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Spatial Selectivity and Demographic Impact of Recent German Immigrants in the Swiss Regions

Ilka Steiner

Abstract

The paper addresses the topic of determinants in German immigrants' regional location choice and its resulting demographic impact in Switzerland, in the context of freedom of movement within the EU/EFTA countries. Our analyses relied on the statistics of the foreign resident population. They covered the period from June 2002 to December 2009. German immigrants' characteristics were compared among the sixteen labour market regions of the country.

The analyses confirmed current literature findings regarding the importance of migrant networks, regional attractiveness and geographical as well as cultural and linguistic proximity with the home country in the location choice. According to the "type of migrant" considered, these factors interacted however differently. Moreover, unemployment within Switzerland did not constitute a significant determinant of German immigration regarding their location choice.

However, depending on the regional economic structure, different types of migrants were attracted, who presented varying dispositions to stay and settle down in Switzerland. Therefore, the demographic impact on the German as well as on the total population varied considerably between labour regions. The German-speaking and borderland regions accounted for up to twice as many German permanent residents in 2009 compared to 2002. Due to this increase, the regions encountered an important demographic growth. In Basel, Bern, St. Gallen or Chur, the increase of the German population was even higher than the growth of the rest of the permanent resident population.

Our paper demonstrates the importance of considering different regions and types of migrants when trying to understand immigration and its impacts in a country like Switzerland. For various reasons, such as the linguistic diversity, the variety of economic structures and occupational activities as well as the regions' positions on the center-periphery scale, analyses at the national level remain insufficient.

Switzerland, Germans immigration, location choice, labour market regions, population growth, migrant networks, types of migrants

Zusammenfassung

Raumselektivität und demographische Auswirkungen der jüngsten deutschen Zuwanderung in den schweizer Regionen

Im Kontext der Personenfreizügigkeit mit den EU/EFTA-Staaten untersuchte diese Studie die Faktoren der regionalen Niederlassungsdisparitäten von deutschen Einwanderinnen und Einwanderern und deren Auswirkungen auf die demographische Entwicklung. Die Analysen basierten auf der Statistik der ausländischen Wohnbevölkerung und betrafen den Zeitraum von Juni 2002 bis 2009. Die sechzehn Arbeitsmarktregionen dienten als geographische Analyseeinheit.

Die Studienergebnisse bestätigten die Bedeutung von Netzwerken von Migrierenden, regionaler Attraktivität und geographischer, kultureller und sprachlicher Nähe zum Herkunftsland für den Niederlassungsentscheid. Der Einfluss der einzelnen Faktoren variierte jedoch je nach „Migrantentyp". Zudem erwies sich Arbeitslosigkeit als keine signifikante Determinante des räumlichen Niederlassungsmusters.

Die regionalen wirtschaftlichen Strukturen hatten jedoch einen Einfluss auf die Zusammensetzung der eingewanderten Bevölkerung, welche unterschiedliche Vorstellungen bezüglich des Bleibehorizonts im Gastland aufwies. Folglich differierten die Auswirkungen der deutschen Eingewanderten auf die deutsche wie auch die gesamte ständige Wohnbevölkerung je nach Arbeitsmarktregion. Dabei hat sich erstere in der deutschen Schweiz und den Grenzgebieten zwischen 2002 und 2009 mehr als verdoppelt, was unter anderem zu einem Wachstum der Gesamtbevölkerung führte. In Basel, Bern, St. Gallen und Chur wuchs die deutsche Wohnbevölkerung sogar stärker als der Rest der ständigen Wohnbevölkerung.

Diese Studie zeigt, dass verschiedene Regionen und Typen von Migrierenden berücksichtigt werden müssen, um die Auswirkungen von Wanderungsbewegungen auf ein Land wie die Schweiz besser zu verstehen. Aufgrund mehrerer Faktoren, wie der sprachlichen Diversität, der Vielfalt von wirtschaftlichen Strukturen und Branchen, wie auch der Zentrumsnähe einzelner Regionen, sind Analysen auf der nationalen Ebene unzureichend.

Schweiz, Deutsche Einwanderung, Niederlassungsentscheid, Arbeitsmarktregionen, Bevölkerungswachstum, Netzwerke, Typen von Migranten

Introduction

During the last 20 years, migration in Western Europe has been shaped by a post-Fordist economical setting and a context of expanding globalization. European integration has induced a shift from state-controlled manpower recruiting to a migration predominately regulated by the market (Braun and Arsene 2009; Favell 2008) as well as to an Europeanization of migration flows. Since "the European Union and its frontier-free "Schengenland" create a borderless zone for mobility" (King et al. 1992), migration between EU/EFTA-countries can today be conceptualized as an extrapolation of internal migration, where the opportunity costs of international migration do not exceed the ones for internal migration anymore. Switzerland, although not a member of the European Union, also underwent this shift, notably since the Agreement on the free Movements of Persons with the EU came into force in June 2002 (Müller-Jentsch and Avenir Suisse 2008; Stutz et al. 2010).

German immigration to Switzerland is one prominent example of these new migration patterns. In 2004, Switzerland overtook the USA as German emigrants' favorite destination country (BAMF 2012). Whereas, 12,820 natives left Germany for Switzerland that year, in 2008 they were 29,140 emigrants, which represents an increase of 127 %. According to Swiss statistics, immigration was even higher, since in 2004, 18,220 German immigrants were registered and 46,300 only four years later.

Little is known about the socio-demographic and professional profile of German immigrants in Switzerland. Studying German emigration, Ette and Sauer (2010) observe, despite a relatively heterogenic composition of the German emigrant group, an overrepresentation of "young, urban, male professionals". Thus, German emigrants are, in comparison to the German population, a positively selected group: the latter is composed of a higher proportion of men and singles, presents a much lower mean age and possesses a higher educational as well as

occupational level than the former. However, according to Swiss statistics, these German immigrants' characteristics are even reinforced. Thus, a twofold selection process takes place during emigration from Germany and immigration to Switzerland.

Despite this selection process as well as a homogenization of the German immigrant group over the past 30 years at the national level (Steiner 2012), a recent study on the spatial dimension of new immigration to Switzerland reveals a close link between the immigrants' profiles and the structural profiles of Swiss regions (Wanner and Steiner 2011). Demand for foreign workers with specific skills is strongly influenced by the regional economy. Stutz et al. (2010) show that German and Austrian immigrants concentrate within the Zurich economic area either in the urban center or the regions bordering Germany and Austria.

Thus, the distribution of German immigrants within the Swiss territory is further influenced by a third selection process, resulting from a spatial selectivity (Gorter et al. 1998), as confirmed for internal migration by Lerch (2012). Furthermore, depending on the "type" of German migrants the regions attract, one can suppose a different demographic impact (Salt 2005).

In this context, our paper raises the question as to "What determines the spatial selectivity of German immigration to Switzerland and how does this influence the regional demographic development"? Our analyses relied on the statistics of the foreign resident population. These covered the period from June 2002 to December 2009. German immigrants' characteristics were compared among the sixteen labour market regions of the country.

We demonstrate the importance of considering different regions when trying to understand immigration and its impacts, using the example of Switzerland. For various reasons, such as the linguistic diversity, the variety of economic structures and occupational activities as well as the regions' positions on the cen-

ter-periphery scale, analyses at the national level remain insufficient.

The paper first reviews the determinants of spatial selectivity in international migration, before presenting the data, the sample and the methods. Thereafter, we describe the regional socio-demographic characteristics of German immigrants who arrived after 2002 in Switzerland, in order to illustrate the spatial selectivity of immigration. Furthermore, the factors underlying the observed regional disparities are estimated. Finally, after analysing the migrant turnover, the demographic impact of German immigration on the German and total resident population in the different labour market regions is presented. The paper concludes with a discussion of the findings.

