# FOREIGNERS IN THE LABOR MARKET – THE EVIDENCE FROM CHOSEN COUNTRIES

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#### Abstract

In this contribution we provide complete data analysis of foreigner employment in the chosen EU countries. These countries lie mainly in the central Europe. The motivation is clear. The sticky wages labour market leads to the foreigner temptation in years of economic boom and in the periods of economic slump there are not only original unemployed people but moreover unemployed foreigners. This state has many social and economic consequences.

At first we have made assumption about existence of unemployed foreigners. We have shown that in developed European countries there is lower volatility in the amount of registered foreign workers. The labour market provides lower disparities between labour supply and labour demand of foreign workers in developed countries than in the eastern European countries in which there is an international labour temptation. In the other word in western European countries they are able to minimize the frictional and even structural employment.

Key words: immigration, efficiency, social pressure

**JEL Code: J22, J64** 

### **1** Introduction

The option to employ foreigners in the internal Labor market is a stressed topic to be discussed. The potential discussion is strengthened in the times of economic crisis. In these times the unemployment rate is high enough to create arguments against the international free labor market and to create requirements for labor protectionism. Need to say that the foreigners must be in a very difficult situation. Their native roots in the original country are broken and the critical economic situation is naturally producing nationalism in receiving countries.

The decisions about the foreigners employment policy are very difficult. Policy makers are following their voting needs, so in order to create balance system changes in proportion of foreigners employed problems must be very strategically solved and must not follow just short term economic and political cycle.

We have chosen a few countries from the central Europe to analyze the evolution of foreigners employment in the last twenty years. These countries are the Czech Republic, Germany, Hungary, Netherlands, Luxembourg, Austria, Poland, Slovenia, Slovakia and Croatia. Let's say that these are following states of German influence area in 19th century. The decisions about the foreigners employment policy are very difficult. Policy makers are following their voting needs, in comparison with the labor market efficiency and flexibility. Need to highlight that we are speaking about human beings. Every employee has his own social problems that seem sometimes unsolvable. In order to create balance system changes, the proportion of foreigners employed must be very strategically solved and must not follow just short term economic and political cycle. It is very important to think local and act global in order to succeed in the global economy (Soukup (2009)).

# 2 The Current Level of KNOWLEDGE

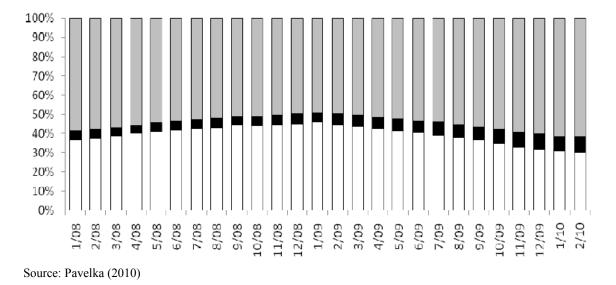
In this chapter we are following the theory described in articles Pavelka (2011b and Pavelka 2011c) and in article Pavelka et al. (2011a). In these contributions there is shown that the slump in the economy (according to decrease in the rate of growth) is followed with the decrease in the foreigners employment. It is obvious that there is an important delay. In this point of view the foreigners are threatened people in the labor market during the times of long lasting recessions Baldwin et al (1997).

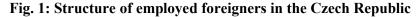
Čadil at al. (2011) contributed the topic with the thesis about positive influence of foreigners' employment to country unemployment and to the fiscal expenditures of government budget.

For the unemployed foreigners there is an option to become a part of the grey economy or become criminals. Both these situations are not positive. These foreigners usually are not willing to leave the visiting economy.

Fig. 1 gives us information about the evolution in the structure of the employed foreigners in the Czech Republic from 2008 to 2010 (quarterly). The white stripe represents working foreigners with license, the black stripe represents the working foreigners without license and the grey stripe represents the EU citizens.

The main hypothesis about the relation between working foreigners and the phase of economic cycle in the visiting country is confirmed. Moreover it is obvious that the men are likely to be employed than women. In the Czech Republic the greater deal of working foreigners belongs to the citizens from the following Soviet Union states and from Vietnam (King et al. (2007)). These people were attracted in the periods of economic boom as it is described in Macáková and Pavelka (2011).





