Hungarians working abroad, non-residents working in Hungary (Difficulties in the statistical enumeration)

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Although the understanding of international migration is important for both the countries of origin and countries of destination, the tools of statistics are quite insufficient. The EU LFS (EU Labour Force Survey), which may be considered as mirror statistics and a target survey as well, is an important data source, nevertheless, methodological pitfalls may occur. Until the recent years, Hungary was hardly affected by the migration process of the EU, so its recording was less important. As a result of the 2008 crisis, however, the number of people working abroad has increased, and the growth was further intensified by lifting the restrictions in the Austrian and German labour market in the spring of 2011. For Hungary, the three main EU countries of destination are Austria, Germany and the United Kingdom. Labour movements to these countries include commuting, which can be traced by the Hungarian LFS. Migration processes have typical characteristics by the countries of destination, while the data sources available for estimating the size of migration and the relevance of their information are different also by countries. For recording the labour migration to Hungary, there are several administrative data sources, so it is not necessary to use the less reliable data of population surveys.

KEYWORDS: Migration. Employment. LFS.

DOI: 10.20311/stat2016.K20.en003

Since EU enlargement, the difference between the wage levels of the old and new member states has significantly stimulated labour migration, in which new member states are countries of origin and old member states are countries of destination. Despite the fact that migration between countries is becoming increasingly important for both parties, relatively few and only limited sources of information are available for understanding this process that is different in many aspects from the earlier one. This article is inspired by the need to learn about relevant data sources and by the June 2014 special issue of the European Commission's "Employment and Social Situation Quarterly Review" with supplement on the recent, crisis-induced trends in the geographical mobility of workers in the EU (*European Commission* [2014]). Although Hungary was mentioned only in a few parts of the study, from the data series by member states, several pieces of information can be obtained, which are stored in the database of the EU LFS but not necessarily accessible for the NSIs.

1. Labour market migration trends in Central and Eastern Europe since the EU accession until now

The Baltic States, Poland, the Czech Republic, Slovakia, Slovenia and Hungary (EU8 or EU10 together with Malta and Cyprus) joined the EU in 2004, Romania and Bulgaria (EU2) became EU members in 2007, and Croatia was admitted in 2013. The macroeconomic development and living standards of the newly acceded countries were significantly below those of the old member states, and some of them struggled with high unemployment. The accession – even if some countries implemented temporary restrictions in order to protect their labour market - has made it easier for the citizens of the new member states to work abroad. Migration for employment is a much less final decision than emigration, and in many cases it is limited only to certain members of the households. Therefore, the accession of the Central and Eastern European countries has largely increased the migration in the EU. According to the study referred to in the introduction, in 2013, 10 million EU citizens of working age (15-64-year-olds) lived in member states other than their country of citizenship (in addition to the 15.5 million non-EU migrants), 2.5 million of them were Romanian and Bulgarian, and 2.3 million arrived from one of the countries that joined the EU in 2004.

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Despite the common historical heritage, Central and Eastern European countries are quite different in terms of intensity and nature of the migration process. Latvia, Lithuania, Romania, Bulgaria and Poland have already been countries with significant labour outflow since the moment of accession, while the Czech Republic and until recently – Hungary were characterized by a definitely low number of labour migrants. Employees from Romania and Bulgaria targeted primarily countries in the Southern European region, so the labour market consequences of the 2008 crisis strongly affected them there. Thus, for example, the number of Romanian migrants working in the region decreased, and the popularity of other countries of destination (first of all Germany) increased. Most people from the Baltic States and Poland took a job in Ireland or the United Kingdom. The crisis in Ireland had an especially significant impact on the labour market of these countries as, due to the burst of the bubble in the real estate market, the largest layoff occurred in construction traditionally employing many non-residents. After a time, the economic situation of the Baltic States improved, hence some people who had worked abroad earlier found a job at home. Meanwhile, the labour outflow from Poland increased again after 2012, and Germany became more and more a country of destination for Polish employees as well.

