

# **National Accounts and economic migration**

## **Remittances in the Czech Republic**

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### **Abstract**

Migration of people for economic reasons is an important economic phenomenon. It is not only a consequence but also a reason of different economic development in different countries and regions. It has an impact on social and economic situation in both origin and host countries. This phenomenon should be recorded in national accounts, where general principle resident - nonresident is expected to be applied. The definition looks clear but application is not simple. The main reason of difficulties is usually a lack of direct data. That's why there is a large area for modeling. However these models need again some basic empirical data. New model elaborated in the Czech statistical office in the last year is aimed on complete coverage of the economic activity of foreigners on the Czech Republic territory. We used empirical data concerning number of foreigners, duration and reasons of their stay, structured by their country of origin. The information on average earnings by different groups of foreigners was available too. Our model is more or less complete, it covers the estimate of earnings, expenditure, savings and remittances divided by countries of origin. Therefore the model covers needs not only for supply and use tables but for sector accounts and balance of payments too.

# 1. Introduction

Migration of people due to economic reasons is an important economic phenomenon. It is not only a consequence but also a cause of differences in economic development of countries and regions. The migration impacts on the social and economic situation both in the migrants' countries of origin and in the host countries. This phenomenon is reflected in the national accounts as well as balances of payments of the countries.

For the Czech Republic it is a relatively new phenomenon. In 1970's and 1980's the migration to the former Czechoslovakia was covered by intergovernmental agreements with Cuba, Poland and Vietnam. However, the numbers of workers were insignificant. Since the migration of Czechoslovak citizens to foreign countries was considered purely politically motivated the then totalitarian regime restrained the now common cross-border movement of people. Economic cross-border contacts of relatives were then enabled only by official channels captured in the balance of payments.

In 1990's the cross-border financial-flows data were still taken from official sources and they were supported by estimates of the then new mass phenomenon – shuttle trade. The transformation and adaptation problems encountered by the statistical service and chaos in legislation did not allow us to capture significant changes: return of many emigrants, increasing inflow of immigrants and a new wave of “short-term” emigrants intending to work abroad. The Czech Republic turned from a predominantly emigrant country to a predominantly immigrant country in that period. It became a “pure” host of migrants seeking work. The immigrants now account for about 5 – 7 % of the total number of 5.5 millions workers in the Czech Republic. Capturing the remittances to their countries of origin in the national accounts and balances of payments thus became one of the problems of great importance.

The direct cause for the transfer of responsibility for remittance estimates from Czech National Bank (CNB) to the Czech Statistical Office (CZSO) was the limitation of thresholds for obligatory transaction identification in commercial banks and increasingly popular use of credit cards. The formal method to estimate the remittances became ineffective because the remittance flows captured through formal financial system [banks and credit unions or licensed money transfer operators (MTOs)] represented only a small portion of the total remittance volume. Currently the formal flows of funds do not allow full coverage of all transactions on one hand, and provide poor tools to distinguish the transaction purposes, i.e. involve the mixing of tourists' and migrant workers' money transfers, on the other hand. Neither do the formal flows of funds enable to distinguish between short- and long-term migrants which is important to differentiate between the primary and secondary income flows. This indicates in the actual circumstances the remittance level can be estimated only using statistical methods combining various information sources. However, the CZSO has not accumulated sufficient comprehensive experience in this sphere. Therefore we have been focused on the labour of foreigners in the Czech Republic and we drew up a general procedure to estimate their income, expenses and remittances to their countries of origin. For that reason our contributed paper handles this remittance aspect.

## **2. Estimate of foreigners' labour in the Czech Republic and remittances to their countries of origin**

Following the first attempts from the late 1990's, the current approach to the estimates is focused on full coverage of the basic requirements of national accounts, balance of payments and supply and use tables. Each of the three estimate output application areas has specific requirements. The national account system requires a differentiation between primary and

secondary income and focus on gross wages (compensation of employees, taxes, contributions to social and health insurance systems). Apart from the principal requirements of the national account system, the balance of payments needs also territorial division, i.e. division according to the main groups of countries. The consumption and exports of short-term migrants' goods needs to be divided according to commodities in the input-output tables and supply and use tables.

