Statistics of Remittances in the Czech Republic

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Abstract

Remittances represent transfers of earned money of foreigners to home country and they belong to often discussed topics in the connection with migration issues. The reason is the recent increase of the number of migrants and the amount of sent remittances. Since the Czech Republic became the immigration country, remittances have gained the importance. Many foreigners come to the Czech Republic because of work or study. However, many of them send earned money back to their country of origin, to their families and relatives. The information about the foreigners is crucial for describing their behaviour (incomes, consumption expenditures) and recording the transactions in national accounts and balance of payments. Permanent lack of data sources causes problems with such statistics. The aim of the paper is the description and interpretation of the issue of remittances. Procedures that are used for these estimates are briefly described with respect to the users' needs. The description is mainly focused on the estimates of numbers and structures of foreigners, covering the length of stay, economic activity, their behaviour and estimation of sent remittances.

| Keywords | JEL code |
|---|---------------|
| Migration, remittances, national accounts | F22, F24, J61 |

INTRODUCTION

Remittances are defined as migrants' transfers of money to their country of origin (home country) resulting from their temporary or permanent incomes. The increasing attention is going to be put on remittances; currently many migration and development studies deal with cross-border money transfers of migrants. The main reason of these studies is the fact, that migration and remittances are generally considered as efficient instrument for development of developing countries but it has also impact on the labour market. A host developed country (usually with worsening demographic structure) is getting a work force (temporary or permanent) that will help to satisfy the needs of the pensioners (Šimková, Sixta, 2013). These issues are also important for construction of national accounts and balance of payments. This has become an important issue in the EU and it covers new member states, as well. The number of immigrants and the amount of sent remittances have been still increasing since 1990s.

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On the other hand, remittances are causing the outflow of funds from economically developed countries and this outflow became noticeable.

At the national level, the importance of remittances is naturally connected with their position in the economy. Remittances influence social and economic situation, not only in the country of origin, but also in the host country and therefore migration and remittances are reflected in the national accounts as well as in the balance of payments of the countries. Their impact on social condition of households is evident in the current world. We can find very persuading examples not only for African or Asia refugees but also for Ukraine, former Yugoslavian republics, Caucasus, etc. In the Czech Republic, the remittances gained its importance primarily because of the positive migration balance (CZSO, 2013a). It is obvious that labour migration plays an important role in maintaining stable levels of the workforce; especially in construction or in low-level paid services (e.g. cleaning in hospitals). Since mid-90s, these jobs have been very often occupied by people from former Soviet bloc. The structure of immigrants also influences the human capital of the country in terms of their education and profession (Mazouch, Fischer, 2011). Currently this breakdown is still far from our possibilities and we concentrate on country of origin only. Obviously, a part of created values outflows abroad because this was in fact (at least for some group of workers) one of the most important motivation factors for arrival.

1 DATA AND METHODOLOGY

This area is still being developed as the migration issues going to be more and more important. In fact, the definition of remittances is not uniform and recently has been still changing. Currently, the Czech Statistical Office (CZSO) uses the definition given by the International Monetary Fund (IMF). The IMF (2009) derives remittances from two items of the balance of payments:

- Revenues earned by workers in economies without permanent resident (eventually from employers seated abroad).
- Transfers from residents of one economy (the residents see below) to residents of other economies. For quantification of the total amount of remittances is necessary to know the amount of the income of migrants. The estimation of incomes and remittances is based on the behaviour and structure of foreigners. We suppose that the amount of foreigner's income depends on the type of their activity, whether they are employees or employers (entrepreneurs), whether they work legally or illegally. Similar assumption is applied on the consumption behaviour; the consumption expenditures depend on the income, length and purpose of their stay.

The foreigners (according to current national account standard ESA 1995) are distinguishing primarily by the length of stay:

- Residents economic entities, living and working in the Czech Republic for at least one year or longer.
- Non-residents economic entities, living and working in the Czech Republic less than one year.
 This category also includes the cross-border workers, seasonal workers, foreign students studying in the Czech Republic, foreigners working in the Czech embassies abroad.

The breakdown of foreigners between residents and non-residents is crucial for correct capturing and quantifying all of accompanying flows. Subsequently, the nature of their economic activity has to be taken into account and foreigners are broken down by following categories:

- · economically active persons:
 - employees (legal x illegal),
 - employers (entrepreneurs),
- economically non-active persons:
 - · students.
 - · others.

