DRIVERS OF IMMIGRANT EMPLOYMENT IN SWITZERLAND

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Faculté de Droit, des Sciences Criminelles, et d'Administration Publique

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Drivers of Immigrant Employment in Switzerland

Thèse de Doctorat

présentée à la

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pour l'obtention du grade de
Docteur en administration publique

par
Daniel Auer

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Jury

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Prof. Giuliano Bonoli, University of Lausanne, supervisor
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1 Synopsis

In modern societies, labour market participation is considered essential for immigrants[1] in order to be regarded as 'integrated'. Moreover, paid work generally increases societal participation and reduces welfare dependency. Hence, it is in the interest of both, immigrants and the host-country society, to ensure a high level of labour-market integration.

Initially, it is important to highlight that 'labour-market integration' describes a broad concept with various outcomes. While access to employment per se might be essential, many (economic) studies investigate post-labour-market entry outcomes, particularly - but not exclusively - immigrant earnings. For instance, Barrett and Duffy (2008) investigate labour market positions of immigrants as a form of occupational ranking, while Fernandez and Ortega (2008) investigate native-migrant differences in terms of contract types and job-qualification matches. Analyses of immigrant earnings, their development over time and relative to native wages, as well as the economic incentives of (return-)migration, are amongst the most common studies related to immigrants' labour market integration (e.g. Baker and Benjamin 1994; Chiquiar and Hanson 2005; Damm 2009; Pan 2012; Dustmann and Görlach 2015 and 2016). Often, studies focus on so-called 'earnings differentials', which are usually estimated on an aggregated level. Grogger and Hanson (2011), for instance, use OECD emigrant stock data to show that individuals seek to maximise future earnings when deciding to migrate to a specific country and sort themselves accordingly based on their educational attainment. Ottaviano and Peri (2012) analyse the long-run effect of immigration on wages of natives as well as of previous immigrants. Micro-level approaches, in turn, often analyse the so-called 'earnings assimilation', that is, whether immigrants are able to close a potential income gap over time, with mixed conclusions (e.g. Borjas 1987 and 1995; Hu 2000; Lubotsky 2007).

The focus on employment outcomes of immigrants, that is, access to paid work, is emphasised by scholars who argue that access to employment represents the initial, yet most important prerequisite for a successful social integration into the host society, including possible subsequent employment-related advancements (e.g. Rendall *et al.* 2010; Kalter and Kogan 2014). In fact, it has been shown that 90% of discrimination against minorities (see Section 1.2.2 below) happens at these first stages, meaning that immigrants are often even denied the 'chance to prove' themselves in the labour market (see Riach and Rich 2002). Consequently, employment (or unemployment duration) is also a key outcome of the studies we conducted within this project (see **articles #2 and #3**).

Especially proponents of experimental investigations focus on the initial phases of the hiring process, such as invitations to job interviews (e.g. Carlsson and Rooth 2007). This is not only because experimental data is capable of producing robust results, while the usage of

[1] In this thesis, we apply different definitions of 'immigrant', ranging from so-called second generation immigrants, i.e. persons with parents originating from outside the host country, to first-generation non-naturalised immigrants, to very specific groups such as refugees. For simplicity, the general term 'immigrant' shall represent all these groups in this introduction, while 'native' represents all individuals not belonging to the group of immigrants.

fictitious applications at this stage is feasible and usually ethically acceptable.[2] Moreover, gaining a better understanding of the interplay between migration-related aspects and employer behaviour during the hiring process can provide valuable insights for societal mechanisms in general. We contribute to this growing literature by studying employers' hiring behaviour in quasi-experimental settings to draw inferences about the fundamental drivers of differences in native-immigrant labour-market outcomes (see **article #1**).

Independently of the outcomes of interest, the underlying fundamental question always is '*what aspects ensure successful labour-market integration?*' The most straightforward, yet accurate answer to this question is a combination of *human and social capital* or simply *skills* (e.g. Checchi 2006; Heckman *et al.* 2006). In principle, this general relationship between skills and labour market integration holds independently of origin, that is, migrant status. Persons with higher or, more precisely, *compatible* skills are more likely to be in employment and to earn higher wages. Relevant skills thereby include both, human capital, such as education or on-the-job training, and social capital, ranging from networks that help finding a job, to appearance, punctuality, or communication skills. One can also refer to this combination of human- and social skills as *employability*.

However, there are numerous accounts of immigrants faring worse in a host-country's labour market. Their labour-market participation rates are mostly below the ones of natives, unemployment is usually higher (e.g. Heath and Cheung 2007; McGinnity and Lunn 2011), and employment-outcomes such as earnings or promotions are worse, too (e.g. Ebner and Helbling 2016). As has been shown, differences in individual employability between natives and immigrants - such as lower educational attainment or a lack of social capital - partly explain worse outcomes (e.g. Aguilera and Massey 2003; Dustmann and Fabbri 2003; Koopmans 2016). Yet, the picture is far from complete. Moreover, the direction of mechanisms if often unclear: is an immigrant denied employment in a host-country's medical sector because she lacks the necessary skills or because her skills are not recognised? Do immigrants have more difficulties in finding a job through their network because they lack the social capabilities to 'integrate' or because they are excluded from a closed majority group? To answer these questions, it is important to understand the very functioning of *employment*, that is, what role do employers play when it comes to granting immigrants access to jobs? Are individual skills affected by policies and could a (perceived) difference in native-immigrant employability be systematically present across a society?

1.1 The Swiss Context

The particular studies in this thesis seek to draw generalisable answers to these questions based on Swiss data. While the focus on Switzerland allows to investigate unique policy settings (see **article #3**), it also comes with additional advantages. The country has a long-standing tradition as a pluralistic society in several ways. On the one hand, the state itself consists of four different language regions (German, French, Italian, and a smaller Romansh enclave), whose

[2] In a related experiment, we are currently investigating ethnic discrimination on the Swiss housing market (Auer *et al.* 2018).

specific socio-cultural characteristics go beyond differences in communication. These regions largely follow political borders at the cantonal level, which themselves are equipped with a relatively high level of political independence, including varying approaches towards immigrant integration and economic performance (e.g. Grin and Sfreddo 1998; Demont-Heinrich 2005; Federal Office of Statistics 2014; Eugster *et al.* 2017). As Grin (1998, 3) states: "[...] living in Switzerland means living entirely in German [...], in French or in Italian." On the other hand, the country is host to a large and diverse group of immigrants, particularly but not exclusively from European countries. Immigration policy in the last decades has been subordinate to the needs of the economy, initially manifested in the so-called 'guest-worker approach' (Piguet 2005; Ruedin *et al.* 2015). The government allowed Swiss employers to recruit temporary workers with requested skills from countries considered culturally similar (Italy, Spain, Greece, Portugal), with the goal to sustain high labour supply while preventing permanent settlement and growing cultural heterogeneity of the Swiss population at the same time (Becker *et al.* 2008; Pineiro and Haller 2012). This guest-worker approach of the 1960s was gradually suspended amid growing international pressure and replaced with a tiered labour-market model in the 1990s (Mahnig and Piguet 2003). Again, the new system regulated labour market access based on a notion of cultural proximity or distance from the Swiss majority population. Initially, it consisted of three 'circles': culturally and geographically close EU/EFTA countries, followed by the United States, Canada, Australia and New Zealand, which were deemed culturally similar and were expected to provide high-skilled labour, versus all other countries, which occupied the least preferred third circle (Becker *et al.* 2008). With the introduction of the free movement agreement with the European Union in 1998, the three-circle model was replaced by a simplified two-circle model, distinguishing between immigrants from EU/EFTA countries (the preferred group) and those from non-EU/EFTA, so-called 3^{rd}-countries (Becker *et al.* 2008). In general, this relatively restrictive tiered system reflects the country's desire to steer immigration based on social adaptability and conformity to cultural elements of the host society (see Section 1.2.2 below), such as values, religion, and beliefs (see also State Secretary for Migration 2015). At the same time, with a share of approximately 28% foreign-born among the resident population, Switzerland has one of the largest immigrant populations in Europe (Eurostat 2016). Hence, one can conclude that despite its selective approach toward immigration in general, interaction and co-existence with foreign born has been a constant in the younger history of the country.