Our approach to the estimation procedure is based on the combination of the requirements mentioned above. The description of the procedure below is limited to one direction of remittance flows - the flows from the Czech Republic to foreign countries - which flows include only those from migrant workers, and not from Czechs. The estimation procedure can be divided into four stages:

## **2.1 Estimates of the number of foreigners working in the Czech Republic**

It is self-evident the estimates of income, expenses and remittances cannot be made based on aggregate data not only due to the structure of required outputs but also, and most importantly, because of the differences in behavior of various groups of remitters (foreigners).

Their income depends mostly on the type of their activities, whether they are employees or entrepreneurs, whether they work legally or illegally and whether they have additional job or not. Their expenses depend mostly on their income level, purpose and duration of their stay, whether they maintain other person(s) or not, national habits etc. However, the structure in which the numbers of remitters (foreigners) can be ascertained should also be taken into account because the figures showing the number of foreigners are not the simplest calculation item although they may be perceived as such.

There is no uniform compulsory registration system for all foreigners in place in the Czech Republic. In essence, there are three fully independent databases. However, they are incomplete and not coordinated with one another. These overlapping databases are operated by the following authorities:

- Alien police (residence permits)
- Employment bureau (work permits)
- Trades licensing offices (trade licenses)

Combining the administrative sources above in detailed division according to the countries of origin we estimate the numbers of foreigners being employers, entrepreneurs and non-workers (students, children and pensioners). Table 1 provides the resultant overview of the numbers of foreigners according to the different groups of countries and some major countries.

#### *Position of table 1*

According to the calculations using various administrative data sources the alien police figures do not cover some 60 thousand foreigners (mostly from Slovakia and other EU countries who are not bound by the registration obligation). The employment bureau and trades licensing office figures do not cover some 90 thousand foreigners (mostly non-workers). The numbers of foreigners in Table 1 include also those expatriated because of illegal work in the Czech Republic. The estimate of illegal immigrants based on the number of expatriated foreigners in this way is seen by us as the weakest point of the estimate of the number of remitters (foreigners).

## **2.2 Estimates of income of foreigners working in the Czech Republic**

The foreigners working in the Czech Republic are categorized into two groups of remitters carrying on gainful activities - employees (i) and entrepreneurs (ii) - to which a different approach is applied in estimating their income.

(i) The estimates for employees are based on data on average wage of foreigners from statistical surveys conducted for the needs of CZSO by Trexima (private agency). The data are structured according to the countries of origin. However, they are not structured according to the fields of activity, income groups and stay type (long-term, short-term, illegal). Nonetheless, it can be expected the data on the numbers of foreigners disaggregated according to the countries cannot be properly subdivided by us according to the fields of activity and income groups. In case of workers staying in the country for a short-term (nonresidents) the estimated gross wage is used to derive the contributions to social and health insurance systems and income taxes. In case of illegal workers the contributions and taxes are not calculated so the gross wage is regarded as net wage.

(ii) The estimates for employers are aimed to quantify their net income remaining to them for their personal expenses and any remittances to their countries of origin. For that reason our estimates are based on the information on their section of economic activities (according to NACE 2) and the item “Net loans /borrowings” (B.9) in the respective section. The main weakness of this procedure is the fact the entrepreneurs can invest in their countries of origin instead of the Czech Republic. (The actual remittances are higher.) In addition, some of them are only mock entrepreneurs working as employees if at all (e.g. students). Their registration as entrepreneurs is often motivated by an easier way to obtain long-term visa for entrepreneurs. (The actual remittances are lower).

*Position of table 2*

### **2.3. Estimates of expenses for final consumption of foreigners working in the Czech Republic**

The expenses for final consumption of foreigners working in the Czech Republic are estimated in a combined structure according to groups of countries, stay type (long-term, short-term, illegal) and 12 COICOP classification groups. The inputs are the expense level and structure data from the family accounts statistics. Unfortunately, these statistics capture only the Czech households' expense level and structure. The concerned data are therefore corrected individually for each group. The resulting aggregate data for each group are then compared with the income data in the same group. Table 2 shows the estimated expenses according to the major countries and groups of countries. The “net” income and “savings” left for any remittances to the countries of origin are added for convenience.

