremdenwesen und Asyl*	*Federal Office for Alien Matters and Asylum**
BFIS	*Bundesstatistische Fremdeninformationssystem*	*Federal Alien Information System*
BIS	*Betreuungsinformationssystem*	*Basic Welfare Support Information System**
BIS	*Studieninformationssystem des Fachhochschulrates*	*Information system of the Inspectorate for Universities of Applied Scienves*
BK	*Bundeskriminalamt*	*Federal Criminal Intelligence Service*
BKA	*Bundeskanzleramt Österreich*	*Austrian Federal Chancellery*
BMASK	*Bundesministerium für Arbeit, Soziales und Konsumentenschutz*	*Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection*
BMeiA	*Bundesministerium für Europäische und Internationale Angelegenheiten*	*Austrian Federal Ministry for European and International Affairs*
BMF	*Bundesministerium für Finanzen*	*Austrian Federal Ministry of Finance*
BMG	*Bundesministerium für Gesundheit*	*Austrian Federal Ministry of Health*
BMI	*Bundesministerium für Inneres*	*Austrian Federal Ministry of the Interior*
BMJ	*Bundesministerium für Justiz*	*Austrian Federal Ministry of Justice*
BMUKK	*Bundesministerium für Unterricht, Kunst und Kultur*	*Austrian Federal Ministry of Education, Arts and Culture*
BMWF	*Bundesministerium für Wissenschaft und Forschung*	*Austrian Federal Ministry of Science and Research*
BMWFJ	*Bundesministerium für Wirtschaft, Familie und Jugend*	*Austrian Federal Ministry of Economy, Family and Youth*
BPD	*Bundespolizeidirektion*	*Federal Police Directorate**
bPK code	*Personenkennzeichen Amtliche Statistik*	*area-specific personal code**
CES	*Konferenz der Europäischen Statistiker**	*Conference on European Stasticians*
CIREFI		*Centre for Information, Discussion and Exchange on the Crossing of Frontiers and Immigration*
EEA	*Europäischer Wirtschaftsraum*	***European Economic Area***
ELIS	*Wirtschafts- und Arbeitsmarkt- Informationssystem**	*Economic and Labour Market Information System*
ERnP	*Ergänzungsregister für natürliche Personen*	*Supplementary Register (for Natural Persons)**
ESS	*Europäisches Statistisches System**	*European Statistical System*
EU	*Europäische Union*	*European Union*
EU-SILC	*Gemeinschaftsstatistiken über Einkommen und Lebensbedingungen*	*European Union Statistics on Income and living conditions*
eVA	*Elektronischer Verwaltungsautomation*	*electronic administrative acts**
FIS	*Fremdeninformationssystem*	*Alien Information System*
GES	*Gesamtevidenz der Studierenden*	*Evidence system on students**
HV	*Hauptverband der österreichischen Sozialversicherungsträger*	*Main Association of Austrian Social Insurance Institutions*
IFA	*Integrierte Fremdenapplikation*	*Integrated Alien Application**

ILO	*Internationale Arbeitsorganisation*	*International Labour Organization*
ISCED	*Internationale standardisierte Klassifikation der Bildungsabschlüsse**	*International Standard Classification of Education*
ISCO	*Internationale Standardklassifikation der Berufe*	*International Standard Classification of Occupations*
LFS	*Arbeitskräfteerhebung*	*Labour Force Survey*
LPD	*Landespolizeidirektionen*	*Regional Police Directorates**
MZ	*Mikrozensus*	*Microcensus*
NACE	*Wirtschaftszweigklassifikationen der Europäischen Union**	*Statistical Classification of Economic Activities in the European Community*
NUTS	*Systematik der Gebietseinheiten für die Statistik**	*Nomenclature of territorial units for statistics**
OECD	*Organisation für wirtschaftliche Zusammenarbeit und Entwicklung*	*Organisation for Economic Co-operation and Development*
PAD	*Protokollieren-Anzeigen-Daten*	*Police-Administration-Database**
POPREG	*Bevölkerungsregister**	*POPulation REGister*
SZR	*Stammzahlenregisterbehörde*	*Source PIN Authority**
UN	*Vereinte Nationen*	*United Nations*
UNIVIE	*Universität Wien*	*University of Vienna*
WP	*Arbeitspaket*	*Work Package*
ZMR	*Zentrales Melderegister*	*Central Register of Residents*
ZPR	*Zentrales Personenstandsregister*	*Central Civil Status Register*
ZSR	*Zentrales Staatsbürgerschaftsregister*	*Central Citizenship Register*
	Arbeitsanalysedatenbanken	*Work Analysis Databases**
	Anhaltedatei	*Database on detention pending deportation and more lenient measures**
	Anmeldebescheinigung	*registration certificate**
	Applikation Lokales Melderegister	*Application Local Register of Residents*
	Bildungsstandregister	*Educational Attainment Register*
	Bundesländer	*Austrian province**
	Bundesverwaltungsgericht	*Federal Administrative Court*
	Bürgerkarte	*Citizen Card**
	Datenschutzkommission	*Austrian Data Protection Commission*
	Fremdenpolizei	*Aliens Police*
	Gemeindeamt	*Municipal office**
	Lokale Evidenzdateien	*local databases**
	Magistrat	*Magistrate*
	Magistratisches Bezirksamt	*Municipal District Office*
	Meldebehörde	*Local Competent Registration Authority**
	Meldebestätigung	*confirmation of registration**
	Meldeschlüssel	*registration key**
	Schlepperdatenbank	*Smuggler Database**
	Sicherheitsdirektion	*Federal Security Directorate**
	Staatssekretär für Integration	*Secretary for Integration**
	Staatsbürgerschaftsabteilung	*Naturalisation Office**
	Stammzahlenregisterbehörde	*Source PIN Authority**
	Standesamt	*Local Register Office**
	ZMR-Zahl	*ZMR number*

Executive Summary[1]

Towards evidence-based policy-making on migration

In the last decades, migration as pivotal demographic phenomenon has increasingly entered into policy and public debates. For Austria, confronted with population ageing resulting from declining fertility rates accompanied by an increasing individual life expectancy, immigration will remain an important aspect for population development in the future.[2] The necessity of underpinning and justifying effective policy measures in the areas of migration and integration based on statistical and scientific evidence is becoming more and more obvious. This can be seen in the design and upgrading of administrative and statistical data sources, which also deliver results for new publication formats targeted at displaying migration-related data for reaching the wider public. An example of this is the annually issued *Statistical Yearbook* "migration & integration", which has displayed a range of statistical core results in a consolidated format since 2010.

Significant trends towards register-based data production

Since the beginning of the twenty-first century, the data production system in Austria has been in transition, and a distinct evolution towards register-based data collection can be perceived. Data is being increasingly computerised and interlinked in order to optimise administrative data sources and also for statistical purposes. Definite milestone in this respect included the launch of the *Information System on Asylum Seekers (AIS)*, the *Alien Information System (FIS)* and the *Central Social Security Database* already in the 1990s. Regarding population statistics, the implementation of the *Central Register of Residents ZMR* and subsequently of its mirror statistical register, the *POPulation REGister POPREG*, constituted obvious turning-points in 2001/2002. The *Educational Attainment Register* has been in place since the academic year 2003/2004, and *the Labour Market Database (AMDB)* was set up in 2006. After a long tradition of exhaustive census, data from the first *Register-based Population Census* from 2011 will be available during the first half of 2013. Supplementary, non-register based sources of major relevance, such as surveys carried out in the EU context, have considerably methodologically evolved, i.e. the *Microcensus*, including the *Labour Force Survey (LFS)*, and the *European Union Statistics on Income and living conditions* (*EU-SILC)*.

Associated with register-based data production, legal bases were defined to better regulate the interplay among actors responsible for data production on different territorial and institutional levels. However, due to a lack of interlinks and of automatic matching of data, data is only comparable in a very limited way, even though many efforts have been undertaken to enhance the compatibility of different registers. Better interlinking of databases constitutes a range of technical challenges concerning both the overall set-up and the appropriate legal preconditions, both require intensive coordinative efforts.

Infobox: The SEEMIG project and the context of Work Package 4 on data production

SEEMIG is a transnational cooperation project that is being implemented in the framework of the programme SOUTH-EAST EUROPE from 2012-2014. In order to facilitate evidence-based policy-making on the national, regional and local levels, and focusing on data availability and data enhancement, the main objective of SEEMIG is to better understand and address the longer term migratory, human capital and demographic processes of the SEE area as well as their effects on labour markets and national/regional economies.

The WP 4 analysis of data production systems in SEEMIG countries provides insight into processes of migration-related data production and reveals the strengths and weakness of different data sources. As one of eight country reports in total, the country report for Austria intends to deliver essential information about the shortcomings of data quality, help in better understanding aspects of data availability, reliability and comparability, and serve as input knowledge for the transnational synthesis report. It also aims to contribute to the common further SEEMIG activities, i.e. a SEEMIG database, the formulation of recommendations aiming at enhanced data production, and interactive discussion rounds with experts concerned with data production and decision-makers applying data, including the SEEMIG Panel of Experts.

[1] ***The executive summary is also available in German at*** *http://raumforschung.univie.ac.at/forschungsprojekte/seemig/*

[2] Migratory development patterns and trends in the policy context in Austria will be further examined in the framework of the SEEMIG Country Report Austria on longer term migration trends, which will be available in summer/autumn 2013.

Data quality and international comparability of statistical concepts

The enhancements of databases in the recent past were accompanied by more definite conceptualisations of indicators. While no temporal concept was applied for defining usual resident population in the framework of traditional census rounds until 2001, for the *POPREG* since 2002 and the *Register-based Population Census* since 2011[3], only persons who are uninterruptedly registered with their main residence for more than 90 days are counted as being usually resident. Regarding migratory flows, since 2001, the definition in the *UN Recommendations on Statistics of International Migration 1998* has been applied. This means that for the Migration Statistics elaborated by *Statistik Austria* based on *POPREG* data derived from the *ZMR*, both short-term and long-term migration of both international and internal migration are considered for national purposes. Consequently, it is possible to trace migratory movements, namely immigration flows, emigration flows and re-migration flows, according to officially registered movements.

However, in general, as in all countries, migration in total is likely to be underestimated in administrative data sources, as they only show an administrative reality. This might also occur in further enumerations or surveys due to language barriers and non-respondents, partially because participation in the survey is not obligatory. Another restricting factor, particularly regarding surveys, is an often relatively small sample size, which hampers the small-scale meaningfulness of statistical results.

Some specific data will remain a challenge in the future, for instance, emigrant stocks, because data on Austrian citizens residing abroad still are based on estimates which are partially based on mirror statistics; conclusions can also be drawn by analysing flow data, i.e. de-registrations recorded in the *ZMR*. Finally, estimating irregular migration will remain difficult due to its hardly tangible nature.

Enhancement and mainstreaming of migration-related data

Statistical data production based on administrative register databases generally poses some difficulties, particularly regarding specific attributes or variables which are of major importance for policy-makers or for researchers, but which are not of relevance for administrative purposes. Consequently, clear steps have been made towards increasingly integrating several indicators that make it possible to analyse migratory development patterns and trends, including nuances regarding nationals and non-nationals. This trend can be observed both on the international and the European level, as well as on the national level.

In Austria, for instance, the variable "*country of birth"* was re-introduced into the traditional census in 2001, after 20 years of non-consideration. It has been maintained for the *ZMR* and, consequently, also for its statistical mirror register *POPREG* since 2002, and the *Register-based Population Census* since 2011. Thus, by combining the variables "*citizenship"* and "*country of birth"*, the population of foreign origin can be generated; this has been conducted for the *POPREG* since 2007. In 2008, the *Microcensus* first introduced the variable "*country of birth of parents"* in the framework of the *ad-hoc-module 2008 on the labour market situation of migrants in Austria*. This enrichment has been maintained since then in order to differentiate migration background along the first and second generation. Nevertheless, inconsistencies between different datasets remain regarding these core variables: While *citizenship* is included in all data sources as prescribed above, the *country of birth* is only given fragmentarily, as most registers do not record it.

[3] This concept was also applied for the census test round in 2006.

Efforts on enhancing data production & preliminary recommendations from an academic perspective

The range of possible advantages of register based data production can only come to maturity after single registers have existed for a longer time, which is primarily linked to coherent data collection and data processing and to cross-cutting, consistent definitions of indicators across several registers. This is primarily depending on enhanced and continuous reciprocal cooperation of actors in maintaining and enhancing connections between the different databases on a long-term basis. Current efforts aiming at ameliorating register-based data production in Austria could help in enhancing data gathering on migration: The *ZMR* will incorporate the *Central Civil Status Register ZPR* and the *Central Citizenship Register ZSR* starting in November 2013. The *Ad-hoc-module 2008 on the labour market situation of migrants and their immediate descendants* of the *Microcensus* will be repeated in 2014. The *AOE Registration of Austrians Residing Abroad* could at least theoretically become of statistical significance in a few years.

Hence, harmonising different datasets and variables is essential. For instance, it would be desirable to continuously foresee *country of birth* in various fields of statistics, e.g. on labour market or educational attainment. As a next future step, it would constitute a major enrichment to also include the variable "*country of birth of parents"* as it is the case for the *Microcensus* and consequently for the *LFS* since 2008. This would allow more multi-facetted analyses of migratory patterns and processes, even if statistical analyses along those aspects can also be seen in an ambivalent light. Especially for Austria as an immigration country, as also outlined in the context of the Transition Theory, which was identified as one conceptual backbone for SEEMIG in the course of the *SEEMIG WP3 Conceptual Paper*, knowing more about immigrants is crucial in order to better conceptualise migration and integration management measures. Enhanced usability of evidence-based results could also specifically serve the needs of institutional actors to better respond to emerging challenges related to migration.

Although some being disputable, further variables which could be useful for analysing migratory patterns and events such as *religion*, *origins* or *ethnicity* and *colloquial language*, are mostly not included in registers, surveys or estimates and are consequently not of statistically exploitable. In-depth information on individual migratory histories are hardly traceable, as information on legal status, duration of stay or former intermediate residences in other countries are hardly enumerated; in addition, motives and reasons for migrating are not systematically surveyed.

Other projects and studies also criticize a lack in longitudinal data and migration-specific surveys, which could only be responded to by setting up longitudinal databases or by introducing a panel survey. Fortunately, the second option will be tested in the SEEMIG context for Hungary and Serbia in relation to the *LFS*, and the approach might be transferable to other countries in the future as well.

1. INTRODUCTION

Main focus and aims of SEEMIG country reports

The analysis of data production systems of migration-related data in SEEMIG countries provides insight into production processes and reveals the strengths and weakness of different data sources. In the framework of Work Package 4 (WP4), country reports are being produced for eight countries in the South-East European region: Austria, Bulgaria, Hungary, Italy, Romania, Serbia, the Slovak Republic and Slovenia. The analytical work will deliver essential information about the shortcomings of data quality, help in better understanding aspects of data availability, reliability and comparability, and serve as input knowledge for the transnational synthesis report. The analytical work also aims to deliver the common basis for building a SEEMIG statistical database containing all relevant indicators defined for the measurement of migration processes and effects related to human capital, socio-economic development and the labour market (identified in the *SEEMIG Data Requirement Paper*).

In addition, the comparison of existing data production systems followed by the collection of key data aims to provide good practises and fill data gaps in SEE. This platform will contribute to formulating recommendations for data enhancement (WP5), and strategies aiming at enhanced data production (WP6). Finally, this exercise aims to contribute to future interactive SEEMIG discussion rounds with experts and entities concerned with data production and decision-makers applying data. These events will be organised at the national and transnational level, also involving the SEEMIG Panel of Experts.

Country Report Austria: specific contents and priorities

This country report presents main data sources on migration-related issues in Austria, considering data sources on demographic, labour market-related and human capital related events, as also outlined in the *WP3 Conceptual Paper* and *Data Requirement Paper*. The following migration-related aspects constitute the core of the analytical work carried out: immigration flows, emigration flows, re-migration, acquisition of citizenship, asylum, irregular migration and remittances.

In chapter 2, general trends in data production will be outlined, before briefly presenting major actors responsible for data production. Subsequently, data sources of relevance for SEEMIG in general and for the given country report and their inter-linkages will be described. The country report is specifically dedicated to outlining developments and structures of data production systems from 2001 until spring 2013, and also attempts to highlighting plans for future enhancements, i.e. upgrading and inter-linking sources. Specific emphasis is put on major data sources of relevance for capturing information on migration-related events plus demographic, labour market-related and human capital-related aspects. Hence, registers of central significance for migration research are outlined. For population stocks, flows and naturalisations, the *Central Register of Residents ZMR* and its statistical mirror register *POPREG* have constituted the main sources since 2002. For 2001, data can be derived from the population census which was carried out as a traditional census for the very last time. For 2011, data from the first *Register-based Population Census* will be available in the first half of 2013. The *Austrian Federal Ministry for European and International Affairs* (*BMeiA*) provides estimates of emigration stocks of Austrian citizens residing abroad, although they are based on non-unified and therefore disputable in statistical terms. The *Alien Information System FIS* and the *Information System on Asylum Seekers AIS* are the main sources on residence permits and applications for asylum. The *Central Social Security Register* contains information on all socially insured persons plus their dependent family members. The labour market data collected by the *Labour Market Service* relies on data stemming from the *Central Social Security Register* and data from both sources has been combined in the framework of the *Labour Market Database AMDB* since

2006. The *Educational Attainment Register* has been in place since the academic year 2003/2004. Since 2008, valuable information has also been generated in the framework of the register-based labour market statistics, which also fed into the census 2011. Finally, the *Microcensus*, which also includes the *Labour Force Survey LFS*, provides rich information on occupational and educational aspects.

The subchapters of chapter 2 are dedicated to systematically examining the aforementioned data sources of major significance in the SEEMIG context. Accordingly, actors involved in producing data, underlying laws and regulations, concepts, definitions, variables, changes in methodology within the reference timeframe 2001-2013 will be described. Migration-related aspects will be at the core of the analysis. In accordance with the perspective chosen for Austria, emphasis is laid on highlighting limitations of conceptual approaches and statistical usability, of comparisons between different data sources and of outlooks on foreseeable steps to expand and further inter-link existing sources, therefore also towards data enhancement.

In chapter 3, conclusions will be drawn and recommendations for data enhancement and usability will be formulated. As annexes, an overview of the 45 indicators, which were commonly identified by the SEEMIG project partners, displays the state-of-the-art as regards available indicators and their definitions in the Austrian context, furthermore used classifications and an overview on data sources as described in the very beginning of chapter 2 are included.

Target audience in the Austrian context

This country report intends to contribute to the national debate on statistical usability of given data sources, connected concepts, definitions and methodologies of producing data. In this context, it builds upon scientific expertise gathered in the framework of precedent studies and projects, but follows a more data source-oriented and comparative approach than other research projects. Furthermore, this report also aims to highlight trends and ongoing efforts to contribute to data enhancement. One target audience is therefore comprised of experts that directly produce data on migration and data application, including experts that contribute to debates dedicated to ameliorating evidence for migration-related policy-making, i.e. research and academic institutes.