From an economic-integration perspective, the Swiss case is particularly interesting. On the one hand, the critical stance on immigration is reflected in both, the countries policies and in the public debate, resulting in so-called *ethnic penalties*, that is, the difference in native-immigrant labour-market outcomes, which are comparable in their extent to other European countries (e.g. Midtbøen 2015). On the other hand, Switzerland's economic performance is exceptionally strong, resulting in a constantly high demand for labour and even labour shortage in specific branches (BSS 2014). Hence, immigrants can be expected to face fewer obstacles caused by human- or social-capital shortcomings than in countries with an abundant supply of qualified labour. In other words, the Swiss labour market has less freedom of choice, thereby enhancing immigrants' chances to succeed and arguably rendering differences in labour-market outcomes vis-à-vis natives a conservative estimate of disadvantages in other countries. Related,

Switzerland also provides an adequate case to study employers' hiring behaviour, as the topic of (further) restricting labour immigration currently receives much attention, with a quota system being regularly discussed. Hence, one can expect employers to unveil their true preferences more readily because they are afraid of being neglected in the political game.

1.2 Drivers of Immigrants' Labour-Market Disadvantage

In the following, I am going to argue that immigrants' labour market disadvantage can be explained by four different drivers. *First*, as mentioned, differences in existing human and social capital - read *skills* or *employability* - can determine labour market success relative to natives. *Second*, a host-country's society's attitudes towards immigrants can affect their labour market success. According to this concept of *discrimination*, (residual) differences in labour market outcomes are explained by differential behaviour of a majority population towards its in-group peers vis-à-vis the immigrant out-group. *Third*, specific policies can affect individual human capital endowment (e.g. acquiring additional skills) and consequently alter the skill composition of immigrants relative to natives. I label this *integration-policy effects*. Eventually, *fourth*, policies can also affect how immigrants are enabled to applying their existing skills. That is, such *immigration-policy effects* do not change individual skill composition, but affect how these skills can be used in the host-country labour market, for instance, through recognition of educational attainment.

One could formulate a very simplistic model of labour-market success of the following form:

$$Y_i = \beta_1 + \beta_2 Emp_i + \beta_3 Dis_i + \beta_4 Ipol_i + \beta_5 Mpol_i + \epsilon$$

... with Y being the specific labour-market outcome of individual $i = \{M_{migrant}; N_{native}\}$ belonging either to the native or immigrant population, with level of employability Emp and, if $i = M$ exposed (or not exposed if $i = N$) to discrimination exerted by the majority group Dis, to direct integration policies affecting human capital endowment $Ipol$, and to indirect immigration-related policies $Mpol$.

1.2.1 Differences in Employability

Referring to individual employability, the literature has shown that differences in skill endowment can explain differences in labour market outcomes between natives and immigrants (or between other groups, e.g. O'Neill 1990). Along these findings, proponents of a meritocratic understanding of employability argue that - at least over time - achieved characteristics are more important than ascribed characteristics; or, as described by Erikson and Goldthorpe (1992:6): "What counts is increasingly what individuals can do, and not who they are." Thereby, most investigations focus on human and social capital aspects that require some 'assimilative effort', such as acquisition of language skills or establishing social networks. However, it is important to emphasise that theses studies almost unisono stress the fact that human and social capital differences cannot account for the *entire* native-immigrant difference in labour market outcomes. For instance, based on two independent large-scale surveys in the UK, Leslie and Lindley (2001) and Dustmann and Fabbri (2003) find that English language ability among ethnic minority residents in Britain accounts for part albeit not all of the higher unemployment and

lower earnings that this groups faces. A similar study on the Swedish case by Duvander (2001) was not able to identify significant differences in unemployment risk and earnings if immigrants acquire Swedish education, are proficient in the host-country language, or living with a native partner (social ties). Grand and Szulkin (2002), in turn, show that country-specific human capital can reduce the earnings differentials particularly for those immigrant groups who are the most disadvantaged in the Swedish labour market. Scholars have subsequently expanded this meritocratic approach beyond host-country education and language proficiency towards a more socio-cultural notion of employability. In reference to the seminal work of Granovetter (1973), Bonoli and Turtschi (2015) and Lancee (2016), for instance, investigate the importance of social ties, especially how work-related contacts can improve immigrants' employment chances. Further, Koopmans (2016) has shown that productivity-relevant socio-cultural capital, such as language proficiency, inter-ethnic social ties, and gender values, strongly affect labour market participation of Muslim groups in Germany. Taking these socio-cultural traits into account renders differences in labour market participation and unemployment between native ethnics and the Muslim groups minimised and largely insignificant. Similar results on the importance of language proficiency on earnings are stressed, for instance, by Bleakley and Chin (2004) and Isphording (2013). In an article based on encompassing survey data, which has been merged with administrative information by the unemployment registry in the Swiss canton of Vaud, we investigate whether such productivity-relevant socio-cultural traits could provide an explanation for immigrants' prolonged unemployment durations (Auer *et al.* 2017). The public debate sometimes ascribes weaker work values to immigrants (e.g., acceptability of remaining on benefits), which, in turn should explain higher unemployment rates. Indeed, we find that - next to educational attainment - social-capital characteristics in form of the quality of a person's informal network, higher levels of psychological well-being, and indicators of unemployment being a burden ('work ethics') significantly reduce unemployment durations of immigrants. However, they explain only a small share of the overall disadvantage that some immigrant groups experience. We conclude that at least some of the large differences we observed in unemployment durations are likely to be due to other factors including discrimination by employers (see section 2.2 below).

In addition, heterogeneity in the effect of skills on labour market success between natives and migrants stems from the fact that employer's assessment of skills (i.e. perceived productivity) varies across groups. As stressed for instance by Friedberg (2000), "the national origin of an individual's human capital is a crucial determinant of its value." He shows that foreign skills acquired through education or labour-market experience are valued less than domestic ones and that this penalty accounts for the entire earnings disadvantage of immigrants in Israel. This finding has been corroborated for other labour markets, such as the Canadian (see Ferrer and Riddell 2008). For the United States, Chiswick and Miller (2009) infer that a malfunctioning international transferability of skills leads to situations of over-qualification of immigrants in various jobs, which increases with an immigrant's level of education and a short period of residence in the US. The same increasing shape of the penalty on non-domestic human capital has been highlighted Barrett *et al.* (2012). Similarly pointed out by Dahlstedt and Bevelander (2010) for Sweden and Buzdugan and Halli (2009) for Canada, and recently Lancee and Bol (2017) for 11 European countries, assessments of human capital quality in terms of years-in-education

disregard the decisive effect attached to place of acquisition (host-country or country of origin), with a possible plethora of influencing factors in-between.

In sum, differences in employability between natives and immigrants depict an important piece of the puzzle explaining immigrants' labour market disadvantage. However, neither do differences in skills *fully* explain differential outcomes, nor do they answer the question of *why these differences exist in the first place.* In the following sections, I am going to provide three types of factors that influence immigrants' (perceived) employability and its match with the demands of a host-country's labour market.

1.2.2 Social Distance Perceptions and Discrimination

Initially, a large number of studies attribute differences in labour-market success between natives and immigrants to (ethnic) discrimination against the minority group, that is, the systematic differential treatment of individuals based on group association.[3]

A growing literature has shown that the occurrence of discrimination is not a dichotomous phenomenon. Rather, a more graduated approach applies, according to which group-preference or disadvantage patterns are heterogeneous and depend on a complex web of various dimensions affecting the perceived cultural or social *proximity* between two individuals or groups. This differential perception of distance leads to so-called *ethnic hierarchies* (Hagendoorn 1993 and 1995; Fibbi *et al.* 2006; Auer *et al.* 2018), which is often defined as the degree of 'sympathetic understanding' for another group (Bogardus 1959; Alba and Nee 1997; Ebner and Helbling 2016). In the labour-market context, lower social distance, for instance because of a shared language or a common history between two groups, comes with a higher likelihood of economic success, since discrimination-induced disadvantage is absent or less severe compared to individuals who are perceived to be socially more distant (e.g. Portes and Rumbaut 2001; Van Tubergen *et al.* 2004). Despite a general acknowledgement of the existence of social distance perceptions, their measurement represents a rather contested field. For the Swiss case, we base our concept of social distance on existing research, corroborated by national legislation and interviews with involved actors. As described in Section 1.1 above, Switzerland relies on a tiered immigration regime, which strongly differentiates between immigrants from countries perceived as socio-culturally close (European Union/EFTA) and so-called 3^{rd}-countries. Moreover, a foreign nationality - especially in the case of 3^{rd}-country citizens - often overlaps with other easily observable traits such as ethnicity and/or religion. Such markers of group membership are an important source of discrimination in all social spheres, not least in the labour market (e.g. Weichselbaumer 2016). With respect to skin colour or religion, the notion of taste for discrimination (Becker 1974) rather than productivity-related (statistical) discrimination (Phelps 1972) becomes a particularly plausible explanation for immigrants' labour market disadvantage. This notion of social distance is taken up, for instance by Ebner and Helbling (2016), who show

[3]Usually, discrimination is defined as an *observable* and *unjust* difference in the treatment of distinct groups. However, in a related study (Auer and Ruedin 2018), we show that reporting discrimination depends on individual traits that shape whether discrimination is *accepted* and whether immigrants *identify* with the host society. We conclude that individual-level measures based on observable differences merely approximate discriminatory patterns.

that earnings of immigrants in Switzerland originating from countries with a very high social distance are substantially lower than of 'preferred' immigrant groups. For a detailed description of the operationalisation of social distance in the studies of this thesis, see Sections 2.2.1 and 3.4.

