

FIW Research Reports 2009/10 N° 08 March 2010

Policy Note

## Qualification Structure, Over- and Underqualification of the Foreign Born in Austria and the EU

Peter Huber, Klaus Nowotny, Julia Bock-Schappelwein

### Abstract -

This project focuses on comparing the qualification structure of migrants residing in Austria as well as their over- and underqualification rates to other EU countries. The skill structure of foreign born residing in Austria has improved slightly in the last years. Austria is, however, characterised by a high share of medium skilled migrants and a low share of highly skilled migrants. In addition among the pool of migrants in the EU from a given country, Austria generally selects the less qualified. The location decisions of highly skilled migrants are mostly governed by income opportunities, labour market conditions, ethnic networks and a common official language. Over- and under-qualification rates among the foreign born in Austria largely accord with the European average, the largest part of the differences can be explained by differences in qualification and country structure between the foreign born in Austria and the EU. Native-foreign born differentials in employment rates are, however, significantly higher in Austria than in other EU countries.

### JEL Codes: F22, J61, J15 Keywords: Migration, Migration Policy, Migrant Skill Structure, Integration

The FIW Research Reports 2009/10 present the results of four thematic work packages 'Microeconomic Analysis based on Firm-Level Data', 'Model Simulations for Trade Policy Analysis', 'Migration Issues', and 'Trade, Energy and Environment', that were commissioned by the Austrian Federal Ministry of Economics, Family and Youth (BMWFJ) within the framework of the 'Research Centre International Economics" (FIW) in November 2008.



# ÖSTERREICHISCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG

## Qualification Structure, Overand Under-qualification of the Foreign Born in Austria and the EU Policy Brief

Peter Huber, Klaus Nowotny, Julia Bock-Schappelwein

Research assistance: Andrea Grabmayer, Andrea Hartmann, Maria Thalhammer



ÖSTERREICHISCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG AUSTRIAN INSTITUTE OF ECONOMIC RESEARCH

### Qualification Structure, Over- and Under-qualification of the Foreign Born in Austria and the EU Policy Brief

### Peter Huber, Klaus Nowotny, Julia Bock-Schappelwein

### January 2010

Austrian Institute of Economic Research

Commissioned by the Federal Ministry of Economy, Family and Youth Research assistance: Andrea Grabmayer, Andrea Hartmann, Maria Thalhammer

#### Abstract

This project focuses on comparing the qualification structure of migrants residing in Austria as well as their over- and underqualification rates to other EU countries. The skill structure of foreign born residing in Austria has improved slightly in the last years. Austria is, however, characterised by a high share of medium skilled migrants and a low share of highly skilled migrants. In addition among the pool of migrants in the EU from a given country, Austria generally selects the less qualified. The location decisions of highly skilled migrants are mostly governed by income opportunities, labour market conditions, ethnic networks and a common official language. Over- and under-qualification rates among the foreign born in Austria largely accord with the European average, the largest part of the differences can be explained by differences in qualification and country structure between the foreign born in Austria and the EU. Native-foreign born differentials in employment rates are, however, significantly higher in Austria than in other EU countries.

Please refer to: Peter.Huber@wifo.ac.at, Klaus.Nowotny@wifo.ac.at, Julia.Bock-Schappelwein@wifo.ac.at

2010/020/A/WIFO project no: 3409

© 2010 Austrian Institute of Economic Research

Policy Brief:

### Qualification Structure, Over- and Under-qualification of the Foreign Born in Austria and the EU

#### Introduction

In the last two decades the share of foreign born residing in Austria more than tripled. In the late 1980s a mere 5% of the total resident population in Austria was born outside the country. In 2008 this applied to over 16%. This surge in the number of foreign born has led to an intense public debate on the potential effects of migration on the wage and employment prospects of natives as well as appropriate migration and integration policies in Austria. One stylized fact that has gone largely unnoticed in the public debate, however, is that the foreign born in Austria differ markedly in their characteristics from those of other EU-countries. In particular according to data from the OECD (2008) in 2001 Austria was the OECD-country with the lowest share of high skilled among its foreign born population (see OECD (2008), *Biffl* (2006) and *Bock-Schappelwein et al.*, (2008)) and is also characterized by a structure of migration that is strongly focused on European countries that are not member states of the European Union (EU) as well as on older and female migrants with a longer duration of stay in the country.