According to current rules, entrepreneurs are always considered as residents only. The last breakdown focuses on the country of origin of foreigners. We suppose that people from poorer countries have slightly different behaviour even within each group (e.g. a difference between students).

1.1 Data sources on numbers of foreigners

Unfortunately, the number and structure of foreigners living in the Czech Republic is not recorded uniformly. There is no central database collecting all information about foreigners. There are three independent resources for statistics of foreigners in the Czech Republic:

- 1) The Ministry of the Interior (MOI) Alien police inspectorate records the total number of foreigners by length of stay and country of origin.
- 2) The Ministry of Labour and Social Affairs (MLSA) employment bureau issue work permits.
- 3) The Ministry of Industry and Trade (MIT) monitoring of trades licenses.

The estimate of the number of foreigner employees and entrepreneurs is done by combination of all available data sources. Known total number of foreigners broken down by the length of stay from MOI makes possible the division the group into foreign residents and non-residents. We estimate the number of economically non-active residents by difference between the total number of foreign residents, the number of legal employed residents (from MLSA) and entrepreneurs (from MIT).

A similar procedure is applied for calculation of economically non-active non-residents. At first, it has to be estimated the number of illegal employment. Estimates of illegally employed foreigners are based on the results of inspection performed by controls at employers employing foreigners in the co-operation among Employment Bureau, Alien Policy Inspectorate and Customs Offices (MLSA, 2011). Illegal employees most often recruit from the citizens of third countries asking for international protection and waiting for resolution. According the report from controls, if foreigners wait longer than 3 to 6 months, they usually start working illegally. According to the employment law, the foreigner may obtain permission for Czech labour market for a period of one year from the date of making an application.

The economically non-active non-residents are represented by foreign students and others non-active persons (e.g housewives). The numbers of foreign students studying in the Czech Republic is obtained from the Institute for Information on Education (IIE).³ The number of other economically non-active non-residents is calculated as a difference between the numbers of the total foreign non-residents and economically active non-residents (legal + illegal employed) and foreign students.

1.2 Estimation of remittances

Usually, there are no or very limited direct information about remittances. These international flows are very difficult to capture regardless transferred via cash or via bank accounts. At first, central banks lost lots of their power in recent years when the law regulating banking statistics was changed in 2005 (Kudlák, Písaříková, 2008). At second, these transactions were often tried to hide. Actually, the issue of migration is very often difficult to measure especially with respect to national accounts requirements. Therefore model approach is the option how to provide at least rough estimates of these flows. The model is based on the number of people, country of origin, activity, their consumption habits etc. Such model requires some survey or qualified judgement to put into practice. Therefore the CZSO conducted the research project with the help of the Institute of Sociology of the Academy of Sciences of the Czech Republic (ISAS). The ISAS prepared survey conducted in 2010 and it was partial financed by the CZSO (Leontiyeva, Tollarová, 2011 a, b). The project was focused on labour migration, incomes,

The Institute for Information on Education was closed to 31st December 2011. From 1st January 2012 agenda IIE associated with the collection and processing of data takes over the Ministry of Education, Youth and Sports.

⁴ The methodology of national accounts is very complex. The description of the account of the rest of the world can be found in Hronová et al. (2009).

consumption expenditures, savings and remittances of several nationalities in the Czech Republic: Ukraine, Vietnam, Russia, Moldova and the countries of the former Yugoslavia. The results of this project were used for estimation of monetary remittances and in kind remittances of foreigners of five countries mentioned above. It was possible to survey only five countries within this the project. It means that behaviour of migrants from other countries has to be expertly estimated on the basis of similarity with selected countries. On this basis, groups of countries were created representing clusters with similar behaviour in terms of incomes, consumption and remittances. When estimating non-resident's remittances, the CZSO supposes the equality between their savings and remittances. It means that all earned funds remaining after deducting consumption expenditures are sent back to their home country. It is supposed that non-residents do not create savings in the Czech Republic or their savings are only temporary and will be spent (sooner or later) in their home country.

The basis for calculation of savings and remittances is the net wage. The net wage has to be broken down by type of activity, whether the foreigner is employed legally or illegally, or if he is entrepreneur. The CZSO estimates also gross wage (wages, salaries plus taxes and insurance) based on database maintained by private company Trexima (ISPV, 2011). There are available the data on average wages of selected employees' citizenship working in the Czech Republic. Unfortunately the survey does not differentiate the type, length of stay and all of citizenship. Selected obtained average wages are used for approximation of average wages in all other countries. The net wage (legal non-resident employees and resident employees) is equal to wages and salaries less social contribution, health insurance and income taxes, see formula (1).

