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Social distance and wage inequalities for immigrants in Switzerland

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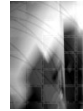
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Article: *Migrant labour*

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Abstract

This study investigates the impact of the social distance between immigrants and Swiss natives on wage inequalities. Social distance is assumed to be high when immigrants come from a different culture, a different education system and speak a different language. By combining these three aspects, this article goes beyond existing studies that only focus on cultural differences. The empirical findings indicate that, net of education, immigrants with a high or very high social distance from the receiving society are strongly disadvantaged in terms of their salaries. Additional analyses show that the impact of typical explanatory factors for labour market success such as education, citizenship and length of stay also vary by the degree of social distance between immigrants and their destination country. The analyses are based on data from the Swiss Labour Force Survey for the years 2010 and 2011, which allow for detailed analyses on individual immigrant groups due to oversampling.

Keywords

education system, human capital, immigration, labour market integration, social distance, Switzerland, wage inequalities

Introduction

Increasing immigration has led to heated debates in Western Europe. Many debates have focused on how immigrant groups integrate and how to explain why certain groups do better than others in certain areas. A large range of studies has already focused on how to

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explain economic, social and cultural integration. In most cases these forms of integration have been studied separately from each other. This article aims to go beyond existing studies by combining these different aspects of integration. It investigates the extent to which social and cultural factors have an impact on economic integration. Such a holistic perspective is necessary for understanding prevailing differences between natives and specific immigrant groups on the job market.

A whole range of studies has shown that differences in wages between immigrants and natives in Western countries can largely be explained by human capital (among others, Berthoud, 2000; Heath and Cheung, 2007; Schmidt, 1997; for Switzerland specifically: De Coulon et al., 2003). However, even after education has been statistically controlled for, differences between natives and immigrants persist. These remaining gaps are often described as 'ethnic penalties' (Heath and Cheung, 2007). It is argued that differences that cannot be explained by conventional demographic and human capital variables such as age, gender and education might be the results of discrimination.

While most studies make do with describing the remaining differences between natives and immigrant groups, this article aims to look more closely at the social and cultural factors that make immigrant groups different from natives. It therefore focuses on social distance. The main assumption is that an immigrant group is particularly disadvantaged when the social distance between this group and the receiving society is high. The degree of social distance is determined by taking the following factors into account: culture, language and the education system. These aspects of social distance are not only regarded as key criteria for integration in the labour market but are also relatively straightforward to define and measure.

Switzerland constitutes an ideal case for this research question, as it has a high number of highly diverse immigrants from countries inside and outside Western Europe. These include countries with a very similar and a very different education system as well as countries in which the languages spoken are the same as in Switzerland and countries where the languages are different. Three of Switzerland's four official languages are spoken in neighbouring countries. Like Germany and Austria, the education system in Switzerland is highly stratified with the prevalence of a strong occupation-specific apprenticeship system ('dual system of vocational education and training'). In other immigrant origin countries in Western Europe either the education system (Italy and France) or both the education system and the language (Portugal, Spain) are different. This variation makes it possible to test whether a smaller social distance leads to better socio-economic integration. In the second step, the study will analyse the extent to which the effects of classic explanatory factors for labour market integration, such as length of stay or citizenship, depend on the social distance between immigrants and their destination country.

Using data from the Swiss Labour Force Survey for the years 2010 and 2011, which includes additional samples for immigrants, the article shows that the concept of social distance may contribute to understanding why certain immigrants earn more than others. While earlier research has shown that education plays an important role, the present study suggests that educational qualifications may lose some value when immigrants come from a country with a different education system (see also Friedberg, 2000). Moreover, the analysis here shows that the length of residence is especially beneficial for high and very high social distance groups.

Theories and hypotheses on ethnic disadvantage on the labour market

Social distance from the receiving society

A common explanation for labour market inequalities between groups of people from different countries focuses on group-specific endowment with human capital. According to human capital theory, education is an individual investment (Becker, 1964; Mincer, 1974) that leads to different productivity and hence to different earnings prospects on the labour market. Human capital can be accumulated within the education system, that is, in schools, training colleges and universities. It can also be acquired on the labour market or in companies.

Immigrant groups differ in terms of their endowment with human capital; and therefore clear differences in salaries can be expected. Regarding the Swiss case, the literature increasingly refers to 'old' and 'new' immigration (Hermann, 2012; Müller-Jentsch, 2008). The new wave of immigration includes immigrant groups from the northern EU and in particular from German-speaking countries (Helbling, 2010; Hermann, 2012: 33). The bilateral contracts between the European Union and Switzerland have made employing European workers much simpler. The increasing demand for highly qualified workers is another factor explaining the growth of this group. These individuals can be expected to have particularly good prospects of earning a high income due to their human capital endowment.