These differences in the structure of migration to Austria raise a number of issues which are relevant to the design and workings of migration and integration policy in Austria. In this policy brief (which is based on the results of the FIW study Qualification Structure and Overund Under-qualification of the foreign born in Austria and the EU) we focus on three of sets of these issues: First, we want to know how the skill structure of the foreign born in Austria compares to other EU-countries in the light of more recent data from the years 2006 and 2007 taken from the European labour force survey and what factors shape the decision of migrants of different education levels to settle in a country. Second, we want to compare differences in labour market integration of the foreign born relative to natives between Austria and other EU-countries and to analyze to what degree the differences found can be explained by differences in the demographic and skill structure of migrants. Third, we analyze how changes of the Austrian migration law since the mid 1990's impacted on the qualification structure of migrants to Austria.

### How does the skill structure of the foreign born in Austria compare to other EUcountries?

With respect to the first question in comparison to the 13 EU-countries<sup>1</sup> for which we have data (see figure 1) the skill structure of foreign born in Austria is characterized by a high share of medium skilled migrants and a low share of highly skilled migrants. At the same time the share of low skilled foreign born is slightly lower in Austria than in other EU-countries, but high relative to the education structure of natives. 46.7% of the foreign born population in Austria has a medium educational level. Behind the UK this is the second largest share in the EU 13. At the same time the share of high skilled migrants is only 16.5% of the total foreign born population, which is the third lowest. The shares of high skilled migrants were lower only in Italy

<sup>&</sup>lt;sup>1</sup> These are the 15 EU-countries that were members already before 2004 excluding Germany and Ireland.

and Greece. The share of low skilled foreign born is 36.5% in Austria and is the eighth lowest among the EU 27. This thus points to a rather unfavorable position of Austria with respect to the skill structure of the foreign both relative to other EU-countries, that in their vast majority manage to attract more high skilled foreign born, as well as relative to the skill structure of natives, that substantially more often have a medium skill level than the foreign born.

Although our data are thus consistent with the large body of recent comparative empirical evidence they also suggests a moderate improvement in the relative position of Austria with respect to the skill structure of migration in recent years. While previous studies focusing on the years 2000/2001 find that Austria has the lowest share of high skilled migrants among the OECD countries, our more recent data suggests that since then Austria has at least overtaken Greece and Italy with respect to this indicator.







In addition these particularities of the education structure of foreign born in Austria are closely associated with the particularities of labour demand (in particular with respect to the high share of medium education levels among the foreign born) as well as more low skilled migrants from third countries and (to a lesser extent) more established migrant groups that reside in Austria for more than 10 years.

These findings are also confirmed by a shift share analysis of the skill structure of migrants. This analysis, however, also indicates that the larger part of the differences in skill structure between Austria and the EU is due to the selection of migrants rather than to an unfavorable country of birth structure of the foreign born. Among the pool of migrants in the EU form a given country, Austria generally selects the less qualified. The only exception to this is the low share of high skilled migrants, which is due almost to equal parts to an unfavorable country structure as well as to negative selection. Furthermore, our results also suggest that more established migrants contribute more strongly to selection than recent migrants and thus imply some change in selection of migrants in recent years. This also points to the role of migration history in shaping the skill structure of foreign born. From a policy perspective the results thus underline the importance of changing the mechanism of selection of migrants by skills if a more highly skilled structure of the foreign born is sought for.

## What factors shape the decision of migrants of different education levels to settle in a country?

To identify the causes for this strong selection of mostly low and medium skilled migrants to Austria we analyze the location choice of migrants to the EU 13. The results indicate that the location decisions of migrants in the 13 EU-countries considered are mostly governed by income opportunities, labor market conditions (like unemployment or the ease of access to the labor market), ethnic networks, a common official language as well as the design of the tax system (tax and social security rates, progressivity of the tax system). We do, however, not find strong evidence for the hypothesis that migrants are attracted to countries or regions with generous welfare benefits in Europe.