Net wage = Wages and salaries (D.11) – social contribution of employees (D.6112) – income taxes (D.51). (1)

Formula (1) is applied for legal employees only; in the case of illegal employees the net wage is equal to gross wage, because illegal workers do not pay any contributions or taxes. However, such employees probably receive lower wages and the CZSO assumes that such workers receive 25% lower wage than legal employee.

Something like a net wage of entrepreneurs is recorded in national account as net lending/borrowing (B.9) of the entrepreneurs' sub-sector. They have such income at their disposal for personal expenses and for the possible transfer of money to their country of origin (in case of foreign entrepreneurs), see formula (2).

Net lending/borrowing (B.9) = The average net lending(+)/borrowing(-) of entrepreneurs * The number of entrepreneurs * k, (2)

where k is the coefficient of ratio of the earnings of Czech entrepreneurs to earnings of foreign entrepreneurs. This coefficient k is expertly estimated and the level differs according to the type of country. It usually applies that the net lending/borrowings of foreign entrepreneurs are slightly higher than those of Czech entrepreneurs.

Economically non-active persons have no income from employment, but they have other revenues, e.g. scholarships, retirement pensions, disability pensions, etc. The CZSO also estimates scholarships of foreign students and revenues from retirement pensions of foreign pensioners.

Savings of foreigners are obtained by the deduction of final consumption expenditures from net wages. These expenditures are estimated according to the Czech households' expenditure consumption broken down by CZ-COICOP and subsequently the figures are adjusted individually for each group of countries:

Consumption expenditures (P.31) = Σ consumption expenditures in particular sections of CZ-COICOP *r, (3)

where r is the coefficient of ratio of the expenditures of Czech consumers to expenditures of foreign consumers. This coefficient r is expertly estimated for each group of countries. It provides consistent estimates with Czech households, on the contrary its weaknesses is subjectivity of adjustments. Besides, the CZSO uses the research project from the ISAS (mentioned above); where it can be determined consumption habits of some groups of foreigners.

The estimation of the total of remittances is also based on the research project from the ISAS. There was determined the average amount of remittances in CZK, the percent of their income and the percent of sent money abroad for last 3 years. The estimates of total remittances of all foreign residents are shown in Table 1, row 7. Also the information about value of sent gifts (valuables) was determined within this research project. In the same way as a percent of monetary remittances, it can be computed the percent of gifts⁵ from income (see Table 1, row 14).

| Table 1 Calculation of the percent of remittances and gifts from net income | | | | | | | | |
|---|--------|---------|--|---------|---------|--------|---------|--------------------------|
| | Number | Formula | ltem | Ukraine | Vietnam | Russia | Moldova | Yugoslavia ⁵⁾ |
| | 1 | | Average remittance in CZK 1) | 34 228 | 33 375 | 34 813 | 31 667 | 41 698 |
| | 2 | | % Remittances from income 1) | 26.63 | 22.33 | 22.33 | 27.55 | 18.49 |
| CES | 3 | | Donor YES | 61.00 | 47.00 | 44.00 | 43.00 | 40.00 |
| REMITTANCES | 4 | | Donor NO | 39.00 | 49.00 | 54.00 | 55.00 | 60.00 |
| | 5 | | Donor without answer | 0.00 | 4.00 | 2.00 | 3.00 | 0.00 |
| | 6 | 3/(3+4) | % Donor of remittances from foreigners ²⁾ | 61.00 | 48.96 | 44.90 | 43,88 | 40.00 |
| | 7 | 2*6 | % Remittances from income ³⁾ | 16.24 | 10.93 | 10.03 | 12.09 | 7.40 |
| | 8 | | Average Gifts in CZK 1) | 17 668 | 17 771 | 16 857 | 24 159 | 22 642 |
| | 9 | 8/1 | Share remittance/gifts | 0.52 | 0.53 | 0.48 | 0.76 | 0.54 |
| GIFTS | 10 | 2*9 | % Gifts from income 1) | 13.75 | 11.89 | 10.81 | 21.02 | 10.04 |
| | 11 | | N Gifts ⁴⁾ | 136 | 23 | 31 | 6 | 12 |
| | 12 | | N Income ⁴⁾ | 550 | 238 | 125 | 46 | 39 |
| | 13 | 11/12 | % Donor of gifts from foreigners ²⁾ | 24.73 | 9.66 | 24.80 | 13.04 | 30.77 |
| | 14 | 10*13 | % Gifts from income ³⁾ | 3.40 | 1.15 | 2.68 | 2.74 | 3.09 |

¹⁾ only donors

The remittances of resident employees and entrepreneurs are estimated as the percent from net wage or percent from net lending/borrowing.