The second target group consists of policy-makers and decision-makers who rely on migration data when arguing place-based policies and financial frameworks, i.e. national, regional and local level administrations and intermediate bodies dealing with sectoral challenges and spatial developments. As mentioned above, this report is the first product in the series of SEEMIG activities. An analysis of migratory developments and patterns in the context of evolving policy contexts will be available by autumn 2013 (SEEMIG WP3 Country Report Austria on longer term migration). Furthermore, a variety of discussion rounds with Austrian stakeholders and experts are foreseen in 2013/2014 to contribute to enhanced data production, data usability and specifically data usage, also in the European and international context. As a final product, recommendations will be derived from the aforementioned activity. Consequently, this report attempts to present a consolidated and critical portrait of the data production methods that currently exist and are still evolving in Austria.

Methodology of elaboration

This country report is mainly based on desk research carried out by the UNIVIE team. The team screened metadata documents, websites and databases, and also thematically-related publications and outputs of precedent projects[4]. Contrary to other SEEMIG partner countries, which have involved statistical offices that are directly in charge of data production and contribute with background information, UNIVIE is the sole scientific partner that is participating in the SEEMIG consortium in Austria. Consequently, there is neither direct in-house knowledge, nor insider

[4] THESIM http://www.uclouvain.be/en-7823.html, PROMINSTAT http://www.prominstat.eu/drupal/?q=node/64, MIMOSA http://mimosa.gedap.be/, CLANDESTINO http://irregular-migration.net/; Fassmann et al. 2009

information on data production, nor direct access to data. To compensate for this, desk research exercises were complemented by face-to-face and telephone interviews with experts of the respective responsible institution. In-depth interviews with selected experts took place on data evaluation, changes in methodology and future developments to be expected: these interviews were then followed up with written correspondence. Nevertheless, the perspective of the country report remains of an external, research-oriented nature.

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2. DATA SOURCES AND RESPONSIBLE AUTHORITIES

Towards register-based data collection – general trends of migration-related data[5]

Starting in the 1980s, recognisable attempts to gather more systematic information on migration arose in Austria in close connection with the increased emergence of migration-related topics in public and policy debate. In the 1990s, the cornerstone for a variety of datasets was laid. Population Statistics based on register data have been produced by *Statistik Austria* since 1996. The *Federal Ministry of the Interior (BMI)* launched the *Alien Information System (FIS)* and the *Information System on Asylum Seekers (AIS)* in the 1990s as well. The *Central Social Security Register* was launched in 1995 and has been an important basis for other registers and statistics since then.

The Austrian data production system looks back on a long tradition of censuses to quantify the resident population: Starting in 1869, censuses took place usually decennially, a practice which ended in 2001 when the last traditional census was carried out. Since the turn of the millennium, population-related datasets in Austria have increasingly relied on register-based sources. This is a trend which is also noticeable in the majority of European countries and will further continue to evolve in the future. One of the registers of central significance for Migration Statistics and consequently for research on migration in Austria is the *Central Register of Residents* (*ZMR*), which has constituted the administrative basis for its statistical mirror register *POPREG* since 2002. The *ZMR* provides solid, administrative data for comprehending population stocks, i.e. nationals and non-nationals, flows (i.e. immigration, emigration, re-migration) and naturalisations. For 2011, data from the first *Register-based Population Census* will be available during the first half of 2013, whereby information on aspects related to the labour market is affiliated with register-based labour market statistics, which have been elaborated on an annual basis since 2008.

Labour market data as collected by the *Labour Market Service* in a register-based manner rely on data stemming from the *Central Social Security Register*, and has been combined with the latter in the framework of the *Labour Market Database (AMDB)* since 2006. The *Educational Attainment Register* has been in place since the academic year 2003/2004. The *Microcensus* also includes the *Labour Force Survey (LFS)* and provides rich information on occupational and educational aspects.

Overview on data sources in Austria in the SEEMIG context

The data sources listed below constitute the main sources of information for quantifying the migratory events which have been identified as focal points of the given SEEMIG country reports on data production systems. This particularly concerns migratory aspects of immigrant stocks, emigrant stocks, immigration flows, emigration flows, re-migration flows, asylum seekers and naturalisation/ acquisition of citizenship. The pursuing chapters are dedicated to thoroughly examining most of the mentioned sources and their developments since 2001, in accordance with the established research priorities as described above: actors involved in producing data, underlying laws and regulations, concepts, definitions, variables, changes in methodology and outlooks as regards steps towards data enhancement. As regards the topic irregular migration, related data sources are only briefly described in the context of *the Smuggler Database** (*2.1.3.4*). Regarding remittances, related data sources are only briefly described in the context of *Annex 5.1*; e.g. an estimation model was developed to identify workers' remittances from abroad to Austria and pay slip statistics are the main source of data for workers' remittances from Austria.

[5] Abbreviations and acronyms see *Annex 5.2*; further information on development of sources: see also several metadata documents as issued by Statistik Austria, Bilger & Kraler 2006, Kraler et al 2009, Reeger 2009 and Reichel 2011; CLANDESTINO project – Country Report Austria: Kraler et al 2008.

This country report mainly aims to describe the following data sources[6]:

	Name of data source	responsible institution	main purpose and main content
Registers	Central Register of Residents (ZMR)	Federal Ministry of the Interior (BMI)	**administrative register**: recordings of main and secondary residences, vital events, change of citizenship
	POPREG (POPulation REGister)	Statistik Austria	**statistical mirror register**: population stock & flow data, demographic events, citizenship changes
	Alien Information System (FIS)	BMI	**administrative register**: residence permits; enforcement measures
	Information System on Asylum Seekers (AIS)	BMI	**administrative register**: asylum claims and procedures
	Basic Welfare Support Information System* (BIS)	BMI	**administrative register**: asylum seekers in federal care
	Smuggler Database*	BMI	**administrative register**: apprehensions
	Central Social Security Register (HV)	Main Association of Social Insurance Carriers (HV)	**administrative register**: social insurance cases
	Labour Market Database (AMDB)	Labour Market Service (AMS)	**statistical register**: longitudinal labour market data
	Educational Attainment Register	Statistik Austria	**statistical register**: educational attainment
Sureys	Microcensus & Labour Force Survey (MZ & LFS)	Statistik Austria	**EU-related survey**: employment & unemployment
Census	Population Census until 2001	Statistik Austria	exhaustive statistical census
	Register-based Population Census	Statistik Austria	exhaustive statistical register-based census
	Mini Register-based Census & Register Based Labour Market Statistics	Statistik Austria	annual census for fiscal equalisation *(part of annual census for fiscal equalization)*
Estimates	Estimates on Austrians Residing Abroad	Austrian Federal Ministry for Foreign Affairs	**estimates**: on Austrians residing abroad in destination countries

In order to investigate the commonly agreed 45 indicators to measure migration-labour market-demography and human capital related processes within the SEEMIG context as identified in the framework of *the SEEMIG Data Requirement Paper* in the context of this report (see *Annex 5.1*), a variety of administrative and statistical data sources to measure migration and integration are of central relevance. However, they cannot be examined in detail in the framework of this report[7]. These include the *PISA* survey carried out by the *OECD* for tracing education-related patterns or *the EU-SILC* for estimating indicators on income and living conditions. The same applies for "feeding sources" or comparison registers for one or some of the aforementioned data sources[8]. Further aspects important to measuring the integration of immigrants (e.g. health, discrimination) are not considered within this report. Examples of further data sources include: the *Statistics on Infant Day-Care Centres*, the *Register of Enrolled Pupils and Students*, the *Austrian Health Survey*, the *Police Criminal Statistics*, the *Microcensus Survey on Housing and Dwellings* or the *General Income Report*, the *Survey on the Perception of Migration and Integration in Austria*.

[6] In order of appearance in this country report.

[7] e.g. *National Accounts* data, *Household Budget Survey*, *Foreign Trade Statistics* (Intrastat and Extrastat), *Job Vacancy Survey*, *Labour Cost Survey*, monthly and annual surveys of the *Austrian National Bank (OeNB – Oesterreichische Nationalbank)* on foreign direct investment in Austria.

[8] e.g. *Housing Register of Buildings and Dwellings, Business Register of Enterprises and their Local Units (including the Agricultural and Forestry Register), Tax Register, Child Allowance Register, Registers of Public Servants of the Federation and the Federal States, Register of Social Welfare Recipients, Register of Alternative Civilian Service, Conscription Register, Register of Car Owners* etc.

Main actors in charge of data production

Statistik Austria constitutes the pivotal actor in producing data for statistical purposes. The data stems from a variety of registers, surveys and other data sources, and thereby covers a wide range of thematically diverse statistical results. In this context, the *POPREG*, the population census, EU-related surveys such as *Microcensus* (incl. *LFS*) and the *EU-SILC* lie in the direct competence of *Statistik Austria*.

The *Federal Ministry of the Interior (BMI)* is responsible for the *Central Register of Residents ZMR* and of several databases gathering information on non-nationals, i.e. the *Alien Information System* (FIS)*, the *Information System on Asylum Seekers* (AIS)* and the *Basic Welfare Support Information System* (BIS)*. The latter two databases are maintained by the *Federal Asylum Office* as institutional part of the *BMI*. The *Federal Criminal Intelligence Service* collects data on smugglers in the *Smuggler Database** and further data on enforcement. *Judicial Crime Statistics* are collected by the *Austrian Federal Ministry of Justice*. Also on behalf of the *BMI*, the *Austrian Data Protection Commission* in its function as *Source PIN Authority** is in charge of anoymising several administrative data.

The *Austrian Federal Ministry for European and International Affairs (BMeiA)* delivers data on visa and estimates on Austrian nationals residing abroad. The *Central Social Insurance Register* lies in the responsibility of the *Main Association of Austrian Social Insurance Institutions (HV)*. The *Labour Market Service (AMS)* holds a range of registers on registered unemployment and work permits and also the *Labour Market Database (AMDB)*, on behalf of the *Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASK)*.

Several other ministries collect data which could be of relevance for gathering information on specific fields of integration, e.g. the *Federal Ministry of Finance*, the *Federal Ministry of Economy, Family and Youth*, *Ministry of Health*, the *Federal Ministry of Education, Arts and Culture* and the *Federal Ministry of Science and Research*.

A range of further actors at the local, regional and national levels are involved in different stages of data collection: they are referred to in the framework the following sub-chapters.

2.1. Administrative (register-based) data sources

2.1.1. ZMR – Central Register of Residents (Federal Ministry of the Interior)[9]

The *Central Register of Residents* (*ZMR – Zentrales Melderegister*) is an administrative database that is centrally maintained by the *Austrian Federal Ministry of the Interior* (*BMI)* and comprises all persons registered as residents in Austria. The *ZMR* primarily aims to record residence-related data on persons who are registered with a residence in Austria. This also includes registrations of main residences for homeless people for their contact address and information on prisoners as provided by prisons (Statistik Austria 2010a:9). Asylum seekers are also included (*see 2.1.3.2*). The *ZMR* does not foresee any differentiation along these groups; they are solely registered as persons with a registered residence in Austria. Tourists are not included in the ZMR. As outlined below, births and deaths are provided *Local Register Offices**, and changes of citizenship are linked to the issuance of citizenship notifications by *Naturalisation Offices** (Statistik Austria 2010a:17). The central legal bases for the *ZMR* are the *Registration Act 1991* (*Meldegesetz*) and the *E-Government Law 2004*, as well as the *Civil Status Act 2013* (*Personenstandsgesetz*), the amended *Citizenship Act 1985* (*Staatsbürgerschaftsgesetz*) and the *Name Change Act 1988* (*Namensänderungsgesetz*).

From ZMR to POPREG – from administrative to statistical data

The *ZMR* itself has not been set up to immediately meet the demands of population or migration statistics. Consequently, *ZMR* data is of administrative relevance only, and is therefore neither of statistical relevance nor accessible for analytical purposes. Data stemming from the *ZMR* constitutes the principal basis for the "statistical twin" database of the *ZMR*, the so called *POPREG* ("*POPulation REGister*"), which is operated by *Statistik Austria* (*see 2.1.2*). At *Statistik Austria*, *ZMR* data is not evaluated directly, but first processed using a database which contains historical data and is refreshed whenever new data is supplied from the *ZMR*. In a next step, datasets for statistical purposes are generated from this database. It is the basis for the new register-based demographic system at *Statistik Austria* (Lebhart et al. 2007:279).

Interplay of Layers – ZMR, ERnP, ZPR, ZSR and SZR

The *ZMR* is the basis register in this context, containing individual-related data respectively connected to one specific *ZMR number* (*ZMR-Zahl*) per person. The *ZMR number* is an ordinal number of twelve figures or a personal authoritative code, used both for nationals and non-nationals registered with their main residence in Austria. Due to data protection, the *ZMR number* is only recorded in framework of the *ZMR* and saved on the individual *Citizen Card** (*Bürgerkarte*). The second basic register is the *Supplementary Register (for Natural Persons)** (*ERnP – Ergänzungs-register für natürliche Personen*) which includes persons who are of administrative relevance, but who do not reside in Austria, i.e. frontier commuters, seasonal workers and Austrian citizens residing abroad who left before 2001 and are therefore not registered in the ZMR, but are still subject to social contributions. Deaths occurring abroad pose specific challenges for the *ERnP*. The *ERnP* uses another ordinal number, which is designed similarly to the *ZMR code*. Starting in April 2013, the *ZMR* will be further extended by integrating the *Central Civil Status Register (ZPR – Zentrales Personen-standsregister*) and the *Central Citizenship Register (ZSR – Zentrales Staatsbürgerschaftsregister),* which will become fully operational in November 2013. The *ZMR* will still remain the pivotal basis register. While the *ZPR* aims to centrally record vital events, the *ZSR* will contain changes of citizenship (*see below for more information*). The registers are widely interlinked, rendering mutual updates possible, e.g. name changes indicated in the *ZPR*, the *ZMR* or *ERnP* are updated

[9] Information included in this chapter relies on an expert interview with Markus POPOLARI (Austrian Federal Ministry of the Interior) and information gained from Stephan MARIK-LEBECK and Alexander WISBAUER, Statistik Austria. Further central sources of information include: http://zmr.bmi.gv.at (last consultation 26 February 2013) and https://www.help.gv.at/Portal.Node/hlpd/public/content/118/Seite.11802001.html (last consultation 19 March 2013)

automatically. Via the *ZPR,* the *ZSR* is updated on personal data; in reverse the *ZSR* updates information on citizenship in the *ZPR*. As a precondition, persons generally must be registered in the *ZMR* or the *ERnP*. Only the *ZPR* provides updates on personal data, including citizenship, to the *ZMR/ERnP* if there are changes.

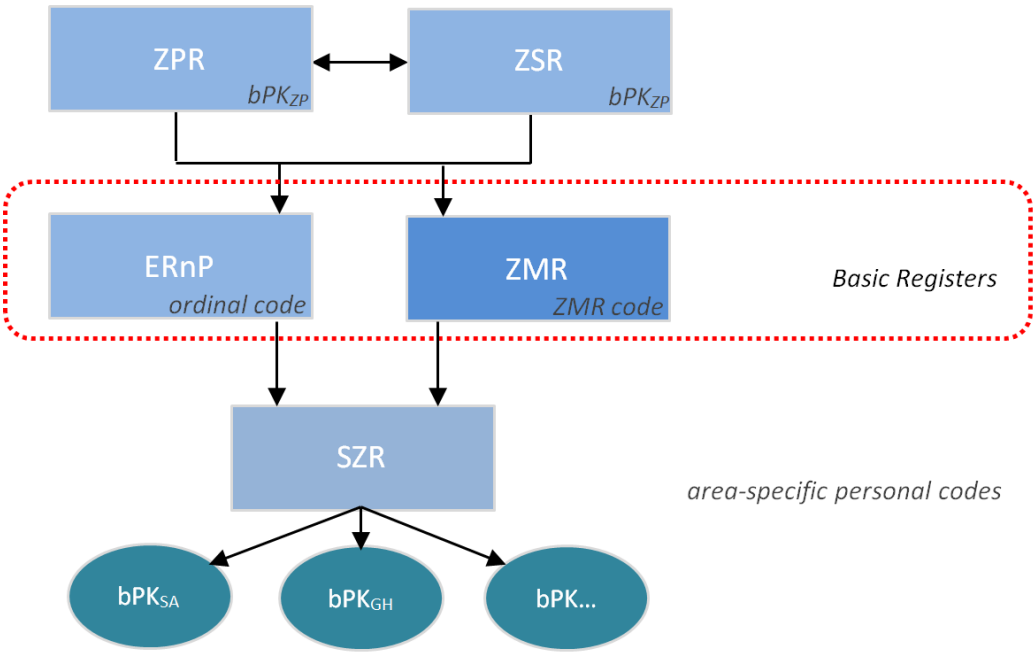

Figure 1: ZMR and interlinked registers (own illustration)

In close collaboration with the divisions of *Austrian Federal Chancellery* (*BKA – Bundeskanzleramt Österreich*) in charge of data protection and e-government, a data collection and linking method was elaborated for eliminating direct personal references in the data delivered to *Statistik Austria*.[10] The *BMI* hosts a clearing office that is specifically dedicated to anonymising data stemming from other administrative sources: The *Austrian Data Protection Commission** (*Datenschutzkommission*) in its function as *Source PIN Authority** (*SZR - Stammzahlenregisterbehörde*) is responsible for maintaining administrative personal identification numbers and encrypts the *ZMR number* into an area-specific personal code (*bPK – Personenkennzeichen Amtliche Statistik*) in order to prevent any direct personal reference between the statistical and administrative registers. Contrary to the personalised *ZMR* code as mentioned above, which is only used within the *ZMR* database for administrative purposes, the *bPK code* corresponds to an anonymised code that aims to render data statistically utilisable for *Statistik Austria*, which also allows data-linking. Only the *ZMR* and the *ERnP* serve as source and basis registers for the *SZR*. The respective *bPK code* can only be used for the respective area (e.g. authoritative statistics, health); for other areas data is only available in coded format (see also *Civil Status Act 2013,* §47 and §48).

Statistik Austria is involved as a contributing partner in the task force dedicated to defining the overall set-up of the four registers and since the very beginning has been responsible for the statistical practicability of the data and the data transfer. Consequently, the production of coherent data is secured (once again linked to the *bPK code*). However, *Statistik Austria* is neither currently nor has ever been involved in the technical design of the *ZMR* database. This is designed for purely administrative purposes, with the statistical use being a secondary function. The statistical

[10] See also http://www.bmi.gv.at/cms/BMI_ZMR/historie/start.aspx (last consultation: 25 February 2013) and http://www.statistik.at/web_en/surveys/register_based_census/ (last consultation: 18 March 2013)

significance and interplay of the different datasets as well as appertaining conceptual approaches and limits are lined out in chapter *2.1.2.*

General personal core data will be accessible for all authorities for administrative procedures or if they need of access to documents; specific data can be accessed on a restricted basis (e.g. data on parents, marriages, registered partnerships), and information on deaths can by requested by anyone.