In order to uncover discrimination, either dichotomously or using the concept of social distance, quantitative research relies on two main methodological strands: First, studies on discrimination often apply a so-called *residual approach*, where employment-relevant individual human and social capital is accounted for as good as possible. The remaining differences in outcomes, which consequently cannot be explained by differences in skills, occur because of unobserved mechanisms, predominantly discrimination (e.g. Ballarino and Panichella 2015). We, too, contributed to this literature with two studies on immigrants' unemployment durations in the Swiss canton of Vaud (see above Auer *et al.* 2017). Relying on the same hybrid data consisting of administrative- and survey-information, we also investigate whether unemployed individuals who were born abroad and/or held a foreign nationality differ in terms of re-employment chances compared to native job-seekers (c.f. Auer and Fossati 2016). While causal evidence for discriminatory practices is generally difficult to provide with registry data, with the hybrid data source available to us, we follow the residual approach and argue for a design that minimises potential alternative explanations. Our findings are based on real labour market behaviour and show that, when controlling for human capital and employability criteria, individuals stemming from non-EU countries and/or who are not born in Switzerland face unemployment durations that are up to 80 days longer compared to Swiss natives, a penalty of almost 40 per cent.

The second strand of literature tries to circumvent the issue that residual studies face, that is, claiming that discrimination is the most important among the arguably large 'black box' of unobserved mechanisms. To avoid the need for relying on this strong assumption, differences in labour-market outcomes are estimated using *experimental* data (e.g. Riach and Rich 2002). Thereby, both, labour demand ("Imagine you are looking for an employee in ..."), as well as individual skills can be kept constant across natives and immigrants. Moreover, the influence of individual traits that are unobserved in administrative data, such as appearance, punctuality, etc., can be minimised by either not stating, or by explicitly mentioning them, thereby, keeping their influence constant across groups. Zschirnt and Ruedin (2017) have recently conducted a meta-analysis of 43 experimental studies across 25 years, showing that "discrimination of ethnic and racial minority groups in hiring decisions is still commonplace." Related to this field of research, we conducted two factorial survey experiments with HR managers and hotel employers in Switzerland. In **article #1**, we propose a model that combines ethnic- and occupational rankings to predict whom employers favour for particular occupations (the *matching hierarchies model*; Auer *et al.* 2018b). The results indicate that employers' evaluations of non-natives follow socio-cultural distance perceptions and that a non-native background leads to disadvantage foremost in higher-skilled occupations. In low-skilled occupations, instead, having an immigrant background is less detrimental. We conclude that, in order to understand disadvantage patterns, it is important to be aware of contextual factors (occupational hierarchies) that may change the nature of ethnicity-based discrimination. In a second factorial survey experiment, we test whether HR managers' discrimination against candidates with a non-native background can

be counteracted by signalling assimilation into the (Swiss) host society (Fossati *et al.* 2017). Here, we vary the nationality of the candidates and different signals of cultural attachment to their background or to the host country. The findings reveal that candidates with Polish- and Turkish-sounding names are evaluated worse than candidates with Swiss- and Spanish-sounding names. More interestingly, however, signalling civic engagement within a traditional Swiss volunteering organization increases the opportunities given to individuals born to Polish and Turkish parents, while engagement in an organization connected to their parents' background dramatically damages their evaluation by prospective employers. We also show that candidates born to Polish or Turkish parents, who *whiten* their CVs and who indicate fluency in only the local language, fare much better than those who convey a cultural attachment to their country of origin. We conclude that there are limited opportunities to ameliorate the evaluation of a CV by signalling assimilation into the host country; conversely, non-whitened CVs and CVs that convey multiple signals of attachment to one's culture of origin are heavily sanctioned by assessments of lower productivity. In sum, both methodological strands, residual as well as experimental, describe an arguably unambiguous picture of immigrants being exposed to discrimination in various aspects of the labour market.

1.2.3 Integration-Policy Effects

As shown above, immigrants can lack the skills required for a host-country's labour market. They are also often exposed to discrimination on behalf of the majority population. However, countries have introduced regulations and policies that also affect immigrants' skills composition and how they can apply them. Therefore, it would be hasty to ascribe immigrants' labour market disadvantage entirely to their 'unfitness' or to natives' 'unwillingness' to host and integrate foreigners.

The first type, *integration-policy effects*, consists of policies that interfere with individual human-capital endowment, that is, they change the skills that an immigrant (or native) can put forward. Depending on the breadth of conceptualisation, one can identify many policies qualifying as *integration policies*. For instance, a government's decision to expand compulsory years of kindergarten participation alters individual years of schooling and, hence, the skills of all children involved (e.g. Margo and Finegan 1996; Duflo 2001). One particular area of research is dedicated to investigating *effect-heterogeneity* of policies related to human capital and labour market outcomes, either between natives and immigrants, or between other groups within a society (e.g. Card 1999; Chiswick and Miller 2008). We contribute to this literature by investigating the assignment mechanism to and the consequences of participation in training programmes and occupational measures under so-called *Active Labour Market Policies* (ALMPs).

Industrialised countries, including Switzerland, invest largely into measures that seek to mitigate potential hurdles, which might occur when immigrants try to enter the labour market. These measures range from language courses and job-related training to professional qualifications. Participation in such activation measures, with the goal of bringing jobless people back into employment, is often beneficial for unemployed individuals, particularly if their employability is low. However, some measures can affect labour market outcomes, such as unemployment

duration or post-unemployment wages, even in a negative manner due to human-capital deprivation, lock-in effects, or negative signals (e.g. Falk *et al.* 2005; Liechti *et al.* 2017; Auer and Rose 2018). For instance, Card *et al.* (2015) conclude that the labour-market effects of most ALMPs are close to zero in the short run and modestly positive 2 to 3 years after programme completion. Gains seem to be bigger for those interventions that focus on human-capital enhancement and wage subsidies in private companies (see also Martin and Grubb 2001). Kluve (2010) finds positive effects for wage subsidies and 'services and sanctions' and modest positive effects for training programmes, but negative effects for occupational programmes. For Switzerland the picture is similarly mixed and whether an ALMP is beneficial or detrimental for a participant's employment outcomes eventually *depends on the type of programme* (e.g. Duell *et al.* 2010). Lalive *et al.* (2008) apply a timings-of-event approach and find that none of the Swiss activation policies shortens unemployment duration. Arni *et al.* (2015) find that both, supportive and restrictive assignment strategies of caseworkers prolong unemployment duration, but the former increase while the latter decrease earnings.

In **article #2**, we elaborate and test a theoretical model of assignment to different ALMPs by caseworkers in the local job-center (Auer and Fossati 2016b). Based on administrative data that covers all newly registered job-seekers in Switzerland between 2010 and 2012, we find evidence for a systematic access bias against immigrants, whereby caseworkers assign unemployed individuals based on an so-called *competition logic*, which is driven by economic incentives, the job-centre's performance evaluation, and the anticipation of employer discrimination against immigrants. From the perspective of immigrants' labour-market integration, this may be problematic because it results in an over-representation (under-representation) of immigrants in activation measures with little (high) efficacy. Conversely, Swiss citizens are advantaged in accessing measures that promote human capital enhancement and that have been shown to be successful tools for labour-market reintegration (e.g. Bonoli 2010). It is plausible that this competition logic amplifies the general labour market disadvantages that immigrants must face. In other words, ALMPs as one form of policies that directly influence a person's skills, turn out to favour natives over immigrants in Switzerland.