Remittances of resident employees are equal to:

²⁾ only donors, which answer

³⁾ all foreigners

⁴⁾ number of respondents

⁵⁾ countries of former Yugoslavia except Slovenia

Source: Leontiyeva, Tollarová (2011b), calculations of the CZSO

⁵ Valuable items like electronic goods, expensive drugs, clothes, jewellery and even automobiles.

Remittances
$$(D.75) = Net wages * (% remittances + % gifts).$$
 (4)

Remittances of entrepreneurs are equal to:

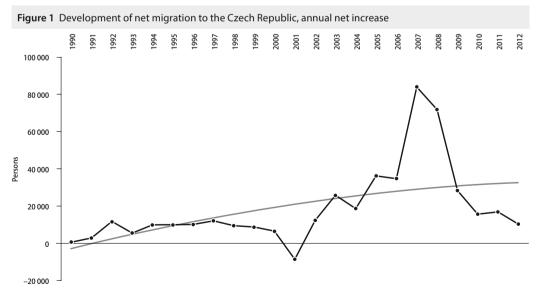
Remittances of entrepreneurs are equal to:

Remittances
$$(D.75)$$
 = Savings $(B.8)$ = Net wages – Consumption expenditures $(P.31)$. (6)

The CZSO estimates remittances with respect to the country of origin of foreigners. That is why that the key determinant is the citizenship of migrants. For that model, it is not important where money is actually sent. Moreover, such information is not available.

2 REMITANCES FROM THE CZECH REPUBLIC IN 2011

Migration has become very important issue since 1990 (see Figure 1) and Czech society is still getting used to it. The problems connected with crime, smuggling and wild black labour market in 1990s mainly passed away and current migrants have different structure and different aims. Moreover, implementation of European law and joining to Schengen Agreement lead to major changes in Czech society. Nowadays we can identify more rich people from former Soviet bloc moving permanently to the Czech Republic. Therefore the breakdown of foreigners between residents and non-residents is more important in recent years. During the 90s, the net migration was around 10 000 persons a year, in the years 2007–2008 it rose to as much as 70–80 000 persons per year but then it dropped again to less than 30 000. In 2012, it was only just over 10 000 persons in the year. The cumulative impact on the economy is clear. Some of them became Czech citizens and the rest who are living more than one year in the Czech Republic are regarded as foreign residents. More than 530 thousand foreigners (nearly 5% of total population) living in the Czech Republic in 2011 represent significant economic power.



Source: The black line represent simple moving average for rough determination of trend. Source: CZSO (2013a) According to the various administrative data resources, they were approximately 537 000 foreigners (see Table 2) in the Czech Republic in 2011. They represent about 5% from total population. Working foreigners count about 4% (non-resident employees, resident employees and entrepreneurs). Most foreigners come from Slovakia, Ukraine, Vietnam, Russia and Poland, see Table 3. The income according to formula (1) is estimated only for employees. Entrepreneur's earnings are expressed by net lending/borrowing (formula (2)). The revenues of economically non-active persons represent scholarships and retirement pension. In 2011, non-resident employees' net wages represented about 17 billion CZK (see Table 2), resident employees earned about 62 billion CZK and the earnings of entrepreneurs were 33 billion CZK.