The older wave of immigration to Switzerland principally consisted of groups from Southern Europe, the Western Balkans and Turkey. Nowadays, immigrants from the countries of the former Yugoslavia make up the biggest group among them. This rather poorly qualified group came to Switzerland in the 1970s and 1980s as a cheap source of labour. Due to the Balkan wars in the 1990s and the increasing numbers of family reunions, the number of immigrants from this group has again increased considerably in the last two decades (Commission fédérale contre le racisme, 2006: 7–8; Gianni, 2005: 13–14). These individuals can be expected to do rather poorly on the labour market.

Although this analysis takes into account the role of education to explain differences between immigrant groups, the individual level of education may be only one reason for why certain immigrants earn more than others. According to Shibutani and Kwan (1965: 264), '[C]onceptions of other people are constructed from a variety of sensory cues – their speech, their facial expressions, their deeds – from which inferences are made about their inner experiences'. In this regard, social distance describes a subjective feeling of closeness to individuals who are defined as belonging to different categories (see also Alba and Nee, 1997: 838; Steinbach, 2004). When social distance is great this is often accompanied by feelings of mistrust, reserve and apprehension. Conversely, when social distance is at a minimum, there is a feeling of common identity. Social psychological studies show that membership of a social group alone can induce positive or negative feelings (Tajfel, 1970).

This article suggests that the concept of social distance can also be used to study the labour market status of immigrants. Social distance is regarded as a group characteristic that can be ascribed to immigrants from specific countries. The degree of social distance

Table 1. Immigration country and social distance from Switzerland.

	Western Europe	Language	Education system	Social distance
Germany	+	+	+	Low
Austria	+	+	+	
France	+	+	–	Intermediate
Italy	+	+	–	
Spain	+	–	–	High
Portugal	+	–	–	
Former Yugoslavia	–	–	–	Very High
Turkey	–	–	–	

between the receiving society and the immigrant groups is determined by three core macro indicators that differentiate groups according to their education system, their culture and the language they speak.

Table 1 provides an overview of the important immigrant groups and shows which groups have a low and which have a high social distance from Switzerland. People from Germany and Austria have the lowest social distance from Switzerland: their culture, language and education system correspond to those found in Switzerland. Immigrants from France and Italy share Western culture and speak one of the Swiss national languages. However, they have a different education system. There is a somewhat larger distance from Switzerland for Spanish and Portuguese immigrants. They also come from Western Europe but lack common ground with Switzerland with regard to language and the education system. The largest social distance can be observed among immigrants from Turkey and the former Yugoslavia, who neither share the same culture, nor a language, nor the education system with Switzerland.

According to this article’s main hypothesis, ethnic disadvantage on the labour market increases as the social distance between the sending and receiving societies grows (H1). To better understand this relationship, the following sections elaborate on the three aspects that make up social distance between groups. The various arguments as to why the impact of immigrant’s length of stay and citizenship status might depend on social distance are then discussed.

Culture

Experimental studies have shown that employers may behave in a discriminatory fashion when dealing with foreign applicants in hiring processes (Bertrand and Mullainathan, 2004; Carlsson and Rooth, 2007; Kaas and Manger, 2010). This discrimination may be linked to stereotypical expectations and prejudices¹ regarding immigrant groups’ productivity (for a theoretical approach to this issue, see Correll and Ridgeway, 2003). The present article assumes that immigrants are more strongly disadvantaged when there is a greater cultural distance from Switzerland. People from far distant countries are often easier to identify as foreigners as they are more identifiably different from the natives due to their appearances, names or behaviour (see Heath and Cheung, 2007: 13; Heath and Martin, 2013: 1006).

As has also occurred in other European countries, in Switzerland Muslim migrants have become the most controversial migrant group and they are perceived as a cultural threat. In 2009, as part of the Minaret Initiative, 57 per cent of Swiss people voted for an amendment that would ban the construction of minarets in Switzerland in future (Fetzer and Soper, 2011). In the 'Against Mass Immigration' referendum in 2014, just over half of the Swiss population voted to limit immigration, even for EU citizens. However, actors from industry were particularly critical of this initiative and actively tried to prevent it in order to avoid a skills shortage.²

This study assumes that disadvantage on the labour market principally affects people who do not come from the Christian-Western cultural sphere. Several studies have found labour market penalties against Muslims (e.g. Burkert and Seibert, 2007; Granato and Kalter, 2001; Heath and Martin, 2013; Seibert and Solga, 2005). It has been shown that while most non-white groups face such penalties, Muslim groups experienced the greatest penalties (Khattab and Johnston, 2013). The extent to which discrimination and negative attitudes towards Muslim immigrants are different from those towards other immigrant groups is, however, disputed (Helbling, 2010; Meer and Modood, 2009).