# **3** Foreigners in the chosen countries

We have chosen a few countries from the central Europe to analyze the evolution of foreigners' employment in the last twenty years. These countries are the Czech Republic, Denmark, Germany, Hungary, Netherlands, Luxembourg, Austria, Poland, Slovenia, and Slovakia (we are able to say that these are following states of German influence area in 19th century).

The following table shows the evolution of employed foreigners in the period between 2004 and 2012 (quarterly).

GEO/TIME	2004Q1	2004Q2	2004Q3	2004Q4	2005Q1	2005Q2	2005Q3	2005Q4	2006Q1	2006Q2	2006Q3	2006Q4
Czech Republic	34.8	34.3	39.3	39.3	37.6	38.6	42.1	39.3	44.8	46.2	47.1	47.2
Denmark	74.4	77.3	85.6	71.5	70.8	80.3	82.6	95.1	81.0	91.0	85.0	98.8
Germany	:	2 903.2	:	:	2 996.5	3 070.7	3 019.6	2 987.0	2 964.3	3 035.4	3 069.6	3 035.7
Luxembourg	82.5	82.5	82.5	82.5	86.0	86.0	86.0	86.0	87.2	87.2	87.2	87.2
Hungary	28.0	29.6	29.7	31.7	30.5	30.8	28.1	27.5	28.8	29.2	27.7	31.2
Netherlands	277.1	269.5	265.4	258.5	246.6	255.7	260.6	276.8	272.1	272.2	275.1	264.2
Austria	283.5	357.6	366.1	371.0	364.1	381.6	378.1	366.3	360.4	385.5	398.0	390.8
Poland	15.8	17.1	11.6	13.3	19.8	19.1	18.7	17.7	28.7	27.2	24.8	25.9
Slovenia	3.4	2.6	2.2	2.6	2.7	3.3	2.1	4.3	4.2	3.3	3.0	2.6
Slovakia	6.3	5.8	5.6	4.3	3.8	3.4	3.6	4.1	3.9	4.4	4.3	3.3
GEO/TIME	2007Q1	2007Q2	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2	2009Q3	2009Q4
Czech Republic	49.6	49.2	55.8	52.4	53.9	60.7	62.3	64.3	68.2	72.4	73.8	73.9
Denmark	132.0	134.4	127.8	120.1	135.6	134.9	138.8	128.7	136.0	131.3	157.8	146.8
Germany	3 128.3	3 154.6	3 186.6	3 140.5	3 202.6	3 242.3	3 271.7	3 242.8	3 270.6	3 353.0	3 327.5	3 308.4
Luxembourg	96.2	96.1	96.9	95.0	93.6	101.4	93.8	92.2	103.4	104.5	104.0	103.8
Hungary	31.9	29.8	28.3	27.9	33.3	31.1	30.8	34.7	37.1	38.0	27.6	27.7
Netherlands	271.1	285.6	300.4	288.8	307.7	312.1	315.4	303.2	309.7	295.8	300.0	295.6
Austria	389.7	404.9	421.3	416.7	407.3	433.5	428.8	425.7	413.4	416.0	416.2	422.9
Poland	30.3	34.0	28.1	19.5	30.4	36.6	29.4	18.1	24.4	20.1	21.4	22.1
Slovenia	5.4	5.8	9.3	10.4	11.4	13.1	15.8	11.7	9.6	10.7	9.2	10.9
Slovakia	3.2	3.7	3.1	3.6	3.5	5.2	6.2	5.4	5.2	4.9	4.1	3.8
GEO/TIME	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2011Q4	2012Q1	2012Q2	2012Q3	2012Q4
Czech Republic	77.2	72.9	69.1	68.2	70.5	71.3	74.8	73.5	68.4	76.8	75.4	79.1
Denmark	130.8	132.1	149.5	160.4	145.8	155.7	163.2	166.4	172.8	168.0	168.1	179.5
Germany	3 274.4	3 349.9	3 390.4	3 328.6	3 403.3	3 538.2	3 615.1	3 531.8	3 516.5	3 654.7	3 775.6	3 750.6
Luxembourg	104.4	104.4	105.5	107.8	109.3	108.4	108.9	109.1	116.2	116.3	116.5	118.9
Hungary	23.5	28.8	31.2	30.7	29.6	31.8	31.6	30.7	25.0	27.1	31.9	:
Netherlands	259.1	274.6	291.4	285.3	289.5	276.3	291.5	293.3	300.8	310.0	317.1	:
Austria	418.6	428.9	444.5	452.3	436.5	460.5	464.9	475.8	471.8	493.0	490.2	484.1
Poland	25.0	28.2	19.9	21.5	21.5	24.6	25.3	27.8	25.7	23.4	25.5	33.1
Slovenia	12.1	13.1	13.2	15.8	19.3	19.1	17.3	19.4	25.0	24.7	16.9	22.0
Slovakia	4.9	4.7	5.7	4.7	4.2	4.0	4.7	3.9	4.5	3.9	4.2	4.4