Determinants of spatial selectivity in international migration

In Switzerland, like in other European countries, immigration is the main driver of population growth, natural increase being very low. Migration plays a major role at the regional level and can create or reinforce disparities between regions. Salt (2005) argued that the local implications of migrant flows are strongly affected by the degree to which the migrants are concentrated. According to the literature the distribution of an immigrant group and its concentration result from a "spatial selectivity" (Gorter et al. 1998) and are determined by several, and in particular non-demographic and external, factors. Lee (1966), in his Theory of Migration, proposes four ranges of factors that enter into the migration decision and process: positive and negative factors associated with the area of origin[1] and with the destination, intervening obstacles and personal factors.

The region's proximity to the country of origin is one of the main factors in the migrants' choice of destination (OECD 2003). For Lee (1966), the distance of the move is part of the obstacles intervening

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1   Due to the absence of information on the region of origin in the data set, we cannot consider the factors associated with the area of origin in our model, even though we expect them to potentially improve the model.
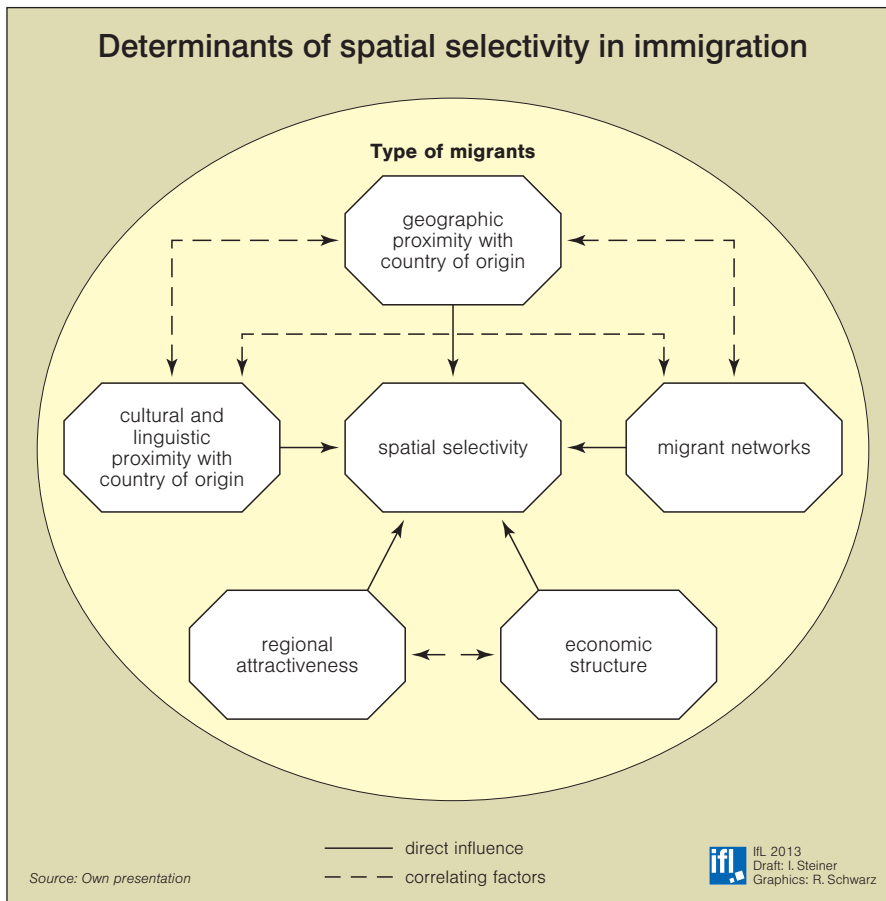
Determinants of spatial selectivity in immigration

Type of migrants

geographic proximity with country of origin

cultural and linguistic proximity with country of origin

spatial selectivity

migrant networks

regional attractiveness

economic structure

——— direct influence
— — — correlating factors

Source: Own presentation

IfL 2013
Draft: I. Steiner
Graphics: R. Schwarz

Fig. 1: Determinants of spatial selectivity in immigration

during the move between the origin and the destination. Switzerland and Germany are neighbouring countries. Since there are no more legal barriers to the settlement of EU-15 or EFTA citizens, the proximity of the region is expected to be determinant and the border regions are likely to be particularly affected by German immigration.

SALT et al. (2004) underlined the importance of historical and cultural, and therefore also linguistic, ties between the host and the home country. Even though the authors referred to international migration, we assume this factor to be determinant in the migrants' regional destination choice in a country like Switzerland, since it is constituted of four linguistic regions: the French-speaking part in the west, the Italian-speaking part in the south, the Romanic-speaking part in the east and the German-speaking part (see Map 1), which extends from the north to the south and the east. The latter, bordering Germany, shares the same historical, cultural and linguistic attrib-

utes. Therefore, we expect German immigrants to be more concentrated in the German-speaking part than elsewhere.

The factors associated with the area of destination (LEE 1966) constitute another important determinant of spatial selectivity in international migration. RAVENSTEIN (1889) already considered that migration currents triggered by the "inherent desire in most men to 'better' themselves in material respects" are the most important. Therefore, the existing fields of activity, the wage level or the unemployment rate influences a person's propensity to migrate to a particular region (MAZA et al. 2013). Unemployment rates vary significantly between the different regions of Switzerland: the Italian and French-speaking parts, except for the canton of Fribourg, are affected by a relatively higher unemployment rate (for January 2013, over 5 %) than the German-speaking regions (4 % or less) (SECO 2013). Since German migration to Switzerland is mainly motivated by professional reasons (PECORARO 2005;

STEINER 2012), we expect this factor to be decisive in German immigrant's settlement choice.

Regions with metropolises and in particular capitals constitute poles of attraction for foreigners (SALT 2005). Therefore and since substantial variations exist across Swiss regions, we expect the regions' attractiveness, in terms of accessibility or tax-situation, and the urban-rural character to influence the migrants' choice of regional settlement (VAN DER GAAG and VAN WISSEN 2001).

Finally, migrant networks can facilitate the immigration process by providing information and support to new arrivals. Research has shown that persons therefore migrate to regions where the stock of foreigners is already important (BAUER et al. 2007; JAEGER 2000; VAN DER GAAG and VAN WISSEN 2001).

Fig. 1 summarizes the aforementioned factors which influence the migrants' regional destination choice (continuous lines). However, these factors also interact with each other (dashed lines): for example migrant networks, in the form of foreigners' concentration in a region, exist predominantly in regions with a certain degree of geographic or cultural proximity to the host country.

Finally, it is expected that the reason for immigration as well as other personal characteristics play a role in the immigrants choice of settlement (OECD 2003). The region-specific context may influence this choice differently according to the type of migrant (GARIP 2007). Therefore, according to their stage in the life cycle (LEE 1966) or their gender, people do not respond equally to the different factors discussed so far.

Methodology
Data and Sample
The analyses relied on the Swiss Statistics of the foreign resident population (PETRA). This exhaustive data source allows the assessment of immigrants' socio-demographic characteristics. It documents, on the one hand, the characteristics of the foreign population living in the country at the end of the year and, on the

other hand, the movements, such as migratory flows (international and internal), births and deaths as well as naturalization.

We considered the period from June 2002 to December 2009, since migration policy has had – with the ratification of the Agreement on the free Movement of Persons between Switzerland and the European Union – an influence not only on the size but also on the composition of the German group living in Switzerland (STEINER 2012).