Language

A number of studies have demonstrated the importance of language for the integration of immigrant groups (e.g. Dustmann and Fabbri, 2003; Kogan et al., 2011; McManus et al., 1983). On the one hand, language serves as a means of communication. However, it can also function as a distinguishing characteristic and work to strengthen feelings of group membership and social identity. In Switzerland there are four official languages: German, French, Italian and Rhaeto-Romanic. The Italian language region is comparatively small; and the fourth language, Rhaeto-Romanic, is spoken by less than 1 per cent of the population. When the main immigrant groups to Switzerland are looked at, there is an overlap between immigrants' native languages and one of the Swiss national languages for people from Germany and Austria, France and Italy. This linguistic congruence may prove advantageous on the labour market, whereas incongruence may be a disadvantage.

Education system

In quantitative migration research, immigrants' formal qualifications are often integrated as a control variable into statistical models. However, this method implicitly suggests that qualifications from other countries have equal standing among employers in the receiving country, a somewhat unrealistic assumption.

Signal theory (Spence, 1973, 1974; Stiglitz, 1975) argues explicitly from the perspective of the employers, who use particular 'signals' such as education certificates to assess the likely productivity of the labour supplier. We assume that a fundamental element of uncertainty comes into play specifically when employers seek to assess the productivity of immigrants: in contrast to national educational qualifications, the value of foreign educational qualifications is less clear. Friedberg (2000), Weins (2010) and De Coulon et al. (2003) have, for example, shown that foreigners who obtain their

qualifications in Switzerland are on average paid more than foreigners who complete their education abroad.

The Swiss education system resembles that of its neighbours Germany and Austria to a high degree (Ebner et al., 2013). Immediately after primary school, young people are selected into school types with different qualification options. Comparatively few gain entry to the university sector; the level of 'stratification' in the school system is high (Allmendinger, 1989). Training for apprenticeships and professional qualifications below university level takes place within the standardized and highly occupation-specific dual training system (Müller and Shavit, 1998). This system combines classroom learning in a training college with a company apprenticeship, thereby combining theoretical and practical learning. The apprenticeship is highly standardized and the curricula for the training occupations are developed in industry and are nationally prescribed. The dual apprenticeship system is considered important for 'diversified quality production' (Streeck, 1991). The tertiary sector in Switzerland is organized in a 'binary' fashion (Arum et al., 2007) and thus, like Germany and Austria, it differentiates between traditional universities and universities of applied science.

This study assumes that immigrants have worse labour market chances when they come from countries whose education systems are dissimilar from the Swiss system. Employers would then tend to act in a risk averse way and place such groups in lower paid positions. This assumption is in line with theories on statistical discrimination (Phelps, 1972) that focus on the variance of signals and employers' risk aversion (e.g. Aigner and Cain, 1977).

Social distance, education, citizenship and length of stay

Having laid out the arguments why social distance influences labour market integration, the next question is whether its impact depends on other integration mechanisms. First of all, one can expect education, as the main factor of human capital, to have different effects on immigrants' wages depending on whether they come from low or high social distance countries (differential effects of formal level of education). In other words, immigrants from very high social distance countries should find it difficult to capitalize on their academic qualifications, unlike immigrants with the same education level from low social distance countries (H2). Another distinguishing characteristic between first-generation immigrants is whether they have already acquired Swiss citizenship or not. Similar to Germany, Switzerland belongs to the group of countries with an ethnic understanding of citizenship. This results in relatively restrictive naturalization policies (Helbling, 2008). One relevant aspect is certainly that only people who have lived in Switzerland for at least 12 years can apply for Swiss citizenship. This is clearly above the average of Western European countries. Naturalized immigrants can be expected to be better integrated, not only because they are sending out a different signal to employers than non-naturalized employees but also because they have already spent a certain amount of time in Switzerland. Such signals are therefore expected to be especially relevant for immigrant groups from (very) high social distance countries, meaning that Swiss citizenship should have a greater effect on their wages compared to those immigrants coming from low social distance countries (H3).