Tab. 1: The amount of employed foreigners (thousands) in particular countries

Source: authors modification of Eurostat data

The greater absolute value of employed citizens is in the Germany. The value is around 3000 thousand people. Very low number of employed citizens is registered in Poland which is slightly unexpected. The other countries are smaller economies able to be compared themselves. We can observe that the greater absolute value from the smaller economies is recorded in the Netherlands and Austria. In these two countries the absolute amount of working foreigners is around 300 thousand people in the Netherlands and around 400 thousand people in the Austria.

GEO/TIME	2004Q4	2005Q4	2006Q4	2007Q4	2008Q4	2009Q4	2010Q4	2011Q4	2012Q4
Czech Republic	0.0038	0.0038	0.0046	0.0051	0.0062	0.0071	0.0065	0.0070	0.0075
Denmark	0.0132	0.0176	0.0182	0.0220	0.0235	0.0266	0.0290	0.0299	0.0322
Germany	no data	0.0362	0.0368	0.0382	0.0394	0.0403	0.0407	0.0432	0.0458
Luxembourg	0.1813	0.1865	0.1859	0.1995	0.1906	0.2103	0.2147	0.2132	0.2265
Hungary	0.0031	0.0027	0.0031	0.0028	0.0035	0.0028	0.0031	0.0031	no data
Netherlands	0.0159	0.0170	0.0162	0.0177	0.0185	0.0179	0.0172	0.0176	no data
Austria	0.0456	0.0447	0.0473	0.0503	0.0512	0.0506	0.0540	0.0566	0.0573
Poland	0.0003	0.0005	0.0007	0.0005	0.0005	0.0006	0.0006	0.0007	0.0009
Slovenia	0.0013	0.0022	0.0013	0.0052	0.0058	0.0054	0.0077	0.0095	0.0107
Slovakia	0.0008	0.0008	0.0006	0.0007	0.0010	0.0007	0.0009	0.0007	0.0008

Tab. 2: The total amount of working foreigners divided by total population

Source: authors modification of Eurostat data

The Tab. 2 describes the percentage deal of working foreigners to the total population in particular economy. We have highlighted the figures from the last quarter in every year. Our first conclusions are verified. The highest deal of employed foreigners is registered Luxemburg which is famous for the foreigner employment (mainly banking and financial sector)<sup>1</sup>. It is the smallest economy with very different conditions.

From the others the greater percentage of working foreigners to the total population is registered in Austria and in Germany. In Austria there are around 5 or 6 working foreigners to hundred working original citizens and in Germany there are around 4 or 5 working foreigners to hundred native citizens. Significant percentage appears in the Netherlands and the Denmark (from 1 to 3 working foreigners to hundred original citizens). From the "new" EU countries the highest percentage of working foreigners is registered in the Czech Republic. In the Czech Republic there are from 5 to 7 working foreigners to thousand original citizens.

In order to make perfect insight in these data, we need to create the chains of relative changes. These changes provide information about cycles in the employment of foreigners. These relative changes are calculated in the Tab. 3 which provides a greater insight into dynamics of working foreigners in chosen countries.

<sup>&</sup>lt;sup>1</sup> Moreover state Luxemburg is an example of state with very different value of GDP and GNP.