In particular, with respect to the location decisions of highly skilled workers we find that these are generally more attracted to larger regions, especially capitals, with good income opportunities. Ethnic networks of other highly skilled migrants from the same country of origin already living in the region also increase the attractiveness of a region for highly skilled migrants. Ethnic networks of migrants with lower skill levels do, however, not decrease the attractiveness of a region (except for migrants from the EU-15). The same holds true for networks in neighboring regions, as well as networks in second neighbor regions. Thus, as in previous studies in the literature, we conclude that networks are among the main factors determining the location choices of highly skilled migrants.

Language knowledge also plays an important role for highly skilled migrants' location decisions: the odds of a highly skilled migrant moving to a country which shares a common official language with his home country are – all else equal – 2.3 to 5.7 times larger. Easier access to the labor market also increases the probability of choosing a specific country/region for migrants outside the EU 15. However, the effect is largest for low and medium skilled individuals. Highly skilled migrants are also attracted to regions with lower

taxes and a lower progressivity of the tax system, however less so than migrants with medium levels of education. The same holds true for the quality of the schooling system. Concerning other variables used to capture the generosity of the welfare system, our regressions (except for the EU-12 subsample) show that a larger pension replacement rate increases the probability of moving to a region for highly skilled individuals. In general, we however find only weak support for the welfare magnet hypothesis among high-skilled workers.

The results do not indicate any clear-cut evidence for the scope of economic policy to affect the skill composition of migrants. Almost all variables controllable by public policy (e.g., the design of the tax or welfare systems, the ease of labor market access for foreigners) which positively affect the probability of highly skilled migrants moving to a region also increase the probability of medium and low skilled migrants choosing this region. Options to increase the skill level of migrants by creating incentives for more highly skilled workers must thus be found outside the scope of the tax and welfare policies.

We, however, also find that skill-differentiated ethnic networks have the largest effect on individuals with the same skill level. i.e., ethnic networks of low skilled migrants mainly attract other low skilled migrants, while ethnic networks of high skilled migrants increase the attractiveness of a region for other highly skilled migrants. This implies that a given skill structure among established migrants from a specific source country will be "handed down" to future generations of migrants from the same country – thus in a sense "perpetuating" the skill structure in the absence of skill-based regulation and selection. This suggests that there is a lock-in effect with respect to the skill structure of migrants from a particular country. Depending on the stock of migrants from a specific sending country it may thus take a long time before and substantial efforts before the skill structure of migrants from a specific country can be changed perceptibly, so that regulation must be sustained for a long period if the share of highly skilled migrants is to be increased, and the possibility of policies to change the migrant skill structure rapidly must at least be questioned.

### How do differences in labour market integration of the foreign born relative to natives in Austria compare to other EU-countries?

With respect to the second set of issues there are clear signs of foreigners being disadvantaged relative to natives in terms of employment as well as over- and underqualification rates both in Austria and the EU 13. These differences between natives and foreigners are, however, larger than in other EU-countries only with respect to employment rates, which is in turn primarily due to higher employment rates among natives in Austria than in other EU 13 countries (i.e. the EU 15 excluding Germany and Ireland), rather than to lower employment rates among foreigners. The employment rate among natives was 72.2% in Austria in the average of the years 2006 and 2007 and thus (significantly) by 5.2 percentage points higher than in the average EU 13 country, while the employment rate of the foreign born, was 64.2% and thus 0.5 percentage points (and statistically insignificantly) lower than in the average of the EU 13. Furthermore, significant differences between the foreign born residing in Austria and in other EU-countries exist only with respect to under-qualification rates. Among the EU 13 countries Austria is a country with about average over-qualification rates among natives. Applying the methodology to measure over- and under-qualification proposed by the OECD (2008) 8.7% of the Austrians work in occupations that require skill-levels below their education level relative to 8.9% of the natives in the EU. This is the 6<sup>th</sup> highest share in the EU 13 and slightly below average over-qualification rates among the foreign born (15.8% in Austria, 17.0% in the EU, 4<sup>th</sup> highest share in EU 13 – see figure 2). Thus also the native-foreign differentials in over-qualification are slightly lower in Austria than in the EU 13 average and rank 6<sup>th</sup> highest among the EU 13 countries.