The launch of the *ZPR* will also have effects for the end-user by facilitating inscriptions for citizens who will no longer have to consult different offices in case of changes, but only have to announce them once. Furthermore, the obligation to provide proof of documents will mostly become obsolete (e.g. certificate of citizenship), documents can be accessed independent of location (*Citizen Card**).[11]

Recordings of main residences *(Local Competent Registration Authority*)*

According to the *Law on Data Protection (§ 16 (2)*, the *Local Competent Registration Authorities** (*Meldebehörde*)are considered as contracting authorities for the *ZMR* (Statistik Austria 2010a:3pp). These authorities are either embedded in the *Municipal offices** (*Gemeindeamt*), *Magistrates* (*Magistrat*) in statutory cities or *Municipal District Offices* (*Magistratisches Bezirksamt*) in Vienna. As a centralised and computerised system, the *ZMR* replaced previous decentralised population registers run at the local level (Bilger & Kraler 2006:565). Before 2002, data on registrations was contained in local registration registers, which were transmitted individually to *Statistik Austria*. However, the data on population stocks contained many double counts as *Statistik Austria* had no power to clarify these among the municipalities concerned. Electronic local registration registers were introduced in municipalities at very different dates, and full coverage was only achieved with the entry into force of the *Registration Act* in 1995. Data on migration flows (registrations and de-registrations) is available from 1996 onwards, and population stocks were transmitted in 1998 for the first time with full coverage. There were some amendments to the *ZMR* database at the beginning of 2005, but these were mainly of technical nature (change of sets of codes used), but did not alter the basic operational structure of the *ZMR*.

Since 2002, local authorities at the level of communities (country – federal states – communities) have been able to directly enter information on registrations and de-registrations via the *Application Local Register of Residents* (*Applikation Lokales Melderegister*) which directly feeds into the *ZMR* using one specific *ZMR* number (*ZMR-Zahl*) per person (Statistik Austria 2010a:10). The *ZMR* number is a person-related ordinal number of twelve figures, hence, a personal authoritative code, used both for nationals and non-nationals registered with their main residence in Austria and is only used in the framework of the *ZMR*. This number reflects core information that is included in the *ZMR* system, i.e. *name*, *original name*, *sex*, *date of birth*, *place and country of birth*, *citizenship*; and data of travel documents in case of aliens. Further information registered for individuals include *marital status*, *address of main residence* and possible *secondary residences*, *country of origin* of immigrants or *country of destination* of emigrants. *Religious affiliation* can be indicated optionally, but is recorded on the local level only and not provided to the *ZMR* based on the *Law on Data Protection 2000*. Information on ethnicity is generally not registered.

For both for national and non-national residents in Austria, it is obligatory to declare changes of main residences by registering and de-registering at the competent registration authority (*Meldebehörde*) within three days after relocation (Statistik Austria 2010a:17). There are no differences for the registration of nationals and non-nationals. It is necessary to register in the following cases: When first establishing an accommodation in Austria, when moving within Austria and changing one's main (usual) residence or when establishing of a further (secondary) residence while the main residence

[11] see also: https://www.kommunalnet.at/nc/news/artikel/select_category/125/article/zentrales-personenstandsregister-kein-stein-bleibt-auf-dem-anderen.html?cHash=b9472431e7b2d091e81ef1471532b8f2&sword_list%5B0%5D=zentrales (last consultation: 23 July 2012)

remains the same. If a person fails to fulfill the legal obligation to register, this is considered an administrative offence which may result in a monetary fine. Exceptions apply for people accommodated in a flat for no more than two months free of charge, patients admitted to a hospital, minors at institutional or recreational camps, members of the *Austrian Armed Forces*, the police, the customs guard and the prison service as well as people involved in catastrophe services initiatives who are accommodated in a shared accommodation building (e.g. in barracks).

Notifications of change of address are automatically linked to a change of registration or to de-registration of former main residential addresses to avoid double-counting; this is carried out by the competent registration authority. While a person can only have one main residence, the number of secondary residences is unlimited (Statistik Austria 2010a:10). New registrations, notifications of change of address and de-registrations are connected to a residence registration form (*Meldezettel*) which must be completed by the person to be registered. Usually such notifications are carried out directly by the person concerned, but some exceptions apply. For example, residency operators are responsible for registering asylum seekers residing at a reception centre. After entry into the *ZMR*, a written confirmation of registration (*Meldebestätigung*) is issued, which is an important document necessary for many purposes (registration at school, opening a bank account etc.), which represents a significant incentive for people residing in Austria to register. Due to their status as official documents, indications are deemed to be accurate and reliable. Changes in *name*, *civil status*, *sex* or *citizenship* that occur in Austria are entered directly into the *ZMR* by the departments responsible for civil status or the citizenship offices (see below), meaning that separate registration is not required. Residence registrations for newborns can be notified at the register office together with the notification of its birth. EU and EEA citizens and their relatives who intend to stay in Austria for more than three months and settle must additionally apply for a registration certificate (*Anmeldebescheinigung*). The provisions of the *Residence and Settlement Act* apply for the admission and residence of non-EEA nationals (*see also 2.1.3.1*).

Apart from the requirement to register within three days after moving, no further temporal concept is applied, as the *ZMR* solely constitutes an administrative database. The derived crude data consequently corresponds to “de jure” population only, while further data processing for statistical purposes as carried out by *Statistik Austria* also aims to approach the concept of the UN Recommendations for Population and Housing Censuses 2008 (*see 2.1.2*).

Births, deaths and marital status *(Local Register Offices*)*

Records on *births*, *deaths* and changes in *marital status* are currently maintained de-centrally in local registers of births, marriages and deaths (*Geburtenbuch, Ehebuch, Sterbebuch*) by *Local Register Offices** (*Standesamt*) at municipalities or groups of municipalities. The following demographic variables are recorded: *sex*, *age*, *marital status*, *citizenship*, *country of birth* and *religious affiliation* (available only in local level registers); in case of births this information is also collected for the mother (supplemented by highest educational attainment, occupational status and position) and in the case of married couples also for the father. Territorially, for births the place of residence of the mother, for deaths the last place of residence of the deceased and for marriages the common place of residence of the couple concerned is considered. Indications can be deemed as accurate and reliable, due to their status as official documents.

From April 2013 on, the *Central Civil Status Register ZPR* will be in place. It will become fully operational in November 2013 and will be closely linked to the *ZMR*. The *ZPR* is the main register dedicated to personal core data, depicting persons from birth until death. Variables are comparable to those included in current registers (including *bPK codes*). Births, deaths and name changes entered into the *ZPR* will be reflected in the *ZMR* by automatic updates of the relevant sections. There have been efforts to render the *ZPR* the pivotal register instead of the *ZMR*, but the creation of an exhaustive data stock is a demanding challenge: While current and future entries on vital events will consistently be entered into the *ZPR*, entering and harmonising vital events that occurred before the

launch of the *ZPR* is not universally possible (for the *ZMR*, exhaustive stock data could be generated when launching the system). Wherever local registers already exist in electronic format, a migration of the existing data will be carried out. It must be added that the quality of data varies significantly, as some municipalities only maintained electronic data for auxiliary purposes. Manually maintained registers will progressively be fed into the *ZPR* retroactively, particularly for persons who are still alive, either in cases of applications of individual persons or when autonomous data is reprocessed at the local level. If a person is not concerned by any future vital event, e.g. if the person does not get married, this person might never be entered into the *ZPR*; however, the extent of this problem is not yet foreseeable. A first evaluation is planned for 2016, particularly to estimate the exhaustiveness and quality of entered data.

***Change of citizenship** (Naturalisation Offices*)*

The *Naturalisation Offices** (*Staatsbürgerschaftsabteilungen*) of the nine regional authorities of the Austrian provinces (*Bundesländer, NUTS2*) register data on all declarations of intentions and all consequent public records on the acquisition of Austrian nationality. The *Naturalisation Offices** act on behalf of the *BMI*, based on the *National Statistics Law* and *Regulation (EC) No. 862/2007*. All legal forms of naturalisation are included, encompassing naturalisation by discretion, extension or entitlement.[12] Changes of citizenship not relating to acquiring Austrian citizenship are not recorded. Territorially, both naturalisations concerning persons residing in Austria and abroad are considered. In statistical terms, almost only decisions for those residing in Austria are considered (*see also POPREG, naturalisation statistics; 20*). Currently, data is not provided to the *BMI* but only maintained locally. Marginal notes are usually taken manually, allowing for inter-linkages to locally maintained records on vital events, as outlined above.

Based on *the Registration Act 1991* and the *Regulation on Naturalisation Statistics (BGBl. II Nr. 32/2000)*, data on registration changes is directly provided by the *Naturalisation Offices** to *Statistik Austria*. Since the corresponding regulation has been in place since 1995, electronic data has been available since 1996 – preliminarily without connection to a personal code. On a quarterly basis, anonymised datasets are provided by the regional authorities in electronic format (since 2002 via the *ZMR*). Indications can be deemed as accurate and reliable, due to their status as official documents.

Data derived from notifications of naturalisation include the variables *sex*, *age*, *previous citizenship*, *country of birth* and *place of residence*, *date and reason of entitlement*, as well as *marital status*, *status as convention refugee* and *naturalisation code.*

As with births and deaths, as mentioned above, information on naturalisations will be fully integrated into the *Central Citizenship Register ZSR*, which will become fully operational in November 2013 (Statistik Austria 2010g:3pp). Hence, data will no longer be solely registered locally. In cases of naturalisation due to birth, information from the *ZPR* is automatically provided to the *ZSR*.

Further efforts towards data-interlinking and simplification

Another step towards administrative simplification is the intention to also process socio-medical data electronically in the future. Currently, hospitals or midwives must fill a form containing data on the newborn (weight, type of birth etc.) and the parents, which is provided to *Statistik Austria* for statistical purposes and which must be transcribed. For the future, efforts are being made to also attach this information as a coded package in e-format (entered by hospitals, midwives or parents for home births), which can only be processed by *Statistik Austria*, to entries on newborns that are registered to the *ZPR*. This would mean that only one *bPK code* could be applied; manual transcription would no longer be necessary at *Local Competent Registration Authority**. Currently,

[12] According to §§10-24; §58c of the *Citizenship Act 185 version 2009.*

this step is still in its pilot phase since only few hospitals were approached or are already participating.

2.1.2. POPREG – POPulation REGister (Statistik Austria)[13]

Statistik Austria compiles register-based statistics on population stock and population change. As mentioned above, the database system *POPREG* (*POPulation REGister*) should be considered as the statistical mirror register of the *ZMR* (*see 2.1.1*), and thus the major statistical data source on population stock, population change and demographic events for Austria. The *POPREG* was prepared in parallel to the last census in 2001 and became fully operational in 2002[14]. Traditionally, Population Statistics were derived from census data, which were usually collected every ten years (*see 2.3.1*), from data on births and deaths as delivered by *Local Register Offices**, from registrations and de-registrations as reported by *Local Competent Registration Authorities**and from naturalisations as provided by *Naturalisation Offices** of regional authorities.

The investigation of annual population data is no longer based on forward projections of separate population aggregates, as was the case until 2001, but rather on single datasets in accordance with the *ZMR*. Due to the direct linking to authoritative administrative systems of registrations, the *POPREG* provides exhaustive Population Statistics for specific timepoints at all territorial levels. Since 2011, the census has also been register-based (*see 2.3.2*), relying on the *POPREG* as a central component (Statistics Austria 2010a:3pp; Kytir et al. 2005).

[13] Information included in this chapter relies on an expert interview with Alexander WISBAUER and on information provided by Stephan MARIK-LEBECK, Statistik Austria, and is enriched with information provided by Markus POPOLARI (Austrian Federal Ministry of the Interior).

[14] Legal bases: *1991 Registration Act, National Statistics Law: Bundesstatistikgesetz 2000, idF. BGBl. I Nr. 92/2007; Registration Act: §16b (7) Meldegesetz 1991, idF. BGBl. I Nr. 45/2006; Constitutional Act: Bundes-Verfassungsgesetz Art. 6 (3), idF. BGBl. I Nr. 47/2009; Implementing Regulation on the Registration Act: Meldegesetz-Durchführungsverordnung - MeldeV, idF. BGBl. II Nr. 495/2008; Regulation (EG) Nr. 862/2007; Regulation (EG) Nr. 2223/96* (Statistik Austria 2010a: 4, Statistik Austria 2010b:5)

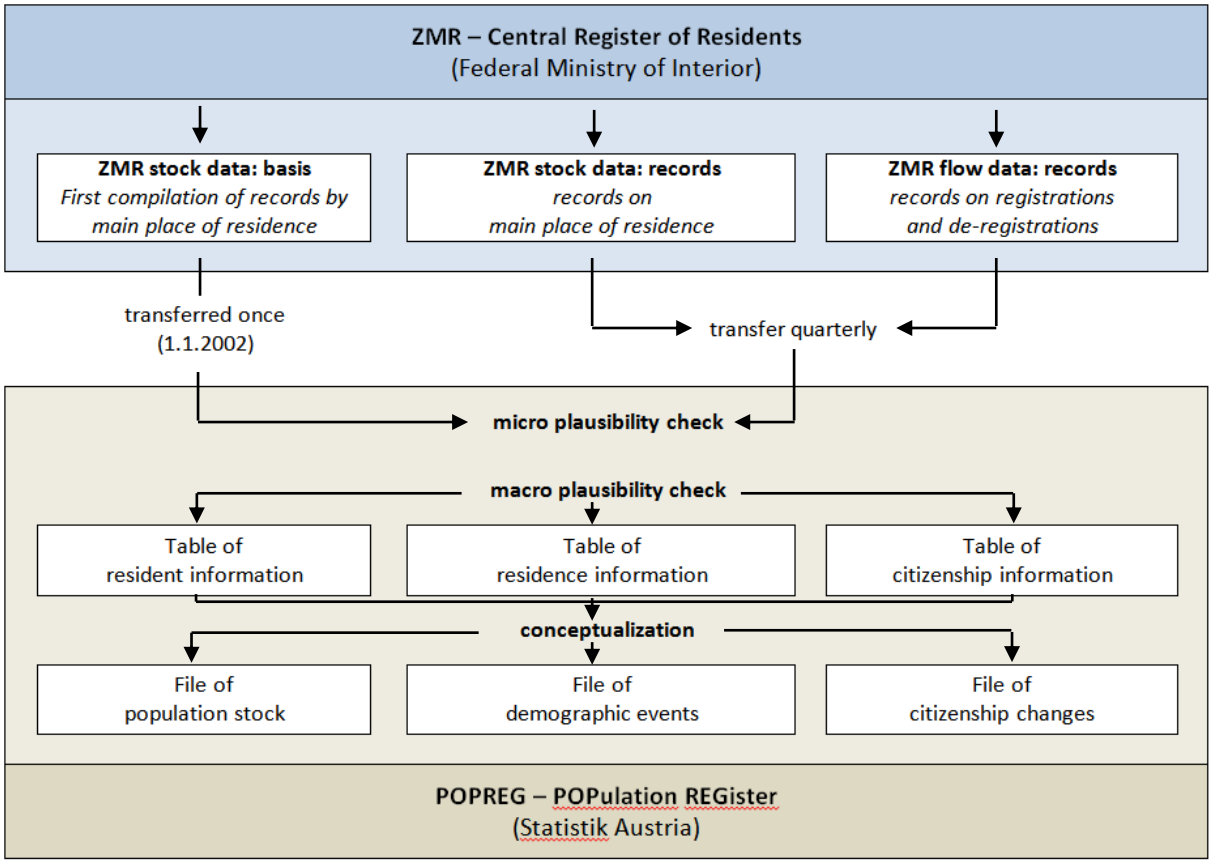

Figure 2: Interplay of *ZMR* and *POPREG*
(Lebhart et al. 2007:283 and Statistik Austria 2010b: 3, translated and amended)

As described above, *Statistik Austria* renders the administrative *ZMR* data statistically utilisable by applying statistical concepts. As visualised in *Figure 2*, two coded and anonymised datasets are provided from the *ZMR* to *Statistik Austria* quarterly, i.e. (A) flow data according to recorded registrations, de-registrations, births and deaths and (B) stock data on the resident population at the end of the quarter, including main residences, secondary residences and indications on homeless people. The following key variables are provided (Statistik Austria 2010a:11, Statistik Austria 2010b:11p):

- Area-specific personal code (*bPK code*)
- Registration key for identifying registrations of main residence (*Meldekey*), for tracing the registration history
- Personal characteristics, i.e. sex, date of birth, date of death (if applicable), marital status, current citizenship, country of place of birth
- Residential characteristics, i.e. date of registration/de-registration (corresponding to date of authoritative registration)
- Dataset information, i.e. date of creation and date of last amendment.

Statistik Austria carries out a three-stage check, i.e. a micro plausibility check, a consistency check and a macro plausibility check (Statistik Austria 2010a:12). Both datasets are subsequently integrated into the *POPREG* database, which mainly aims to account for and explain stock and flow data between given time-points, also in demographic terms (Kytir et al. 2005:205). As a statistical database, the *POPREG* consists of three components (persons, main residences and citizenship), which are interlinked by the anonymised *bPK code* and a second key for identifying registrations of main residence (*Meldekey*). Based on this, three database tables are generated: population stock,

change of citizenship (naturalisations, other changes of citizenship) and demographic events (births, deaths, internal migration, immigration, emigration, and other events) (Statistik Austria 2010a:12pp). Both Population Statistics and Migration Statistics as well as Naturalisation Statistics are produced as secondary statistics based on *POPREG* data.

Anonymised individual data on all movements are transmitted to the statistics departments of the Austrian *Länder*. Specific data may be provided also for certain scientific purposes, as outlined in the *Constitutional Act 2009* (Statistik Austria 2010a:14pp, Statistik Austria 2010b: 16). The tables as prepared for *Eurostat* (particularly *Migration Questionnaire* and *Regional Questionnaire*) are delivered in time for publication during the second half of the year (Statistik Austria 2010a:14). For external users, data can be gathered via *STATcube*[15], which also contains further data on a broad thematic range of issues. Depending on the user's requirements, fees are charged for the compilation of detailed data. Data may also be requested by e-mail. Selected data, overview tables, charts and map are also available via the website, and part of press releases and of a variety of publications[16].