This approach has its weakness in a relatively arbitrary correction as we lack reliable information on consumption habits of some groups of foreigners (Vietnam, Ukraine).

### **2.4. Estimates of remittances of foreigners working in the Czech Republic**

There are great differences among the groups of remitters (foreigners) in the resultant estimate of “savings” left for any remittances to the countries of origin (see Table 2). With the actual Czech crown / Euro exchange rate (26 CZK / 1 Euro), the estimate ranges from 250 to 600 Euro per month.

However, the estimate of remittances does not imply the funds are really transferred in the calculated amount and specified period. The actual money transfer is usually influenced by a number of other factors connected with the purpose of stay in our country and the link to the

country of origin. The transfer may be postponed or there may be no transfer at all. The worker may make the remittances regularly, from time to time or at the end of his or her stay. Or no remittances may be made if he or she obtains permanent residence permit in the host country. For that reasons the actual transfers are estimated, for example, at only 10 % of the estimated “savings” in case of the Slovak citizens and 90 % in case of managers from the western countries because their behaviour is obviously shaped by the development of exchange rates. For the short-term and illegal stays (of non-residents) it is expected the actual remittances are equal to those calculated.

*Position of table 3*

### **3. Foreigners’ labour and remittances captured in national accounts**

The primary categorization of foreigners into residents and nonresidents is essential for correct quantification of all flows to be captured in national accounts. Table 3 offers the resultant figures on the foreigners’ labour in the Czech Republic in 2006. However, some data are implicitly included in the overall data and are used only to illustrate the remittance calculation in Table 3. Consequently, they are not explicitly included in the national accounts.

### **4. Conclusion**

The procedure to estimate the foreigners’ labour in the Czech Republic and remittances to the countries of their origin described above has a number of weaknesses and many assumptions are not supported by exactly ascertained data. This applies particularly to the estimates of expenses and remittances made. Nevertheless, the development of a general estimation



procedure covering all required outputs can be looked upon as an initial, fundamental step to properly capture the relatively new, yet very significant phenomenon in the Czech economy. The procedure is expected to be improved in its routines and disburdened of the weak points step by step using goal-oriented one-off statistical surveys in future. In order to identify the optimum approach in our circumstances, a task force managed by the CZSO was set up. The team is made up of representatives of different institutions dealing with the issues related to foreigners in the territory of the Czech Republic.

## **5. References**

[1] European system of accounts (ESA 1995). Eurostat, Luxembourg 1996.

[2] System of National Accounts 1993. United Nations, IMF, OECD, Eurostat, World Bank, New York 1993.

[3] Remittances and labour mobility. Bureau of Economic Analysis, United States, 11.-13.5. 2009, Geneva. <http://www.unece.org/stats/documents/2009.05.sna.htm>

[4] [www.czso.cz](http://www.czso.cz)

**Table 1 – Numbers of foreigners working in the Czech Republic, 2006**

	Non-residents employees legal	Non-residents employees illegal	Residents employees	Residents entrepreneurs	Economically non-active foreigners	Total
<b>European monetary union</b>	<b>841</b>	<b>:</b>	<b>9 598</b>	<b>5 280</b>	<b>3 251</b>	<b>18 970</b>
<i>of which: managers</i>	697	:	7 007	x	2 064	9 768
<b>European Union – non-members of EMU</b>	<b>12 867</b>	<b>:</b>	<b>88 041</b>	<b>10 776</b>	<b>23 715</b>	<b>135 399</b>
<i>of which: Poland</i>	1 263	:	12 939	1 385	1 804	17 391
<i>Slovakia</i>	11 065	:	73 060	8 512	20 925	113 562
<b>Third countries</b>	<b>55 527</b>	<b>:</b>	<b>35 950</b>	<b>79 833</b>	<b>35 684</b>	<b>206 994</b>
<i>of which: Western countries</i>	2 021	:	1 924	1 352	1 759	7 056
<i>Ukraine</i>	35 318	:	22 356	29 429	8 413	95 516
<i>Russia</i>	4 805	:	3 457	5 004	4 874	18 140
<i>Vietnam</i>	231	:	223	27 570	10 935	38 959
<b>Non-legal person</b>	<b>x</b>	<b>7 117</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>7 117</b>
<b>Total</b>	<b>69 235</b>	<b>7 117</b>	<b>133 589</b>	<b>95 889</b>	<b>62 650</b>	<b>368 480</b>