■Austria □EU13

Source: EU-LFS. – Notes: Base population aged 15-64, excluding Germany and Ireland, excluding unknown highest completed education and unknown country of birth, , Over- and Under-qualification rates are calculated on the basis of OECD (2007) method (based on a bridge between ISCED and ISCO on a one digit level).

By contrast under-qualification rates (with 35.6% for native and 27.8% for foreign born) are substantially below the EU 13 average (of 38,7% and 31.7%, respectively) of for both natives and foreign born in Austria. The foreign-native differential in this respect is only slightly (and

statistically insignificantly) higher than the EU 13 average, ranking 4<sup>th</sup> highest among the EU 13.

From a policy perspective these results thus suggest that on the one hand policies aiming at increasing employment rates among the foreign born in Austria are even more important than in other EU-countries, since this is the indicator where differences to other EU-countries are largest. On the other hand policies aiming at improving skill transfer (both with respect to formal and informal skills) seem to be of an equal importance as in other EU-countries, since here problems (both with respect to over- and under-qualification) are of a more comparable magnitude.

## To what degree can these differences be explained by differences in the demographic structure of migrants?

We, however, also find that the majority of the differences in employment over- and underqualification rates between foreign born residing in Austria and other EU-countries can be explained by differences in characteristics between the foreign born residing in Austria and in other EU-countries. In particular the marked differences in the education and country structure of the foreign born contribute strongly. Thus after controlling for differences in migrant characteristics the foreign born in Austria are neither better nor worse integrated into the labour market in Austria than in the EU 13.

This can be seen from the top panel of table 1 (decomposition 1), where we report the results of a decomposition of differences in native-foreign differentials in employment, over- and under-qualification rates between Austria and the EU 13. In this decomposition native foreign differentials are decomposed into two components: The first of these measures the part of foreign native differentials that can be explained by the differences in characteristics of migrants in the EU and Austria with respect to education, age, gender and nationality. The second component by contrast measures the part of differences that cannot be explained by such differences in structure. It could thus be interpreted as the share that is due to a combination of differences in the behavior of migrants, discrimination or the difficulties of skilltransfer across countries.

According to the results the largest part of the differences in over- and under-qualification rates of the foreign born between Austria and the EU can be explained by differences in characteristics between the foreign born in Austria and other EU 13 countries. These differences account for almost 6.1 percentage points of the total 9 percentage point difference in the under-qualification rate between the foreign born in other EU-countries and Austria, while it contributes 1.3 percentage points to the 2.4 percentage point difference in over-qualification rates among foreign born in other EU 13 countries.

This points to the important role of migration policy in securing an adequate labour market integration of the foreign born. A higher selectivity of migration policy could also contribute to reducing problems of integration of the foreign born. Here in particular attracting more highly

skilled migrants could contribute to reducing foreign-native differential in employment as well as over- and under-qualification rates.

The situation is somewhat different with respect to employment rates, however. Here on account of characteristics employment rates among the foreign born in Austria should actually be by 1.9 percentage points higher than in the other EU 13 countries if the parameters governing employment probabilities were equal across both regions. The higher employment rates of the foreign born in the EU than in Austria can thus not be explained by differences in migrant characteristics and may thus be attributed to either a different behavior of migrants, or difficulties in skill-transfer or discrimination.