Population stocks in the context of Population Statistics *(Statistik des Bevölkerungsstandes)*

Population Statistics, a major product of the *POPREG* and a meaningful source on residing nationals and non-nationals, embrace all persons registered with their main residence in Austria at the respective reference date (Statistik Austria 2010a:3). Until 2001, the annual average population was calculated only as average mean between two years. The annual average population is calculated as the arithmetic mean of quarterly figures[17] (Statistik Austria 2010a:11). Data is available also for territorial units at the local level (Statistik Austria 2010a:4). According to the *POPREG*, the following key variables are considered for the Population Statistics: *age*, *sex*, *citizenship*, *country of birth*, *martial status* and residential characteristics (address, date of registration, quality of residence – e.g. main residence or homeless) (Statistik Austria 2010a:12).

Since 2002, *usual resident population* in the context of the *POPREG* has been defined as persons who have been uninterruptedly registered in Austria with their main residence for more than 90 days, with the exception of newborns, who are recorded immediately. Basically, this definition corresponds to the *de jure* concept as included in the *UN Recommendations for Population and Housing Censuses 2008* (Statistik Austria 2010a:4pp). In the framework of data processing, *Statistik Austria* attempts to approach a "de facto" concept, by (1) excluding registrations for less than 90 days and (2) by cross-checking with the results of analysis on residences gained by register counts or *mini-register counts* for fiscal equalisation (*Mini-Registerzählungen, see also 2.3.2.1*), including non-active registrations due to emigration. This double superposition allows approximation towards the UN definition of usual residence, even if there are further limitations, i.e. a different miminum length of stay (90 days instead of twelve months) and no counting of unregistered/non-documented/illegally residing population. This is to ensure that differences between both datasets

[15] *STATcube* is a database based on the software package *SUPERSTAR*; it replaced the former ISIS database *(Integriertes Statistisches Informationssystem der Statistics Austria*). Seventeen segments referring to population stock are available there (1 January or annual average), based on traditional census until 2001 or register-based *POPulation REGister* from 2002 on (Statistics Austria 2010a:16), 22 segments on migration (13 2002-2007, 9 1996-2001) (Statistics Austria 2010b:18). See also: http://statcube.at/superwebguest/login.dol

[16] i.e. quarterly and annually standard publications in German, e.g. Population Stock (*Bevölkerungsstand*), Migration Statistics (*Wanderungsstatistik*), Demographic Yearbook (*Demographisches Jahrbuch*), Statistical Yearbook Autria (*Statistisches Jahrbuch*), Austrian Cities in Numbers (*Österreichs Städte in Zahlen*), Statistical News Reports (*Statistische Nachrichten*); partially accompanied by a thematical in-depth article and monthly summaries (Statistik Austria 2010a:14pp, Statistik Austria 2010b:15p).

[17] By applying the formula: "Annual average = (population on 1 January + 2x 1 April + 2x 1 July + 2x 1 October + 1 January of the following year) divided by 8".

are minimised and ensure consistency between Population Statistics and Migration Statistics. *Statistik Austria* also carries out a micro plausibility check, a consistency check and a macro plausibility check (Statistik Austria 2010a:7pp).

By combining the variables "*citizenship"* and "*country of birth"* a "*population of foreign origin*" can be generated. The total number refers to non-nationals born in Austria plus foreign-born persons (Statistik Austria 2010a:11, Statistik Austria 2012e:42). This variable has been available since January 2007 in the population register (Lebhart & Marik-Lebeck 2007: 165). In contrast, it is not yet possible to depict "*migration background*" as defined by the *UN Recommendations 1998*, because currently no familial relationships among people in the *POPREG* can be established. However, the introduction of the *ZPR* will improve this situation over time, as it will register all births with *bPK codes* of child, mother and, if available, father. Nevertheless, it may take a very long time until sufficient information for a significant part of the population has been gathered, as the information will only be entered into the register for all newborns from 2014 onwards. Variables such as *country of birth of parents*, *religious affiliation*, *colloquial language* or *ethnic background* are not available.

Migratory events in the context of Migration Statistics *(Wanderungsstatistik)*

The first step to establishing the *POPREG* was the creation of comprehensive Migration Statistics, which encompasses all changes of location within, to and from Austria connected to a change of main residence. It thus constitutes the major source of information on migratory flows, i.e. immigration, emigration and re-migration. *Statistik Austria* has conducted Migration Statistics since 1991 (*Registration Act*) based on registration changes directly provided by *Local Competent Registration Authorities**. Electronic data has been available since 1996 – preliminarily without being connected to a personal code (Statistik Austria 2010b:3pp). From 1996 until 2001, micro data was available also for the local level, but migration within municipalities was not registered, no concept on minimum duration of stay was utilised and no *bPK code* was applied. This hampers comparability with current data.[18] Since 2002, Migration Statistics have been derived from the *ZMR*, which is again connected to individualised *bPK code*s, which makes it possible to depict individual registration histories (Statistik Austria 2010b:5; *see also 2.1.1*).

The following key variables are available: *age*, *sex*, *citizenship*, *country of birth*, *marital status*, *country of origin* and *destination* (for international migration)[19] (Statistik Austria 2010b:12). Other information which could be valuable for statistical purposes, such as *educational attainment* or *occupational status*, is not available, although it could theoretically be generated through data linkage (Kraler et al. 2009:11pp).

The conception, production and ongoing processing of migration data is closely linked to the *UN Recommendations on Statistics of International Migration 1998,* although it has a different minmum length of stay (90 days instead of 365), and is also principally in line with *Regulation (EC) 862/2007* (Statistik Austria 2010b:6). The concept of Migration Statistics covers internal migration, international migration and intra-regional migration within the respective territorial unit. In 2002, a minimum length of stay was added as a prerequisite for inclusion in Migration Statistics, differentiating between temporary stays of up to 90 days, short-term migration with to a duration of stay of more than 90 days but less than one year and long-term migration with a duration of stay of more than one year (Statistik Austria 2010b:7, Lebhart et al. 2007:283).

[18] As regards census data 2001, an in-depth revision has been carried out due to inconsistencies with the currently applied methodology as in the second half of 2001, both systems were co-existing (census, ZMR/POPREG), showing discrepancies due to under-estimations in the *POPREG* – the net migration was increased retrospectively (see revised estimations for 2001 dating 2010, see also: Kytir et al. 2005:208; and: Statistik Austria 2010b:17)).

[19] Country of usual residence in case of immigration/emigration (state or subordinate country), relying of self-declaration of person concerned as restricting factor. Missing indications are classified as "unknown/not specified" (Statistik Austria 2010b:12). Countries are often bundled in country groups (Statistik Austria 2012d:45)

Consequently, the statistics covered under *Regulation (EC) 862/2007* only cover a subset of national migration statistics, namely migrants with a minimum duration of stay of twelve months. However, national statistics follow the *1998 UN recommendations* on migration (par. 34 pp) in counting short- and long-term migrants.

Even if data is gathered for national purposes by applying the 90 days concept, data transmitted to *Eurostat* follows the definitions set under *Regulation (EC) 862/2007*, which considers twelve months as decisive (Statistik Austria 2010b:9). This data must be estimated, as the time limit for data delivery (twelve months) does not allow the theoretically possible provision of register data according to a twelve month concept. According to *Regulation (EC) 862/200*7, register-based estimations are applicable; therefore, the method applied can be deemed to be in line with the requirements. The calculations are generally based on the estimation that the share of observed flows within the nationally applied three month period can be transferred to a twelve month period by multiplying the observed equities. Comparing the provided estimations with an ex-post-analysis from the *POPREG* according to the twelve month concept, inflows were over-estimated by 8% while outflows were under-estimated by 9% for 2009 (Marik Lebeck & Wisbauer: 2012: 86pp).

De-registration generally is either linked to self-de-registration carried out by the person concerned or to procedures carried out by the *Local Competent Registration Authorities**, e.g. when notified that a specific person is no longer residing at the indicated address or when inconsistencies are detected during data clearing. There are no analyses available for the *ZMR* regarding differencies for different person groups, e.g. third country nationals. Data on emigration is generally likely to be under-estimated due to a lack in incentives for self-de-registration for persons moving abroad, particularly for temporary emigration. *Local Competent Registration Authorities** try to gather information on emigration retrospectively – this often leads to postponed recording of emigration, but nevertheless contributes to compensating for the aforementioned general under-estimations (Statistik Austria 2010b:15). A person who de-registers within 90 day is not included in Migration Statistics. If the person registers a different main residence in Austria, this is counted as internal migration – even if the person registers abroad first and registers again in Austria within 90 days. If the gap between two consecutive registrations exeeds 90 days, this is counted as an emigration and a subsequent immigration. Interruptions of registration of less than 90 days are not considered for the Migration Statistics (continuous stay is assumed then) (Statistik Austria 2010b:9p). Another temporal problem linked to the act of registration also concerns internal migration: in principle, registrations should be undertaken within three days, a rule which is not always complied with. Consequently, movements are often recorded with a delay (Kytir et al.2005:208).

Cases of deaths are sometimes not correctly encoded in the *ZMR*, and a number of cases are therefore misinterpreted as emigration in the *POPREG*. In order to solve this problem, data clearing by consulting the *Central Social Security Register* (*see 2.1.4*) has been carried out since 2006 by *Statistik Austria* (Statistik Austria 2010b:15). The launching of the *ZPR* will prospectively contribute to enhancing data quality.

Seasonal workers only appear in the Migration Statistics if they register a main residence in Austria for at least three months, which might not always be the case. Comparability of results between Migration Statistics based on *POPREG* data and *FIS* remains restricted because of the different methods in data production. For valid seasonal work permissions, the database of the *Labour Market Service* constitutes a meaningful source of information (*see 2.1.5*) (Statistik Austria 2012d:40). The launch of the *Integrated Alien Application** in 2014 (*IFA – Integrierte Fremdenapplikation*) will include both data on persons who applied for residence permits and persons who hold a valid residence permit, provided with a *bPK code* (*see also 2.1.1*) – this will contribute to data enhancement in this context.

Naturalisations in the context of Naturalisation Statistics (*Statistik der Einbürgerungen*)

Since 1996, Naturalisation Statistics have been based on data provided by *Naturalisation Offices** of the regional authorities of the nine Austrian provinces. The statistics are an important source of information for the Population Statistics as all legal forms of naturalisations are included, apart from "automatic" forms of acquisition of citizenship, i.e. birth, legitimation, retroactive legitimation. Even if naturalisations of persons residing abroad are also an object of attention[20], for statistical purposes only naturalisation of persons residing in Austria are taken into account.[21]

The following key variables are included: *sex*, *age*, *previous citizenship*, *country of birth* and *place of residence*, *date and reason of entitlement*, as well as *marital status*, *status as convention refugee* and *naturalisation code*. Data is also available for the regional level (*NUTS2*) (Statistik Austria 2010g:3pp).

As mentioned above, information on naturalisations will be included in the *Central Civil Status Register ZPR*, which will become fully operational in November 2013 (Statistik Austria 2010g:4, *see also 2.1.1*). Consequently, for the future, the *POPREG* might become a valuable source for monitoring patterns in longitudinal and cohort perspective; so far, this possiblity has hardly been exploited. Apart from considering only citizenship, the elaboration of more exhaustive statistics on changes of citizenship could become a future option, i.e. by considering withdrawals or renouncements, automatic naturalisations (birth, legitimation) or further types of deprivations (death, acquisition of another citizenship, military service in another country). Recording such events is currently not obligatory. For persons residing in Austria, gaps can be filled by considering birth statistics (ius sanguinis), marriage statistics (acquisition due to legitimation) and death statistics because they all include the variable "*citizenship"* (Statistik Austria 2010g:10).

Besides the Population Statistics, the *Labour Market Database AMDB* (*see 2.1.5*) also includes information on acquisition of citizenship, but this dataset does not proceed from the entire resident population and updates of records are not foreseen for changes of citizenship. For this reason, the provided picture remains incomplete (Kraler et al 2009:13p).

POPREG – interim considerations and outlook

Generally, Austrian statistics on population stocks and flows are able to meet international requirements on acquisition and processing of data, both regarding methodological and conceptual aspects. A major measure towards quality assurance is the advisory body which meets yearly to discuss results and further conceptual approaches (Statistik Austria 2010a:16). Generally, all variables requested by *EC Regulation 862/2007* are available. Data on *country of birth* could be perceived as being of poor quality and coverage for the first years since the *ZMR* became operational as municipalities were not able to provide this information due to technical reasons (Bilger et Kraler 2006:572).

One of the main weaknesses of the *POPREG* compared to the traditional census that was carried out until 2001 is that no information on housholds and houshold structures is included. Thus, households can only be defined as persons sharing a dwelling (household-dwelling concept). Familial relationships cannot be identified. Only the civil status of persons (married, divorced, single) and age are available and may be used as rough indicators of the household composition (Kraler et al. 2009:10). There is no generally agreed upon definition of households (e.g. in the *Registration Act*). Improvements may be expected in the long run in relation to the launch of the *ZPR*, which will include current cases of births, marriages and divorces, applying also *bPK codes* – household relations might then be rendered traceable.

[20] Approximately 300,000-400,000 Austrians are estimated to have their main residence abroad. Changes of citizenship or automatic acquisition or withdrawal of citizenship might not always be registered (Statistik Austria 2010g:4).

[21] Applied naturalisation rate: naturalisations of persons residing in Austria related to 100 foreign citizens residing in Austria (Statistik Austria 2010g:6).

Due to the *ZMR's* nature as an administrative database, only the registered resident population is considered; therefore, the administratively captured reality does not necessarily correspond to individual concepts of life (Statistik Austria 2010a:16). As the *POPREG* was only established after the *ZMR* became fully operational in 2002, there are no historical records of *change of citizenship* of persons who have acquired citizenship before this date. The instalment of the *bPK code* allows for comparisons of different individual characteristics over time, i.e. *citizenship*, *country of birth*, *country of origin* and *country of destination.* This might also contribute to enhanced quality of data in the future (Statistik Austria 2010a:17). Generally, the methodological changes in data production as concerns all datasets as outlined above resulted in a disruption of the time series, which made statistical corrections necessary[22] (*see also above*) (Kytir et al. 2005: 208). Further data enhancement is likely to go in hand in hand with the coming into effect of the *ZPR* and the *ZSR* in November 2013.

[22] E.g. quality problems regarding deaths which are to be entered by *Local Competent Registration Authorities** (under-recording for the years 2002-2004) resulted in statistical corrections. This problem might be solved from March 2005 on because local register offices are obliged to directly enter into the *ZMR*. Slight variations may still occur, e.g. due to births abroad in hospitals near to the border or to newborns deceasing still at the hospital. In return, deceases also persons registered in Austria but deceasing abroad are more likely to be considered now. Further demographic challenges like demographically not explicable population developments are quantitatively only of little importance (Kytir et al. 2005: 208pp).

2.1.3 BFIS – Federal Alien Information System (Federal Ministry of the Interior)[23]

Since 2004, the *Federal Alien Information System* (*BFIS – Bundesstatistisches Fremdeninformations-system*) has constituted the technical bracket for two databases dedicated to registering asylum seekers and foreign citizens: the *Alien Information System* (*FIS – Fremdeninformationssystem*) and the *Information System on Asylum Seekers* (*AIS – Asylwerberinformationssystem*). Both databases are of an administrative nature only and are maintained by the *BMI*, but set-up independent one from each other. Accordingly, there is no direct, standardised data-interchange between the systems, and their components are not defined similarly. While the *AIS* is designed as a process and file-oriented, centrally maintained database, the *FIS* is fed de-centrally and claim-oriented.

Data from the *AIS* and the *FIS* is regularly provided to *Statistik Austria* (*see also below*), and thereby widely incorporated in diverse publications, e.g. in the *Statistical Yearbook* "migration & integration" which has been issued yearly since 2010 or the standard publication Migration Statistics (*Wanderungsstatistik*)".

There are longstanding efforts aiming to definitively interconnect these two databases and their applicability. Fundamental changes to this end will be implemented in the nearer future: Adopted in July 2012, the new *Federal Office for Alien Matters and Asylum** (*BFA – Bundesamt für Fremdenwesen und Asyl*) will become operational in January 2014. The BFA will be responsible for processing asylum claims, undertaking coercive measures against aliens with no right to stay in Austria and issuing humanitarian residence permits (*BMI* 2012b:67) in the first instance. Connected to this, a new register-based system called *Integrated Alien Application** (*IFA – Integrierte Fremdenapplikation*) will be launched, aiming to substitute the *Alien Information System* (*FIS*) and the *Information System on Asylum Seekers AIS* (*see 2.1.3.2*), aiming at administering persons instead of file and applications.

Two further administrative registers are briefly described in the context of this chapter, first the *Basic Welfare Support Information System** (*BIS - Betreuungsinformationsdatei*) and the *Smuggler Database** (*Schlepperdatenbank*).

2.1.3.1 FIS – Alien Information System (Federal Ministry of the Interior)[24]

Since the 1990s, the *FIS* has operated as administrative register of the *BMI*, containing information on applications for residence permits, issued and rejected residence permits, issued and rejected visas, as well as data from the Aliens' Police on law enforcement measures involving foreign citizens.

Data on residence permits and law enforcement measures is directly provided from local databases (*Lokale Evidenzdateien*) by *Regional Police Directorates** (*LPD – Landespolizeidirektionen*), for all nine Austrian provinces. In the past, separate databases were maintained for the nine Austrian provinces (*Bundesländer*) by the *Federal Police Directorate** (*BPD – Bundespolizeidirektion*) and the Federal Security Directorate (*Sicherheitsdirektionen*), which fed into the central database. The *Austrian Federal Ministry for European and International Affairs* (*BMeiA – Bundesministerium für Europäische und Internationale Angelegenheiten*) delivers data on visas, which is transfered on an hourly basis into the *FIS*.

Data on residence permits refers to all persons whose residence is regulated by the *Settlement and Residence Act (NAG – Niederlassungs- und Aufenthaltsgesetz – NAG – BGBl. I Nr. 100/2005*). Since 2006, the NAG has regulated the issuance, refusal and withdrawal of residence permits for foreign

[23] Information included in this chapter extensively relies on an expert interview with Peter ZIMMERMANN, Federal Ministry of the Interior.
[24] idem.

citizens already residing or intending to reside in Austria for more than six months as well as the documentation of the right to residence under European Union law. Residence permits are classified according to the quality of residence (settlement or residence) and the possibility of entering the labour market (Statistik Austria 2012d:39). The *Settlement and Residence Act* foresees different types of residence permits: short term residence permits (*Aufenthaltsbewilligung*), residence titles for settlement (*Aufenthaltstitel zur Niederlassung*) and residence certificates for long-term residents according to Council Directive 2003/109/EC (*Daueraufenthalt*). Even if EEA nationals and Swiss citizens were fully recorded (*Dokumentation "Daueraufenthaltskarte"*), data would not be exhaustively included, because the persons concerned often fail to apply for this documentation; they are therefore not comprehensively registered in the *FIS*. Residence visas (*Aufenthalts-Reisevisum, Visum D+C*[25]) are covered in the *FIS*, but no statistics are published. Asylum seekers are registered in the *Asylum Information System (AIS)* for processing purposes and in the *Alien Information System (FIS)* to record their type of stay in Austria. (*see 2.1.3.2*) (Kraler et al. 2009: 12, *BMI* 2012a).