The labour migration trend in Hungary is specific, as the accession was not followed by a surge in the number of people working abroad. Compared to the population number, only a few people went abroad to work, and they did not take a job in countries strongly hit by the crisis. So the impact of the crisis did not reduce emigration, but, on the contrary, its domestic consequences increased it. According to EU LFS data (which survey measures the trends of migration processes within the EU), Hungary is one of the four countries (with Greece, Spain and Portugal) whose citizens lived in significantly greater numbers in other EU member states in 2012-2013 than in the preceding two-year period. On the basis of this data source, the number of economically active Hungarians living in other EU member states increased by 78%, and none of the Central and Eastern European countries experienced similar change in this period. In addition to Hungary, we can talk about substantial growth in emigration in the case of Poland alone, but the increase was only about 30% there because many Poles returned home between 2010 and 2011, after losing their job abroad due to the crisis. In May 2011, the expiry of the transitional arrangements on the free movement of workers in Austria and in Germany gave impetus for Hungarians to work abroad. Both countries have traditionally many links to the Hungarian economy, which, along with the historical past, facilitate the integration of Hungarians. As regards working in Austria, a significant additional motivation is the geographical proximity that makes even daily commuting possible for many people. Although the Hungarian labour market has not been characterised by oversupply but by the lack of (skilled) labour force since the mid-2010s (even if more than 200 thousand people work in public employment programmes), the popularity of working abroad is steadily increasing. It has several reasons, the most important is undoubtedly the considerably higher earnings than in Hungary, which makes many people take even a job requiring lower qualifications than their professional level. Besides, the network effect is also increasing, i.e. more and more people get help from friends and relatives working already abroad.

Figure 1. Changes in the number of economically active non-residents who have been living for less than two years in another EU member state by country of origin, 2011–2013



Source: European Commission [2014] p. 54.





Source: European Commission [2014] p. 39.

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Despite its popularity, the share of Hungarians working abroad is still below the average of other countries in the region. In 2013, according to EU LFS-based expert estimations, the share of working-age (15–64-year-old) people working abroad was over 14% in Romania followed by Lithuania with about 10% and Croatia (that joined the EU only in 2013) with nearly 12%. Latvia and Bulgaria belonged to the range between 7% and 9%. Although the proportion in Poland was only around 5%, it implies a considerable number of people, as Poland is the most populous country in the region. At this time, 3% of Hungarians and only 1% of the Czechs of working age lived abroad, but the proportion of people living abroad for less than five years among migrants was much above the average in Hungary, which makes a rapid growth of this 3% proportion likely.

2. Hungarians working abroad in the domestic data sources

In principle, one can be informed about Hungarians working abroad from many data sources. In the case of some professions (e.g. health), professional organizations try to trace the evolution of the number of people working abroad, but reliable information is available only about flow data. The stock data can only be estimated at best, and the number of family members moving with is unknown as well. People working abroad and having social insurance there must report this at the domestic social security organ asking for the suspension of their insurance coverage in Hungary. However, not every person affected complies with the rules, some of them do not even know about it. Besides, a small number¹ of people work formally in another EU member state as posted workers of Hungarian employers, so they continue to be insured in Hungary. Although some small-sample population surveys also have a migration block (e.g. Turning Points of the Life-course [see http://www.demografia.hu/hu/kezdolapef in Hungarian]) and recently a targeted migration survey (SEEMIG project on the basis of the Hungarian LFS) was also conducted in 2012–2013, there are no proven statistical observation practices for non-permanent migration (typically motivated by the intention to work).

The 2011 census attempted to enumerate the total population residing abroad. Therefore, in the dwelling questionnaire, where persons belonging to the address/household were recorded, two categories referred to these persons:

¹ In the debate about the EU regulations concerning wages, experts calculated with 60 thousand such employees at the beginning of 2016.