Table 1:	Alternative Decompositions of total differences in native-foreign differentials
between	Austria and the EU

	Employment rate			Over-qualification rate			Unde	Under-qualification rate		
	Percentage Points		S.E.	Percentage Points		S.E.		entage pints	S.E.	
Total Differential		***	0.7	0.4		0.9	1.8		1.5	
	Decomposition 1									
Difference between Foreign born EU-AT			0.7	2.5		2.2	9.0	**	1.1	
of this explained by characteristics <sup>1</sup> )	-1.9	***	0.5	1.3	***	0.7	6.1	***	0.8	
of this unexplained <sup>2)</sup>	2.3		3.1	1.1		4.2	2.5		5.0	
Difference between Natives EU-AT		***	0.7	2.8	***	0.6	10.8	***	1.0	
of this explained by characteristics	-1.9	***	0.1	2.5	***	0.1	10.8	***	0.1	
of this unexplained	-3.4	***	0.8	0.3		0.8	-0.8		1.0	
	Decomposition 2				2					
Native - foreign born difference in EU		***	0.4	-12.6	***	0.5	10.7	***	1.9	
of this explained by characteristics	-3.8	***	0.1	0.2	***	0.1	0.6	***	0.1	
of this unexplained	6.0	***	0.4	-12.9	***	0.5	10.1	***	0.7	
Native - foreign born in Austria		***	0.9	-12.8	***	2.5	8.8	***	2.7	
of this explained by characteristics		***	0.3	-0.9	***	0.1	-5.3	***	0.5	
of this unexplained	11.9	***	2.2	-11.9	***	2.1	14.1	***	4.1	

Source: EU-LFS, WIFO-calculations. – Notes: Table reports percentage point contribution to total differences derived from and Oaxaca-Blinder decomposition based on a logit model including age group dummies, gender, educations groups and country dummies as explanatory variables. – 1) part due to differences in characteristics (endowment effect). 2) part due to differences in parameters (parameter effects). \*\*\* (\*\*) (\*) – signify significance at the 1%, (5%), (10%) level respectively. – S.E. = standard error of the estimate.

In addition, large differences – that cannot be explained by differences in demographic structure – exist in all indicators between natives and foreigners both in Austria and the EU (see decomposition 2 in the bottom panel of table 1). Our results suggest that both in the EU 13 as well as in Austria foreigners have characteristics that – if they were treated in the same way as natives on national labour markets – would suggest oppositely signed native-

foreign differentials. Thus, based on characteristics alone, foreign born in Austria should have employment rates that are by 4.0 percentage points higher and over- and underqualification rates that are by 0.2 and 0.6 percentage points lower than those of natives. The observed differences are thus entirely due to unexplained differences. This thus points to the continuing importance of integration policies with respect to improving labour market integration of the foreign born.

The underlying regression results for these decompositions also point to a number of areas in which this discriminatory part of native-foreign differentials is particularly pronounced both in the EU 13 and in Austria and could be priorities for policy makers. In particular

- Educational attainment (and to a lesser degree age) has a stronger impact on the respective probabilities of employment as well as over- and under-qualified employment for natives than for foreigners. This implies that native-foreign differences are particularly pronounced among the more qualified. While Austria only differs marginally from other EU 13 countries in this respect, this points to the particular problems of skill transfer of highly skilled foreign born workers in European labour markets. In consequence highly skilled migrants are likely to profit disproportionately from measures directed at improving the transfer of skills across borders.
- Native-foreign differentials are more pronounced for females than for males (or equivalently gender differences are more pronounced among foreign born) with respect to all indicators, thus indicating particular disadvantages of foreign born females. Here with respect to employment and under-qualification rates gender differences are lower in Austria both for natives and foreign born than in the rest of the EU, while they are larger than in the rest of the EU for the foreign born in Austria with respect to over-qualification.
- the foreign born in other EU 15 countries are somewhat of a special group, since their employment rates and even more strongly their over-qualification rates are significantly lower and higher with respect to under-qualification than for the average foreign born. This thus indicates that skill transfer within the EU is significantly easier than from countries outside the EU, and thus provides evidence of the high level of labour market integration among the EU 15. At the same time this does not apply to those born in the member states of the EU that joined since 2004 (i.e. the NMS 12) and thus suggests that with respect to these countries there is still some room to improve the mutual acceptance of skills and degrees.

## How did the changes of the Austrian migration law in the 1990's impact on the qualification structure of third country migrants?