A person's record is entered when the first residence permit is issued and is either updated when the legal or personal status of a person changes or when an administrative procedure (e.g. termination of residence) is initiated. The following person-related data is recorded: *name*, *date of birth*, *citizenship*, "alias data", *title* and application including related decree. Information on *educational attainment*, *occupation* or *economic activity* is partially included in textual form, but hardly replicable because it is often only collected for the first registration only and is not verified; such information therefore cannot be deemed of statistical relevance. Files are deleted a maximum of ten years after a binding decision or when the reason for registration ceases to apply, i.e. naturalisation, death or termination of residence.

Data on Law Enforcement Measures is registered according to the *Aliens' Police Act (FPG – Fremden-polizeigesetz 2005 (FPG), BGBl. I Nr. 100*). These measures include data on forced returns (*Abschiebung*), voluntary returns (*freiwillige Ausreise*), rejections at borders (*Zurückweisung*/ Zurückschiebung), expulsions (*Ausweisung*), return bans (*Rückkehrverbot*), return decisions (*Rückkehrentscheidung*), prohibitions of entry or stay (*Einreiseverbot/Aufenthaltsverbot),* extentions *(Aufschub)*, and orders of arrest (*Festnahmeauftrag)*. Data on detention pending deportation (*Schubhaf*t) and more lenient measures (*gelinderes Mittel*) is stored in a separate database (*Anhaltedatei*). They are recorded with the person-related information of *sex*, *age* and *country of citizenship*.

Long-term analysis of changes is not possible because former personal information is not stored and processed data is not included in the *FIS*. The personal authoritative *bPK code* is provided annually with a rate of 80-85% regarding distinct replicability. Anonymised data on recorded persons and residence permit titles is provided to *Statistik Austria* yearly. *Statistik Austria* also provides requested data to *Eurostat* (Regulation 862/2007), in coordination with the *BMI*. *Alien Statistics* (*Niederlassungs- und Aufenthaltsstatistik*) are published monthly and annually on the basis of *FIS* data[26]. Since 2002, they have also been available in electronic format (*BMI* 2011a). Since 1999, *Alien*

[25] D visas are issued for seasonal workers from third countries for entry into Austria, with a validity of six months. However, this type of visa is also issued to other types of persons. Thus, a definite identification of the number of seasonal workers is not possible. Nevertheless, the issuance of residence visas is bound to the existence of seasonal working permissions (*see also AMDB 2.1.5*) (Statistik Austria 2012d:40).

[26] Contents of the Alien Statistics: (1) valid residence permits of third country nationals (by type, sex, age groups, citizenship, and federal province) in total and per type ("documentations" since 2006, grouped by type, sex and age); (2) applications for residence permits including applications for renewal (by type, sex and citizenship since 2007); (3) residence permits issued in a given year (by sex), separately for first permits issued (incl. consideration whether they are subject to quota restrictions), renewals and change of purpose of stay; (4) applications for documentations and issued "documentations" (by citizenship, type, purpose and sex, citizenship and sex; (5) quota occupancy rate by province (BMI 2011a).

Statistics have been compared with results of the immigration of third country nationals gained via the *POPREG* as compiled by *Statistik Austria* based on *ZMR* data.

The *FIS* is a non-exhaustive source on stocks of foreign citizens, because neither all asylum seekers are included – only asylum seekers accepted for processing (*zugelassen zum inhaltlichen Verfahren*) (*see 2.1.3.2*) are included – nor is the group of EEA or Swiss citizens sufficiently covered, as already stated above. Generally, a factual duration of stay can hardly be traced due to a dearth of long-term and consecutive personal datasets. Consequently, the *FIS* only contains valid permits and may contain persons no longer residing in Austria because of missing interlinks to the *POPREG* (*see 2.1.2*) (Kraler et al. 2009: 12). The latter problem could be solved in the future if the prospective *IFA* system is successfully linked up to the *ZMR* (see above).

2.1.3.2 AIS – Information System on Asylum Seekers (Federal Asylum Office)[27]

The *AIS* has been maintained as an administrative database by the Federal Asylum Office (*Bundesasylamt*) on behalf of the *BMI* since the 1994. Records have generally been kept since 1983. Based on the database of electronic administrative acts (*eVA – Elektronischer Verwaltungsautomation*), further data is provided by the *High Courts*, such as the *Supreme Court of Asylum* (*AGH - Asylgerichtshof*). The AGH will be converted into the Federal Administrative Court (*Bundesverwaltungsgericht*) in 2014.[28]

The *AIS*, in its function as an administrative system, files data for processing asylum claims, which mainly includes personal data on asylum seekers and the status of the procedure, information on recognised refugees (i.e. reception of federal care or other federal support), and information on the asylum procedure (Kraler et al. 2009:14). Aiming at registering data on proceedings only, single records are compiled per asylum claim, and separate records are not consecutively interlinked. Up to 30 single records can be registered per asylum claim. If one person is concerned with more than 30 procedural steps, a new record is set up. Each record comprises the following variables: *name*, *date of birth*, *sex*, *citizenship*, *status of the asylum procedure*. Information on ethnicity is included in textual form, but only for asylum procedural purposes and not used for statistical purposes. The variable "*sex"* was only introduced in 1997, as well as terminations of proceedings. The break-down of types of decisions into *countries of origin* has been carried out since 2002, while the number of asylum claims per *countries of origins* has been continuously available (Langthaler & Trauner 2009:7p), also for statistical purposes. According to the *Asylum Act 2005*, entries are deleted ten years after a final decision on the asylum claim, and five years after the death of a person or if the person is naturalised *(*Kraler et al. 2009:14).

Further data substantiating the asylum procedure is derived from *the Federal Criminal Intelligence Service (BK – Bundeskriminalamt, see also 2.1.3.4*). Since 2004, asylum seekers have also been registered in the *ZMR* (*see 2.1.1*): they are thus included in stock and flows figures included in the Migration Statistics derived from the *POPREG*, on the condition that they are registered with a main place of residence (Kraler et al. 2009:21).

Similar to the *FIS*, a personal authoritative *bPK code* is provided annually with a rate of around 40% clear traceability to individuals. Data generally refers to *NUTS0* only, even if the location of submission of claims can be broken down to *NUTS2* level.

Data on asylum procedures generally shows obvious deficits regarding statistical relevance and comparability. For instance, in Austria, due to the procedural character of the *AIS* database, only total applications can be extracted, but not first asylum applications. At the international level,

[27] Information included in this chapter is mostly based an expert interview with Peter ZIMMERMANN, Federal Ministry of the Interior.

[28] According to the *Federal Administrative Court Law – Bundesverwaltungsgerichtsgesetz BVwGG BGBl. No 10/2013*

national categories of status of asylum proceedings are hardly comparable. This may result in significant incoherencies, obviously restricting comparability of published datasets.

Similar to the *Alien Statistics (FIS*) as lined out above, results on asylum seekers are compared with results on immigrants of the Migration Statistics derived from the *POPREG* (*see 2.1.2*). The comparability of both sources remains limited: The *Asylum Statistics* count all asylum claims regardless of whether the person concerned factually immigrated, without considering the actual duration of stay. In contrast, for the Migration Statistics, only persons who are registered with their main residence, staying for a period of more than three months, are considered (Statistik Austria 2012d:39p).

From 2014 onward, connected to the launch of the *BFA*, the *AIS* will be transferred into the *Integrated Immigration IFA*, together with the *FIS* (*further information see 2.1.1*). Data on asylum seekers is likely to evolve towards better statistical significance due to prospective consecutive linkage of multiple asylum claims of the same person by introducing an area-specific personal authoritative code.

Since 2002, anonymised abstracts of the database have been provided to *Statistik Austria* monthly, e.g. as a basis for the *POPREG* (*see also 2.1.2*). Information is provided to *Eurostat* by *Statistik Austria* monthly, in cooperation with the *BMI*. Data is also provided to UNHCR. *Asylum Statistics* (*Asylstatistik*) are published monthly and annually by the *BMI* on the basis of *AIS* data[29]. Since 2002, they have also been available in electronic format (*BMI* 2011b). The *BMI* does not publish information on stocks of asylum, but figures on pending procedures may be taken as a proxy (Kraler et al. 2009:14).

2.1.3.3 BIS – Basic Welfare Support Information System (Federal Asylum Office)*[30]

Complementary to the *AIS*, the *BIS* includes information on aliens receiving basic welfare support in Austria. As a subsidiary database to the *AIS*, since 2004 the *Basic Welfare Support Information System* (BIS)* has included asylum seekers, recognised refugees, and persons with subsidiary protection status and aliens with no right to stay in Austria. Information on procedures, decisions and persons is entered by the *Federal Asylum Office*, on behalf of the *BMI*, into the *AIS* and transferred in real time into the *BIS*.

In accordance with the *Asylum Act 2005*, records are deleted in cases of naturalisation, five years after death or ten years after the last support was given to the person. Data on place of residence, health insurance, type and duration of support are comprised. As in the *AIS*, information on *religious affiliation* and *ethnicity* are in theory present, but in textual format only and therefore of no statistical relevance (Kraler et al. 2009:14).

2.1.3.4 Smuggler Database (Federal Criminal Intelligence Service)* [31]

Since 2003, the *Smuggler Database** of the *BMI* has been dedicated to compiling data on third country nationals. Run as a centrally maintained register by the *Federal Criminal Intelligence Service (BK – Bundeskriminalamt*), institutionally part of the *BMI*, it contains data on all persons apprehended for illegal border crossings, illegal stay within the federal territory, and smuggled

[29] Contents of the Asylum Statistics: asylum applications (by sex and citizenship), applications of unaccompanied minors (by age groups and citizenship), decisions (by type, citizenship and sex), refoulement (by status of proceeding, type of decision, sex and citizenship), Dublin decisions (by type) (BMI 2011b).

[30] Information included in this chapter is extensively based on an expert interview with Peter ZIMMERMANN, Federal Ministry of the Interior.

[31] Information included in this chapter vastly relies on an information provided by Gernot TATZGERN (Austrian Federal Ministry of the Interior, Central Unit THB/Human Smuggling).

persons and smugglers. Since 2006, persons who facilitate the illegal entry of an alien without payment are also included (Kraler et al. 2009:7,16). The *Smuggler Database**was developed to have a basis for analyses and investigations. The main aim of the database is to combat organized Smuggler Crime. The statistics is a further product, hence, Statistik Austria has not been involved in the design of the database and its contents.The central legal bases is the *Security Police Act 1991*, more specifically § 53a on data application for security authorities.

Since 2005, the so called *Police-Administration-Database* (*PAD – Protokollieren-Anzeigen-Daten*) as an internal, administrative protocol system is in force. Data is directly entered by police officers, meaning that also personal data is introduced into the *Smuggler Database** automatically, rendering inter-linking within the database possible. Additional information for filling gaps is directly entered by police officers, e.g. phone numbers, nicknames etc. All data provided by police officers is counterchecked and approved by the *Central Unit THB/Human Smuggling* at the *BMI*, quality management is carried out by phone and mail requests. Generally, the quality of data is high, also due to prompt data processing as the time line for filling in is max. 24 hours – but data are not corrected after the approving process. Furthermore, overall data comparability is high, because definition of data is based on definitions of the *CIREFI* (*Centre for Information, Discussion and Exchange on the Crossing of Frontiers and Immigration*). For purposes of data enhancement, both the *PAD* and the *Smuggler Database** are currently under evaluation, results may be available in the end of 2013.

The *Smuggler Database** includes personal data, i.e. *name*, *date of birth*, *citizenship* etc., data about the apprehension, i.e. *place* and *time*, and other information that is of importance for police proceedings. Additionally to the personal data of the smugglers and smuggled persons, information on routes, addresses,communication, means of transport, id-information and border crossings is stored (Kraler et al. 2008: 24). This micro data is only stored for internal, administrative purposes, also for police officers. Consequently neither micro data nor detailed anonymised data are accessible for external users, but analyzis must rely on published data, see below.

It is not planned to link the *Smuggler Database** to the *FIS and the AIS* nor to render it an integral part of the *IFA* due to data protection reasons. Even if technically feasible, the *BK* database is neither technically linked to the enforcement database nor the *AIS*, meaning that apprehension data is just as weakly systematically linked to enforcement and asylum data (Kraler et al. 2009:16). However, traditionally, the number of applications for asylum closely correlates with apprehension figures. (Jandl 2004, cited in Kraler et al. 2008:25). Data on detention pending deportation and more lenient measures is stored in a separate database (*Anhaltedatei*), which has been operated since 2008 and stems from entries operated by the *Aliens Police* as lined out in *2.1.3.1*. The *Smuggler Database** is not linked to the *Anhaltedatei,* but there manual cross-checks to so called *Work Analysis Databases* (*Arbeitsanalysedatenbanken*) which are maintained for internal purposes.

Annual reports on organized criminal smuggling have been electronically published since 2003, mainly focusing on the differentiation whether a person was smuggled or not; visualising also differentiations according to *sex*, *age*, *citizenship* and Austrian provinces (*NUTS3*). A valuable further variable is the *means of transports* (BK 2011). Other publications as issued by the *BMI*, which are also based on *BK* data include, for instance, criminal statistics that have been electronically available either as annual reports since 2001 or as quarterly published results, considering also *type* and *status of residence* and *citizenship* plus *criminal cases* according to *type of crime* and *type of residence for aliens* from selected countries (DE, RS, RO, TR, BiH, HU, PL, SK, RU, HR) (*BMI* 2011c). Another substantial publication is the annual security report, including information in the international

context, i.e. on organised crime, human trafficking, prostitution, smuggling and illegal migration (available as electronic version since 2006).[32]

General remarks on irregular migration

Due to the nature of irregular migration, the actual numbers of irregular migrants are difficult to assess, and estimates and recorded cases of irregular migration in official statistics can only show a fragmentary picture of the real situation (IOM 2006: 36). Various administrative datasets, notably the aforementioned *Smuggler Database** and statistics on asylum applications are used for illustrative rather than analytical purposes to measure irregular migration (Kraler et al. 2009). There are relatively few estimates of irregular migration stocks in Austria and even fewer are methodologically founded (ibid; IOM 2006). The CLANDESTINO project[33] gives an overview of administrative data and estimates available on irregular migration in Austria.

2.1.4 HV – Central Social Security Register (Main Association of Social Insurance Carriers)

Since 1995, the *Main Association of Social Insurance Carriers* (*HV – Hauptversicherungsverband der Sozialversicherungsträger*) has run the *Central Social Security Register* (*Register der Versicherungs-verhältnisse*) and published statistics based on administrative data on employees with valid employment plus on recipients of pensions (Statistik Austria 2010f:5). Several other registers and statistics rely on *HV* data, e.g. both the labour market statistics as issued by the *AMS* (*see 2.1.5*) and results published in the framework of the *Register-Based Labour Market Statistics* (*see 2.3.2.1*) rely on data derived from the *HV* register.

The register comprises all persons with a social security number, both employed and self-employed persons as well as dependent family members (HV 2012b:31). It is compulsory for persons who are gainfully employed to make social insurance contributions. Personal data is entered at birth or, for persons born abroad, at the starting point of their duty to provide social insurance contributions (of a family member). The register is updated daily and information is neither deleted nor overwritten (Reichel 2010:5). Data on insured persons was also collected before the establishment of the current *HV* register, and since 2007 data on dependent family members has also been included (Reichel 2011:32). This also comprises persons who receive child care funds and are completing military service; however, employees in marginal employment are not exhaustively included (HV 2012b:31). The register may also include illegally residing persons and persons employed in breach of restrictions of access to labour market, because it is not directly linked to the *FIS* (*see 2.1.3.1*) or to the register of employed foreign citizens whose employment is subject to approval (*see 2.1.5*) (Kraler et al 2009:18).

The following core variables are included: *age*, *sex*, *citizenship*, *occupation*, *place of employment*, (declared) *income*, *legal information on insurance*, *occupational status*, *number of employment relationships* and access to long-term benefits related to unemployment (HV 2012a; Kraler et al 2009:18). Since 2008, the *ÖNACE* classification has been applied to economic branches (HV 2012b:33). Only one migration-related variable (*citizenship*) is included; neither information on *country of birth* nor on *year of immigration* are considered (Reichel 2011:30). As there is no obligation to announce naturalisations, the picture remains incomplete. If a person concerned

[32] See also http://www.bmi.gv.at/cms/BK/publikationen/ and sub-sites plus http://www.bmi.gv.at/cms/bmi_service/start.aspx#t_download

[33] CLANDESTINO http://irregular-migration.net/;

provides information on a voluntary basis, this is also communicated to the *AMS* (*see also 2.1.5*) (Reichel 2010:4).

Since 1995, the *HV* has run the so-called *Data Hub* (*Datendrehscheibe*) which primarily serves as a communication interface between the *HV* stock data as maintained at the *HV* register and data provided by the single social insurance carriers to the *HV* (demographic data and information on the occupational status are delivered by employers). Data reaching the *HV* is provided to the carriers on a daily basis. The data hub also allows data to be supplied to partner institutions relying on *HV* data, i.e. federal ministries, provincial governments, the *Federal Data Centre*, the *Labour Market Service* and *Statistik Austria* (HV 2012b:148). Annual labour market statistics are issued together with data on unemployment stemming from the *Labour Market Service* (*see 2.1.5*). For the *HV* statistics, employment relationships are recorded instead of employed persons; hence, if a person carries out two jobs which are subject to social insurance contributions, the person appears in the labour market statistics derived from the *HV* twice (HV 2012b:31).

2.1.5 AMDB – Labour Market Database (Labour Market Service)

The *Labour Market Database* (*AMDB – Arbeitsmarktdatenbank*) is maintained by *the Austrian Labour Market Service* (*AMS – Arbeitsmarktservice*) on behalf of the *Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection* (*BMASK – Bundesministerium für Arbeit, Soziales und Konsumentenschutz*) as a register database. The *AMDB* contains anonymised, individual-related and business-related micro data on labour market aspects in Austria, e.g. periods of employment and unemployment and periods beyond the occupational system. The database is fed with raw data from the *HV* register and with data from several *AMS* registers (*see above and below*). It mainly aims to provide longitudinal data for scientific purposes, connected to research and evaluation. Since 2006, the *AMDB* has been accessible online for external users; accession of data is generally subject to fees.