- number of persons living abroad temporarily (the dwelling is their permanent home but they are staying abroad temporarily and this period of time is expected to last up to 12 months);

- number of persons staying abroad for long (the dwelling is their permanent home but they are staying abroad and this period of time has already reached or is expected to reach 12 months).

For persons belonging to the first category, a personal questionnaire was also completed, but those in the second one did not have to be counted among the population of the country in line with the generally accepted definition of migration. According to census data, on 1 October 2011, 70 thousand people had lived abroad for less and 134 thousand for more than one year. Those Hungarian citizens living abroad who did not have a household connection in Hungary were not enumerated, and for people living abroad temporarily, only the economic activity had to be indicated, from which the purpose of living abroad could be inferred. Although the census is a very useful source of information, its big disadvantage is that it is held only once in every ten years, moreover, it is not sure whether the questions referring to people living abroad will be the same in the next survey. (For example, the questionnaire of the migration sub-sample of the 2016 micro-census was designed according to another concept.)

The large-sample population survey, the Hungarian LFS – that was launched in 1992 and is the national counterpart of the EU LFS – is of great importance in respect of both continuity and data content. It provides detailed information about people working abroad who are members of households in Hungary and about whom the households included in the sample of the survey provide data. So, such members of the reporting households are included in the LFS as people working abroad for whom the respondents indicate a settlement outside the borders of Hungary as the place of daily work. Although people staying abroad but not for the purpose of work (e.g. studying) may also be enumerated as household members, there is only limited information about them in the LFS, and it is available only since 2015 onwards.²

In the Hungarian LFS, the number of those who indicated a place of work abroad was only a few thousand at the end of the 1990s, and it reached 20 thousand by 2004, the year of EU accession. In 2010, 51.4 thousand and in 2013, nearly 98 thousand people indicated a settlement outside the borders of Hungary as the place of daily work, while in 2015 this number was already more than 110 thousand. Most of them indicated a location in Austria, where people often commute to every day to work from their place of residence. In 2015, Germany was in the second place with more than 30 thousand employees, because many people take a job there, while their fami-

 $^{^{2}}$ Since 2015, the LFS questionnaire has inlcuded a question on the actual place of living (if it is abroad, the name of the country should also be given).

lies continue to live in Hungary (although their proportion is smaller than in the case of Austria). The majority of those indicated a place of work in Austria or Germany live in cohabitation, acquired vocational secondary qualifications and are young, middle-aged men. Essentially, the LFS can enumerate only the so-called commutingtype work abroad (for which the primary country of destination is Austria or Germany) that explains the evolution of the trend as well: the opening of the Austrian and German labour market enabled the mass labour movement to these countries, which was then followed by a continuous increase.

Those who indicate a place of work abroad in the Hungarian LFS are not included in the administrative data of the host country if they continue to be insured in Hungary or take a job through a temporary work agency registered in Hungary, what must be taken into account when elaborating an estimation procedure. The applicability of the classic definition of migrants is also questionable. The majority of people working in Austria and Germany have been employed with their current employer for more than one year. All people indicating a workplace in Germany and a part of those working in Austria must have a place of residence (abroad) where they habitually live while they have a job there. Therefore, in principle, they should not be included in the Hungarian resident population, although most of them continue to be a member of an income and consumption unit (household) in Hungary (in many cases they are even the breadwinners). Nevertheless, some people working in Austria as daily commuters are not part of the Austrian resident population. The distinction between these two groups is, however, impossible for the time being in the lack of adequate information.

| Tal | bl | e | 1 |
|-----|----|---|---|
|-----|----|---|---|

| | 2000 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | |
|--------------------------|--------------------|------|------|------|------|------|-------|--|
| Country of destination | (thousand persons) | | | | | | | |
| Austria | 5.3 | 17.5 | 22.9 | 29.8 | 44.7 | 44.1 | 52.7 | |
| Germany | 2.3 | 11.3 | 13.7 | 23.8 | 28.6 | 29.7 | 31.3 | |
| United Kingdom | 0.7 | 7.7 | 8.2 | 8.9 | 8.3 | 6.5 | 9.3 | |
| Other EU countries | 1.7 | 9.5 | 12.5 | 12.9 | 11.0 | 13.3 | 12.4 | |
| Other reported countries | | 3.5 | 4.1 | 4.9 | 4.8 | 6.1 | 5.4 | |
| Total | 10.1 | 49.5 | 61.4 | 80.4 | 97.4 | 99.7 | 111.1 | |

Number of Hungarian people working abroad by country of destination, 2000-2015

Note. Here and in the tables hereafter, any differences between the total figures and the sum of the individual values are due to rounding.