The process of integration can be viewed as involving a decline in ethnic distinction with regard to behavioural, cultural and economic differences (Alba and Nee, 1997:

863). Immigrants who have recently arrived in their receiving society have less knowledge of the culture, customs, language and skills required to perform country-specific job tasks than native-born workers. In his seminal study, Chiswick (1978) examined the earnings of foreign-born men in the USA. He found that the earnings of first-generation immigrants increased significantly with the length of time they spent in the USA. This is assumed to be due to the acquisition of country-specific knowledge, which then would lead to higher wages. The same study also found that the steepness of the rise in earnings was also dependent on the country of origin. Likewise, the present study also expects to find that the length of stay in Switzerland has a greater effect on wages for immigrants coming from (very) high social distance countries than for immigrants coming from low social distance countries (H4).

Data source, variables and methodology

Data source and study population

The analyses are based on data from the Swiss Labour Force Survey (SLFS). The SLFS has been conducted annually since 1991 and covers the permanently resident population of Switzerland, that is, all those who reside in Switzerland throughout the year (Bundesamt für Statistik, 2004: 9). With respect to the immigrant population, this results in the exclusion of people who are staying in Switzerland on a short-term basis, border crossers residing in other states or asylum seekers from the sample. Since 2003, in addition to the basic sample (Swiss natives and foreigners), a large number of foreigners have additionally been surveyed (the 'Immigrant SLFS') (Bundesamt für Statistik, 2004: 32).

The survey is conducted in Switzerland in German, French and Italian in order to adequately cover the various language regions. The 'Immigrant SLFS' is also conducted in English and in minority languages such as Serbo-Croatian and Albanian (Bundesamt für Statistik, 2004: 18). In the year 2010, the survey moved from collecting data in a single period in the second quarter of each year to continuous year-round data collection. At that time, the sample for the Immigrant SLFS was again substantially increased, which has since made it possible to conduct detailed analyses on individual immigrant groups (Bundesamt für Statistik, 2012: 4). This study therefore analyses the pooled SLFS data sets from the years 2010 and 2011.

The study population consists of adults aged between 25 and 64 who are working for pay. Given that the study intends to test the signalling value of foreign qualifications, the analysis only includes first-generation immigrants who obtained their highest qualification outside of Switzerland. Ethnic disadvantage on the labour market generally affects the first immigrant generation more strongly, i.e. individuals who were not born in the receiving society (Heath and Cheung, 2007). After applying these restrictions, the sample still includes approximately 53,000 people.

Dependent variable

In this study, wage differences between Swiss natives and first-generation immigrants from several countries are investigated. The measure of interest is gross salary, as this direct payment has not been subject to any deductions and thus provides the best

reflection of professional success. The gross weekly wages are first calculated in Swiss francs (CHF) based on the SLFS and the log of this is taken. The logarithm has the advantage that it accounts for the right-skewed income distribution and that the coefficients for the immigrant group can approximately be interpreted as percentage differences to the reference income for the Swiss-born group. However, this approximation becomes rather imprecise when coefficients exceed the value of 0.2. In this case, the exponential function of the coefficient should be interpreted.³ Working time (contractually agreed working time categories and number of hours usually worked per week) is controlled for in all multivariate models.

Independent variables and control variables

Immigrants differ markedly in their social distance from Switzerland as described above. In the following, the operationalization of the central independent variable and control variables is explained.

Social distance from the receiving society. Social distance is the central independent variable in this study. All employed persons born in Switzerland are considered natives ($n = 46,304$). They constitute the reference category. Persons born abroad are then assigned to different social distance categories (see the section *Theories and hypotheses on ethnic disadvantage on the labour market*, for classification criteria and Table 1 above). Immigrants from Germany and Austria come from 'low social distance countries' ($n = 4677$). Persons who immigrated to Switzerland from France or Italy are considered to be from 'medium social distance countries' ($n = 2500$), while immigrants from Spain or Portugal ($n = 1519$) are categorized as being from 'high social distance countries' and immigrants from the former Yugoslavia or Turkey are considered to be from 'very high social distance countries' ($n = 2015$). A dummy variable for 'other' first-generation immigrants is also included in the models.

Education. Individual education status is an important control variable. Based on information from the SLFS, qualifications are assigned to one of three education levels: low education level (did not complete any professional training; reference category); intermediate education level (completed apprenticeship within the dual system or full-time schooling); and high education level (attended college of professional education and training, university of applied science or traditional university). Fifteen group variables are also generated to reflect the combination of education levels and social distance groups to gain further insights into underlying mechanisms (e.g. low social distance and low education, low social distance and intermediate education etc., Swiss-born with low education being the reference category).

Swiss citizenship and length of stay. A dummy variable on Swiss citizenship is included in the models (reference category: no Swiss citizenship) to test whether high social distance immigrant groups benefit more from becoming Swiss citizens than other groups. Length of stay in the receiving country, Switzerland, is measured in years.