The population under study were German permanent residents in Switzerland that arrived or departed by international migration between June 2002 and December 2009. According to the statistical definition (one year of anticipated duration of stay) proposed by the UNITED NATIONS (1998), settled foreign residents (C permit), resident foreign nationals (B permit) and short-term residents of one year or more (L permit) composed the foreign permanent resident population.

We focused on the analysis of international migration, since internal migration, natural movements and naturalization only had a negligible influence on the demographic dynamics of the German permanent resident population. Whereas gross international migration reached 176,860 moves between 2002 and 2009, only 50,260 internal moves were observed. Furthermore, net international migration ranged between 32,160 in Zurich and 350 in Sion but did not exceed +340 for Chur and -730 for Winterthur-Schaffhausen for net internal migration. Therefore, the latter only had a modest impact on the demographic evolution of the German permanent resident population in the different regions.

The regional level for analysis was the 16 labour market regions of Switzerland (see Map 1). It was more adapted for our analysis than institutional typologies, such as the cantons, due to the economic reasons that mainly drive German immigration to Switzerland.

The labour market regions result from an aggregation of the 106 spatial mobility regions (MS-Regions), which are char-acterized by a certain spatial homogeneity and follow a functional orientation toward the regional (economic) centers. Whereas the labour market regions make it possible to clearly map the phenomenon, the regression model was estimated using the MS-Regions. Finally, migrants' characteristics were compared between different municipalities and their associated characteristics, which are based on a center-periphery model. We considered eight different types: central, suburban, high income, peri-urban, touristic, industrial and tertiary, commuter and agricultural municipalities.

Methods

Different indices were calculated in order to assess the spatial selectivity and the demographic impact. All indices represent the mean for the period under study (June 2002 to December 2009). The crude immigration rate is the ratio between the number of German immigrants and the midyear total permanent resident population (in per thousand). The turnover rate is obtained by dividing the number of emigrants by the number of immigrants (in per cent). This simple ratio provides us the replacement rate of the German immigrants. It varies between 0 (all immigrants stayed) and 100 (all immigrants re-migrated). Finally, the age specific net migration rate presents the ratio between net migration and the midyear German permanent resident population (in per cent). Due to an age effect – depending on the length of stay of the migrants – it is possible that this ratio turns negative (fewer Germans immigrated at a certain age than emigrated).

We used a multiple linear regression in order to test the effects of the discussed variables on the distribution of German immigrants in the different MS-Regions. The dependant variable was the crude immigration rate (CRUDE). Geographic proximity with the country of origin was indicated by the distance in km between the region of immigration and one out of four border crossings (KM). The latter are either important car or rail entry points: Basel, Koblenz (canton of Aargau), Schaffhausen and Kreuzlingen. Cultural and linguistic proximity was approximated by the binary variable German-speaking region or not (LANG). Migrant networks were approximated by the proportion of German permanent residents in the total population (PROPGER). The economic structure was indicated by the unemployment rate (UNEMP). And finally, the attractiveness of a region was approximated by the binary variable urban or rural region (URBRUR) as well as the locational quality indicator (QUALITY). This indicator takes into account five key locational factors relating to taxation (legal entity and natural person), levels of education of the resident population, presence of a highly qualified workforce and access by various forms of transportation (WEBER et al. 2009). The model was estimated for total immigration, by gender and by age category, approximating different stages in the life course: student, labour and retirement migration (18-29, 30–64 and 65+).

Spatial selectivity in immigration

The analyses showed significant differences in the composition and the size of the German immigrant group in the sixteen labour market regions. A predominance of the analyzed group in the German-speaking part was observed, as well as in the German border regions. In absolute numbers, Zurich attracted the most German immigrants, with 45,850 new permanent residents (35 % of total immigration between 2002 and 2009), followed by Basel with 15,420 German immigrants (12 % of total immigration).

The crude immigration rates varied between 3.9‰ in Winterthur-Schaffhausen and 0.2 ‰ in Neuchâtel. Map 1 graphically confirms the importance of geographic proximity to the host country. It also shows the importance of cultural and linguistic ties. The highest crude immigration rates were found in the German-speaking part, followed by the Rhaeto-Romanic, the French and the Italian-speaking parts.

Results of the multiple linear regression
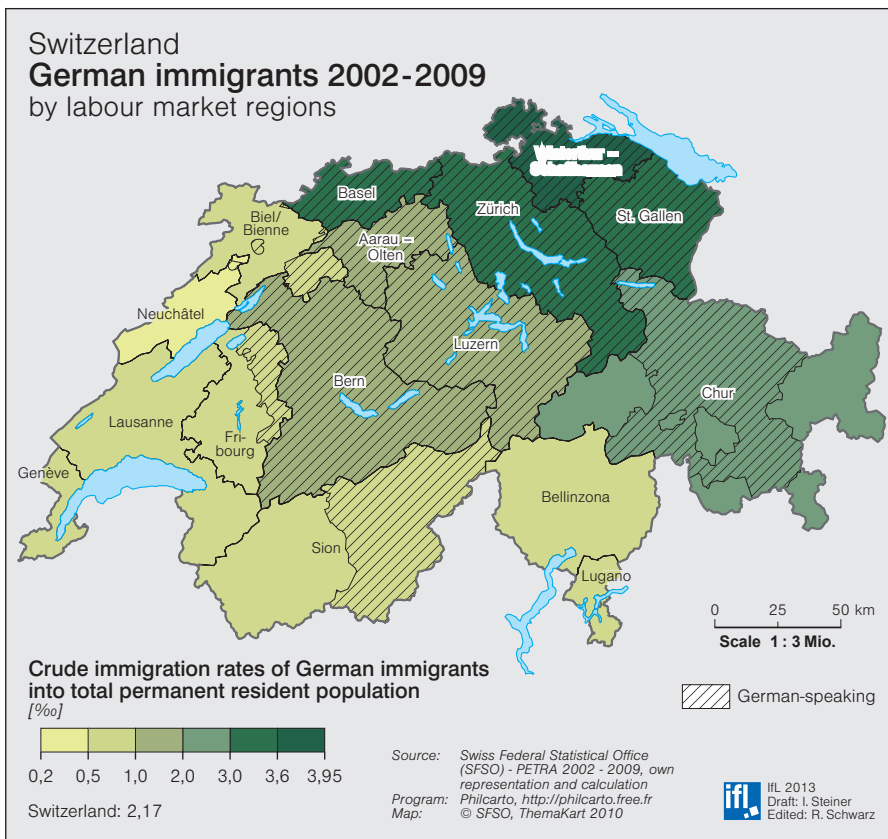
Map 1: Crude immigration rates of German immigrants into total permanent resident population, by labour market regions, Switzerland 2002-2009,

women than men: Geneva (+225), Neuchâtel (+6) and Lugano (+46). Crude immigration rates were therefore very similar between men and women in the French and Italian-speaking parts (differences lower than 0.06‰). In the German-speaking regions, there were more men immigrating than women; in Zurich the difference was as high as 6430 immigrants. For both sexes, the highest rates were found in Winterthur-Schaffhausen. However, whereas Basel and Zurich were the second and third destinations among women, men chose St. Gallen and Zurich.