Source: Hungarian LFS.

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Table 2

| | of destinati | on, 2015 | | | | |
|---|------------------------|----------|-------------------|--------------------|------------------|-------|
| | Country of destination | | | | | |
| | Austria | Germany | United Kingdom | Other EU countries | Non-EU countries | Total |
| | (thousand persons) | | | | | |
| Total | 52.7 | 31.3 | 9.3 | 12.4 | 5.4 | 111.1 |
| Sex | | | | | | |
| male | 38.5 | 26.1 | 6.1 | 10.1 | 3.7 | 84.5 |
| female | 14.2 | 5.2 | 3.2 | 2.3 | 1.7 | 26.6 |
| Age group | | | | | | |
| 15–29 | 12.3 | 8.0 | 5.7 | 2.7 | 1.0 | 29.7 |
| 30–49 | 33.2 | 17.1 | 3.4 | 7.5 | 4.0 | 65.4 |
| 50–74 | 7.2 | 6.2 | 0.2 | 2.2 | 0.3 | 16.1 |
| Highest educational level | | | | | | |
| eight or less grades of primary school | 2.9 | 3.4 | 0.7 | 0.5 | 0.4 | 7.9 |
| vocational, apprentice school | 22.9 | 16.1 | 1.6 | 5.5 | 1.0 | 47.1 |
| secondary general school | 7.5 | 2.8 | 1.6 | 1.1 | 0.6 | 13.6 |
| secondary vocational school | 13.0 | 6.2 | 3.4 | 1.6 | 1.5 | 25.6 |
| university, college | 6.5 | 2.9 | 1.9 | 3.7 | 1.9 | 16.9 |
| Family status | | | | | | |
| husband, wife, cohabiting partner | 30.1 | 18.3 | 1.4 | 7.2 | 2.3 | 59.2 |
| single parent | 0.7 | 0.6 | 0.2 | 0.1 | 0.2 | 1.8 |
| child | 12.0 | 8.1 | 6.9 | 3.5 | 1.7 | 32.3 |
| single and other | 10.0 | 4.3 | 0.8 | 1.6 | 1.1 | 17.8 |
| Industrial classification of the employer | | | | | | |
| agriculture | 2.3 | 0.0 | 0.0 | 0.1 | 0.0 | 2.5 |
| industry | 10.0 | 10.2 | 1.4 | 2.2 | 1.8 | 25.6 |
| construction | 10.7 | 9.7 | 0.5 | 3.7 | 0.9 | 25.4 |
| trade, repair of motor vehicles | 4.7 | 1.4 | 1.3 | 0.6 | 0.1 | 8.2 |
| transportation and storage | 4.3 | 2.9 | 0.3 | 1.2 | 0.4 | 9.0 |
| accommodation and food service activities | 14.3 | 3.8 | 4.7 | 1.3 | 1.0 | 25.1 |
| other industries | 6.3 | 3.4 | 1.1 | 3.3 | 1.2 | 15.4 |

Characteristics of Hungarian people working abroad by country of destination, 2015

Source: Hungarian LFS.

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The fact that there are daily commuters among people working in Austria can be presumed from their place of residence. In 2015, out of the nearly 53 thousand people indicating a workplace in Austria, about one in every two persons lived in (Győr-Moson-Sopron, Vas and Zala) counties directly adjacent to Austria. (As, based on the sample, one is unable to calculate with the specific geographical concentration of people commuting to Austria, the number of those working abroad may be slightly wrongly estimated.)