Socio-demographic characteristics. A range of socio-demographic characteristics, which in some cases also vary greatly between immigrant groups, are included in the model: the respondent's gender (female versus male [reference category]), marital status (married/registered partnership versus not married/divorced/widowed [reference category]) and whether the respondent has children under the age of 15 (reference category: no children). As women with children are often more restricted in their labour market activities, an interaction term was estimated from the gender and children variables. The individual age is measured metrically and is used as a proxy for labour market experience. According to the underlying assumption, as age increases, so does pay. Age is centred for the model and is also squared. The squared age term represents the extent to which income diminishes with age (concave-shaped income function).

Labour market regions, company characteristics, industries and occupations. Theories of labour market segmentation (e.g. Doeringer and Piore, 1971) assume that the labour market is subdivided into different, relatively persistent labour submarkets, in which specific conditions and rules apply. In order to capture the contextual conditions and labour market situations in the models, company characteristics, industries, occupations and labour market regions are controlled for. Promotion and earnings prospects are dependent on the structure and size of the company (Rosenbaum, 1979). Companies were divided into four categories: micro companies, with between one and nine employees (reference category), small companies with 10 to 49 employees, medium-sized companies with 50 to 99 employees and larger companies and corporations with more than 100 employees.⁴ The length of time the individual has spent at the company is also collected and divided into four categories: less than a year (reference category); one to three years; three to five years; five years and more. Tracking the length of time spent at the company makes it possible to consider individual careers in a company and people's accumulation of company-specific capital. Finally, it is important to note that, in Switzerland, employers' associations and unions determine salary levels at sector level (Visser, 2013). This study differentiates between 15 different branches of industry⁵ and generates 38 dummy variables for occupational groups (International Standard Classification of Occupations ISCO-88) while bearing the cell size in mind. As immigrants are also concentrated in particular geographical locations, the analysis differentiates between 12 Swiss labour market regions.⁶

Statistical method and analytical strategy

The dependent variable, the logged weekly income, is estimated for employed people using ordinary least squares (OLS) regression with robust standard errors. An analysis of employment status shows that some immigrant groups (in particular those from the former Yugoslavia and Turkey) have a higher risk of not being employed compared to others. There is therefore a possibility that, especially for groups with higher barriers to entry, positive selection exists for those who have successfully entered employment; and that this influences salary in an unobserved way. In order to capture motivation and willingness to perform in the models, controls were introduced for working hours as an

indicator. Among some of those surveyed, these hours were substantially above the contractually agreed 40 to 42 hours weekly.

In the multivariate models, controls for regional information and individual socio-demographic characteristics are introduced first; however, individual education is not included as a variable. This provides a general overview of (dis)advantages and the extent of ethnic stratification at the gross level (Heath and Cheung, 2007: 24). The second model relates to the question of whether, net of education, social distance groups still differ from Swiss natives and whether these net (dis)advantages follow a clear pattern of social distance: are earnings disadvantages net of education particularly high for those countries where social distance from Switzerland is high? The third model also considers that immigrants concentrate in specific firms, industries and occupations and integrates these as further controls in the model. The fourth model includes several combinations of social distance and education groups. This approach can answer the question whether the same type of educational qualification (e.g. a tertiary degree) has different effects depending on the social distance group immigrants belong to (*differential returns to education*).

Empirical findings on social distance and wages

Social distance, education and wages

To begin the analyses, a brief descriptive overview of the main immigrant groups is instructive (see Table 2). In order of quantitative importance they came from Germany, the former Yugoslavia, Portugal, France, Italy, Turkey, Austria and Spain. Comparing the education levels, it was evident that more than half of the German and French immigrants had tertiary qualifications – principally university degrees (the ‘high education’ category) – and therefore were considerably better qualified on average than the Swiss-born population. There were many low-skilled workers without any professional qualifications (the ‘low education’ category) among the immigrants from Portugal, Turkey, the former Yugoslavia, Italy and Spain. Second, it was evident that better qualified immigrant groups earned higher wages on average. French and German immigrants even earned slightly higher salaries than Swiss-born individuals. Particularly low wages were found for immigrants from Portugal, the former Yugoslavia and Turkey. These first descriptive results give us an idea of the degree of ethnic stratification on the labour market. Given that immigrants differ in their socio-demographic characteristics, regional distributions or allocations to firms, industries and occupations, multivariate models allow for the more precise identification of ethnic penalties, i.e. disadvantages that are due to the fact that people were not born in the receiving country, but in a specific country abroad.⁷

The first OLS regression model (Table 3) only controls for socio-demographic characteristics (education not included) and the distribution of the study groups between the Swiss labour market regions. Considerable differences between people born in Switzerland and immigrants were evident. Immigrants from low social distance countries (Germany, Austria) earned significantly higher wages than Swiss natives. By contrast, there were enormous wage disadvantages of more than 40 per cent compared to

Table 2. Swiss natives and first-generation immigrants: share of population, wages and education (percentages).