At the same time, in a related study, we provide evidence that taxpayers' money for such activation measures is in fact better spent on immigrants than on natives (Auer and Liechti 2017). We arrive at this conclusion by investigating native-immigrant heterogeneity in participation effects of different active labour market programmes on employment probability, wages, and subsequent benefit recipiency, a topic which has been widely under-researched.[4] Theoretically, we argue that heterogeneous effects can provide information about the type of discrimination immigrants are possibly confronted with in the labour market (see section 2.2). Using encompassing administrative data from Switzerland, we observe all registered job-seekers in 2004, trace their past employment records and follow their monthly labour market trajectories over 10 subsequent years. Our findings are in line with earlier evaluations of ALMPs in Switzerland and elsewhere, which find that participation effects are limited and often even negative, independently of the type of labour market outcome (e.g. Card *et al.* 2010; Kluve 2006). How-

[4]For notable exceptions see, for instance, Butschek and Walter (2014).

ever, compared to natives, participation effects for migrants are more positive (less harmful) for effective (ineffective) activation measures. That is, employers value the additional productivity information of migrant candidates. These effects are statistically robust, substantial in magnitude, and stable across 10 post-unemployment years. Referring to section 1.2.2 above, we infer that labour market discrimination against migrants is based to a large extent on statistical reasoning on behalf of prospective employers (see also Baert and De Pauw 2014).

In sum, we find that, *first*, activation policies do seem to affect individual human capital (or at least employers' perception of changes in skills). *Second*, we show that effect-heterogeneity seems to favour immigrants (or generally individuals with lower perceived initial employability). This means that targeted investment in ALMPs can render activation policies successful. However, *third*, we also provide evidence that assignment mechanisms to the most successful measures in Switzerland largely favour natives over immigrants, thereby widening the gap in (perceived) employability between natives and immigrants, instead of closing it.

1.2.4 Immigration-Policy Effects

While active labour market measures and education policies in general affect individual human capital directly, and, as shown, possibly incur differences between natives and immigrants, other policies may affect immigrants' employability in an *indirect* manner. This is the case if regulations interfere with immigrants' access to the labour market or even to 'exerting their own skills' in a way that deviates from the majority group, that is, natives. For instance, after the enlargement of the European Union in 2004, most of the EU-15 imposed labour market restrictions for the new member states. These restrictions did not prohibit free movement of people per se, but disallowed immigrants to pursue professions in very specific branches of the host-country economy. Subsequently, heterogeneity in restrictions led to a relatively stronger influx of workers in more easily accessible labour markets, such as the UK, compared to more restrictive ones, such as Germany (e.g. Brenke *et al.* 2009; Holland *et al.* 2011).

Another field of occupational regulation, which has been subject to many studies in the social science literature, is characterised by restrictions regarding the recognition of foreign credentials, that is, education (e.g. Bauder 2005; Kogan 2006; Geis *et al.* 2013).[5] Often, immigrants have the skills required for a specific job recognised in their country of origin, but not in their host country, because requirements regarding content or duration of a qualification differ across countries, or simply because governments feel the need to protect their native work force. The impact of this phenomenon on immigrants' labour market success becomes more prevalent (and researched) in times when movements occur for political reasons and recognition of certificates becomes a secondary reason to decide over emigration.

Hence, immigration-related policies affect whether immigrants are able to 'access their existing human capital' and whether they have access to jobs suited for their skill set. Both restrictions arise for asylum seekers in most industrialised (read: highly regulated) countries,

[5]Often labelled *Social regulation of labour markets* in the context of non-orthodox economics (e.g. Hanson and Pratt 1995).

where they face difficulties in getting their professional training recognised and are exposed to work restrictions for different periods and sectors. In Switzerland, randomised attribution of asylum seekers across the country (e.g. Couttenier *et al.* 2017; Slotwinski *et al.* 2018) and its different language regions leads to a special type of 'accessibility of individual skills', which I investigate in **article #3** (Auer 2018): The Swiss policy of random (and binding) placement of asylum seekers across sharply separated language regions within the country allows to estimate the causal effect of language skills on employment chances, as refugees are exogenously placed across regions where the spoken language could either match or deviate from individual language skills. The results of this natural experiment show a substantially higher probability of finding employment when asylum seekers are placed in regions with a lingua franca that matches their individual language skills. In a second analysis, referring to integration policies presented in section 1.2.3 above, I show that language course participation can offset the reduced likelihood of employment in cases of a language mismatch. That is, promisingly, providing an activation measure that directly affects the (language) skills of refugee-job-seekers turns out to be beneficial for these individuals' labour market success.

Overall, several of our studies contribute to the body of literature that investigates policy-induced disadvantages of immigrants in the labour market, thereby stressing the need to look beyond the unidimensional aspects of discrimination and skills-mismatch. In fact, we highlight that *integration* and *immigration policies* can play a decisive role for immigrants labour market success. As I will highlight in the next section, a question of fundamental importance for future research is to investigate how such policies are interlinked and possibly mutually self-reinforcing with immigrants' skill deficits and their exposure to discrimination.

1.3 Conclusion

In sum, *discrimination* continues to be a plausible explanation for differences in labour-market outcomes between natives and immigrants. While survey-based analyses (Auer and Ruedin 2018) and residual approaches (e.g. Auer and Fossati 2016; Auer *et al.* 2017) have to rely on strong assumptions, the findings of such broad analyses among representative population-samples are repeatedly confirmed by experimental studies (e.g. Fossati *et al.* 2017; Auer *et al.* 2018 and **article #1:** Auer *et al.* 2018b).

At the same time, immigration-related *policies* can be decisive, yet sometimes negative factors for immigrants' labour market success.

On the one hand, we show that enhancing immigrants' human capital can turn out to be a powerful tool to mitigate differences in labour market outcomes, even among the most vulnerable groups such as asylum seekers (**article #3:** Auer 2018). In fact, we provide evidence that active labour market measures are more beneficial (respectively less detrimental in case of ineffective programmes) for immigrants than for natives (Auer and Liechti 2017). We provide a possible explanation based on for this finding in related studies (Auer and Rose 2018; Liechti *et al.* 2017), where we argue that *statistical discrimination* dominates employers' perception. From a policy perspective, this can be regarded promising insofar as relevant adaptations in

the incentive structure of caseworkers and a subsequently improved assignment of immigrants to beneficial activation measures can have positive effects on their employment success.

On the other hand, we have shown that the effects of integration and immigration policies currently in place in Switzerland are often detrimental for immigrants' skill acquisition as well as skill utilisation, thereby hampering immigrants' labour market integration instead of promoting it (Auer and Fossati 2016b; Auer 2018). Whether these effects are unintended or the result of a self-reinforcing interdependency with (ethnic) discrimination in a society, remains to be answered case-by-case. Future research should therefore investigate the foundations of such policies and their implementation. Are restrictive or detrimental immigration-related policies the result of widespread sentiments among the native population? Do such policies reinforce the harmful nature of discrimination against immigrants? For activation measures in Switzerland, this assumption seems to hold, as we show that migrants are overrepresented in activation measures with little efficacy (**article #2:** Auer and Fossati 2016b). Arguably, this is because caseworkers are able to shift the blame of discriminatory behaviour towards potential future employers. Put differently, discrimination affects street-level bureaucrats in their decision-making, which they justify by employers' negative evaluation of immigrants, which, in turn, is justified by immigrants' lack of labour market fitness, which, again, is emphasised by detrimental policies and selective assignment to activation programmes by job-centre caseworkers. If political or societal goals do not prioritise immigrants' integration, such self-reinforcing patterns can easily occur. In contrast to incidents of *statistical discrimination*, counteracting people's *taste for discrimination* provides a challenge that goes beyond short-term labour-market policies.

In order to achieve a better understanding of the fundamental drivers of immigrant employment disadvantage, future research should put its focus on *discrimination formation*. What motivates systematic disadvantaging of minority groups? Is the policy-making process biased towards compliance with its constituents' perception instead of facilitating immigrant integration? And, if yes, how can this self-reinforcing interdependency be broken?

1.4 Outlook

In the following, I briefly present three avenues for expanding this thesis and for conducting future research in the field of labour market integration of immigrants.