The United Kingdom is among the three EU member states employing the most Hungarian employees. However, in the Hungarian LFS, people working in the United Kingdom are strongly under-represented. According to non-statistical data sources, a considerable proportion of them are single, young people (which is proven by the fact that in the LFS, the family status was typically "child" for those who indicated a workplace in the United Kingdom), about whom usually the parents provide data. Probably because most of them are already financially independent from the parental household or lived separately from their parents before working abroad, the parents do not indicate them in the survey among household members. Due to the low prevalence, it is also uncertain, how well the LFS trend data (according to which the number of people working in the United Kingdom has only moderately increased since the accession) and the characteristics of the composition reflect the reality.

3. Hungarians working abroad according to international data sources

Monitoring the evolution of the number of non-residents – so also Hungarians – working in another EU member state is generally based on administrative data sources (e.g. social security registers). Because of the diversity of national practices, the possibility of circumventing registration as well as the fact that the existence of entitlement is not really checked, the data from these sources should be treated with caution. Among the three countries that are the most important in terms of migration from Hungary, the Austrian and the German registration systems have many similarities, but, since the majority of Hungarians working in Austria are commuters or casual workers, it is likely that the difference between the number of employees estimated on the basis of registration and that of people actually working is large. Thus, it is difficult to use these administrative data sources. The most important German data source concerning foreign employees is the national immigration statistics, which, however, classify non-resident citizens living in Germany as immigrants when the length of their stay reaches 3 months instead of 12 (this latter is the major criterion of the international

Table 3

definition of migrants used by Eurostat). According to this data source, the net international migration balance was 459 thousand in 2013, out of which 303.9 thousand people arrived from an EU member state. Most of them came from Poland (72 thousand), Romania (50 thousand) and Hungary (24 thousand). The ratio between the net international migration balance and the number of arrivals (inflow) in the given year was 36-37% for Poles and Romanians and 42% for Hungarians. The other German data source is the social security system, which provides stock-type information about foreign employees who are reported and insured workers there. According to that, the number of employees from Poland and Hungary grew the most rapidly between 2010 and 2014 due to the liberalization of the labour market. Employers paid social security contribution for 49 thousand Hungarian employees in 2013 and for 65 thousand in 2014. In 2014, the number of people from EU2 countries increased the most, since labour market restrictions were lifted for them in that year. So, even if at a slower pace, the number of Hungarians working in Germany continued to grow between 2013 and 2014, and its dynamics was outstanding during the overall four-year period.

| Non-residents in Germany by country of cutzensnip, 2010–2014 | | | | | | | | |
|--|--------------------|------|------|------|------|--|--|--|
| Country of | 2010 | 2011 | 2012 | 2013 | 2014 | | | |
| citizenship | (thousand persons) | | | | | | | |
| EU8 | 186 | 207 | 302 | 372 | 449 | | | |
| Of which | | | | | | | | |
| Poland | 125 | 140 | 201 | 241 | 291 | | | |
| Hungary | 17 | 19 | 33 | 49 | 65 | | | |
| EU2 | 65 | 78 | 99 | 124 | 186 | | | |
| Of which | | | | | | | | |
| Romania | 46 | 55 | 71 | 89 | 132 | | | |
| Bulgaria | 19 | 22 | 28 | 35 | 54 | | | |

Non-residents in Germany by country of citizenship, 2010–2014

Note. The table includes social security data read for each year in March. *Source: European Commission* [2014] p. 59.