The regression models confirmed gender differentials in the destination choice of German immigrants (Tab. 1). Whereas the regions' distance to the border was positively correlated for men, women's immigration rates decreased with growing distance (M4 and M7). However, both sexes preferred the German-speaking part over the other linguistic regions. The model testing the influence of locational factors was only statistically significant for women (M5 and M8). For the latter, whereas unemployment was not a determinant in their settlement choice, their immigration rates were higher in more attractive as well as in urban regions. When controlled for all the factors and the size of the migrant network (M6 and M9), the importance of the latter was

showed that the further away the regions were from the border, the lower the total crude immigration rates became. Moreover, German-speaking regions attracted significantly more German immigrants than the other linguistic regions (Model 1 – M1, Tab. 1). When controlling for locational factors only (M2), we found that the higher the unemployment rate was in a region, the lower the crude immigration rates became. On the other hand, the higher the attractiveness of a region was, the higher the crude immigration rate became. Finally, urban regions attracted more German immigrants than rural regions. These results are not surprising and confirm the theory and our hypotheses. However, when controlling for all factors and the proportion of the German residents population (M3), the effect of the migrant network played an essential role in the destination choice of German immigrants. Furthermore, German-speaking regions attracted less German immigrants than the other language regions, unemployment was no more a sig-

nificant determinant and the regional attractiveness had become negatively correlated with the crude immigration rate.

The immigration patterns differed according to the gender. Only three regions accounted for slightly more immigrant

Results of the multiple linear regression of regional immigration of Germans to Switzerland
by sex (β-Estimates)

	Total German immigrants			German immigrant men			German immigrant women		
	M1	M2	M3	M4	M5	M6	M7	M8	M9
KM	-0.008**		-0.003**	0.012*		0.016***	-0.023*		-0.006
LANG^German	1.029*		-0.913***	2.859***		-0.929	3.538*		-3.240***
UNEMP		-0.301*	-0.020		-0.616*	0.242		0.557	-0.152
QUALITY		0.581**	-0.163*		-0.140	-0.675**		1.826**	-0.606**
TYPE^urban		0.720*	0.251*		0.639	0.048		2.474*	0.875*
PROPGER			1.068***			1.813***			3.669***
constant	2.049***	2.142**	0.368	-0.851	3.594***	-2.042*	6.569**	7.357***	1.125
R²	0.269***	0.193***	0.933***	0.119**	0.041	0.747***	0.241***	0.182***	0.928***

N=106 / *** p<0.001, ** p<0.01, * p<0.05

Source: Swiss Federal Statistical Office (SFSO) – PETRA, own calculation

Tab. 1: Results of the multiple linear regression of regional immigration of Germans to Switzerland, by sex (β-Estimates)

again confirmed, even though the estimates were higher for women, indicating that the size of the German resident population was more decisive in their destination choice. Furthermore, the German-speaking regions attracted fewer women, whereas the effect became non-significant for men. Finally, for both sexes, the attractiveness of the region was once controlled for the proportion of German residents negatively correlated with the immigration rate.

The patterns of settlement choice also differed according to the immigrant's age, even if Germans aged 18-29 and 30-64 presented similar preferences. In particular, the German-speaking and border regions were prominent destinations. However, German immigrants aged 65+ tended rather to move to the south of the country (Bellinzona or Lugano), to Luzern or Chur. Those regions, and in particular Bellinzona and Lugano, are known for their warmer climate. Retirement homes and apartments for the elderly seem therefore not only to be an attractive choice for residents from Switzerland but also from Germany.

The regression models confirm this dichotomy (M10, M13 and M16, Tab. 2). Whereas the regional proximity to the border was negatively correlated for immigrants aged 18-29 and 30-64, the re-

tiree's immigration rate increased with growing distance. Furthermore, even if the German-speaking regions attracted more immigrants than the other regions, the effect was more pronounced for German migrants aged 30-64 than for the oldest ones and did not have an influence on the crude immigration rate of young Germans. For the latter, educational and professional opportunities are important destination choice factors. The University of Geneva and the Federal Institute of Technology of Lausanne (EPFL) as well as multinational companies constitute poles of attraction for German students and a young and dynamic workforce.

The locational factors differed also considerably (M11, M14 and M17); not surprisingly, the model was not significant in the regional destination choice of elderly immigrants. Furthermore, for German immigrants aged 18-29 and 30-64, unemployment was a non-significant factor whereas the regional attractiveness was positively correlated with the immigration rate. Finally, young people preferred urban destinations; whereas migrants aged 30–64 did not show any preferences.

Controlling for all factors and the size of the migrant network (M12, M15 and M18), we found that even though the latter was positively correlated for all three

age categories, it played a less determinant role for older immigrants. The latter hence preferred the rural over the urban regions, possibly due to lower real estate prices.

The analyses have shown that various factors determined spatial selectivity in German immigration, and these interacted differently according to the migrants' gender and stage in the life cycle (LEE 1966). The only factor that did not have a significant impact on the complete models was unemployment. This result could be due to the fact that even though unemployment varies between the MS-Regions (0.2 % in Prättigau, situated in the labour market region of Chur, and 6.8 % in Neuchâtel), it is still very low, with a mean of 2.4 % on the national level. The only factor that had a significant and positive impact on all the complete models was the proportion of German residents. This factor was particularly important for women and people aged 18-29 and 30-64. This result should however be interpreted with caution, since considering the share of German residents in the total population as an approximation of the migrants' networks poses a problem of correlation with the crude immigration rate.

Emigration-Immigration turnover
When analyzing the impact of an immigrant group, emigration also needs to be considered. At the national level, one out of three migrants left the country again by December 2009. Map 2 shows the international turnover rates: the darker the color the less German settled. Circles indicate the number of immigrants in red and the number of emigrants in blue. In general, an inverse proportionality is observed: the higher the crude immigration rate (see Map 1) or gross migration were, the lower was the turnover. Bern presented the highest international turnover rate of all German-speaking regions (46 emigrants for 100 immigrants). Basel, Aarau-Olten and Zurich on the contrary recorded the lowest turnover rate of all regions (30/100). The highest overall turnover rates how-

Results of the multiple linear regression of regional immigration of Germans to Switzerland
by <u>age</u> (â-Estimates)

	Aged 18-29			Aged 30-64			Aged 65+		
	M10	M11	M12	M13	M14	M15	M16	M17	M18
KM	-0.021*		-0,009	-0.031**		-0.010**	0.002**		0.002***
LANG^German	2.05		-4.010***	4.558**		-1.604*	0.392***		-0.043
UNEMP		-0.698	-0.042		-1.142	0.072		-0.042	0.002
QUALITY		1.195***	-0.992**		2.676***	-0.023		-0.013	-0.051
TYPE^urban		2.514***	0.996		2.164	0.705		-0.119	-0.174**
PROPGER			3.301***			3.539***			0.198***
constant	5.588**	4.649***	0.678	7.645***	8.592***	1.124	-0.189	0.519***	-0.231
R²	0.163***	0.127**	0.815***	0.357**	0.243***	0.919***	0.241***	0.016	0.928***

N=106 / *** p<0.001, ** p<0.01, * p<0.05

Source: Swiss Federal Statistical Office (SFSO) – PETRA, own calculation

Tab. 2: Results of the multiple linear regression of regional immigration of Germans to Switzerland, by age (β-Estimates)

ever were registered in the bilingual regions of Sion (77/100) and Chur (71/100).

One explanation for these results can be found in the municipality-specific composition of the different labour market regions, which is closely linked to their economic structure and occupational activities. Aarau-Olten, for example, accounts for 33 % of rural commuter regions. These regions presented the lowest turnover rates of all types of regions, with 30 emigrants for 100 immigrants. We can therefore suppose that German migrants settling in these regions were less mobile than the ones that moved directly to the city centers.

The highest turnover rates were found in touristic municipalities (84/100). When considering international and internal migration together, the turnover-rate even rose to 95 emigrants for 100 immigrants. Therefore, only one out

of twenty Germans settled between 2002 and 2009 in touristic regions. This result is certainly due to the seasonal nature of the available employment. Sion and Chur, both situated in the mountains, are respectively composed of 36 % and 27 % of touristic municipalities. Their demand for a foreign seasonal workforce was certainly very high, explaining their high turnover-rates.