With respect to the third issue we focus on the accession to the European Economic Area (EEA) in 1994, which liberalized immigration and labour market access from all member states of the EEA, and reforms of the foreign residence law which went into effect on 1<sup>st</sup> of January 2003 and aimed at increasing the share of high skilled migrants from third countries to Austria. The reason for this is that these reforms may also by of a wider policy interest in the light of

future challenges to the Austrian migration regime and recent trends in international migration policy. In particular in 2011 Austria will liberalize its migration with the new member states of the EU. The accession to the EEA – although it concerned a set of countries that differ substantially from the new member states in terms of structure and wealth as well as occurring in a rather different institutional environment - thus represents a valuable historical example against which the potential effects of liberalization of migration and labour market access for the new member states can be assessed. Furthermore, a number of EU-countries have recently put in place policies that are intended to increase the share of high skilled migrants and migration experts have long argued that Austria should aim to attract more high skilled migrants. The effectiveness of previous reforms, however, has rarely been formally evaluated in the literature and only very little is known about the issue of which policy measures are most likely to contribute to a higher selectivity of migration regimes. Thus the experiences of the reform in residence law in 2003 may serve as one benchmark case for future reforms of migration law both in Austria as well as in other countries.





Source: Austrian Labour Force Survey, WIFO-calculations. – Pooled values 2004-2007, excluding migrants from former Yugoslavia, developed countries= countries with an average HDI in excess of 0.75 for the years 1985-2005.

Our results suggest that after accession to the EEA the skill structure of permanent migrants from the EEA increased relative to that of permanent migrants from other countries as can also be seen from figure 2. We find highly robust descriptive and econometric evidence that the share of less educated permanent migrants from the EEA to Austria reduced relative to the share of low skilled permanent migrants from other countries after Austria's accession to the EEA. This can also be shown in figure 3, which displays the share of permanent migrants with a low educational attainment level from the EEA and other developed countries as well as all other countries in our sample that permanently settled in Austria between the years 1988 to 2002. Considering the time period from 1988 to 1993 as the pre accession period to the EEA and the time period 1994 to 2002 as the post accession period, we see that in the time period before 1994 in each year the share of low educated permanent migrants from

the EEA to Austria was higher than the share of low educated permanent migrants from other developed countries, while in the period after 1994 (i.e. after accession to the EEA) this share was lower among the permanent migrants from EEA countries than among permanent migrants from other developed countries in every year except for the years 1995 and 2001.

With respect to the reform of foreigner law in 2003, by contrast, our results are much less robust and indicate only few significant changes. Our interpretation of these results is that the implicit positive impact of the reforms in the migration regime in 2003 was countervailed by an increasing share of low skilled migration not covered by residence quota.

Our results thus suggest that liberalizing migration can have a positive impact on the education structure of permanent migration if the previous migration regime is strongly focused on less skilled migrants and also provide case study evidence to warn that reforms of migration law that provide privileged access to highly skilled migrants may not provide the expected results if other elements of the system of regulations governing migration counter-act these developments.

Although these results are suggestive it is also too early to draw firm conclusions from them with respect to the likely impact of either liberalization of migration and labour market access to the new member states in 2011 and partial migration law reforms on the skill structure of migrants. This is because there is only very little formal evaluation literature of the effects of changes in migration policy on migration outcomes and countries differ substantially in their migration laws as well as labour market institutions and these institutions also change over time. It is also likely that the effects of individual migration policies are shaped by the interactions of a number of these institutions, so that inferring from one particular case of liberalization to another is always risky given that it is hard to tell from one case study alone, which of our findings are general and which are particular to the institutional environment of Austria in the time period analyzed here.

### Literature

Biffl, G., Small-Scale Study III: Conditions of entry and residence of third country highly-skilled workers in Austria, Study for the International Organisation for Migration Vienna in its function as the National Contact Point Austria within EMN, Wien, 2006.

Bock-Schappelwein, J., et al., Die Ökonomischen Wirkungen der Immigration in Österreich 1989-2007, Study of the commissioned by the Austrian Ministry for Labor and Economic Affairs, WIFO, Vienna, 2008.

OECD, A Profile of the Immigrant Populations in the 21st Century: Data from the OECD Countries, OECD, Paris, 2008.