Although the immigration statistics of the United Kingdom having high priority in terms of the employment of Hungarians is fairly comprehensive, there are only a few available stock data on immigration from Central and Eastern European countries for employment purposes, broken down by countries. According to the sole detailed data source, the 2011 census, the number of people indicating languages of the countries in the region as main language was around 900 thousand. Out of them, 546.2 thousand declared Polish, 85.5 thousand Lithuanian, 67.6 thousand Romanian and 44.4 thousand

Hungarian as their mother tongue. 38.5 thousand people spoke Bulgarian, 31.5 thousand Latvian and 29.4 thousand Czech. Hungarian-speaking people were more concentrated in London than those speaking other Central Eastern European languages (out of the 44.4 thousand people 16.6 thousand were enumerated there). In the annual population survey that applies a citizenship grouping and is only available in an aggregated form, 1 074 thousand EU8 citizens were included in 2012. The UK practice of issuing social security numbers is similar to the Hungarian one, i.e. if someone once has got the number indispensable for employment, studying or requesting any social benefit, it never will be withdrawn. Thus, stock data cannot be obtained from this data source, or, if there are any, they are not public. All one can know is that in the 2012/2013 social security year, 24.7 thousand Hungarian citizens were newly registered, and their number was nearly the same in the following year, too. According to the Hungarian figure, (more or less) constant-intensity immigration is likely to the United Kingdom that is relatively significant compared to the population number of Hungary, but based on UK 2011 census data and the annual number of people requesting social security number, the stock data can be a maximum of hundred thousand. In the register of social security numbers, there is no information either about the purpose of immigration (according to cross-border survey data, it is probably taking a job for Hungarians just like for nearly 70% of all migration from the countries in the region) or related to this, about the extent of backflow.³

Table 4

| Country of origin | 2013/2014 | 2012/2013 | Change compared to th | e previous budget year |
|-------------------|-----------|-----------|-----------------------|------------------------|
| Country of origin | thousand | l persons | thousand persons | % |
| N FU (| 162.5 | 176.0 | 12.0 | 0.0 |
| Non-EU countries | 162.5 | 176.2 | -13.8 | -8.0 |
| EU countries | 439.5 | 385.4 | 54.0 | 14.0 |
| Of which | | | | |
| Poland | 101.9 | 91.4 | 10.6 | 12.0 |
| Romania | 46.9 | 17.8 | 29.1 | 163.0 |
| Hungary | 23.6 | 24.7 | -1.1 | -4.0 |
| Lithuania | 22.4 | 27.3 | -4.9 | -18.0 |
| Bulgaria | 17.8 | 10.4 | 7.4 | 71.0 |
| Slovakia | 11.8 | 11.5 | 0.3 | 3.0 |
| Latvia | 11.3 | 13.6 | -2.3 | -17.0 |

Number of adult foreign citizens entering the social security register of the United Kingdom

Source: European Commission [2014] pp. 60-61.

³ This practice may be changed in the future by the Brexit.

A uniform but far from perfect data source is the LFS (as mirror statistics) which adequately reflects the migration trends and the likely rates by countries of origin. The LFS, however, is not really sufficient for estimating headcounts since its sampling criteria do not require that the sample should properly represent non-residents living and working in the member states, whose spatial distribution and housing characteristics are not necessarily the same as those of the general population. The most recent EU labour force data available in appropriate breakdown are the data of 2014. Then, 193 thousand Hungarian employees living in a private household and staying in another member state for at least one year were enumerated, out of them, 78.3 thousand in Germany, 62.8 thousand in the United Kingdom and 26.1 thousand in Austria. The figure for Austria is much smaller than the number of those who indicated a workplace in Austria in the Hungarian LFS. If we add the two figures (presuming that the households of people in the Hungarian LFS live in Hungary, while Hungarians enumerated in Austria do not have any ties to Hungarian households), it is likely to get a more or less realistic picture of the number of Hungarians working in Austria (60-70 thousand people). Those working in the United Kingdom are typically missing from the Hungarian LFS, so only mirror statistics data are available. (Presumably, they provide realistic information both about the headcount dynamics and about the composition of people working there.) German data are the most problematic due to the risk of double enumeration (i.e. someone is enumerated both in the German and in the Hungarian LFS: in Germany as a person living there and in Hungary as a member of a surveyed household). Despite this, the number of Hungarian employees in the German LFS and in the social security register are nearly the same. Since those people who are employed through Hungarian temporary work agencies and covered by the LFS are missing from the latter source, the headcounts are probably underestimated by the population survey. This is indirectly proven by the comparison of headcount data from different data sources on non-residents working in Hungary, which is the subject of the next chapter.