| Table 2 The number of foreigners in the Czech Republic, their incomes, expenses, savings and remittances | | | | | | | | | |
|--|------------------|---------------|-----------|------------------------|-----------|---------------|-----------|------------------------|--|
| | Total Foreigners | Non-residents | | | Residents | | | | |
| 2011 (million CZK) | | Total | Employees | Economically nonactive | Total | Entrepreneurs | Employees | Economically nonactive | |
| The number of foreigners | 536 815 | 118 484 | 82 358 | 36 126 | 418 331 | 129 513 | 222 946 | 65 872 | |
| Wages and salaries (D.11) | 107 001 | 24 068 | 19 163 | 9 474 | 82 933 | х | 82 933 | 8 331 | |
| Social contribution of employers (D.12) | 49 944 | 3 958 | 6 466 | 0 | 45 986 | х | 28 166 | 0 | |
| Compensation of employees (D.1) | 139 145 | 28 029 | 23 124 | 9 474 | 111 116 | х | 111 116 | 8 331 | |
| Social contributions of employees (D.6112) | 20 232 | 747 | 2 203 | 0 | 19 485 | х | 9 088 | 0 | |
| Income taxes (D.51) | 12 716 | 1 333 | 1 333 | 0 | 11 383 | х | 11 383 | 0 | |
| Net wage | 84 433 | 21 988 | 17 083 | 9 474 | 62 445 | х | 62 445 | 8 331 | |
| Consumption expenditures (P.31) | 85 579 | 14 634 | 9 528 | 5 106 | 70 945 | 21 463 | 44 496 | 8 243 | |
| Net lending/ borrowing (B.9) | х | х | х | х | х | 33 238 | х | х | |
| Net savings for export (B.8n) | 41 735 | 11 923 | 7 555 | 4 368 | 29 812 | 11 775 | 17 949 | 88 | |
| Remittances (D.75) | 14 995 | х | х | х | 14 995 | 4 933 | 10 062 | 0 | |
| Gifts (D.75) | 3 191 | х | х | х | 3 191 | 1 045 | 2 146 | 0 | |
| Savings in CZ | 23 549 | 11 923 | 7 555 | 4 368 | 11 626 | 5 797 | 5 741 | 88 | |

Source: Calculations of the CZSO

The Czech Republic has also emigrants working abroad, who bring earned money back, of course. The CZSO estimates the Czechs abroad, but we deals only with foreigners and remittances in the Czech Republic, as outflow of funds abroad.

In 2011, the resident remittances (in cash or in kind) represented almost 18 billion CZK. Cash remittances constituted 82% of total remittances, gifts (or kind remittances) only 18%. Foreigners living and working in the Czech Republic less than one year saved and transferred away over 11 billion CZK. The total amount of transferred funds from the Czech Republic achieved almost 30 billion CZK. Total savings of foreigners for the Czech Republic was 23.5 billion CZK (see Table 2).

Labour migration is getting an important role in maintaining of a stable level of the labour force. From the perspective of economically developing countries, remittances are considered as an effective

tool for their development. However, the Czech Republic does not belong to countries for which sending remittances represents a huge problem up to now because remittances constitute approximately 0.7% of GDP, (CZSO, 2013b). For comparison we mention Luxembourg, which is in first place on the worldwide table as far as sent remittances are concerned and where in 2011 remittances amounted to 19.3% of the GDP (The World Bank, 2013).

The following Table 3 describes the number of foreigners and their remittances to countries of the five most common nationalities in the Czech Republic in 2011. The number of immigrants from Slovakia and Ukraine exceeded 100 000 persons.

| Table 3 | Calculation | of remittances | from the | Czech Republic |
|---------|-------------|----------------|----------|----------------|
|---------|-------------|----------------|----------|----------------|

| 2011 | | Foreigners | | Remittances (million CZK) | | | |
|----------|---------|-------------------|-----------|---------------------------|-------------------|-----------|--|
| | Total | Non- residents | Residents | Total | Non- residents | Residents | |
| Total | 536 815 | 118 484 | 418 331 | 30 109 | 11 923 | 18 186 | |
| Poland | 23 602 | 1 275 | 22 327 | 884 | 140 | 744 | |
| Russia | 33 939 | 9 584 | 24 355 | 3 190 | 2 474 | 716 | |
| Slovakia | 148 224 | 30 366 | 117 858 | 6 103 | 1 022 | 5 081 | |
| Ukraine | 136 044 | 43 176 | 92 868 | 7 710 | 4 318 | 3 392 | |
| Vietnam | 59 281 | 3 610 | 55 671 | 1 687 | 225 | 1 462 | |

Note: Savings of non-residents will be transferred out of the Czech Republic.

Source: Calculations of the CZSO

The greatest amount of remittances was transferred to Slovakia, Ukraine and Russia in 2011. Total amount of remittances transferring to countries of five most frequent nationalities of foreigners in the Czech Republic took 65% of total remittances; 26% (7.7 billion CZK) went to Ukraine, 20% (6.1 billion CZK) to Slovakia and 11% (3.2 billion CZK) to Russia from total remittances.