Country of birth	CH	DE	YU	PT	FR	IT	TU	AT	ES	Other
Share of population	77.6	4.4	3.1	1.9	1.6	1.5	0.6	0.4	0.4	8.5
Wages (CH=Reference)	100	103	68	66	103	84	75	98	96	103
Low education	12.1	9.2	49.0	77.0	17.3	40.4	58.3	12.6	48.3	30.7
Intermediate education	52.7	34.8	43.1	18.2	27.3	32.2	26.0	47.4	22.9	19.6
High education	35.2	56.0	7.9	4.8	55.4	27.3	15.7	40.0	28.8	49.7

Notes: Own calculations, weighted. Years 2010 and 2011 (pooled). Adult population aged 25 to 64 years. Number of observations $n = 76,574$. Only first-generation immigrants. Weekly gross wages for people in contractually agreed full-time employment ($>39h$) only ($n = 33,329$). (CH = Switzerland, DE = Germany, YU = former Yugoslavia, PT = Portugal, FR = France, IT = Italy, TU = Turkey, AT = Austria, ES = Spain, Other = Other countries).

Swiss natives for high (Spain, Portugal) and very high (former Yugoslavia, Turkey) social distance immigrant groups.⁸

Model 2 indicates the net disadvantages of migrants, controlling for individual levels of education. The important role played by education was evident: in comparison to people with low levels of education, people with intermediate education levels earned about 10 per cent more income; highly qualified individuals even earned 50 per cent more income on average. The wage differences between the Swiss-born group and immigrants were smaller compared to model 1 and the social distance groups followed the assumed hierarchy (Table 1), which supports hypothesis H1. When the same formal level of education was present, low social distance countries did not differ significantly from Swiss natives. Wage penalties of 7 per cent were found for medium social distance immigrant groups. Marked wage penalties of 17 per cent were found for high social distance groups and penalties of 22 per cent were found among immigrants from the former Yugoslavia and Turkey, which represent the very high social distance category.

This hierarchy still applied when controlling for variables on the company level (company size and tenure), industry and occupation effects (Model 3). Differences in salaries between Swiss-born individuals and immigrants were still significant but they further decreased. Germans and Austrians again earned the highest salaries among the immigrant groups – they even earned slightly higher salaries than natives. Taken together, the results confirmed the hypothesis of greater ethnic disadvantage when there is a large social distance from the receiving society.⁹ The differential effects of education were evident in Model 4. The social distance categories and the education categories were combined to form 15 groups, with Swiss-born individuals who had not obtained any formal qualification being the reference group. Thus, there was support for hypothesis H2, which postulates that the formal level of education has a different impact on wages depending on the social distance group.

Three points became evident. First, immigrants from the low social distance group could effectively capitalize on their qualifications. An unexpected finding was that even those without any qualifications earned quite a high salary. Second, immigrants from medium and high social distance countries benefitted markedly from their university

Table 3. Social distance (SD), educational qualifications and wages in Switzerland (OLS).

	M1	M2	M3	M4
Swiss natives (ref)				
Low SD	0.064***	0.016+	0.020*	
Medium SD	-0.088***	-0.071***	-0.026**	
High SD	-0.338 ***	-0.169 ***	-0.045***	
Very high SD	-0.357 ***	-0.219***	-0.084***	
Other country	-0.058***	-0.084***	-0.029***	
Education low (ref)				
Education medium		0.108***	0.071***	
Education high		0.433***	0.239***	
Swiss/educ low (ref)				
Swiss/educ med				0.081***
Swiss/educ high				0.245***
SD low/educ low				0.110***
SD low/educ med				0.101***
SD low/educ high				0.253***
SD med/educ low				-0.046*
SD med/educ med				0.051**
SD med/educ high				0.237***
SD high/educ low				-0.039**
SD high/educ med				0.002
SD high/educ high				0.266***
SD v high/educ low				-0.072***
SD v high/educ med				0.001
SD v high/educ high				0.083**
Not married (ref)				
Married	0.011*	0.011*	0.009*	0.009*
Male (ref)				
Female	-0.204***	-0.166***	-0.166***	-0.166***
No children (ref)				
Children	0.106***	0.092***	0.083***	0.084***
Female×Children	-0.085***	-0.082***	-0.088***	-0.088***
Age centred	0.005***	0.006***	0.005***	0.006***
Age centred ²	-0.000***	-0.000***	-0.000***	-0.000***
Region	YES	YES	YES	YES
Firm level	NO	NO	YES	YES
Industry/Occupation	NO	NO	YES	YES
Constant	5.567***	5.359***	5.503***	5.495***
N	52,796	52,796	52,796	52,796
R ²	0.547	0.595	0.664	0.664

Notes: OLS regression analyses. Years 2010/11 (pooled). Adult population aged 25 to 64 years. Only first-generation immigrants, who obtained their highest qualification outside Switzerland. Further control variables: working hours, year, self-employment.