What 'Triggers' Discrimination?
Together with Didier Ruedin (Universities of Neuchâtel and Witwatersrand), we are designing a vignette study that will test the trade-off between discrimination and economic utility. Thereby, we randomly vary the scarcity of resources (in our case: employees, work colleagues, social networks) to assess whether and to what extent respondents change their discriminatory stance when confronted with situations where, for instances, labour supply is scarce, that is, when they can only choose from a limited number of job candidates.

Related, together with colleagues from NCCR and the Swiss Forum for Migration (SFM), Julie Lacroix, Eva Zschirnt, and Didier Ruedin, we are currently running a large-scale experi-

ment on *discrimination in the Swiss housing market*. By conducting this correspondence study on the national level and across all levels of urbanisation, we are able to better understand the effect of scarcity (here: supply of suitable renters of an apartment) on discriminatory practices. Hence, both studies will advance our knowledge on the nature and drivers of discrimination (statistical vs. taste).

A 'Large-Scale Integration Experiment'

While random attribution of asylum seekers in Switzerland and elsewhere gains much attention, a common European placement mechanism - once introduced on a large scale - will likely resort to a similar logic. It will be interesting to test economic and societal effects of some exogenously imposed placement in a region of almost 500 million residents.

Until then, I seek to conduct a study whereby I make use of differences in placement regulations across European countries. Other countries besides Switzerland, such as Germany, the UK, and - partly - the Scandinavian countries, have introduced a quasi-random placement mechanism. Circumventing the issue of self-selection into a specific host-country, exploiting the differences in placement mechanisms across European countries can *(a)* provide robust evidence on the key drivers that constitute successful labour market integration, and *(b)* provide valuable insights about the (economic) consequences of different placement mechanisms.

Book Spin-Off

We conducted several studies using different methodological approaches, different underlying data structures, and different population samples. To a surprising extent, however, our findings have been consistent throughout. Independently of perspective, we find stable patterns of immigrant-disadvantages in terms of employment outcomes, access to the labour market, and access to human-capital-enhancing programmes. Thereby, we contribute to the literature on active labour market policies and the different mechanisms that define a programme's efficacy. We further link participation in activation measures with heterogeneous effects on labour market outcomes between groups. Eventually, we show that ALMP efficacy and labour market outcomes are mirrored in the perception of candidates and of activation measures by potential employers, thereby, describing their so-called *signalling value* in several ways. It stands to reason that a book jointly written by the co-authors of these studies provides a promising possibility to elaborate and structure our findings.

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2 Article #1: The Matching Hierarchies Model

The matching hierarchies model: Evidence from a survey experiment on employers' hiring intent regarding immigrant applicants

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Abstract

We seek to understand why immigrants encounter labor market integration difficulties and thus propose a model that combines ethnic and occupational rankings to predict which candidates employers will favor for particular occupations (a matching hierarchies model). In a Swiss survey experiment, we found that employers' evaluations of non-natives follow socio-cultural distance perceptions and that a non-native background is a disadvantage mainly in high-skilled occupations. In low-skilled occupations, having an immigrant background is less detrimental. In elucidating disadvantage patterns, we conclude that it is important to consider contextual factors (occupational hierarchies) that may change the nature of nationality-based discrimination.

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2.1 Introduction

Labor-market access is key to successful social and economic integration in every society. In today's world of steadily growing immigration and refugee movements, elucidating why certain groups of immigrants face more difficulties than others in accessing the labor market has become particularly relevant to preventing increasing social inequality (Heath and Cheung 2007). This study focuses on employers' hiring behavior because eventually, employers decide which candidates are hired or promoted and consequently are at least partially responsible for the disadvantages faced by specific groups in the labor market (Riach and Rich 2002; Rydgren 2004). We contribute to the understanding of how employers make use of information pertaining to candidates' national origin in hiring decisions. More precisely, we develop a model that accounts for instances in which natives are preferred over immigrants and for instances in which there is no apparent discrimination against (or preference for) immigrant candidates. In other words, we show that discrimination regarding non-native applicants is not generalized but is instead primarily applicable to more skilled occupations and that, at least in the case of Switzerland, a foreign background hardly hampers employment chances for 'undesirable jobs.'
This outcome can be explained by understanding that employers are striving to find a good match between two hierarchical systems. On the one hand, societies construct ethnic hierarchies that rank individuals with immigrant backgrounds based on the perceived social distance of various immigrant groups from the host society (Hagendoorn, 1993; 1995). On the other hand, jobs are also ranked in an occupational hierarchy based on perceived social status (e.g., Inkeles and Rossi, 1956; Goldthorpe and Hope 1972; Ganzeboom et al. 1992). During the hiring process, employers use these two ranking systems to choose one applicant, from among equally qualified candidates, whose nationality best matches the vacant job's hierarchical position.

We investigate the question of how employers use information regarding national origin in hiring decisions, drawing on data from a survey experiment with employers in the Swiss hotel sector. Switzerland is an interesting case for several reasons. First, the country is host to a large and diverse group of immigrants, allowing us to determine the differential effects of various nationalities in different occupations. Second, although the current political climate might foster increasing disadvantages for immigrants , economic circumstances counteract this tendency. This is largely because Switzerland faces a labor shortage in various branches – a so-called Fachkräftemangel (B, S, S. 2014). Immigrants might thus be expected to face fewer obstacles in Switzerland than in countries with an abundant supply of qualified labor. Third, Switzerland is also a convenient case to study employers' hiring preferences because the topic of immigrant labor is currently receiving much attention, as an immigrant quota system looms. Hence, it might be expected that employers will unveil their true preferences more readily because they are afraid of being neglected in the political game.

The hotel sector is particularly suitable for testing our model because it relies heavily on immigrants and is defined by its international orientation. As a result, employers we contacted in this industry are accustomed to evaluating candidates of different nationalities. In addition, hotels provide jobs situated throughout the occupational hierarchy. Some occupations, such as room cleaners, are among the least desirable in terms of wage, working hours, (physical) dis-

comfort, and social recognition, while others, such as reception jobs, are better paid and have a better social image.

In our experimental survey, Swiss hotel managers were asked to indicate how likely they were to hire hypothetical applicants with different profiles. Thereby, the candidates' nationality, gender, age, education, labor-market history (captured by participation in an active labor market measure, such as training or an occupational programs), and hobbies were varied randomly. The advantage of factorial experiments is that they allow numerous factors to be varied contemporaneously and thus facilitate joint exploration of different sources of and mechanisms triggering disadvantage.

Our findings confirm the theoretical expectation that nationality plays a significant role in hiring but also show that its effect depends on the occupational profile (low-skilled vs. medium-skilled job). Although a foreign nationality leads to a clear disadvantage for positions ranked higher in the occupational hierarchy, we find no evidence that having a foreign nationality is disadvantageous for positions at the lower end of the hierarchy, which indicates that employers' discrimination against immigrants is not homogeneous across the labor market.
The remainder of this paper proceeds as follows: Section 2 sets out the theoretical framework for labor-market disadvantage in terms of different nationalities and how such disadvantage is linked to the occupational hierarchy. Section 3 describes the experiment, the data, and the methods applied to test our hypotheses. Results are presented in Section 4. Finally, Section 5 discusses the study's implications.

2.2 Theory: explaining immigrants' labor market disadvantage

We know that immigrants face disadvantages in various areas of the labor market (Riach and Rich 2002; Fibbi et al. 2006; Fleichmann and Dronkers 2010; Auer et al 2017). For instance, immigrants may suffer from lower hiring chances (Carlsson and Rooth 2007; Kaas and Manger 2011; Bertrand and Mullainathan 2004), lower promotion likeliness (Blank et al. 2004; Pierce 2012), and lower wages (Ebner and Helbling 2016; Blank et al. 2004; Braddok and McPartland 1987). All these factors contribute to constraining immigrants' social mobility (Pierce 2012; Blank et al. 2004; Ebner and Helbling 2016).

The literature has also shown that immigrants face a conspicuous level of disadvantage compared to natives, even after controlling for compositional differences (often called 'ethnic penalties') (Rydgren 2004; Arai and Vilhelmsson 2001; Ballarino and Panichella 2015). For this reason, we analyze the demand-side mechanism or employers' hiring behavior (not the supply-side mechanism, such as candidates' traits) that leads to potential disadvantage for applicants with a non-native background. In fact, employers are the gatekeepers whose decisions regarding who will be hired have important consequences and shape the very structure of labor-market disadvantage. As Acker (1990) explains for gender, discriminatory practices become a substantive issue when they are institutionalized in asymmetric power structures that systematically channel minority applicants into less attractive positions. Thus, a better understanding of hiring decisions might help prevent the spread of such automatisms.