Finally, Geneva also presented a rather high turnover rate (57/100). Two explanations can be found for this result. First, this region is composed of 38 % of high income municipalities, attracting expatriates and international workers. Second, results indicated that 42% of immigrants were aged 20 to 29 years. We assume that most of them are students. Both types of migrants are staying less permanently in Switzerland than other types of migrants.
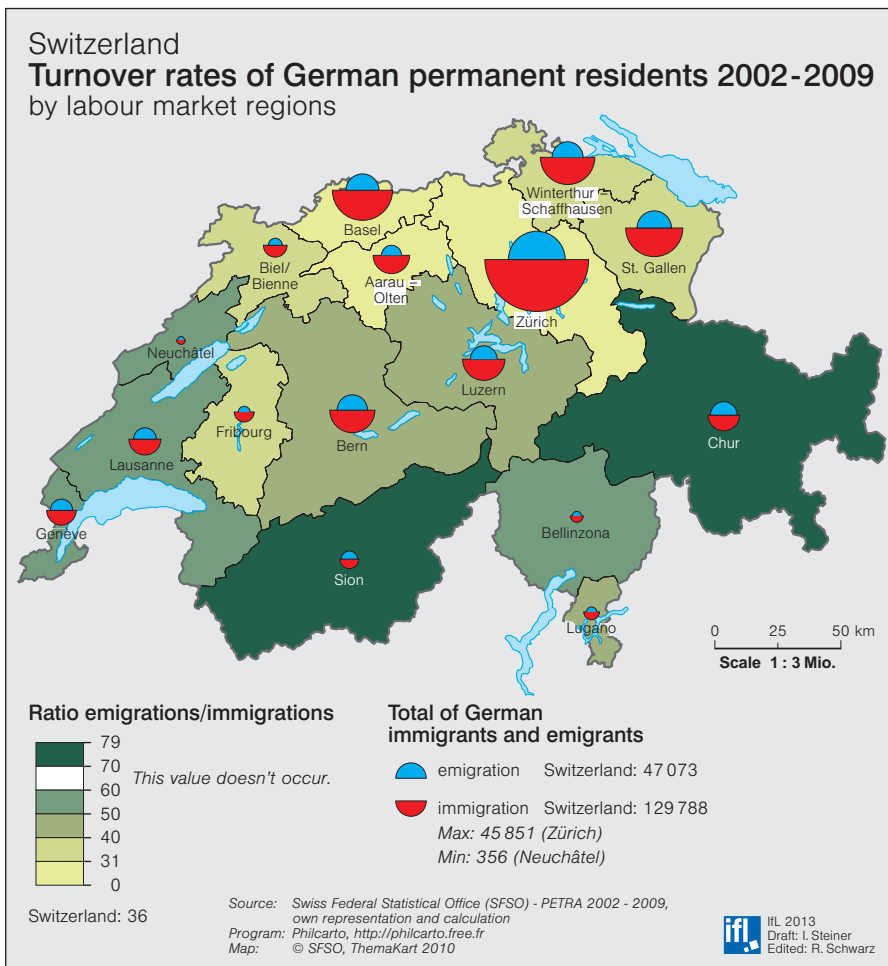
Age and gender composition of migration flows

When assessing the impact of a migration flow, not only its magnitude matters but also its composition in terms of age and gender.

Migration flows were mainly composed of men since the total sex ratio at the national level was 124 % for immigration and 152 % for emigration. These results indicate that German men were more mobile than German women (turnover-rate of 40/100 vs. 32/100 for women). In only two labour market regions women were more mobile than men: Geneva (turnover-rate of respectively 59/100 and 55/100) and Lugano (respectively 47/100 and 37/100). As mentioned in the previous chapter, these two regions together with Neuchâtel were the only ones with immigration and emigration flows composed of a majority of women.

In particular, German-speaking regions and borderland regions showed a relatively high sex ratio. In St. Gallen, 155 German men immigrated for 100 women and 224/100 emigrated, while in Aarau-Olten the sex ratios were respectively 146/100 and 223/100, indicating important differences in turnover-rates.

Fig. 2, representing the age pyramids of German emigrants and immigrants in Geneva and in St. Gallen, demonstrates the imbalance in gender for two disparate regions. A large part of the immigrants and emigrants are aged between 20 and 29 years in both regions. One explanation for the majority of men in St. Gallen could be the attraction of its University, which is oriented towards business and entrepreneurship. The University's student statistics confirm this hypothesis: in 2011, 1472 German students were enrolled in the fall semester (60 % of total foreign students), thereof 75 % were men. For Geneva, a similar logic can be applied with its attraction of mainly female students to the University of Geneva. In 2011, 341 German students were enrolled, thereof 66 % were women. In particular, in medical studies, women were a majority with 83 %. Finally, the age pyramids illustrate the aforementioned differ-

Switzerland
Turnover rates of German permanent residents 2002-2009
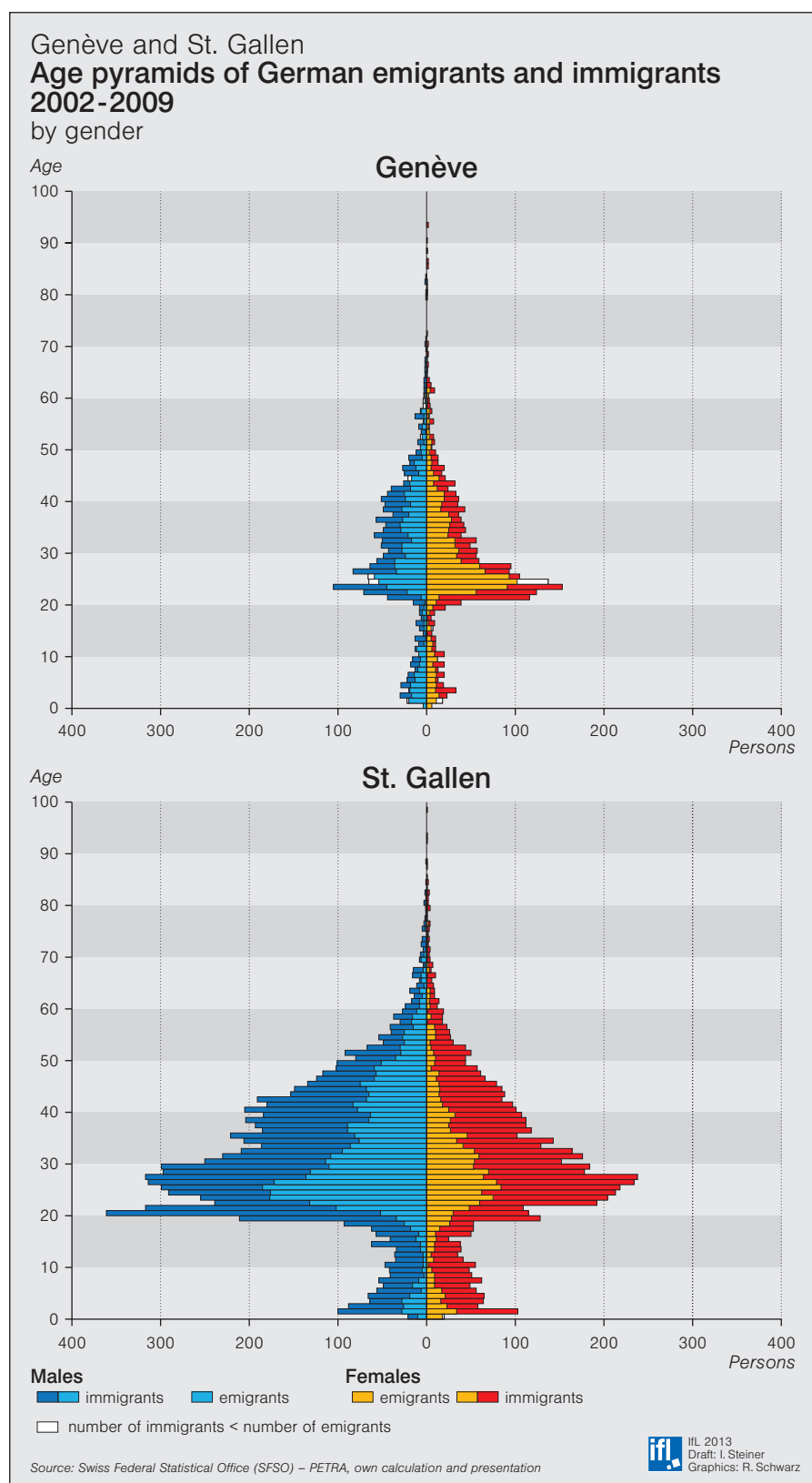by labour market regions