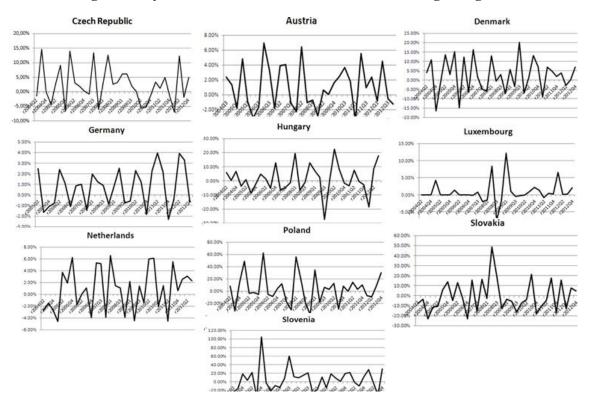
GEO/TIME	r2004Q2	r2004Q3	r2004Q4	r2005Q1	r2005Q2	r2005Q3	r2005Q4	r2006Q1	r2006Q2	r2006Q3	r2006Q4
Czech Republic	-1.44%	14.58%	0.00%	-4.33%	2.66%	9.07%	-6.65%	13.99%	3.13%	1.95%	0.21%
Denmark	3.90%	10.74%	-16.47%	-0.98%	13.42%	2.86%	15.13%	-14.83%	12.35%	-6.59%	16.24%
Germany	XXX	XXX	XXX	ххх	2.48%	-1.66%	-1.08%	-0.76%	2.40%	1.13%	-1.10%
Luxembourg	0.00%	0.00%	0.00%	4.24%	0.00%	0.00%	0.00%	1.40%	0.00%	0.00%	0.00%
Hungary	5.71%	0.34%	6.73%	-3.79%	0.98%	-8.77%	-2.14%	4.73%	1.39%	-5.14%	12.64%
Netherlands	-2.74%	-1.52%	-2.60%	-4.60%	3.69%	1.92%	6.22%	-1.70%	0.04%	1.07%	-3.96%
Austria	26.14%	2.38%	1.34%	-1.86%	4.81%	-0.92%	-3.12%	-1.61%	6.96%	3.24%	-1.81%
Poland	8.23%	-32.16%	14.66%	48.87%	-3.54%	-2.09%	-5.35%	62.15%	-5.23%	-8.82%	4.44%
Slovenia	-23.53%	-15.38%	18.18%	3.85%	22.22%	-36.36%	104.76%	-2.33%	-21.43%	-9.09%	-13.33%
Slovakia	-7.94%	-3.45%	-23.21%	-11.63%	-10.53%	5.88%	13.89%	-4.88%	12.82%	-2.27%	-23.26%
GEO/TIME	r2007Q2	r2007Q3	r2007Q4	r2008Q1	r2008Q2	r2008Q3	r2008Q4	r2009Q1	r2009Q2	r2009Q3	r2009Q4
Czech Republic	-0.81%	13.41%	-6.09%	2.86%	12.62%	2.64%	3.21%	6.07%	6.16%	1.93%	0.14%
Denmark	1.82%	-4.91%	-6.03%	12.91%	-0.52%	2.89%	-7.28%	5.67%	-3.46%	20.18%	-6.97%
Germany	0.84%	1.01%	-1.45%	1.98%	1.24%	0.91%	-0.88%	0.86%	2.52%	-0.76%	-0.57%
Luxembourg	-0.10%	0.83%	-1.96%	-1.47%	8.33%	-7.50%	-1.71%	12.15%	1.06%	-0.48%	-0.19%
Hungary	-6.58%	-5.03%	-1.41%	19.35%	-6.61%	-0.96%	12.66%	6.92%	2.43%	-27.37%	0.36%
Netherlands	5.35%	5.18%	-3.86%	6.54%	1.43%	1.06%	-3.87%	2.14%	-4.49%	1.42%	-1.47%
Austria	3.90%	4.05%	-1.09%	-2.26%	6.43%	-1.08%	-0.72%	-2.89%	0.63%	0.05%	1.61%
Poland	12.21%	-17.35%	-30.60%	55.90%	20.39%	-19.67%	-38.44%	34.81%	-17.62%	6.47%	3.27%
Slovenia	7.41%	60.34%	11.83%	9.62%	14.91%	20.61%	-25.95%	-17.95%	11.46%	-14.02%	18.48%
Slovakia	15.63%	-16.22%	16.13%	-2.78%	48.57%	19.23%	-12.90%	-3.70%	-5.77%	-16.33%	-7.32%
GEO/TIME	r2010Q2	r2010Q3	r2010Q4	r2011Q1	r2011Q2	r2011Q3	r2011Q4	r2012Q1	r2012Q2	r2012Q3	r2012Q4
Czech Republic	-5.57%	-5.21%	-1.30%	3.37%	1.13%	4.91%	-1.74%	-6.94%	12.28%	-1.82%	4.91%
Denmark	0.99%	13.17%	7.29%	-9.10%	6.79%	4.82%	1.96%	3.85%	-2.78%	0.06%	6.78%
Germany	2.31%	1.21%	-1.82%	2.24%	3.96%	2.17%	-2.30%	-0.43%	3.93%	3.31%	-0.66%
Luxembourg	0.00%	1.05%	2.18%	1.39%	-0.82%	0.46%	0.18%	6.51%	0.09%	0.17%	2.06%
Hungary	22.55%	8.33%	-1.60%	-3.58%	7.43%	-0.63%	-2.85%	-18.57%	8.40%	17.71%	XXX
Netherlands	5.98%	6.12%	-2.09%	1.47%	-4.56%	5.50%	0.62%	2.56%	3.06%	2.29%	XXX
Austria	2.46%	3.64%	1.75%	-3.49%	5.50%	0.96%	2.34%	-0.84%	4.49%	-0.57%	-1.24%
Poland	12.80%	-29.43%	8.04%	0.00%	14.42%	2.85%	9.88%	-7.55%	-8.95%	8.97%	29.80%
Slovenia	8.26%	0.76%	19.70%	22.15%	-1.04%	-9.42%	12.14%	28.87%	-1.20%	-31.58%	30.18%
Slovakia	-4.08%	21.28%	-17.54%	-10.64%	-4.76%	17.50%	-17.02%	15.38%	-13.33%	7.69%	4.76%