Drawing on social psychology and discrimination theory, we propose a model that explains employers' hiring behavior and – more precisely – how different types of hierarchical information are used to choose suitable candidates for specific occupations. We argue that two mechanisms affect employers' hiring decisions. On the one hand, employers evaluate a candidate's nationality within the framework of a pre-existing ethnic hierarchy in a particular society. In this manner, employers consider traits, such as social distance, work attitudes in the form of stereotypical perceptions of working morale, anticipation of customer preferences for particular groups, etc. On the other hand, employers have an understanding of the occupational hierarchy (i.e. how a job is regarded in terms of social status, prestige, etc.), as Section 2.3 discusses. Our model predicts that employers match these types of information to maximize the fit between an applicant's position within the ethnic hierarchy and the occupation's position within the social status scale. In other words, the interplay of these hierarchies determines how an employer evaluates candidates.

2.2.1 Ethnic hierarchies

Several studies have shown that employers generally use the information conveyed by place of origin and/or nationality in their hiring decisions (e.g. Baumle and Fosset 2005; Midtbøen 2013). However, understanding how ethnic hierarchies are created and what mechanisms underpin these perceptions is complex and controversial. Informed by social psychology, we know that individuals automatically impose classifications on people (Reskin 2000) and that members of in-groups are preferred in social interactions (Hagendoorn 1993). Theoretically, this preference for in-group members entails multiple advantages. For instance, in-group contacts ease communication due to shared "cultural understandings" (Hutnik 1991). Moreover, in-group contacts foster a supportive and cohesive environment (Sumner 1906) and strengthen their own identity relative to other groups (Tajfel 1982; Snellman and Ekehammar 2005). Unsurprisingly, individuals not only prefer to interact with in-group members but also evaluate other in-group members higher than they evaluate out-group members (Reskin 2000). In the context of hiring decisions, in-group membership translates into a lower level of (perceived) uncertainty for employers (including with respect to work attitudes) and into more positive evaluations. As a consequence, we expect (native) employers to generally prefer native applicants over applicants with a different national background.

In multi-ethnic societies, a more fine-grained classification that ranks out-group members within a hierarchical system seems more appropriate than a dichotomous distinction. The literature has shown that the concept of social distance is helpful with regard to understanding the nature of this ranking (Hagendoorn 1993; 1995 and Hagendoorn et al. 1987). As a concept, social distance dates to Park (1923) and Bogardus (1925; 1959), who established a measure to study interethnic relations . These authors defined social distance as the "degree of intimacy and understanding" that characterizes relationships between individuals and groups (Park 1923: 39) . The concept of social distance is inherently multidimensional and is determined by at least three factors. First, differences in the perceived socio-economic status of the group shape social distance, with immigrants frequently clustering at the bottom of the social stratification system

(Park 1923). Second, social distance is defined by the degree of perceived cultural overlap in terms of language, habits, religion, and – particularly in the labor market – work-related values, including work morale, engagement, and precision, and other values (e.g. Hagendoorn et al. 1998; Auer et al. 2017). The third element that defines social distance is appearance, mainly skin color and facial traits. These last characteristics may be of particular relevance for occupations with a high level of customer contact, as argued by Becker (1957). These three dimensions of what from now on we will refer to as "socio-cultural" distance frequently overlap because immigrants concentrate in particular social classes , have a different cultural background from natives, and are (more or less) easily identifiable because of physical characteristics (Ebner and Helbling 2016; Hagendoorn 1993 and 1995) . However, it is not necessary for these components to overlap, and they do not always. For instance, immigrants in the U.S. from Asian countries face fewer difficulties integrating into the labor market than other immigrant groups (Kossoudji, 1988). In particular, it is plausible that Asians benefit from positive stereotypes linked to work-related values assigned more weight by employers, who thus disregard other elements that might trigger perceptions of greater distance (e.g., religion or language). Based on work-related standards, Asian immigrants seem closer to US citizens than other groups who are less similar in terms of work-related values but more similar in terms of physical appearance, for instance (Fiske et al. 2002). In summary, socially constructed rankings are based on a multitude of dimensions that seem to gain or lose relevance, depending on the groups of interest. With respect to hiring situations, we hypothesize that employers who are (implicitly) aware of these rankings take them into account but give more weight to those characteristics that convey information about workers' expected productivity in the context of a specific occupation. Overall, the literature shows that ethnic rankings are surprisingly consistent within this context (Snellman and Ekehammar 2005). For instance, individuals who share the same foreign background rank members of other nationalities along social distance perceptions, as would members of the in-group (Hagendoorn 1993 and 1995). In other words, they conform to the ethnic hierarchy irrespective of their own ethnicity and social status. In Northern European countries , individuals from Southern and Eastern European countries are ranked closer to in-group members, whereas individuals from the Middle East and Africa are located at the lower end of the ethnic hierarchy (Hagendoorn 1993; 1995 and Hagendoorn et al. 1987). The findings by Hagendoorn and colleagues mirror the distance perceptions we find in Switzerland. Former immigrant groups from Southern European countries (e.g., Italians and Spaniards) are today perceived as culturally close, together with the recently immigrated Portuguese, particularly because of their reputation as hard workers (Ruedin et al. 2013; Städler 2015; Wimmer 2004). Immigrants from the former Yugoslavia (e.g., Serbia and Kosovo) are instead associated with negative stereotypes, which are particularly explicit in the tabloid media (Scherrer, 2012; BfM, 2010: 41; Fibbi et al. 2006; Wyssmüller, 2005). Finally, immigrants from Muslim countries like Turkey occupy the most disadvantaged position in the Swiss ethnic ranking system (Ruedin et al. 2013; Hainmueller and Hangartner 2013; Helbling 2010). These distance perceptions, which also involve productivity assumptions, are relevant criteria when employers make hiring decisions.

2.2.2 Job hierarchies

In modern societies, economic inequalities derive mainly from how different labor-market positions affect individuals' social standing. In other words, working in a particular occupation defines the economic class to which an individual belongs (see Erikson and Golthorpe 1992). The effect of labor-market positioning is not limited to material wellbeing and affects social stratification patterns more generally. Occupations are closely linked to three dimensions of capital (economic, social, and cultural) that – to some extent – can be converted to one another and that allow an individual to acquire a particular standing in society (Bourdieu, 1984). First, a well-paid job is likely to lead to higher social standing than a low-paid job. Second, occupations that require high levels of cultural capital (i.e., particular forms of knowledge and competencies that are frequently "inherited" from family or acquired through education) also ensure higher social position. Finally, social capital helps access good positions, but the reverse is also true, as attractive positions open new opportunities for networking. In summary, an individual's position in a society is based on these three forms of capitals, which are then reflected in the occupational structure. Thus, it follows that, as with ethnic rankings, occupations are ordered hierarchically with respect to multiple dimensions (economic, social, and cultural). Unsurprisingly, sociological research suggests a number of different ways to measure such occupational stratification . The focus of these scales/indexes varies from measuring economic capital (wages) to more complex schemes that attempt to also capture social stratification patterns (cultural capital). However, all these schemes try to rank occupations based on some definition of desirability. Based on this work, we expect that employers rank occupations in line with the social status associated with a particular occupation.

2.2.3 The matching hierarchies model

When assessing their candidates, employers take both, the social-distance perception and the occupational hierarchy into account. Initially, groups that are more distant are disregarded because they are associated with less certainty about their productivity and overall fit with the position (higher socio-cultural distance, especially different work attitudes) and because people of other nationalities are generally evaluated more negatively than fellow nationals (in-group evaluation bias).