4. Non-residents working in Hungary

The general public is much less concerned with how many non-residents live in Hungary and are present in the labour market than the presence of Hungarians abroad. This indifference is partly understandable, since the number of non-residents are not really considerable according to the data sources described hereafter, so they do not endanger the interests of domestic employees. For the steadily growing number of refugees coming from different crisis areas of the world, Hungary is only one station of the transit route, from where they plan to take the direction towards Northern and Western European countries which provide higher social welfare and where there are already settled communities of their countrymen. Settlement of people coming from the Third World is not facilitated by the Hungarian asylum policy either, and communities making their integration easier are missing as well. The earning opportunities in Hungary are not attractive for employees of the more developed EU member states, so the possible sources of immigration for work purposes are the neighbouring countries of similar development level having taken a similar path as Hungary did. In addition to the similarity in their state of development and living standards (or a slight advantage in favour of Hungary), this type of migration is often supported by family and friend relations as well as the knowledge of the Hungarian language.

Information for determining the number of non-residents living in Hungary and their weight in the labour market is available from the following data sources: *1*. administrative registers, *2*. Hungarian LFS, and *3*. population census.

Although the reliability of administrative registers is obviously better than that of statistical surveys, they usually cover only a narrower range of information, and the effects of legislative changes cannot be filtered out of their data series. This is also true for the registers of the Hungarian National Employment Service about foreign employees. The system collects two types of information, one about people having a work permit and another about those who are reported on by employers. EU (since 2009, EEA [European Economic Area]) citizens do not need to have a permit to work in Hungary, but their employers have a reporting obligation under penalty of fine, which, similarly to work permits, is also recorded by the National Employment Service. Those who work as entrepreneurs do not have to be included in the register.

In 2004, the year of Hungary's EU accession, nearly 65 thousand individual work permits were issued. A year later, when it was no longer necessary for EU citizens to apply for such a permit, this figure was only 53 thousand, and it was halved by Romania's EU accession in 2007. Between 2009 and 2013, the annual average number of people receiving a work permit was nearly 11 thousand and halved again after that time. The number of people having a valid work permit was somewhat more balanced than that of those applying for that. Since 2009 (since when the range of non-EU countries whose citizens are obliged to have a work permit in Hungary has been unchanged) the annual number of employees having a work permit has been around 18-20 thousand but has decreased since 2014.

The other group of people working in Hungary that is larger than the above is made up by EU (since 2009, EEA) citizens. Along with strong fluctuations, the annual number of newly reported people shows a slightly decreasing trend. It was nearly 19 thousand in 2005, 16 thousand in 2006, but it did not even reach 8 thousand in 2012 and 2013. According to the reports of employers, 48.9 thousand EU (EEA)

citizens were officially employed in 2009 in Hungary. Between 2010 and 2013, their number ranged from 45 thousand to 53 thousand and was the highest in 2013 (34 037 of them were Romanian, 9 105 were Slovak citizens, while EU15 countries were represented by only 5 387 people). The coverage is not complete here either, as there are no data on those working as entrepreneurs or in private households (who are typically not reported). Those are also missing from the registers who work as employees of temporary work agencies not registered in Hungary.





The average annual number of foreign citizens who are reported employees or have an individual work permit was 62 thousand in the period between 2010 and 2013, that is, the total headcount including entrepreneurs (and not reported workers) was not likely to reach 100 thousand. Two thirds of non-residents working in Hungary came from neighbouring countries, most of them from Romania. The change in the citizenship process had an impact on these data, as those who (also) acquired Hungarian citizenship are no longer included in this statistics.