3 PROBLEMS WITH STATISTICS OF MIGRANTS AND REMITTANCES

Generally, the statistics of remittances is difficult to compile due to lack of data sources. Some estimates were done but it should be noted that these estimation usually included only formal remittances in most cases. The results may be distorted by the amount of informal (unregistered) remittances (Schiopu, Siegfried, 2006). Many immigrants send remittances through informal channels, such as carrying in cash, sending via friends, drivers or passengers on public transport. It is estimated that remittances sent informally can represent up to 85% of total remittances in some countries (Rejšková, Stojanov, Šolcová, Tollarová, 2009). There are lots of reasons ranging from hiding money from financial institutions to mafia, it is present especially persons with lower incomes.

The key advantage of our model is that we do not have to study money channels, because the amount of remittances is based on a percentage from income, not from reporting banks and financial institutions. However, it occurs plenty of other problems related to the statistics of the number of migrants and the amount of remittances.

The long-term problem represents recording of the number of illegally employed foreigners. Recently the number of controls of employers decreased and thereby the estimation of illegal employment is more complicated.

Statistics of foreigners' employment currently faces a problem of the lack of data. Employment bureaus stopped registering and publishing numbers of work permits in January 2012. Unfortunately

the CZSO is still obliged to estimate the number of employed foreigners and therefore it is based on the recent development.

Another problem is the lack of data sources on average wages, consumption expenditures and remittances of foreigners by all of citizenship. Only the information about five countries is available from the research project of the ISAS. Other citizenships must be expertly estimated.

Besides, the general problem with statistics of remittances is the comparability of data on remittances between different institutions. The Table 3 shows that the amount of remittances in 2011 was 30 billion CZK according to the CZSO estimates. However, according to international statistics from the World Bank the amount of remittances outflow from the Czech Republic achieved in 2011 approximately 41 billion CZK (The World Bank, 2013). The reason for discrepancies is obviously different approach to remittances. The CZSO methodology considers remittances (in case of non-resident employees) only as savings, i.e. the difference between net wage and consumption expenditures. In case of resident employees and entrepreneurs the remittances are estimated as the percent from net wage or percent from net lending/borrowing. However, some institutions including the World Bank define the non-resident employees' remittances as total compensation of employees, regardless of consumption in foreign country. Consequently, the amount of remittances is higher using this methodology. We consider the approach of the World Bank as incorrect because it is not in line with other macroeconomic information from national accounts.

CONCLUSION

The role of the statistics of migration significantly increased in the last years. Information about migration and remittances are still gaining the importance as the Czech Republic is facing increasing migration. It is clear that these issues have to be reflected in balance of payments as the outflows and inflows of money. They are reflected in gross national income since the outflow of money of foreign residents decreases sources for domestic consumption expenditures.

Therefore it is important to record the foreigners living in the Czech Republic as well as Czech citizens living abroad. Moreover, the group of foreigners has to be split between residents and non-residents. Foreign non-residents buy goods and services that is recorded as exports and Czech residents abroad affect import of goods and services. Detailed data on the numbers of foreigners in the Czech Republic and Czech citizens abroad are difficult to obtain in appropriate detail. It is due to the unknown behaviour of foreigners, their incomes and expenses. Nowadays, the Czech Republic is country of immigrants and although we have emigrants working abroad and bringing earned money back, remittances are more important in terms of outflow of funds abroad. Therefore we focused on the foreigners in the Czech Republic, although the CZSO estimates a Czech citizens working and studying abroad, as well.

Even though actual estimates based solely on the physical numbers of people have some limitations, they provide useful information. Since the key problem lying in the lack of data sources is remaining, model approach is probably the only way how to satisfy statistical needs. Lots of assumptions have to be used to obtain required results. The improvement of this statistics represents a great challenge and the CZSO is hardly working on it. Definitely a significant progress can be made again in connection with some researches dealing with migration and social issues. We expect that this issue is still going to be more popular in connection with planning some migration strategy or promotion of migration of high skilled workers. Our labour market was very attractive mainly for the people from the east but current long-term economic crisis in the EU may bring change. These issues are connected not only with looking for people for low-qualified jobs but also for people settling in the country and creating values that remain in the Czech Republic.

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