Ratio emigrations/immigrations
- 79
- 70
- 60 *This value doesn't occur.*
- 50
- 40
- 31
- 0

Switzerland: 36

Total of German immigrants and emigrants

emigration   Switzerland: 47 073

immigration   Switzerland: 129 788
Max: 45 851 (Zürich)
Min: 356 (Neuchâtel)

Source: Swiss Federal Statistical Office (SFSO) - PETRA 2002 - 2009,
own representation and calculation
Program: Philcarto, http://philcarto.free.fr
Map: © SFSO, ThemaKart 2010

IfL 2013
Draft: I. Steiner
Edited: R. Schwarz

Scale 1 : 3 Mio.

Map 2: Turnover rates of German permanent residents 2002-2009, by labour market regions

Genève and St. Gallen
Age pyramids of German emigrants and immigrants 2002-2009
by gender

Source: Swiss Federal Statistical Office (SFSO) – PETRA, own calculation and presentation

Fig. 2: Age pyramids of German emigrants and immigrants 2002-2009, by gender for Genève and St. Gallen

level showed a peak between 20 and 24 years, confirming the importance of student migration, before it decreased steadily. Even though net migration was very low at the end of the working life, no region presented a negative rate. Numbers indeed indicate, contrary to public opinion, that in almost all the regions no international retirement immigration or emigration took place.

The highest share of mobile elderly people was observed in Bellinzona, where 9 % of emigrants and 24 % of immigrants were aged 60 or over. As a result, Bellinzona also accounts for the highest net migration rate between 60 and 64 years (6%) in comparison with the other regions. Mean age at immigration was therefore comparatively high (41 years compared to 31 years at the national level) and 45 % of immigrants in Bellinzona were respectively singles or married (compared to 67 % singles and 28% of married men and women). The negative net migration between age 20 and 29 is probably due to an age effect. However, it shows the immigration of seasonal workers, who left the country shortly after their arrival.

Whereas Bellinzona accounted for a large share of pre-retirement and retirement migrants, Lausanne is a typical example of the so called "Eurostars" mobility (BRAUN and ARSENE 2009), a new highly mobile class of young professionals and students benefiting from European mobility opportunities. One of the two Swiss Federal Institutes of Technology as well as several multinational companies are based in Lausanne. Interestingly, there was almost no difference in gender for this region, the sex ratio being 100 for immigration and 106 for emigration flows. The mean age at immigration was only 28 years and 78 % were singles.

This chapter demonstrated regional differences in turnover-rates between immigrants and emigrants and therefore also in net-migration, which is important for the assessment of the demographic impact of an immigrant population. We found an inverse proportionality between the crude immigration rate or the gross

ences in total turnover-rates, which were much higher in Geneva, since the emigration was compensated for by immigration. Spatial selectivity is not only found in

terms of gender but also in terms of age (Fig. 3), which is closely linked to the life-course. The age specific net migration rate of German migrants at the national
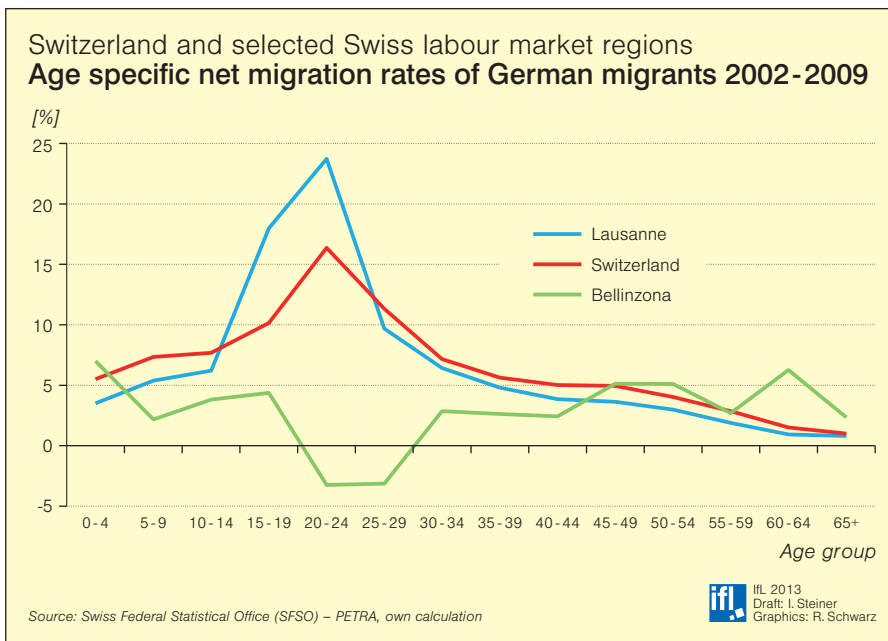
Fig. 3: Age specific net migration rates of German migrants 2002-2009, by selected labour market regions and for Switzerland

migration and the turnover. The latter can be explained by the municipality-specific composition of the different labour market regions, which are closely linked to their economic structure and occupational activities. Touristic regions therefore accounted for much higher turnover-rates than suburban or peri-urban regions. Finally, turnover-rates differed according to the composition of the migration flows in terms of gender and age. Regions with higher mean ages account for a higher share of married persons and vice-versa. The absence of a family and therefore commitments undoubtedly influences the decision to return or to migrate to another country.

Demographic impact on the German and total resident population
In 2002, 124,370 German permanent residents were living in Switzerland. Thereof, 35 % lived in Zurich, 12 % in Basel and respectively 9 % in Winterthur-Schaffhausen and St. Gallen. Seven years later, in 2009, the German resident population doubled and 251,390 Germans lived in Switzerland. Their distribution over the different labour market regions was however the same as in 2002. The smallest German community lived in Neuchâtel with 866 persons, followed by

the two Italian-speaking regions: Bellinzona (1645 Germans) and Lugano (2032 Germans).

Due to relatively high turnover-rates, the increase in the German resident population between 2002 and 2009 was rather low in the French and Italian-speaking regions. The German community for example in Neuchâtel only increased by a factor of 1.2, in Geneva by 1.3 and in Bellinzona by 1.4. On the other hand, due to rather low turnover-rates, the German resident population in Zurich, which is the largest one in Switzerland, doubled during the analysed period and Aarau-Olten accounted for the highest increase with 2.4 times more Germans at the end of 2009 compared to 2002.