Administrative registers provide accurate and valuable information about the number and personal characteristics of non-residents working in Hungary but do not give a picture of the population as a whole. In this regard, the population census, a full-scope survey conducted by enumerators is a relatively reliable data source. The word "relatively" is before the word "reliable" because in a number of cases those owners who do not pay tax on renting their dwellings took the opportunity of completing the 2011 census questionnaire via Internet about themselves (and not about

Source: National Employment Service.

the tenants actually living in them). Thus, households of people actually living at such addresses may have been left out of the census. Beyond that, enumerators could not always contact and enumerate non-Hungarian speaking households during the three weeks of the census (despite the fact that the questionnaires could be completed in several foreign languages) because it took more time than that of "normal" households.

According to the state on 1 October 2011, the census enumerated 143 197 foreign citizens; among them 70 787 were employed, which roughly correlates with register data. In data broken down by countries, there were already considerable differences, e.g. the number of Romanian citizens in the census was only two thirds of that reported by employers.

The LFS has already been mentioned, since it is the most important data source of the EU-level migration analysis presented in the first chapter, and the data on the socalled commuting-type work abroad come also from this source. Consequently, one might think that the Hungarian LFS can provide an accurate picture about the importance of non-residents in the Hungarian labour market, but this is far from being the case. According to the survey, the number of foreign citizens did not reach 44 thousand in 2013, which was about one third of the number of foreigners actually living in Hungary, and out of them 26 thousand were classified as employed. What is the reason for this high rate of under-counting, how could it be corrected, and what follows from this regarding the use of LFS as mirror statistics?

The main reason is methodological. A so-called weight number belongs to individual LFS data, which depends on how many people are represented by the given person within the total population. The weight takes into account sex, age group and the place of residence. If we want to enumerate a population that does not follow the demographic and spatial pattern of the total population, a so-called secondary weight different from the original one has to be defined in the light of the distribution of the given population and used for grossing up. The population of foreigners is typically such because the majority of them live in Budapest, even where their distribution is not uniform but is concentrated to some inner districts. Although there are smaller differences between the rates by sex and age groups for foreigners and for the total population as compared to spatial distribution, these figures are not equal either. There has been no attempts made so far to develop a secondary weighting system despite the framework provided by the 2011 census. The fact that Hungarian LFS data show the presence of foreigners in the labour market with such distortion may raise justifiable doubts about the reliability of the LFS as mirror statistics, because as the spatial distribution of foreigners living in Hungary is not uniform, that of Hungarians living abroad is probably not uniform either. Consequently, the LFS of the member states applying grossing up procedures similar to that of Hungary presumably also underestimates the number of Hungarians working in those countries.

Potential language barriers and difficulties in contacting are further circumstances which increase the probability of failure in the case of foreigners and so impair the reliability of data.

5. Conclusions

With the accession of transition countries, migration between member states has got a new impetus and generated processes different in characteristics from the earlier ones. The main purpose of this new type of migration is working. The countries of destination (and partly the intensity of the outflow of the labour force) in a given period depend on administrative regulations just as much as on the change in the economic situation. Although the better understanding of the process is important for both the countries of origin and countries of destination, the tools of statistics are quite insufficient. Traditional migration statistics provide flow data, and the EU LFS in its current form can give information only with significant uncertainty about how many non-residents and of what nationality are present in the labour market of the member state in question. National data sources include only such pieces of information about foreigners that are required by the administration system of the country. In some countries this is the number of those entitled to social security, in others the number of taxpayers. The registers are not uniform and their update is also different by countries. It is worth considering the possibility of using the LFS as mirror statistics or a targeted survey, however, significant methodological development would be needed to do that. In its current form, the survey is only suitable for measuring the size and trend of the so-called commuting-type work abroad, and has no reliable data on the extent of the full migration process. The fact that it is not exactly known how many Hungarians actually live and work abroad (but probably in the order of hundreds of thousands) has also an impact on the reliability of domestic labour market statistics through the grossing up procedure which is unable to take that into account.

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