The following variables are included in the *AMDB*: *sex*, *age*, *citizenship*, *occupational status*, *gross annual income* and *employer* (Reichel 2011:32). Regarding the register on work permits as described above, field of occupation, economic branch and type of application (initial, renewal) are registered (Kraler et al 2009:17). Data is registered as episodes and can be interlinked in the long-term, thereby making it possible to trace employment careers. The respective person-related record is immediately updated when there is a change of citizenship, change of employment, extension or change of residence, title or death. Information is either provided directly by the person concerned, by the employer or by the *AMS* (Reichel 2011:5p, 32).

AMS data only includes one migration-related variable (*citizenship*), and information is not collected on *place of birth*, *year of arrival* or *country of birth of parents*. Furthermore, due to a lack of inter-linkages between registers, no automatic updates of *AMS* records and consequently of the *AMDB* are foreseen if individuals change their *citizenship*. There is also the fact that it is not obligatory to announce such changes; instead, persons concerned are invited to do so on a voluntary basis. There is likewise no obligation to inform the *Main Association of Social Insurance Carrier*, as naturalisations are communicated voluntarily (*see 2.1.4*). Furthermore, naturalisations are recorded with a delay and are consequently sometimes overestimated and in many cases contradictory information on citizenship is given. The *AMS* seeks to overcome this problem by applying three citizenship tables (*Staatsangehörigkeitstabelle*): (1) non-nationals, (2) non-nationals being naturalised and (3) persons being additional insured with a non-national, not fitting in the other categories. The calculations are based on the aforementioned register on work permits, the unemployment register and the *HV* register, as outlined above. Compared to the results of the *POPREG*, an over-estimation of foreign citizens and an under-estimation of naturalisations included in the *AMDB* can be detected – with great deviations among countries (Reichel 2010:2pp). An important restricting factor concerning the

statistical usability of *AMS* data is that core information, e.g. on *citizenship*, does not cover the entire residing population; hence, other sources should be considered to be of higher statistical relevance (Kraler et al 2009:13p).

Data gained via the register on work permits will be of decreasing significance in the future, because the share of non-nationals who do not require work permits is steadily and significantly increasing, i.e. EU nationals. For example, Kraler et al. (2009:17) points out that in 2008 only approximately 22% of the foreign labour force was subject to work permits and consequently registered in the database.

For *AMS* data, the national concept of unemployment is generally applied, considering persons registered as unemployed and job-seekers at the *AMS* not currently receiving training or education (Statistik Austria 2011c:4). Compared to internationally commonly produced unemployment rates, self-employed and marginally employed persons are not included (Statistik Austria 2010f:5). Another issue hampering the statistical comparability of *AMS* data is the "28 day rule" which foresees the automatic elimination of status entries if there is a change in status that lasts fewer than 28 days by overwriting them with the new entry (e.g. training). This rule cannot be changed, but despite efforts to reconstruct prior statuses, minor deviations remain (Statistik Austria 2010f:22). In reference to the given limitations as described, in the SEEMIG context, data as acquired via the *European Labour Force Survey* as part of the *Microcensus* is of higher relevance due to better international comparability and due to stronger consideration of migration-related variables, including *country of birth* of respondents and *their parents* (*see also 2.2.1*).

***AMS* registers and migration-related information**

The *AMS* is responsible for a range of registers that mainly aim to collect personal attributes on unemployed persons who register at the *Labour Market Services*. The *Unemployment Register* has existed since 1988 and displays information on all persons who have ever been registered at the *AMS*, e.g. connected to unemployment benefits or training. The individual-related information is provided directly by the persons when registering at the respective *Labour Market Service* office (Reichel 2011:5p).

Another register of relevance in the SEEMIG context is the *Register of Employed Foreigners whose Employment is Subject to Approval*, as the *AMS* is in charge of issuing work permits. The register has been maintained since 1992 and includes data on employed persons from non-EEA countries, except family members of EEA citizens, convention refugees and specific occupational groups, e.g. journalists, diplomats, etc. Persons are registered for the first time when they submit an application for employment in reference to the *Aliens Employment Act 1975* (*Ausländerbeschäftigungsgesetz*) (Reichel 2010:5p). Non-EEA nationals temporarily residing in Austria need a residence permit that is valid for at least one year, generally for the duration of the purpose of stay, e.g. for students for the duration of their studies. A residence permit only includes a work permit if it is issued for activities that are not subject to the *Aliens Employment Act*. Some types of residence permits issued by Regional Police Directorates already include work permits, i.e. the *Red-White-Red Card* for highly qualified persons or the *EU Blue Card* for foreign peak forces. For these groups, no further issuance of a work permit by the *AMS* is needed. Two types of visas issued by the *Austrian General Consulates* based on the *Aliens' Police Act 2005* are of relevance: Firstly, the *Jobseeker Visa* and secondly, the *Visitor Visa D* for stays between 91 and 180 days with a validity of six months which is issued for tourists, students, business travelers, visitors of friends or relatives, persons taking up a short-term employment (alias seasonal workers) from third countries. (*see also 2.1.3.1*). EEA citizens[34] do not require a residence permit or a work permit to engage in employment; however, they do need a registration certificate if they intend to stay for more than three months. Registration certificates are

[34] Except Romanian and Bulgarian citizens until 31 December 2013.

issued by the *Local Competent Registration Authority** upon registration of a residence in Austria (*see 2.1.1*). [35]

Further sources containing labour market data based on several sources

There are also other statistical databases aiming to interlink different sources, e.g. the online information system BALI (*Budget-, Arbeitsmarkt- und Leistungsbezugsinformationen*), which enables the combination of *AMS* data on employees, *HV* data on social insurances, unemployment rate according to the *Eurostat* concept and population data from *Statistik Austria*. Standardised tables on labour market related issues are available at the information system ELIS (*Economic and Labour Market Information System*) which is also maintained by the *BMASK* and updated monthly. This system also contains a specific data collection on foreigners in the Austrian labour market.[36] There are also cross-border efforts to commonly monitor labour markets via REGIOLAB. Furthermore, labour market statistics based on *AMS* data only are issued annually and monthly, and enriched statistics are issued together with data stemming from the *Central Social Security Register* (*see 2.1.4*).

2.1.6 Educational Attainment Register (Statistik Austria)

Since the academic year 2003/2004, the *Educational Attainment Register* (*Bildungsstandregister*) has been maintained by *Statistik Austria* and contains personal data on successfully accomplished educational attainment. The register also provides information for the *Register-based Population Census* (*see 2.3.2*). Data on educational attainment includes all institutionalised forms of education at public and private schools, universities or similar educational establishments. Data is also delivered to *Eurostat*, the *UNESCO* and the *OECD* and forms a basis for the national accounts. The specific legal bases are the *Educational Attainment Documentary Law 2002* (*Bildungsdokumentationsgesetz*) and the related regulation. The major annual publication is "Education in Numbers" (*Bildung in Zahlen*), and results also feed into other publications, e.g. since 2010 also into the Statistical Yearbook "migration & integration".

School statistics in the context of the Educational Attainment Register

Schools provide digitalised data to *Statistik Austria* annually or semi-annually in case of semestral educational type of organisation; 90% of school administrators provide data extracted from locally maintained pupil files, 8% transmit Excel tables and a further 2% send data in hard copy format. Schools are obliged to give information; data is principally available for the local level. Traditionally, aggregated data for classes or parts of classes were provided. Since the academic year 2003/2004, single datasets for pupils have been delivered, which makes it possible to connect single characteristics and trace longitudinal educational information. Apart from being processed for the purpose to generate School Statistics (*Schulstatistik*), data also constitutes a major basis for the *Educational Attainment Register*.

Generally, the displayed units are schools, classes, pupils and staff, including teachers and non-pedagogic staff. Core data on pupils is provided (including *sex*, *age*, *citizenship*, *colloquial language*, special educational needs, start of compulsory school attendance), status of educational attainment at reference date, current education, school success in precedent reference period, attendance of foreign language lessons and final exam. The variable "*country of birth*" is not considered. Data on individuals is available by also collecting social security numbers or equivalent surrogate

[35] See also: http://www.ams.at/sfa/14103.html and http://www.bmeia.gv.at/en/embassy/consulate-general-new-york/practical-advice/visa-and-residence-permit/entry-permit-visa.html

[36] i.e. employed persons and unemployed persons per month and year, unemployment rate according to nationality, aggregated information on development of foreigners in the labour market since 1975.

identification codes. Furthermore, types of educational establishment and the municipality of the school location are included (Statistik Austria 2011e:3pp). Results are available online, also in the *STATcube*.

The variables "*citizenship"* and "*colloquial language"* are valuable for generating differentiated statistics on pupils per school type, pupils with special educational needs, early school leavers etc., for nationals and non-nationals, as well as for pupils with a foreign colloquial language.

Statistics of Higher Education in the context of the Educational Attainment Register[37]

Data on students and academic teaching staff are derived from files as kept by universities and equivalent tertiary educational establishments or non-university study courses. Person or study-related data on students and related scholastics is transferred twice a year, while data on final degrees and on teaching staff is provided annually. For public universities, data is centrally collected by the *Federal Ministry for Science and Research* (*BMWF – Bundesministerium für Wissenschaft und Forschung; using GES – Gesamtevidenz der Studierenden*) and provided to *Statistik Austria*. For *Universities of Applied Sciences*, data is derived from an information system that is centrally maintained by the *Inspectorate for Universities of Applied Sciences* (*BIS – Studieninformationssystem des Fachhochschulrates*). University colleges of teacher education use a university administration system (*PH online*) for submitting data. Further data is provided in Excel format. Data on teaching staff is collected by the *Austrian Federal Ministry of Education, Arts and Culture* (*BMUKK – Bundesministerium für Unterricht, Kunst und Kultur*) and provided to *Statistik Austria* annually. Educational expenses are not included in the *Statistics of Higher Education* (*Hochschulstatistik*). These statistics basically pursue the same publication regime as the School Statistics and are also based on the *Educational Attainment Documentary Law 2002* (*see 2.1.6*). Information on attained education is recorded in the *Educational Attainment Register*.

Generally, the *ISCED* classification is applied, but the number of sampling units has evolved over time, since *Universities of Applied Sciences* have only existed since 1994 and provided statistical data since then. *Academies for Social Work and Academies for Healthcare* became *Universities of Applied Sciences* in 2001 and 2006, and were thus shifted from secondary to tertiary educational establishments. Since 2009, short courses at *Universities of Applied Sciences* have also been considered for the statistics. Further extensions in 2003 concern private universities, theological establishments and non-university study courses. *Pedagogic Academies* were upgraded as tertiary institutions in 2006.

The following variables are available: *age*, *sex*, *citizenship*, social security number or equivalent surrogate identification code, place of residence, appellation and type of studies, date of enrolment and of graduation. Additionally, primary data is gathered in the framework of a mandatory electronic survey completed by the students after enrolment, which is dedicated to students' individual social backgrounds (occupation, occupational status at enrolment). Within a second mandatory electronic survey, graduates provide information on study-related stays abroad (country, purpose, funding and duration) (Statistik Austria 2011f:3pp). The variable "*country of birth"* is not considered.

[37] In 1998, 2002, 2006 and 2011 a *Survey on the Social and Living Conditions of Students in Higher Education* has been carried out; since 2006 it has also included variables like *citizenship*, *place of birth*, *place of acquisition of highest education* apart from information on educational attainment, occupation and occupational status (see also http://ww2.sozialerhebung.at/Ergebnisse/, consulted on 3 April 2013)

2.2 Statistical data sources, sample surveys

2.2.1 MZ – Microcensus and LFS – Labour Fource Survey (Statistik Austria)[38]

Since 1995, internationally comparable data on employment and unemployment has been produced in the framework of the *EU Labour Force Survey (LFS)*, which is connected to the *Population and Housing Census* alias *Microcensus* (*MZ – Mikrozensus*), as a primary statistical sample survey.[39] Sample surveys on employment and unemployment have been carried out regularly in Austria since the instalment of the *Microcensus* in 1968. For meeting the related EU requirements, since 2004 interviews have been carried throughout all weeks of the year instead of during one reference week at the end of the quarter. Households are now interviewed only five times in total. Respondents are obliged to participate in the survey. These novelties constitute a methodological break on data production for responding to seasonal fluctuations, but coherence of data comparability is generally given (Statistik Austria 2011c:4p,23), even if marked structural irregularities must be taken into consideration (Statistik Austria 2009:259). Households are still contacted quarterly and data is also still transferred to *Eurostat* four times a year; therefore, the *MZ* pursues having a quarterly character (Statistik Austria 2011c:4).

The sample of a primary statistical sample survey is almost evenly stratified by *Bundesland* (*NUTS2* regions) and covers approximately 23,000 dwellings across Austria.[40] The sample is based on persons in private households, dwellings, households and families. It is predicated upon all persons whose regular residence is in an Austrian private household according to the *ZMR* (*see also 2.1.1*), excluding institutional residences (e.g. retirement homes, residential schools).

The response rate is approximately 95% and the coverage is principally exhaustive, even if there are still some under-recordings of single households and of interview partners in built-up areas. Similarly, non-nationals are generally under-recorded due to language barriers, despite multi-lingual interviewers and questionnaires (Statistik Austria 2011c:11pp, 21p). The results are extrapolated to the population by region, *age* and *sex*; by region and groups of nationality in accordance with the *POPREG* (*see 2.1.2*); and further by region and size of household in accordance with the current household forecast of *Statistik Austria*. Adjustments are implemented through an iterative process (Statistik Austria 2009:259). Results provided to *Eurostat* are anonymised single datasets (Statistik Austria 2011c:7).

The *MZ* embraces a catalogue of questions, reaching from central characteristics on employment and unemployment to information on working hours, economic branch, existing secondary occupations, former occupations of unemployed interviewees, job seeking activities and duration, educational attainment and job-related training (Statistik Austria 2011c:4pp).

The applied definitions comply with those stipulated by *Eurostat*, using *NACE*, *ISCO* and *ISCED* classifications which are adapted for the national context (*see Annex 5.3*).[41]

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[38] Information included in this chapter relies on information provided by Cornelia MOSER, Statistik Austria.

[39] Publications: website *Statistik Austria*, press releases, quarterly and annual condensed reports, exhaustive annual report. Special analyses are carried out for the statistics on households and families, for the annual report of the statistics on dwellings and for annually changing ad-hoc-modules. In-depth thematic articles are attached to the *Statistical News* as also issued by *Statistik Austria* (Statistik Austria 2011c:19p).

[40] The sample is designed in accordance with *Council Regulation (EC) No 577/98* (and *No 430/2005, 2014/2005, 2104/2002, 1897/2000*). Further basic documents regulating the data production process are: *Regulation of statistics on the labour force and dwellings BGBl. II Nr. 111/2010* (based on the *National Statistics Law: Bundesstatistikgesetz 2000, idF. BGBl. I Nr. 92/2007*) and the *Regulations (EC) No* 377/2008, (EC) No 2257/2003 and *(EC) No 1372/2007*. As concerns classifications: *1022/2009* for *ISCO* and *973/2007* for *NACE* (*see also Annex 0*) (Statistik Austria 2011c:9).

[41] Further deviations stem from the methodological changes in 2004: working hours per week (increased due to inclusion of regular over-hours, seasonal fluctuations are considered), occupation (until 2004 code conversion from national to *ISCO*, changes in assignment of sub-groups while maintaining main groups, from *ISCO* 88 to 08), economic sector (from 17 *ÖNACE* 2003 to 21 2008 segments, back-calculation was carried out), highest educational attainment (inclusion of new educational

The definition of employed persons and unemployed persons complies with the *ILO* concept[42]. Due to changes in the formulation of questions in 2004, an under-recording of employed persons emerged. This resulted in decreasing numbers, which were most probably linked to the under-recording of persons on unpaid leave and of accessory family members. Another change in the formulation in 2007 might have helped to overcome this problem. The changes in 2004 also caused increases in the number of unemployed persons. Indications are surveyed in a more detailed manner and critical groups are better depicted, i.e. non-nationals and foreign adolescents. As regards non-employed persons (remaining persons below the age of 15), since 2004, recruits and conscientious objectors performing community service are surveyed, but not included in *LFS* analyses.

The following economic variables are collected: characteristics of activity status in the reference week, characteristics of the primary and eventual further occupations, previous work experience of unemployed persons, job seeking activities of unemployed persons (including livelihood before starting seeking activities, type and duration of job seeking), formal education and vocational training, situation one year before (livelihood, occupational status). Furthermore, place of residence and type of interview are depicted (Statistik Austria 2011c:13p).

Apart from demographic characteristics such as *age*, *sex*, *citizenship*, *country of birth* and *marital status*, a new variable was introduced in the framework of the *Ad-hoc-module 2008 on the labour market situation of migrants in Austria* and has been maintained in the *MZ* since then: *country of birth of parents.* This variable is not included in the *POPREG* (*see also 2.1.2*).[43] This makes it possible to apply a broader concept of foreign background by considering a combination of *citizenship* and *country of birth*, according to the international definition included in the *UNECE Recommendations for the 2010 censuses* (90)*,* differentiation according to "*migration background of first generation*" (born abroad) and "*migration background of second generation*" (parents born abroad)). The *country of birth of parents* is available in aggregated form. If both parents were born abroad, the mother's country of birth is considered, while "Austria" is indicated if at least one parental part was born there. The *Ad-hoc-module* also included duration of stay in Austria (considering also former residences), reasons for emigration from *country of origin*, resources of support measures to labour market access, time limitation of residence permit and legal access to labour market (Statistik Austria 2011c:13, Statistik Austria 2011e:9p). Those variables have not been maintained for the standard programme since then. Since 2004, persons born abroad are asked to indicate the duration of uninterrupted residence in Austria. The *Ad-hoc-module 2008* as mentioned above will be repeated in 2014 in accordance with the *European Statistical System* agreement on the *Labour Force Survey (LFS) ad hoc module 2014 on the labour market situation of migrants and their immediate descendants* (ESS n.y.).

Consequently, the *MZ* is the most comprehensive source of information on the labour market and human capital attributes of foreign nationals. Indications on *country of birth* are included as well as the *year of arrival in Austria*, as well as the person's age at that moment, current citizenship and information on the parents' origins (Statistik Austria 2011e:9p). Particularly the standard programme can be deemed as statistically appropriate and is able to meet the requirements of the relevant EU regulations. In future, the *Register-Based Labour Market Statistics* may become a valuable data source. However, the latter is still in an early stage of operation and has not yet exploited the full range of variables; for instance, the variable "*country of birth"* is not yet foreseen (*see also 2.3.2.1*). The *MZ* has been the only source of information on self-employment of foreign nationals and

formats, changes regarding secondary education), subsistence (self-assessment since 2004, inclusion of characteristic "permanently disabled"), marital status (more divorced persons since use of *ZMR* from 2003 on), number of households (more single households included) etc. (Statistik Austria 2011c:23p). Changes regarding employed and unemployed persons see *Annex 0*.