However, not only the size but also the composition of the German resident population underwent a change. Mean age for example decreased not only at the national level, passing from 40.6 years to 37.6 years, but also in all regions. Whereas in 2002, 12 out of 16 regions presented a mean age above 40, in 2009 only the two Italian speaking labour market regions (Bellinzona and Lugano), which attract rather older migrants, accounted for mean ages of respectively 48.7 and 46.2 years. Fig. 4 demonstrates the impact on the age

and gender structure of two labour market regions: Zurich and Geneva. First, the different scales on the x axis need to be pointed out. Zurich's much larger German resident population was compared to the one living in Geneva between 2002 and 2009. Whereas Zurich accounted in 2009 for up to 1550 persons for one age category (30 year old men), Geneva's maximum was 821 for 34 year old men. Second, the pyramids show the difference in the increase of the German resident population, which doubled in Zurich and only multiplied by a factor of 1.3 in Geneva. In both pyramids, the ageing of the population, such as for example the cohorts aged 55 to 65 years in 2002, is clearly visible. However, whereas in Geneva there were no new immigrants expanding the pyramid, Zurich attracted new immigrants, mainly aged between 25 and 55. Finally, we also observe family migration taking place in Zurich, since there were considerably more children in 2009 than in 2002.

Finally, when taking into account the size of the total resident population, the share of Germans in the Swiss population only passed from 1.7 % to 3.2 %. On the regional level, it was Winterthur-Schaffhausen that accounted for the highest increase between 2002 and 2009 (from 2.9 % to 5.7 %), followed by Zurich (from 2.7 % to 5.2 %) and Basel (respectively 2.8 % and 5.1 %).

These results cannot be explained only by the turnover rates of the different regions, the trends of the total resident population also need to be considered. As shown in Fig. 5, the French-speaking regions, followed by the Italian-speaking parts and Zurich and Winterthur-Schaffhausen encountered the largest total resident population increase between 2002 and 2009. The latter, however, only had such high rates due to German immigration. In Winterthur-Schaffhausen, for example, 3.1 % out of the 7 % population increase was due to German immigration. In Bern, Basel, St. Gallen and Chur the increase of the German population was even higher than that of the rest of the resident population
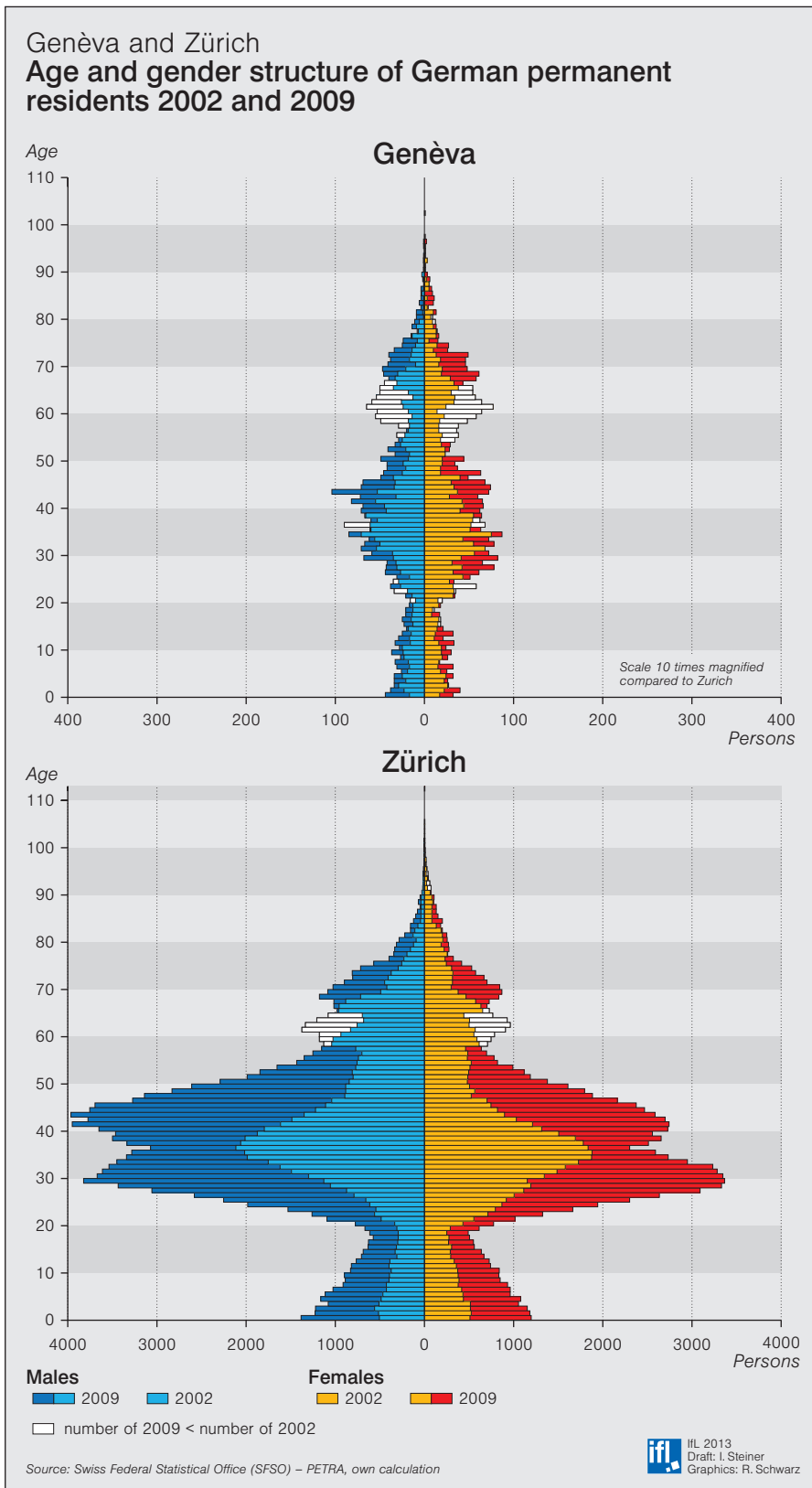
Genèva and Zürich
Age and gender structure of German permanent residents 2002 and 2009

Fig. 4: Age and gender structure of German permanent residents 2002 and 2009 in Genève and Zürich

Switzerland
German share of total population growth 2002-2009
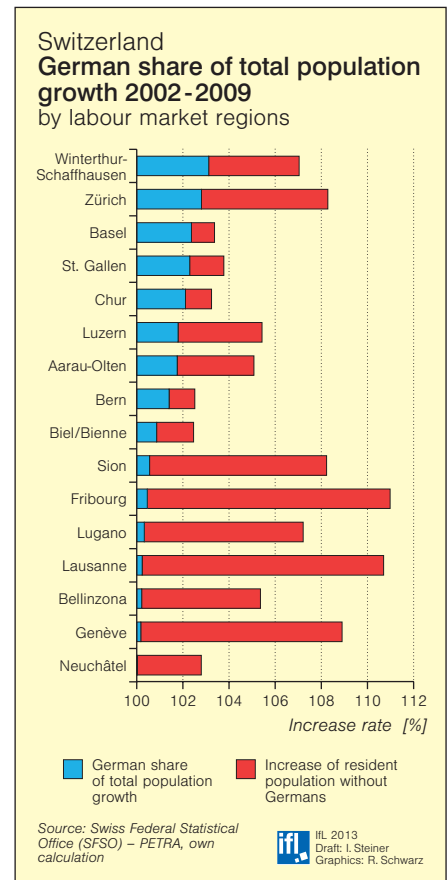by labour market regions

Fig. 5: German share of total population growth 2002-2009, by labour market regions

Regarding spatial selectivity in immigration, our analyses confirmed previous research findings (namely UKRAYINCHUK and JAYET, 2011): the geographical as well as cultural and linguistic proximity with the country of origin, the regional attractiveness and the size of the migrant networks played a role in the immigrants' location choices. The network factor, approximated by the proportion of German residents living in the region, had the strongest effect on German immigration. The only hypothesis that was rejected was the regions' unemployment levels. Even though unemployment varied between the regions, it was still relatively low, with a mean of 2.4 % compared to other European countries. Therefore, and since Swiss citizens do not have the priority anymore on the labour market, finding a job did not constitute an obstacle to German immigration. Finally, German migrants are as mentioned before a positively selected group, regarding their educational and

Conclusion

Our paper addresses the topic of determinants in German immigrants' regional location choice in Switzerland between 2002 and 2009 and its resulting demographic impact on the German as well as the total resident population.

employment level, simplifying their integration into the labour market.