***p<0.001, **p<0.01, *p<0.05, + <0.01.

degrees, whereas immigrants from very high social distance countries only benefitted to a lesser extent. Generally, however, this finding suggests that university (tertiary) education is a crucial element for overcoming social distance.¹⁰ Third, immigrants who came from high or very high social distance countries with intermediate-level education only earned about as much as Swiss-born individuals without any educational qualifications. This was probably due to major differences in these countries' vocational training systems.

Social distance, length of stay and citizenship

The next step was to test the assumption that Swiss citizenship and length of stay in the receiving country are of particular importance for high and very high social distance groups (Table 4). Models M1 only included a dummy variable for Swiss citizenship. Having obtained Swiss nationality proved to be important for immigrants from very high social distance countries (the former Yugoslavia and Turkey); they earned about 5 per cent more than those without Swiss citizenship. This result confirms the assumption that citizenship is particularly important for people who do not come from the Western world (hypothesis H3). Models M2 included the citizenship dummy variable as well as a measure for length of stay in the country of residence, i.e. Switzerland. Given the high correlation between Swiss citizenship and length of stay, the models tested whether being a Swiss citizen offered additional benefits, taking length of residence into account. For high and very high social distance immigrant groups, length of stay had a significant effect on wages. This was not the case for immigrants from low and medium social distance countries, which indicates support for hypothesis H4. However, Swiss citizenship no longer had any significant effect on wages for the very high social distance group as soon as length of stay was included in the model.

Discussion of results and outlook

As expected, immigrants from Germany and Austria, who have a great social closeness to Switzerland, were very well integrated within the Swiss labour market. By contrast, a not entirely expected finding was that both groups in fact enjoyed significant wage bonuses in comparison to Swiss citizens. One possible reason is that both of these immigrant groups perform specialist tasks and help ameliorate the skills shortage in Switzerland in positions requiring advanced qualifications. The disadvantages experienced by immigrants compared to natives were particularly large when the social distance from the receiving society, Switzerland, was great.

Education is an important means of economic integration of migrants in Switzerland. However, the value of educational qualifications on the labour market also varies by the degree of social distance. Upper secondary-level qualifications lost their value when immigrants came from a country with a dissimilar training system. Nevertheless, higher education qualifications (e.g. university degrees) paved the way for high wages for almost all immigrant groups.

Swiss citizenship was of benefit for immigrants from the former Yugoslavia and Turkey; however, the effect diminished when length of stay was included in the

Table 4. Length of stay, citizenship and wages, differentiated by social distance country groups.

	Low social distance		Medium social distance		High social distance		Very high social distance	
	M1	M2	M1	M2	M1	M2	M1	M2
No Swiss citizenship (ref)								
Swiss citizenship	0.006	-0.008	0.018	0.022	-0.021	-0.029	0.056*	0.034
Length of stay (years)		0.002		-0.001		0.004*		0.008***
Sociodemographics	YES	YES	YES	YES	YES	YES	YES	YES
Region	YES	YES	YES	YES	YES	YES	YES	YES
Firm level	YES	YES	YES	YES	YES	YES	YES	YES
Industry/Occupation	YES	YES	YES	YES	YES	YES	YES	YES
Constant	5.638***	5.625***	5.489***	5.500***	5.711***	5.654***	5.335***	5.210***
N	3952	3952	2122	2122	1154	1154	1604	1604
R ²	0.594	0.594	0.675	0.675	0.653	0.654	0.670	0.674

Notes: OLS regression analyses. Years 2010/11 (pooled). Adult population aged 25 to 64 years. Only first-generation immigrants, who obtained their highest qualification outside Switzerland.

***p<0.001, **p<0.01, *p<0.05, + <0.01.

model. This might simply be due to the fact that the likelihood of obtaining Swiss citizenship rises with length of stay in the country of residence. As hypothesized, length of residence in Switzerland affected wages positively for high and very high social distance groups.