[42] see *Annex 0*

[43] The *MZ* cannot be perceived as a very reliable source of information on foreign population for the 1980s and 1990s, even though some questions were introduced in 1995 (country of birth, year of arrival) (Kraler et al. 2009:6).

foreign-born persons since the population census carried out in 2001. Another restricting factor is that *multiple citizenship* is not recorded in the *Microcensus*, and respondents must decide which *citizenship* they want to register (Kraler et al. 2009:14,18).

Another asset is that the internationally accorded *ILO* concept is applied. This is not the case as regards national statistics as produced by the *Labour Market Service* for registered unemployment (*see also 2.1.5*) which is based on registered unemployed persons following the national concept of unemployment statistics (Statistik Austria 2011c:4p).

Nevertheless, it must be acknowledged that results from the *MZ* are only valuable at the aggregated territorial level due to restricted representativeness. General data on nationals and non-nationals might be also derived from other registers like the *POPREG* and the Population Statistics, but *MZ* data makes it possible to combine several variables referring to educational attainment and labour market related characteristics and consider place of birth and duration of stay. Furthermore, the *MZ* provides indicators across specified registers – it therefore remains a valuable source both for statistical and analytical purposes, but complete linking-up of registers is still a longer way off.

2.3 Census databases

2.3.1 Population Census until 2001 (Statistik Austria)

From 1869 to 2001, the population census was carried out as a "modern" exhaustive statistical survey by involving the entire population in Austria in reference to the same survey date, generally every ten years. In 2001, while *Statistik Austria* was in charge of data preparation, processing, analysis and publication, municipalities were responsible for conducting the survey at the local level. *Statistik Austria* provided addresses stemming from the *Housing Register* to the municipalities, and the latter had to link persons to the addresses or dwellings via a registration key (*Meldeschlüssel*), in compliance with registers of *Local Competent Registration Authorities**. Accordingly, data is principally linked to the municipal level, but even referring to smaller territorial scales. Respondents were obliged to give information. Legally, the census was based on the *Population Census Act 1980* (for 2001: version BGBl. No 28/2001). The results of a population census present a numerical picture of the structure of the population, households and families. The concept applied for defining the resident population considered all persons registered with their main residence. This definition of the "*place of usual residence*" refers to the centre of a person's life irrespective of the actual duration of stay, rendering the date of enumeration decisive (Statistik Austria 2005b:3pp). The census 2001 also contains non-nationals without Austrian citizenship who are registered with their main residence in Austria (Statistik Austria 2005b:7), as well as Austrian nationals residing abroad. Asylum seekers are excluded.

Preliminary results were published in November 2001 and the final results were available in autumn 2002. They are available on the website of *Statistik Austria*, in printed publications, on CD-ROM and in the *STATcube* database. Results were also provided to *Eurostat* (Statistik Austria 2005b:7).

The following variables are available: *age*, *sex*, *citizenship*, *country of birth*, *religion* and *colloquial language*. Furthermore, information on *children born alive*, *household position*, *type of household* and *family structures* was collected. The variables connected to the labour market were *activity status* (by applying the *ILO* concept only partially), *status in employment*, *occupation* (ISCO 88) and *economic sector* (*ÖNACE 95*). The variable "*highest educational attainment*" was included according to national classifications. Regarding commuting, usual means of transport and the general duration of commuting were included (Statistik Austria 2005b:78pp).

The variables, concepts, definitions and classifications of the census 2001 were oriented towards the recommendations for the *2000 Censuses of Population and Housing in ECE Regions* plus the connected guidelines. Deviations mainly concern the definition of the "*place of usual residence*". Contrary to the precedent census rounds in 1981 and 1991, the variable "*country of birth*" was reintroduced in 2001 (Statistik Austria 2005b:3), following the UN census recommendations. In case of "*citizenship*" was included in a census before 1981, not the exact country was indicated. For this reason, only differentiations for nationals versus non-nationals were possible (Reichel 2011:24). By contrast, this variable has been consistently included in the *Microcensus* since 1995, which was enriched by "*country of birth of parents"* in 2008, as detailed above. (Kraler et al 2009:8). While the census as carried out until 2001 also recorded "*multiple citizenship"*, this is not foreseen for the *POPREG* or the *Microcensus* (*see 2.1.2 and 2.2.1*). If one of the *citizenships* is Austrian, it is likely to be preferentially entered (Kraler et al 2009:13p). Several languages could be indicated as *colloquial language*, but multiple answers were only processed for German and one further language were included; if several other languages were given, only the main language was considered (Statistik Austria 2005b:8). Neither the variable "*colloquial language"* nor the variable "*religion"* are any longer comprised in the *POPREG* (*see 2.1.2*) or the *Register-based Population Census* (*see 2.3.2*). The variable "*ethnicity*" is generally not included.

2.3.2 Register-based Population Census since 2011 (Statistik Austria)

In 2011, the *Register-based Population Census*[44] replaced the *Population Census, Housing (buildings and dwellings) Census* and the *Census of Enterprises and their Local Units of Employment*. Until 2001, censuses were implemented as a traditional census (*see also 2.3.1*). Thus, the new census format constitutes a milestone towards the complementary use of registers. For the first time, data stemming from diverse existing administrative registers are combined instead of collecting information by manually completing citizens' questionnaires. After a test round in 2006, the first census round was carried out for the reference date "31 October 2006" in accordance with the *Register-based Population Census Act 2006* and in line with *Regulation (EC) No 763/2008*. A major advantage is that *Register-based Population Census*es incurs fewer costs and can be conducted more often, prospectively every five years, from 2011 onward.

The *ZMR* (*see 2.1.1*) is the heart of the census and is complemented by a range of additional base registers: *Housing Register of Buildings and Dwellings, Business Register of Enterprises and their Local Units (including the Agricultural and Forestry Register), Central Social Security Register, Tax Register, Unemployment Register, Register of Educational Attainment* and *Register of Enrolled Pupils & Students*. Comparison registers are considered to secure quality assurance: *Child Allowance Register, Registers of Public Servants of the Federation and the Federal States, Central Foreigner Register, Register of Social Welfare Recipients, Register of Alternative Civilian Service, Conscription Register* and *Register of Car Owners*. Data stemming from these different sources are linked by the *pBK code*. (Statistik Austria 2011d:5).

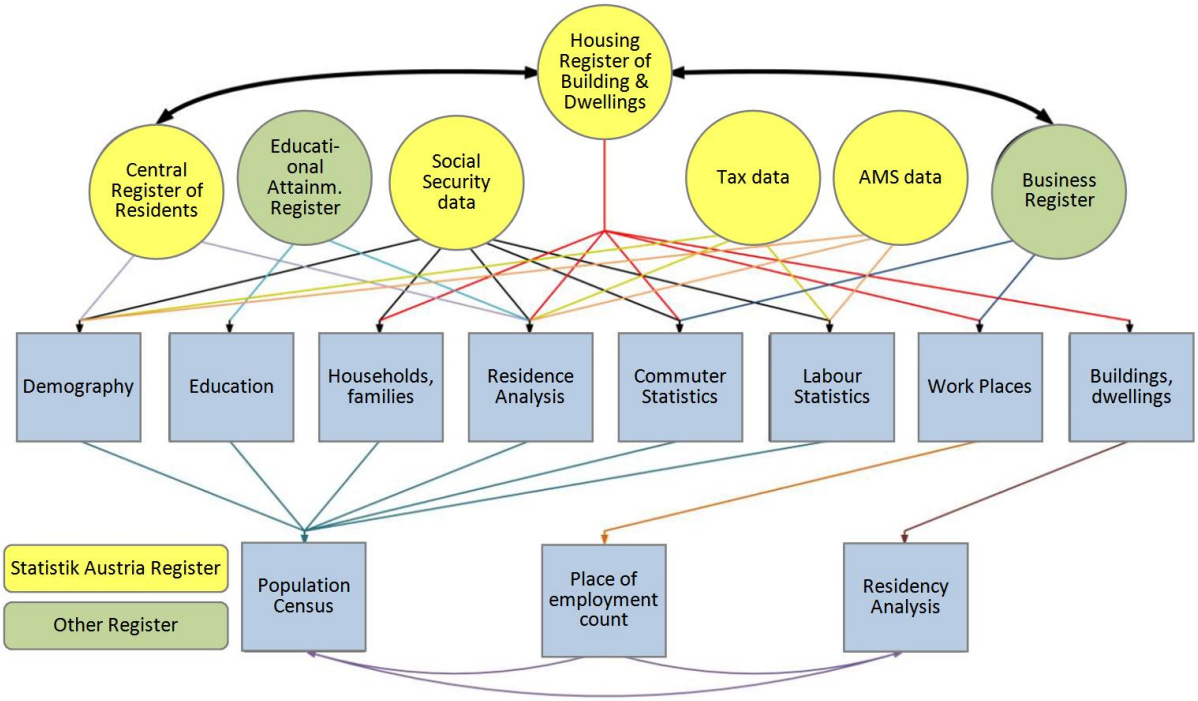

Figure 3: Main sources of the Register-based Population Census (Statistik Austria 2011d:5, translated and amended)

Core variables regarding migration are: *age*, *sex*, *legal marital status*, *nationality*, *country of birth*, *main residence one year before the census* (i.e. 31 October 2010), as well as the *year of arrival in*

[44] See web-descriptions and sub-pages http://www.statistik.at/web_de/frageboegen/registerzaehlung/index.html (DE) and http://www.statistik.at/web_en/surveys/register_based_census (EN), last consultation: 26 February 2013.

Austria (if the main residence has been in a foreign country). Demographic variables are primarily derived from the *ZMR*, but are counter-checked with a range of other sources for securing quality assurance.[45] Regarding education, information both on the formal level of educational attainment[46] and current school attendance[47] are included. For labour market aspects such as activity status, status in employment, occupation and economic activity (*NACE* classification), data is derived from the *Register-based Labour Market Statistics*, which have been produced annually since 2008 (see also 2.3.2.1). The main variable of the commuter statistics is the category of distances covered to reach the place of work, school or university, either in Austria or abroad. Finally, information on households[48] and families[49] is also included. Territorially, census data is available also for the local level and even smaller domains.

According to *Statistik Austria*, by applying the system of *Register-based Population Census*, Austria is meanwhile able to converge towards the requirements of corresponding EU regulations (*Regulation EC No. 763/2008, No. 1201/2009, No. 519/2010,* and *No. 1151/2010*). Furthermore, thanks to the continuous register-based enumeration, a variety of detailed demographic and geographical analyses are now possible (Statistik Austria 2010a:5, Statistik Austria 2010b:5, Kytir et al. 2005:208). Compared to the census in 2001, some variables cannot be further displayed, such as *occupation*, *occupational status* or *highest educational attainment*. Thus, demographic information must be completed with results from the *Microcensus* (*see 2.2.1*), which also includes questions on *household composition*, *country of birth*, *year of arrival*, and, since 2008, *parents' country of birth* (Kraler et al. 2009:11). Furthermore, detailed information connected to commuting to work or school (e.g. frequency and duration of commuting, mode of transport) is missing, because they are not included in any register. Furthermore, no information on commuting from *secondary residences* is included. Generally, the *Register-based Population Census* does not foresee variables like *religion*, *colloquial language* or *ethnicity*. Results from the census in 2011 will prospectively be available in June 2013.

2.3.2.1 Mini-Register Census & Register-Based Labour Market Statistics (Statistik Austria)[50]

Annual *Mini Register-based Censuses* for fiscal equalisation purposes started in 31 October 2008. The *Fiscal Equalisation Law 2008*, enacted in December 2007, decrees that from the financial year 2009 onwards *Statistik Austria* must annually determine the population number on that reference date. Data collected for the *Mini Register-based Census* makes it possible to undertake early analyses for some areas of the *Register-based Population Census* (*see 2.3.2*), i.e. the *Register-Based Labour Market Statistics* (*AE – Abgestimmte Erwerbsstatistik*), which were published for the first time referring to 31 October 2008. In 2009, further results on demography, education and commuting were added, which made it possible to make comparisons over time with the census carried out for

[45] *Central Social Security Register, Unemployment Register, Child Allowance Register, Register of Public Servants of the Federation and the Federal Provinces, Register of Social Welfare Recipients, Tax Register, Register of Car Owners* and the *Central Foreigner Register*.

[46] The variables are the type and field of highest education completed (national classification and *ISCED*), which are derived from the *Educational Attainment Register,* the *Register of Enrolled Pupils and Students* and the *Unemployment Register*.

[47] The variables are the type/field of education completed, location of the educational establishment.

[48] Households are either private households (corresponds to dwelling; all persons counted in one dwelling are counted as members of the same households; the variables are size, type and status of household) or institutional households, capturing all persons except homeless persons. Information is generally obtained from the *Central Social Security Register*. For quality assurance, data is counter-checked with the *Child Allowance Register* and the *Tax Register*.

[49] According to the nuclear family concept (married/ cohabiting couples with/without children or single parents with (biological/step/adopted) children, not having children of their own are considered as children – regardless of age. Variables are family status, type of family, number of persons in the nuclear family

[50] See also http://www.statistik.at/web_en/surveys/register_based_census/mini_register_based_censuses/index.html (last consultation: 20 February 2013) and http://www.statistik.at/web_de/frageboegen/abgestimmte_erwerbsstatistik/demographie/index.html (last consultation: 20 February 2013)

2011. As regards statistics on commuters, the same principles are applied as for the *Register-based Population Census*.

The *AE* is comprised of secondary statistics on variables about the economic activities of the Austrian population, and is operated by *Statistik Austria*. While the central unit pertains to persons residing with a main residence in Austria, relations to *place of residence* and *employment*, *occupation* and *household/family* are introduced. The published variables cover the fields of demography, educational attainment, employment, and commuter statistics. Set up as an exhaustive register-based census, detailed data on economic characteristics of the resident population is generated by proceeding data from existing registers without conducting further primary surveys. Data is generated annually for 31 October (annual reference day for the *Mini Register-based Census*), i.e. *on occupation*, *unemployment* and *non-employment*. After a test round in 2006, data is currently available for 2008, 2009 and 2010, and is compartmentalised for the local and *LAU2* level.[51] The conceptualisation phase was finished for the first register-based enumeration by October 2011. The *AE* constitutes the major pillar for the *Register-based Population Census* as carried out in 2011 (*see 2.3.2*).

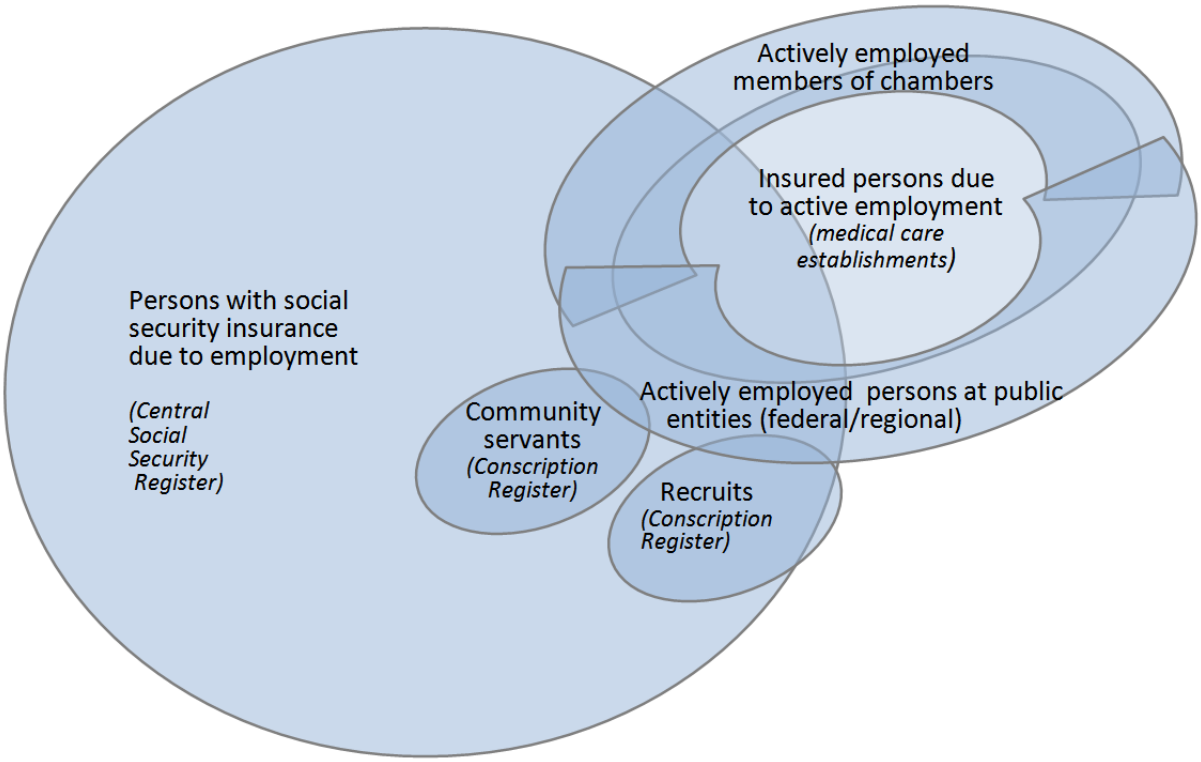

Figure 4: Example of economically active persons: intersections of datasets (Statistik Austria 2010f:10, translated and amended)

Based on the *National Statistics Law* and pursuing the recommendations of the *CES Recommendations* and *Regulation (EC) No 763/2008*, the *AE* relies on a set of 30 administrative data and secondary data sources. These are, for example: *HV register* (*see 2.1.4*), *LFS/Microcensus* (*see 2.2.1*), data as provided by the *Labour Market Service* (*see 2.1.5*), *Educational Attainment Register* respectively *School Statistics* and *Statistics of Higher Education* (*see 2.1.6*), *Business Register of Enterprises and their Local Units and Enterprises in Agriculture and Forestry*, data of chambers on

[51] Online publications: website of *Statistik Austria*, *STATcube*, "A look at the local level" (*Ein Blick auf die Gemeinde*) (Statistik Austria 2010f:21).

insurances, *Conscription Register*, data on federal and regional (*Länder, NUTS2*) employers, tax data etc. Data is processed by analysing and gauging its respective quality, identifying overlaps, drafting decision diagrams with defined prioritising rules. Furthermore, the coherence with other labour force statistics is counter-checked, e.g. *Figure 4* visualises how datasets are interlinked to generate the set of "economically active persons". The *AE* also aims to illustrate differences between indicators provided by different labour market statistics (*AMDB 2.1.5, HV Register 2.1.4, LFS/Microcensus 2.2.1)* (Statistik Austria 2010f:3pp).

The *AE* relies on the *ILO* concept of employment and unemployment (*see also 2.2.1*). The *activity status* is the central variable here; it allows categorisations in major social groups such as employed/unemployed, pupils, students, as well as people receiving a pension. Further variables are: *status*, *status in employment*, *occupation* (*ISCO*) and *economic activity* (*ÖNACE*) of the local unit, *full-time/part-time employment*, *temporary absence of work*, *marginal employment*, as well as a more precise classification of employed persons into white collar workers, blue collar workers, and civil servants (Statistik Austria 2010f:12pp).