In contrast to the current literature, we ran the model separately for men and women and for three different age categories (18-29, 30-64 and 65+). Thus, we confirmed the importance of considering different "types of migrants", since the determinants interacted differently according to the immigrant's gender and stage in the life cycle (Lee 1966). Whereas the German-speaking regions, once controlled for all the factors, attracted for example considerably less women or young immigrants, this determinant was non-significant for men or elderly immigrants.

As in previous research (e.g. Van Der Gaag and Van Wissen 2001), certain independent variables of our model only constituted an approximation of the destination choice factors. For example, considering the share of German residents in the total population as an approximation of the migrants' networks poses a problem of correlation with the crude immigration rate. Furthermore, at the individual level, the network can be measured by the presence of a friend or a member of the family but for a collectivity, the network is difficult to capture.

Regarding the turnover-rates between immigrants and emigrants, and therefore also net-migration, our analyses showed that at the national level one out of three migrants left the country again by 2009. This result confirms on the one hand this new borderless zone for mobility within EU/EFTA-countries (King et al. 1992), where more temporary and circular forms of migration have become more commonplace (Faist 2008). On the other hand, it also underlines the importance to consider certain less mobile migrant groups. This applies especially to highly skilled migrants, who live permanently in their host countries (Harvey 2009) and who potentially have a significant impact on the host society and economy.

At the regional level, we found an inverse proportionality between the crude immigration rate or gross migration and the turnover. The latter can be explained

by the municipality-specific composition of the different labour market regions, which are closely linked to their economic structure and occupational activities and therefore the demand for foreign labour. Touristic regions therefore accounted for much higher turnover-rates than suburban or peri-urban regions. Depending on the regional economic structure, different types of migrants were attracted, who presented varying dispositions to stay, to return or to move on to another country. Regions presenting higher mean ages of German immigrants accounted for a higher share of married persons and vice-versa. The absence or the presence of family and therefore commitments undoubtedly influenced the trajectories of German migrants.

In order to better understand the German immigrants' choices of settlement and emigration, not only their demographic but also their socio-professional characteristics should have been considered. However, up to now, no reliable socio-professional data for a foreigner group at the regional level are available in Switzerland. Furthermore, the data set did not contain any information on the area of origin, even though we expect these factors to better explain intra-European migration.

Finally, the migrant's disposition to settle or to emigrate had not only an impact on the immigrant community but also on the total resident population. Whereas in the French and Italian-speaking regions the German resident population increased little and did not have a considerable influence on the total population growth, the German-speaking and the borderland regions accounted for up to twice as many Germans in 2009 compared to 2002. Due to this increase, the regions encountered a considerable demographic growth. In Bern, Basel, St. Gallen or Chur, the increase of the German population was even higher than the one of the rest of the resident population.

Our analyses demonstrated the importance of considering different regions and different types of migrants when trying to understand migration flows and its im-

pacts in a country like Switzerland. Immigration being the main driver of demographic dynamics on the national level, one immigrant group, such as German residents in Switzerland, can have a considerable impact on the size and the structure of the population on the regional level. For various reasons, such as the linguistic diversity, a variety of economic structures and occupational activities as well as the regions' positions on the center-periphery scale, analyses at the national level remain insufficient.

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Résumé

Ilka Steiner

Sélectivité spatiale et impact démographique des immigrants allemands récents dans les régions suisses

Cette étude analyse les déterminants du choix résidentiel des immigrants allemands et leurs conséquences sur l'évolution démographique dans les régions suisses. Elle se base sur la Statistique de la population résidante de nationalité étrangère de 2002 à 2009. Les unités géographiques d'analyse sont constituées des seize régions du marché du travail.

Les résultats confirment l'importance des réseaux de migrants, de l'attractivité régionale et de la proximité géographique, culturelle et linguistique avec le pays d'origine dans le choix de la région d'établissement. Toutefois, la pondération des différents facteurs varie en fonction des «types de migrants» pris en considération. Il s'avère cependant que le chômage n'est pas un facteur déterminant dans l'immigration des Allemands en direction des régions suisses.

Les structures économiques régionales ont une influence sur la composition de la population migrante, présentant des attentes divergentes quant à leur durée de séjour dans le pays d'accueil. Ainsi, nous observons de grandes différences régionales en ce qui concerne l'impact des immigrants allemands sur la population résidente allemande et la population résidente totale. Entre 2002 et 2009, l'effectif de cette première a plus que doublé dans les régions suisses alémaniques ainsi que dans les zones frontalières, entraînant un accroissement de toute la population résidente. A Bâle, Berne, Saint-Gall et Coire, l'accroissement de la population allemande a même excédé celle du reste de la population résidente.

L'étude souligne l'importance de prendre en considération la diversification régionale et différents types de migrants lorsqu'on analyse l'immigration et son impact dans un pays comme la Suisse. En raison de la diversité linguistique, la variété des structures économiques et des domaines d'activité, ainsi que des positions différentes des régions sur l'échelle centre-périphérie, l'analyse au niveau national reste insuffisante.

Suisse, immigration allemande, choix résidentiel, bassins d'emploi, croissance de la population, réseaux, types de migrants

Резюме

Илька Штейнер

Региональная селективность и демографическое влияние современной немецкой иммиграции в Швейцарии

Исследованы факторы региональных различий в расселении немецких иммигрантов по регионам Швейцарии и их влияние на демографическое развитие. Анализ основывался на статистике иностранного постоянного населения и охватывает период с 2002 по 2009 гг. В качестве обследуемой территории использованы 16 регионов швейцарского рынка труда.

Результаты исследования подтверждают значение сетевых построений мигрантов, региональной привлекательности, географической, культурной и языковой близости по отношению к стране происхождения при принятии решения о переезде. При этом влияние отдельных конкретных факторов варьировалось в зависимости от «типов миграторов». В противоположность этому, безработица не являлась существенной детерминантой, с точки зрения иммиграции немцев в швейцарские регионы.

Региональные экономические структуры оказали влияние на состав иммигрантов, которые демонстрировали различные представления относительно перспектив пребывания в принимающей стране. В результате были выявлены существенные региональные различия в том, что касается влияния немецких иммигрантов на немецкое население и на постоянное население в целом. При этом количество первого за период 2002-09 гг. в немецкой части Швейцарии и в приграничных районах более чем удвоилось, что привело, среди прочего, к росту общей численности населения. В Базеле, Берне, Санкт-Галлене и Куре постоянное немецкое население выросло даже больше, чем остальное.

На основе данного исследования показано, что при попытке осмыслить процесс иммиграции и его влияние на такую страну как Швейцария должны приниматься во внимание различные регионы и типы мигрантов. Анализ, проводимый на агггрегированном уровне, является недостаточным, по причине наличия целого ряда факторов, таких как языковое разнообразие, диверсификация экономических структур и отраслей, а также близость к региональным центрам.

Швейцария, немецкая иммиграция, принятие решения о переселении, региональный рынок труда, рост численности населения, сетевые построения, типы мигрантов.