Overall, this study makes several important contributions to the literature. It proposes a more sophisticated measure of social distance that not only takes into account culture but also language and the education system. This has allowed differences to be detected, not only between Western European and other countries, but also among Western European countries. The analyses were based on unique data with the oversampled foreign-born population. Therefore, and in contrast to other studies, it was possible to make representative statements on the labour market integration of a variety of immigrant groups in Switzerland. This allowed the extent to which the effects of education, citizenship and length of stay – which have turned out to be relevant in other studies – depend on social distance.

Like other labour force surveys, the SLFS makes it possible to consider a range of potentially relevant features, from socio-demographic characteristics to regions and from industry sectors and occupations to company characteristics. Still, the Swiss Labour Force Survey does not contain any information on individuals' actual language knowledge. It is also not possible to determine the extent to which immigrants from the former Yugoslavia are in fact subject to discrimination, as we do not have any data on prejudices or on employers' concrete behaviour. It is therefore preferable to speak of an ethnic penalty in our study (Heath and Cheung, 2007; Heath and Martin, 2013). This more broadly based concept encompasses both unmeasured and unobserved personal characteristics and discrimination. Another shortcoming is the cross-sectional nature of the data. It is therefore not possible to statistically separate aging/residency and immigration-cohort effects (Borjas, 1987). Future research on social distance should therefore also apply longitudinal data analyses.

The measure of social distance used here was tailored to Switzerland and the external validity of the results proposed should be checked by applying this measure to other countries. Generally, countries differ markedly in their integration context, including the labour market, housing, religion, language and legislation (Crul and Schneider, 2010). This means that the measure of social distance would have to be modified or extended in some areas depending on the receiving country under investigation.

The results also have some implications for integration policies. These policies should particularly address those groups that are socially distant from Switzerland. Policies should include targeted language training and education. Ongoing resentment towards immigrants will certainly lead to further disintegration in several areas of society, including in the labour market. It remains to be seen how Swiss initiatives such as the recent 'Against Mass Immigration' initiative will affect the Swiss economy. This proposed reform also applies to EU citizens, among them many highly qualified population groups. Switzerland only has an average share of university graduates in international comparison (OECD, 2013: 35). Theories on skill-biased technological change emphasize the increasing demand for these graduates in advanced labour markets (e.g. Acemoglu, 1998). Skill shortages in higher professional positions can be expected.

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Notes

1. Prejudices are understood as being heavily generalizing and simplifying (positive or negative) ascriptions to a group (Allport, 1954) that are often rooted in a poor knowledge of the group in question.
2. The referendum also reflects the influence of the right-wing Swiss People's Party (Schweizerische Volkspartei, SVP), which has grown in importance over the last few decades to become the strongest political party in the country. Migration is one of its most central political issues.
3. For instance, a beta value of 0.4 would be interpreted as a percentage change of $e^{0.4} = 0.49$.
4. According to the European Commission (2003) a medium-sized company employs 50 to 250 persons. Unfortunately, the SLFS does not allow researchers to differentiate firm size categories above 100 employees.
5. The economic sectors included in the SLFS are based on NOGA (*Nomenclature générale des activités économiques*) 2008.
6. These are: Genève; Lausanne; Biel/Bienne; Bern; Basel; Aarau – Olten; Zürich (reference category); Winterthur – Schaffhausen; St. Gallen; Chur; Luzern; others (Sion, Fribourg, Neuchâtel, Bellinzona, Lugano).
7. It could still also be argued that the allocation to specific firms, occupations or industries does not reflect the free choice of migrants. Some might be forced to do jobs they did not strive for due to existing entry barriers on the labour market.
8. For interpretation of coefficients see *Data source, variables and methodology* section.
9. Additional analyses were conducted in order to check whether individual country effects were similar *within* social distance country groups. Controlling for socio-demographic characteristics and individual levels of education revealed that there were similar effects for countries within social distance groups in general. However, wages for Italians were unexpectedly low. One reason for this might be that although Italian is also a Swiss national language, compared to French it has quite low prevalence rates among Swiss people and therefore brings fewer advantages on the labour market. Moreover, most Italian immigrants were working in the German-speaking part of Switzerland, where they could not make much use of their mother tongue. Another interesting result was that disadvantages for French and Spanish immigrants were non-existent when also controlling for firm-level variables, industry and occupation. This suggests that discrimination might exist at the entry points of specific firms, occupations and industries, but once access has been granted, disadvantages disappear. Also Swiss citizenship had a significant effect on wages for immigrants from Italy, which was not expected.
10. More detailed analyses have shown that within the group of very high social distance countries the wage benefits for immigrants with tertiary education from Turkey is similar to immigrants from Western European countries. There is no wage benefit in this category for immigrants from the countries of the former Yugoslavia.

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