Tab. 3: The relative change in employed foreigners in particular countries

Source: authors modification of Eurostat data

In order to be able to analyze the previous output we show the graphical interpretation (Fig. 2). We observe that there is a great deal of working employers employed as seasonal workers in many countries. Netherlands, Austria and Germany provide the amplitude not higher than 7 %. The Czech Republic and Denmark provide the amplitude not higher than 15 %. Poland, Slovakia and Hungary provide the amplitude not higher than 60 %.

We conclude that in developed countries there is higher amount of working foreigners employed and moreover this employment is more stable than in poorer countries. Nevertheless the greater deal of working foreigners is seasonally employed mainly in the industry of constructions.



#### Fig. 2: Analyzed countries - chain indices of the working foreigners

Source: author modification of Eurostat data

GEO/TIME	2005Q4	2006Q4	2007Q4	2008Q4	2009Q4	2010Q4	2011Q4	2012Q4	average	ranking
Czech Republic	1.000	1.201	1.110	1.227	1.149	0.923	1.078	1.076	1.091372	4th
Denmark	1.330	1.039	1.216	1.072	1.141	1.093	1.037	1.079	1.12194	2nd
Germany	no data	1.016	1.035	1.033	1.020	1.006	1.061	1.062	1.033055	7th
Luxembourg	1.042	1.014	1.089	0.971	1.126	1.039	1.012	1.090	1.046745	5th
Hungary	0.868	1.135	0.894	1.244	0.798	1.108	1.000	no data	0.995431	10th
Netherlands	1.071	0.954	1.093	1.050	0.975	0.965	1.028	no data	1.018207	8th
Austria	0.987	1.067	1.066	1.022	0.993	1.070	1.052	1.017	1.033821	6th
Poland	1.331	1.463	0.753	0.928	1.221	0.973	1.293	1.191	1.12072	3rd
Slovenia	1.654	0.605	4.000	1.125	0.932	1.450	1.228	1.134	1.305964	1st
Slovakia	0.953	0.805	1.091	1.500	0.704	1.237	0.830	1.128	1.002878	9th

#### Tab. 4: Annual index of working foreigners

Although the seasonal unemployment is the most important factor of labor immigrants grey economy according to Fassman and Munz (1992) we need to eliminate seasonal factors. Without seasonal factors we have achieved the Tab. 4.