However, unattractive jobs can lead to downward social mobility and status loss for natives. Thus, if a native worker applied for a job at the lower end of the occupational hierarchy, potential employers would be left wondering whether this person might come with (negative) traits that prevent her or him from applying for better jobs. In this context, an employer is less inclined to strictly prefer a native applicant . Whenever an occupation conveys the image of being "unsuitable" or "unattractive" for a native worker, an immigrant background almost automatically signals a better fit for employers (Wingfield and Alston 2014; Piore 1979; Massey et al. 1993; cf. Friberg 2012) . In addition, an immigration background may be advantageous for an employer that expects a higher level of (long-term) commitment and motivation. Since immigrants experience greater difficulties in finding a job, employers anticipate that they will go to greater lengths to keep jobs that they have after being hired. As an illustration, Zinn and Dill (1994) show that employers believe that (immigrant) women are ideal workers for many

jobs because they are more compliant and demand lower wages (Waldinger and Lichter 2003: 15).

To sum up, we hypothesize that employers hire members of a given nationality when the associated distance perception is consistent with and fits the vacant occupation. Figure 1 below summarizes the theoretical argument and presents employers' preferences as a combination of job hierarchy and socio-cultural distance. Although the dualization literature divides applicants into insiders and outsiders and argues that immigrants are more likely to find employment in outsider jobs (Piore 1979), we argue for a more nuanced distinction. Instead of a dichotomy, the distinctions are multidimensional and subject to employers' matching strategies.

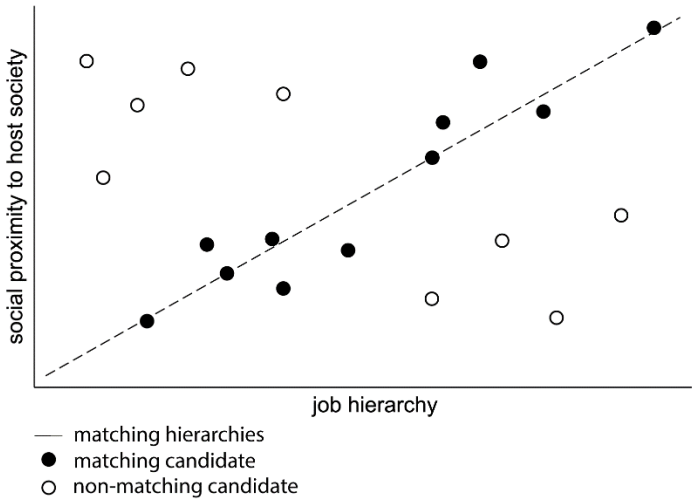

Figure 1: The matching hierarchies model: how employers select candidates based on social proximity and job hierarchy

The hierarchy of a given job increases on the x-axis, whereas an individual's proximity to the host society increases on the y-axis. The dotted line represents the best possible match between a candidate's socio-cultural distance and the job's position in the occupational hierarchy. All else equal, the closer the applicant's position to the diagonal, the better the fit. For occupations perceived as undesirable, an immigrant background (i.e., low socio-cultural proximity (black dot on the line)) constitutes a good – or at least reasonable – attribute relative to natives. Conversely, as an occupation becomes increasingly attractive, in-group nationality (i.e., high socio-cultural proximity) becomes increasingly preferred. Combinations of proximity to the host society and job hierarchies that are farther away from the dashed matching hierarchies line represent a worse fit and are thus less likely to be realized in a hiring situation (hollow circles).

Up to a certain point, employers who cannot find applicants "close" to the optimal match (dotted line) may hire less suitable candidates. However, if the candidates are too "far away" (empty circles), they may resort to alternative strategies, such as revising the occupation's description to better fit with the individuals who actually applied. As Pager et al. (2009) show, employers – particularly those with more than one vacancy – attempt to either channel minority members into those openings that rank lower in the hierarchy or re-negotiate the job with applicants. For instance, they might offer more responsibility, a better wage, or a more prestigious job title to native applicants; conversely, they may "downgrade" the job for non-native

candidates. In this sense, employers have quite some room to manoeuvre to reach or restore the ideal hierarchical match.

The matching hierarchies' theory comes with restrictions. In some contexts, nationality might be a less relevant signal. In the instance of a high level of specialization or in the context of a labor shortage (Baert and De Pauw 2014), for example, employers might have to resort to individuals with foreign backgrounds although they would prefer hiring natives. The importance of the matching hierarchies model might also be attenuated in highly internationalized work environments and particularly at the very top of the occupational distribution (management and research), where employers are used to hiring non-natives and/or where other candidates' attributes become more important or convey less "fuzzy" information. In similar fashion, it is possible that employers' characteristics affect the importance of nationality or immigrant status on the hiring process. More libertarian values, or being an immigrant oneself (i.e., in ethnic labor markets), is likely to make nationality drop in relevance as a signal. The same might be true when employers have the occasion to learn over an extended period and thus counteract their stereotypical beliefs and assumptions regarding "normality". As contact theory suggests, recurrent interactions with non-native employees, particularly within a professional environment, may lead to a correction of perceptions (Pettigrew and Tropp 2006).

2.3 The experimental setting: factorial survey design

Studying employers' hiring behavior has proven difficult, due to the lack of data. Determining which characteristics influence hiring decisions would require the researcher to know not only the successful candidate but also the entire applicant pool. To overcome this problem, we study employers' hiring preferences in an experimental setting, simulating a hiring process for the position of a receptionist (a medium-skilled, "fairly attractive" position) and a room cleaner (a low-skilled, "rather unattractive" position) in the Swiss hotel sector. We focus on these two positions because they are the most common occupations in the hotel industry. Therefore, we expect higher survey engagement because hotel employers are faced with a familiar hiring scenario. In addition, the social policy relevance of focusing on low- and medium-skilled individuals is higher, since most individuals with a migration background still have lower qualifications than natives (BFS 2017) and since low-skilled workers are generally more at risk of becoming unemployed. The advantage of conducting this study with hotel employers is that this sector has, first, a highly fluctuating employment rate and, second, a generally high share of foreign employees, which means that foreign applications are quite common. Moreover, we do not rely on convenience samples but instead study actual hotel employers, who can better assess a job's required skills than a general population sample and who have been shown to reveal their preferences more readily and "honestly" than human resources personnel (Waldinger and Lichter 2003: 25; Midtbøen 2013: 1663). Moreover, in the current Swiss context, hotel managers have an interest in revealing their true preferences based on the current labor shortage and the possibility that contingents on workers are introduced, as a consequence of the bilateral negotiations with the European Union.

We conducted a factorial survey experiment, which is a widely applied methodology (Wal-

lander 2009) increasingly used to study employers' hiring behaviors (van Beek 1993; Biesma et al. 2007; Di Stasio and Gërxhani 2015; Di Stasio 2014; de Wolf and van der Velden 2001; Abraham and Damelang 2016). In factorial experiments, participants must rate or rank tasks of fictitious descriptions (called vignettes) of situations or objects. In our case, we asked employers to evaluate two pairs of fictitious curriculum vitae (CV) on a 10-point Likert scale. This paired conjoint setup has been shown to capture real-world decisions remarkably closely (see Hainmueller et al. 2014). Such vignettes are advantageous in that they (i) reduce the risk of attributing employers' preferences to a characteristic that remains unobserved to the researcher but is nonetheless observed by the employer, (ii) allow for testing several dimensions at the same time, and (iii) are not prone to ethical concerns, as is the case for correspondence studies (Zschirnt 2016). Moreover, it has been shown that vignettes deliver a more valid measurement of attitudes and are less biased by social desirability than item-based techniques, such as standard surveys, because it is more difficult to follow socially desirable patterns when several characteristics associated with lower productivity or other disadvantage vary contemporaneously (Auspurg, Hinz, and Liebig 2009).

In the reviewed CVs, we focused on the influence of six dimensions, each of which can assume different values, which we varied randomly (see Table A2 in the appendix for the dimensions and levels). We drew a sample (d-efficiency = 90.7; see Auspurg and Hinz, 2015) from all possible combinations of characteristics, which allows us to estimate both single and interaction effects. Overall, the main advantage of this method is that it enables us to randomize numerous individual attributes in a single experiment (Andriessen et al. 2014: 240; Hainmueller and Hopkins 2014: 2) and thus not only compare one minority group to a majority group but also differentiate among several groups of immigrants.

In the general description of the scenario, all candidates were declared as unemployed for 6 months because their previous employer closed his/her hotel as a result of his/her retirement. To ensure that employers perceived candidates with an immigrant background to have mastered the local language as well as native speakers – in addition to avoiding divergent assumptions regarding the schooling returns for candidates of foreign nationality – we specified that all applicants were schooled in Switzerland and were, thus, also well acculturated to Swiss society (Gordon 1964). Therefore, we expect our estimation of immigrants' disadvantage to be conservative in nature. We capture the level of immigrant disadvantage by how likely respondents were to hire a candidate, as indicated in the survey. Of course, this is not a direct outcome measure; instead, the rating presents a stated choice. However, studies such as Webb and Sheeran (2006) and De Dreu et al. (2001) show that there is a high correlation between stated and actual behavior.