For the *AE*, the following demographic variables are currently available: *age*, *sex* and *citizenship*; *country of birth* is foreseen to be included in the future. The used sources and the process of generating characteristics correspond to the procedure for the *Register-based Population Census* in 2011; hence, data derived from the *AE* delivers the labour market related information for the latter (*see 2.3.2, particularly Figure 3 on main sources of the Register-based Population Census*).

One of the major advantages of the *AE* is data availability up to *LAU2* with limitations on data protection regulations, which allows analyses to be made at the small-scale level (*while Microcensus data is available only for NUTS2, see 2.2.1.*). As data is derived from other sources, analyses for specific subgroups is hampered, such as employees not included in the *Central Social Security Register* or unemployed persons not registered at the *AMS* (Statistik Austria 2010f:5pp). The *AE* should still be perceived as being in its preparatory phase, but is intended to become a sort of annual *Mini Register-based Census* for fiscal equalisation that will deliver detailed results from October 2011 onwards. This is one major reason why, for the SEEMIG context, data sources on labour market and educational attainment that have long been in place have yet to be considered as more relevant (*see also Microcensus, 2.2.1*).

2.4 Estimates

2.4.1 Estimates on Austrians Residing Abroad (Austrian Federal Ministry for European and International Affairs)[52]

Numbers on Austrian citizens residing abroad are mainly based on annual estimates provided by the *BMeiA*. Legally, the provision of estimates is based on the statute of the *BMeiA*, which primarily regulates internal structures, duties and rights. Estimates are usually provided by embassies or consulates every five years; for some countries results are transmitted more frequent on a voluntary basis. The derived estimates are non-standardised; they are generally based on contacts via official acts, service or information gathering requests, and participations in events. Methodologically, there is neither a commonly agreed basis nor an obligation to reveal sources for estimates, but the overall format and guiding questions for reporting was unified in 2005 (for internal use only). No definite concept on duration of stay is applied. Nevertheless, data is considered to be comparable with estimates before 2005. The number of Austrian citizens residing in the respective countries is only available in aggregated format, without any differentiations (spatial distributions, sex, and age). Published data does not necessarily correspond to actual numbers of citizens residing abroad; according to estimations, approximately 500,000 Austrians were living abroad in 2011, while only 328,542 persons were registered at embassies or consulates (BMeiA 2011: 8p).

Secondary statistics on emigration stocks are prepared by *Statistik Austria*. When preparing those statistics, the only data that *Statistik Austria* derives from mirror statistics pertains to Austrian citizens residing in Switzerland and Germany. Data is only available on the website of *Statistik Austria*, but only on national level for the respective country of destination. No differentiation according to sex or age is given.

Due to the variety of methodological approaches and the use of manifold sources, neither of which have to be documented compulsively, data quality remains limited in terms of comparability and representativeness.

AOE – Registration of Austrians Residing Abroad

The voluntary e-registration in the framework of the *AOE Registration* (*Auslandsösterreicher Registrierung*), which has been operated since 2008, is considered to be a measure aiming at enhancing the quality of data, even if it mainly constitutes a primarily service-oriented tool. The *AOE* mainly aims to facilitate the provision of information to Austrians abroad and to establish contacts for elections or any kind of crisis. Data gathered for the *AOE Database* by the *BMeiA* is kept for administrative purposes only and is subject to data protection.[53] Austrians residing abroad do not necessarily have to register at the *AOE Database* when moving abroad, but data and contact details can be provided on a voluntary basis. The *BMeiA* advises all Austrian citizens concerned to register either at their website (*by filling in an e-form, see below*) or at the geographically responsible authority (embassy or professional general consulate). Core data has been collected via electronic form since 2008 (updated in February 2013): *name*, *family name*, *date and location of birth*, *current citizenship*, *sex*, *address*, person to be contacted in urgent cases.[54]

[52] Information included in this chapter is mainly based on an expert interview with Josef KNAPP and Karl ZACH, *Bundesministerium für Europäische und Internationale Angelegenheiten*, and enriched by information provided by Alexander WISBAUER, *Statistik Austria*.

[53] In this sense, contact details are not provided to third parties, e.g. for judicial concerns, attempts of relatives to establish contact or for inheritance matters; however, registered persons might be informed by the respective embassy in charge in the latter cases.

[54] Further, optional indications: former family name(s), acadamic title, profession, unmarried/married (with), passport/identity card number, telephone number (highlighted as important), e-mail address (highlighted as important),

As no data is provided for statistical purposes, no distinct statisticals concepts are defined, e.g. for *duration of stay*. Indications on *intended duration of stay* at the *indicated address* are neither counterchecked for the *actual duration of stay*, nor is it obligatory to provide updates on further relocations within the hosting country. Registered persons are either deleted manually in the event of notifying removal or automatically three months after the end of the indicated *intended duration of stay* (without notification of the registered person). No inter-linkages or double checks with other statistical or administrative sources exist. The *AOE Database* mainly aims to harmonise data collection and maintenance, also to avoid non-active records. For some countries, it is also a basis for estimations on emigration stock (*see above*). The database constitutes an approach towards overcoming the multitudinous variety of former practices of acquiring contact data of persons residing abroad. Furthermore, it aims to sensitise involved actors on data production and utilisation.

Currently, the coverage ratio of Austrians residing abroad varies from country to country, due to the voluntariness of registering. Only in some cases are embassies able to inform persons concerned in their sphere of competence in an exhaustive manner, i.e. in the framework of events, official acts or further active promotion activities. There are attempts to promote the *AOE Database* by cooperating with single associations and the umbrella association of Austrians residing abroad and via further supporting facilities (e.g. www.help.gv.at). The lack of coverage is only one fact that siginificantly restricts the statistical usability of the database as it is currently designed.

The decisive factor is that, at present, there are no plans to upgrade the database for statistical purposes. However, it depicts an opportunity to facilitate data maintainance and clearing. Nontheless, no linkages to the *ZMR* is currently foreseen (*see also 2.1.1*). In principle, an upgrade towards better statistical usability could become a future option that would allow for more in-depth analysis on emigration stocks than is available at the moment (*see above*) by generating valuable datasets, including information on regional disctributions, sex and age. The relevance of the database could evolve in the upcoming decade.

last address in Austria, family members in same houshold (name, date and location of birth, citizenship), employer and address, prospective duration of stay at residential address, disabilities if applicable, blood group, further medical indications, existence of health/travel/accidential/air emergency insurance, further indications. see also http://www.bmeia.gv.at/botschaft/auslandsoesterreicher/auslandsoesterreicher-innen/aoe-registrierung.html (26.1.2013)

3 CONCLUSIONS AND RECOMMENDATIONS

Generally, major changes can be perceived in the overall data production system on migration in Austria in the recent past, mainly due to a distinct shift towards register-based data production. In the European and global context, data currently available in Austria is generally able to meet international requirements. Overall, data stemming from a variety of registers can consequently be deemed as accurate, timely and reliable, also in the context of *Regulation 862/2007 EC*. In some cases even more detailed statistical concepts are applied for national purposes aiming at better mirroring realities on migration, e.g. the temporal concept for defining usual resident population or the differentiation between long-term and short-term migration. In comparison to other countries participating in the SEEMIG project, a broad range of data is available in Austria and the methods and conceptualisations in data production are appropriate and are still significantly improving.

As in general, regarding specific datasets, international comparability remains limited, mainly due to differing statistical concepts, but also due to different legal frameworks and categorisations, particularly if they lie in national spheres of competence (e.g. residence permits, asylum procedures). Therefore, it remains important to always consider the data production system and the related (national) legal system when handling with data, especially when comparing with other countries.

Trends in data production in Austria – review and outlook

The data production system in Austria has been in transition since the beginning of the twenty-first century. During the last decade, a distinct evolution towards register-based data collection can be perceived. Data is increasingly being computerised and interlinked in order to better use administrative data sources and for statistical purposes. Milestones in this respect include the launch of the *Information System on Asylum Seekers (AIS)*, the *Alien Information System (FIS)* and the *Central Social Security Database* in the 1990s, the implementation of the *ZMR* and subsequently of its mirror statistical database *POPREG* in 2001/2002 and the set-up of the *Labour Market Database (AMDB)* in 2006. Data from the first *Register-based Population Census* in 2011 will be available during the first half of 2013. The *Educational Attainment Register* has been in place since the academic year 2003/2004. Supplementary, as non-register based sources of major relevance, surveys carried out in the EU context have considerably evolved, i.e. the *Microcensus*, including the *Labour Force Survey (LFS)*, and the *EU-SILC*.

Associated with this, legal bases were defined to better regulate the interplay of actors in charge of data production on various territorial and institutional levels. However, due to a lack of inter-linkages and of automatic matching of data, data is only comparable in a very limited way, even though many efforts have been undertaken to enhance the compatibility of different registers. Better interlinking of databases constitutes a technical challenge regarding the overall set-up and as means appropriate legal preconditions for enhancing inter-institutional cooperation. The full range of advantages can evolve only after longer existence, which is primarily linked to enhanced reciprocal action in maintaining and enhancing connections between the different databases.

Enhancement of migration-related data – citizenship still remains recorded characteristics No 1

Statistical data production based on administrative register data generally poses some difficulties, particularly regarding specific attributes or variables of major importance for policy-makers or for researchers, but which are not of relevance for administrative purposes. All in all, the availability of migration-related data has considerably improved in the last decade: for the most part, anonymised micro-data is available, constituting a diversified basis for migration-related analyses. However, inconsistencies among different sources remain.

Citizenship and *country of birth* are the central and predominantly collected characteristics for tracing migratory patterns and developments. While *citizenship* is included in all data sources as described above, the second is only given fragmentarily. The characteristic *country of birth* is indeed included in some sources of central relevance in the SEEMIG context, i.e. the *ZMR* and the *POPREG*, databases aiming to collect information on residence permits and asylum seekers. For example, the *AIS* or the *FIS*, in contrast do not record this information. Neither do specialised registers such as the *AMDB*, the *Educational Attainment Register* or the Register of Enrolled Pupils and Students. In the EU related surveys (*LFS* and *EU-SILC*), both characteristics are considered. For enhancing consistency and comparability among the different datasets and in order to identify the "*population of foreign origin"* by combining both characteristics, it would be desirable to continuously foresee "*country of birth"*. As a next step, it would constitute a major enrichment to also include the variable "*country of birth of parents"*, as has been done for the *Microcensus* and consequently also for the *LFS* since 2008. This would allow for more multi-facetted analyses of migratory patterns and processes by differentiating "*migration background"* along the first generation and second generation, even if statistical analyses along those aspects can also be seen in an ambivalent light (*Do foreign origins necessarily mean social exclusion and disadvantages or may social background, agency, materiel and immaterial resources be more decisive?*). Especially for Austria as immigration country, it would be crucial to know more about immigrants in order to better frame migration and integration management policies.

Although some being disputable, further variables which could generally be useful for analysing migratory patterns and events such *colloquial language*, *religion*, *origins* or *ethnicity*, are mostly not included in registers, surveys or estimates and are consequently not statistically exploitable.

Generating evidence for policies – suggestions for further investigations

As detailed in the course of the several chapters, the given sources and their results make it possible to trace "registered realities only", which do not necessarily have to correspond to individual concepts of life.

As the analytical work carried out for this report revealed, migration in total is likely to be underestimated in administrative data sources, as they only show an administrative reality. This might also occur in surveys due to language barriers and non-respondents, partially because participation is not obligatory. For instance, when comparing national data on population flows with mirror statistics in the destination country or the country of origin, this becomes even more obvious, although it must be added that different temporal concepts of migration might contribute to these deviations. Another restricting factor, particularly regarding surveys, is often a relatively small sample size, which hampers the small-scale meaningfulness of statistical results. Some specific data will remain a challenge in the future, for instance emigrant stocks, because data still is based on estimates or can only be comprehended via analysing de-registrations as recorded in the *ZMR*. Finally, estimating irregular migration will remain difficult due to its hardly tangible nature.

In-depth information on individual migratory histories are hardly traceable as information on legal status, duration of stay or even former intermediate residences in other countries are barely available; not to mention that motives and reasons for migrating are neither systematically surveyed. Other projects and studies also criticise a lack in longitudinal data, which could only be responded to by setting up a longitudinal database or by introducing a panel survey. Fortunately, the second option is tested in the SEEMIG context for Hungary and Serbia in relation to the *LFS*. This approach might be transferable to other countries in the future as well.

Efforts on enhancement are pursuing – and remain to be seen

As stated above, the Austrian data production system is significantly evolving: The *ZMR* is will incorporate the *Central Civil Status Register (ZPR)* and the *Central Citizenship Register (ZSR)*. The *AIS* or the *FIS* will be merged into the *Integrated Immigration Application* (*IFA)* in 2014. The *Ad-hoc*-

module 2008 on the labour market situation of migrants and their immediate descendants of the *Microcensus* will be repeated in 2014. *The AOE Registration of Austrians Residing Abroad* could theoretically become of statistical significance in some years. Finally, the *Register-based Population Census* and the Population Statistics, Migration Statistics and Naturalisation Statistics derived from the *POPREG* will provide meaningful register-based results on a five-year or annual basis. Generally, institutional structures to better responses to challenges related to migration are currently being prepared: the *Federal Office for Alien Matters and Asylum* (BFA)* will become operational in January 2014 and a department specifically dedicated to integration issues will be installed in the *Federal Ministry of the Interior* (*BMI)* in close relation to the state secretary for integration, which has been operational since April 2011. The further developments remain to be seen.

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5 ANNEX

5.1 WP4 Country Report Annex Austria

Analysis on existing data production systems and major data sources

(see extra file)

5.2 Classifications in Austria

a. ILO concept

Employed persons: are persons: a) aged 15year and over; b) who during the reference week performed work, even for just one hour a week, for pay, profit or family gain, c) who were not at work but had a job or business from which they were temporarily absent because of, e.g. illness, holidays, industrial dispute or education and training. (derived from Eurostat, *LFS*; see also: Statistik Austria 2011c:14p)

Unemployed persons: comprise persons aged 15 to 74 who were: a) with work during the reference week, i.e. neither had a job or were at work in paid employment or self-employment; b) currently available for work; c) actively seeking work, i.e. had taken specific steps in the four week period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of at most three months. (derived from Eurostat, *LFS*; see also: Statistik Austria 2011c:14p)

b. NACE

ISIC is the United Nations' International Standard Industrial Classification of all Economic Activities. NACE is the European standard classification of productive economic activities. NACE presents the universe of economic activities partitioned in such a way that a NACE code can be associated with a statistical unit carrying them out. NACE is derived from ISIC, in the sense that it is more detailed than ISIC. ISIC and NACE have exactly the same items at the highest levels, where NACE is more detailed at lower levels. (derived from Eurostat)

The structure of NACE is described in the NACE Regulation as follows:
i. a first level consisting of headings identified by an alphabetical code (sections),
ii. a second level consisting of headings identified by a two-digit numerical code (divisions),
iii. a third level consisting of headings identified by a three-digit numerical code (groups),
iv. a fourth level consisting of headings identified by a four-digit numerical code (classes).

The NACE Regulations allow Member States to use a national version derived from NACE for national purposes. Such national versions must, however, fit into the structural and hierarchical framework of NACE. Most of the Member States have developed national versions, usually by adding a 5th digit for national purposes. (derived from Eurostat) available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-015/EN/KS-RA-07-015-EN.PDF (consulted on 02 April 2013)

The ÖNACE is the Austrian version of the NACE. An additional hierarchical level – the national subclasses – was added to represent the Austrian economy in a more detailed and specific way. All the other levels of ÖNACE are identical with the levels of NACE. (Statistik Austria) The version of 2003 was replaced by ÖNACE 2008. Differences between those versions are:https://www.statistik.at/web_de/static/erzeugerpreisindex_fuer_unternehmensnahe_dienstleistungen_-_korrespondenzt_037084.xls (German only, consulted on 02 April 2013))

c. ISCED

The international Standard Classification on Education (ISCED) was developed by UNESCO and seeks to facilitate comparisons of education statistics and indicators across countries on the basis of uniform and internationally agreed definitions. (UNESCO)

ISCED in AT, formal structure of the Austrian educational system:

Level 0	Kindergarten	kindergarden/ nursery
Level 1	Volksschule	Primary school
Level 2	Allgemein bildende höhere Schule (Unterstufe), Neue Mittelschule, Hauptschule	Academic secondary school (lower-level) , New secondary school, General secondary school
Level 3	Allgemein bildende höhere Schule (Oberstufe), Berufsbildenden höheren Schule, Berufsbildenden mittleren Schule, Polytechnische Schulen	Academic secondary school (upper-level), higher technical and vocational colleges, intermediate technical and vocational schools up to 4 years, pre-vocational year
Level 5	Hoch und Fachschulstudium, Akademie und Kollegbesuch	University and Fachhochschule (University for Applied Sciences), post-secondary college
Level 6	Doktorat	doctorate

Available at: http://www.statistik.at/web_en/statistics/education_culture/formal_education/index.html (consulted on 02 April 2013)

d. ISCO

The International Standard Classification of Occupations was developed by the ILO (International Labour Organization) and is primarily used to facilitate international comparability of labor statistics. Furthermore, it applies in censuses of population, statistics on accidents at work and other statistics in which the occupation of the respondents is of particular importance. At the ISCO similar tasks and duties are summarized to professional activities (jobs) and therewith to occupations. The ISCO distinguishes 4 levels of detail: major groups, sub-major groups, minor groups and unit groups. In 2011 ISCO 88 (after ISCO 58 and ISCO 68) was replaced by ISCO 08. (Statistik Austria)

Differences/ changes between ISCO 88 and ISCO 08.

ISCO-08 groups:	**ISCO-88 groups:**
10 major	10 major
34 sub-major	28 sub-major
120 minor	115 minor
403 unit	363 unit
Total: 567	**Total: 516**

Available at: http://home.fsw.vu.nl/hbg.ganzeboom/ismf/..%5Cpdf%5C2008-ganzeboom-isco08-rc28-florence-(presentation).pdf (consulted on 02 April 2013)

The Ö-ISCO 08 is the Austrian version of the ISCO 08, which is the International Standard Classification of Occupations. (Statistik Austria)

e. Territorial classifications (NUTS and LAU)

Territorial classifications in Austria, per 1.1.2012 (Statistik Austria 2012e:43):

- 1 NUTS0 region
- 3 NUTS1 regions (*groups of "Bundesländer")*
- 9 NUTS2 regions (*corresponding to 9 administrative regions alias "Bundesländer")*
- 35 NUTS3 regions
- 97 LAU1: administrative districts
- 2.357 LAU2: municipalities