These annual indices are the deals of the foreign workers' amount in the 4th quarter to the foreign workers ' amount in the previous year 4th quarter. Moreover we have calculated geometric averages in order to achieve comparability. This comparability is visible in the ranking which provides the main information about dynamics (the relative change) of foreign workers in particular country through the analyzed horizon.

# Conclusion

Working foreigners are always stressed topic in both political and economical discussions. We see that they are essentially needed in the years of economic expansions, but sometimes they are problematic in economic recessions. Basic problem is the seasonal employment, which is higher in the central European developing countries than in the developed countries. When policymakers are taking into account the option of the labor migration into the visiting country, they must be financially prepared to help these working foreigners with solving their situation in the economic slump.

These questions are connected with not qualified unemployed domestic workers. These workers must be stimulated to do their jobs. We do not agree with solving the problems with not qualified workers from foreign lands. We see that the excessive social benefits to home workers (connected with the temptation of the foreign not qualified workers) leads to future social tension, proliferation of grey economy and economic losses (connected with voluntary returns). This statement is real in consequence with the European debt crisis and its impacts into unemployment of both original workers and foreign workers.

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### References

- 1. Adámek, P., (2010). Rekvalifikace jako cesta k redukci nezaměstnanosti? Praha 16.06.2010. In: *Jak dál po krizi [CD-ROM]*. Praha : Oeconomica, s. 620–626.
- 2. Baldwin, R. E., Francois, J. F., Portes, R. (1997). The costs and benefits of eastern enlargement: the impact on the EU and central Europe. *Economic policy*, 12(24), 125-176.
- Čadil, J. -- Pavelka, T. -- Vorlíček, J. (2011). Odhad nákladů nezaměstnanosti z pohledu veřejných rozpočtů. *Politická ekonomie teorie modelování, aplikace*. Vol. 59, No. 5, s. 618-637. ISSN 0032-3233.
- 4. Fassmann, H., Munz, R. (1992). Patterns and trends of international migration in Western Europe. *The Population and Development Review*, 457-480.
- 5. King, L. P. (2007). Central European capitalism in comparative perspective. Beyond Varieties of Capitalism. Oxford University Press. (307-327).

- 6. Macáková, L., Pavelka, T., (2011) Czech government programs for attracting foregners to the Czech labour market. *SCIENTIFIC PROCEEDINGS*, roč. 19, č. 2, s. 704–712.
- Pavelka, T., Löster, T., Makovský, P., Vltavská, K., Macáková, L., (2011a). Cizinci na českém trhu práce [CD-ROM]. 1. vyd. Slaný : Melandrium.
- 8. Pavelka, T., (2010b). Dopady současné hospodářské recese na zaměstnance z cizích států, kteří působí na českém trhu práce. *Ekonomika a management*, 2010, roč. 4, č. 2, s. 34–44.
- 9. Pavelka, T., Löster, T., Makovský, P., Langhamrová, J. (2011b) Dlouhodobá nezaměstnanost v České republice. 1. vyd. Slaný: Melandrium.
- 10. Pavelka, T. (2011). Long-term unemployment in the Czech republic in comparison with the other countries of the european union. In Loster Tomas, Pavelka Tomas (Eds.), International Days of Statistics and Economics (pp. 481-489). ISBN 978-80-86175-77-5.
- 11. Soukup, J. (2011). Nová ekonomika v Evropské unii. Praha 21.10.2011. In: KISLINGEROVÁ, Eva, KRAUSE, Josef (ed.). Nová teorie ekonomiky a managementu organizací. Nová ekonomika, nové přístupy? [CD-ROM]. Praha : Oeconomica, 2011. 11 s.
- Soukup, J. (2009). Nová ekonomika jako pozitivní nabídkový šok. Praha 17.09.2009 18.09.2009. In: *Mezinárodní statisticko-ekonomické dny na VŠE [CD-ROM]*. Slaný: Melandrium.

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