**Table 2 – Monthly incomes and expenditures of foreigners working in the Czech Republic, 2006, CZK**

	European monetary union		EU - non-members of EMU		Third countries		Total
	Total	managers	Total	Slovakia	Total	Ukraine	
Number of persons	10 439	7 704	100 908	84 125	98 594	57 674	209 941
<b>Wages and salaries, gross</b>	<b>43 663</b>	<b>59 603</b>	<b>32 009</b>	<b>22 958</b>	<b>24 645</b>	<b>18 958</b>	<b>28 443</b>
(-) Employees' social contributions	-3 506	-5 458	-7 450	-4 001	-2 870	-3 080	-2 370
(-) Taxes on income	-4 250	-8 012	-12 358	-5 032	-2 623	-3 107	-1 887
<i>Wages and salaries, net</i>	<i>35 907</i>	<i>46 133</i>	<i>12 201</i>	<i>13 924</i>	<i>19 152</i>	<i>12 770</i>	<i>24 187</i>
<b>Individual consumption expenditure</b>	<b>16 884</b>	<b>17 206</b>	<b>7 182</b>	<b>7 471</b>	<b>4 666</b>	<b>4 220</b>	<b>6 482</b>
<i>of which:</i>							
1. Food, non-alcoholic bev.	3 659	4 297	1 792	1 837	1 286	1 261	1 647
2. Alcoholic beverages, tobacco	1 911	2 218	860	880	618	600	799
3. Clothing and footwear	1 458	1 797	348	339	252	241	358
4. Housing, water, electri ..	4 369	2 961	1 987	2 220	879	570	1 585
5. Furnishings, household eq..	524	597	182	182	107	103	163
6. Health	166	183	79	83	48	45	69
7. Transport	510	305	614	640	394	375	506
8. Communication	135	19	122	138	64	47	96
9. Recreation and culture	2 027	2 359	192	173	88	49	234
10. Education	27	0	36	36	18	16	27
11. Restaurants and hotels	258	264	587	564	727	748	637
12. Miscellaneous goods, serv.	1 840	2 206	383	380	185	165	362
<b>"Savings" per month</b>	<b>19 023</b>	<b>28 927</b>	<b>5 019</b>	<b>6 453</b>	<b>14 486</b>	<b>8 550</b>	<b>17 705</b>

**Table 3 – Calculation of remittances from the Czech Republic, 2006, mil. CZK**

		Non-residents employees legal	Non-residents employees illegal	Residents employees	Residents entrepreneurs	Eco. non-active foreigners	Total
<b>Number of persons</b>		<b>69 235</b>	<b>7 117</b>	<b>133 589</b>	<b>95 889</b>	<b>62 650</b>	<b>368 480</b>
D.11	<i>Wages and salaries</i>	16 239	1 110	40 644	x	x	X
D.12	<i>Employers' social cont.</i>	5 521	x	13 821	x	x	X
D1	Compensation of employees	21 760	1 110	54 465	x	x	X
(-)D.51	Taxes on income	-1 721	x	-5 220	x	x	X
(-)D.6111	<i>Employers' actual social cont.</i>	-5 521	x	-13 821	x	x	X
(-)D.6112	<i>Employees' actual social cont.</i>	-1 949	x	-4 877	x	x	X
(-)D.611	Actual social contributions	-7 470	x	-18 698	x	x	X
(-)P31	Individual consumption exp.	-3 949	-343	-12 040	-15 619	-2 155	X
B.9	Net lending(+)/ net borrowing(-)	x	x		75 558	x	X
"Savings" usable for remittances		8 620	767	18 507	59 939	-2 155	85 678
<b>Remittances, total</b>		<b>8 620</b>	<b>767</b>	<b>16 938</b>			<b>26 325</b>
<i>Remittances, % of "savings"</i>		<i>100%</i>	<i>100%</i>	<i>22%</i>			<i>31%</i>
Monthly remittances per person (in EUR)		399	345	95			229