2.3.1 Operationalization of socio-cultural distance

For the operationalization of socio-cultural distance and the choice of nationalities with different rankings, we rely on Hagendoorn (1995). We chose Portuguese applicants to represent southern European countries, which, according to Hagendoorn (1995), rank lower than nationals of Nordic countries. However, as discussed above, Portuguese workers are likely to be perceived as quite close to Swiss employees due to their positive work attitudes and stereotype as particularly

hard workers. Next, we selected Serbians to represent nationals from the former Yugoslavia, which should again be more distant particularly because of the possibility of different cultural and religious backgrounds. Moreover, in Switzerland, minorities from this region are associated with negative stereotypes in terms of character traits (aggressiveness, speeding motorists, etc.) (BFM, 2010: 41; Besic, 2005; Wyssmüller, 2005). Both communities are among Switzerland's largest immigrant groups. Finally, as representative of the most distant group, we chose Senegalese immigrants, who differ substantially in terms of culture and with respect to appearance . Generally, immigrants from Africa still represent a smaller share of immigrants in Switzerland. However, their number is steadily on the rise, as shown in Figure 2, and is thus an interesting group to study with respect to possible future group-specific challenges.

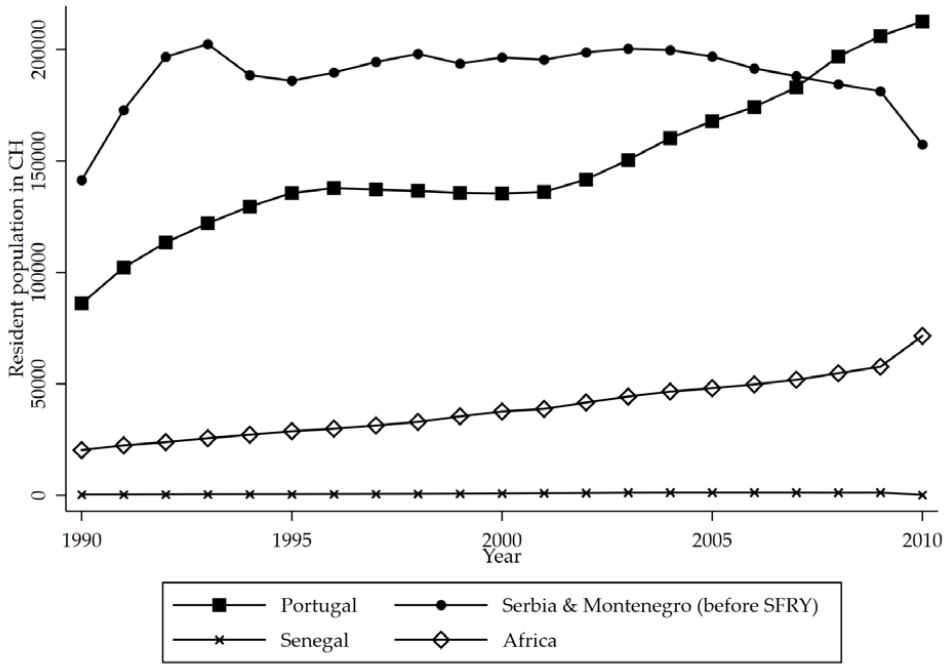

Figure 2: The total number of foreigners for selected nationalities, 1990-2010

2.3.2 Data and estimation strategy

We collected data between September and November 2015, using an online survey sent to members of Switzerland's largest hotel employer organization. Surveys targeting employers and particularly managers are often characterized by lower response rates than general population surveys (Anseel et al. 2010). An important reason for this difference in response level is that in contrast to general population surveys, it is not possible to draw additional samples if the targeted response rate is not reached. Thus, from the beginning, we contacted all 1982 members of the largest employer organization (which covers enough hotels to account for 80% of all overnight stays in Switzerland) by means of postal mail. We informed them of the study and that both the employer organization and the university had explicitly supported our research. One week after sending this information, we sent an email with a personalized link, followed by two waves of reminders (see Table S1a and Figures S1b and S1c in the appendix for the experimental protocol).

A total of 237 participants completed the survey, yielding a response rate of 12 percent, which is comparable to other studies that have analyzed similar populations (Abraham and Damelang, 2016) and with to the insights provided by studies drawing on smaller sets of selected respondents (Di Stasio 2014, Biesma et al 2007, de Wolf and van der Velden 2001). Generally, a low response rate increases the risk that results are biased because of unknown respondent selection in the sample. For instance, our sample has a slight overrepresentation of respondents from urban areas (see Table S3). However, these areas are normally more immigration-friendly, and, as the tourism sector is more developed there than in rural areas, the demand for workers is higher.

As Cook et al. (2000) argue, the representativeness of responses is more important than the actual response rate. Thus, in Table S3 in the supplementary materials, we show that the distribution for a set of crucial macro-level variables of respondents and non-respondents is similar among the two groups. Given the fact that the distributions of a number of important respondent (and hotel) characteristics marginally differ between the contacted population and the respondent sample, we expect our results to be unbiased in spite of our low response rate.
To identify the influence of the candidate's characteristics, respondents' overall rating of each candidate was regressed on the vignette dimensions as independent variables (see Table S2 in the supplementary materials). If specific assumptions hold, Hainmueller et al. (2014b: 10) have shown, linear regression of the outcome on the vignette characteristics produces an unbiased estimate of the so-called average marginal component effect (AMCE), which represents the marginal effects of a given attribute over the joint distribution of the remaining vignette attributes. AMCE is unbiased if, first, there are no carryover effects, which means that a respondent's rating of one candidate or a pair of candidates cannot be influenced by the outcomes of the previous rating task. Second, AMCE is unbiased if profile ordering does not affect ratings. In a given pair of candidates, the individual rating does not depend on whether a candidate has been presented in first or second place (in our case, on the left- or right-hand side of the page). Third, for AMCE to be unbiased, candidate profiles must be properly randomized across all respondents. This assumption holds by study design for the overall population. However, randomization may be violated for the subsample that answered the survey, particularly if the sample size is small. We provide a test for each key assumption below in Section 4.1. As two pairs of candidates for each job have been presented to respondents, we must assume that the ratings are correlated because of unobserved respondent characteristics. Therefore, we estimate robust standard errors clustered at the respondent level, as suggested by Hainmueller et al. (2014b).

The outcomes can be analyzed in three ways. Initially, we assume by study design that respondents compare the candidates within each pair and assign their rating afterwards . Hence, we recode the candidate-specific ratings into a binary choice variable that takes the value of 1 if a candidate was preferred (had a higher rating than its counterpart) and 0 if the other candidate was preferred, where 0.5 represents equal ratings. This approach represents the original way to analyze conjoint experiments, and it can be argued that a choice situation most closely approaches a real-world hiring scenario . In addition, we can further minimize potential bias in ratings due to unobserved respondent characteristics (i.e., if a randomization on respondent

characteristics that leads to a systematically higher or lower rating of candidates would have failed). As a second piece of evidence, we retain the individual ratings and normalize them such that they represent a continuous stated choice model ranging from 0 to 1, with 1 representing the best candidate. Since we assume the individual ratings to be influenced by the other candidate of the pair, we stick to standard errors clustered at the respondent level to account for the possible non-independence of the ratings (Hainmueller et al. 2014b: 17). Finally, we performed the analyses using multilevel regressions, following the suggestions of Steenbergen and Jones (2002) and Auspurg and Hinz (2015). The results remain stable across all estimation strategies.

2.4 Results

Figure 3 below shows the vignette ratings by job type and by applicant nationality (descriptive results). Although applicants with a Swiss background for the reception job are rated higher, the low-skilled cleaning occupation depicts a rather similar picture for all nationalities (i.e., the average rating for Swiss candidates aligns with the three migrant groups). This change is also shown in the third plot of Figure 3: respondents' rating of the Swiss candidates remains relatively stable at approximately 5.5 points, whereas the three immigrant groups close the gap between them and the Swiss candidates for the cleaning position.

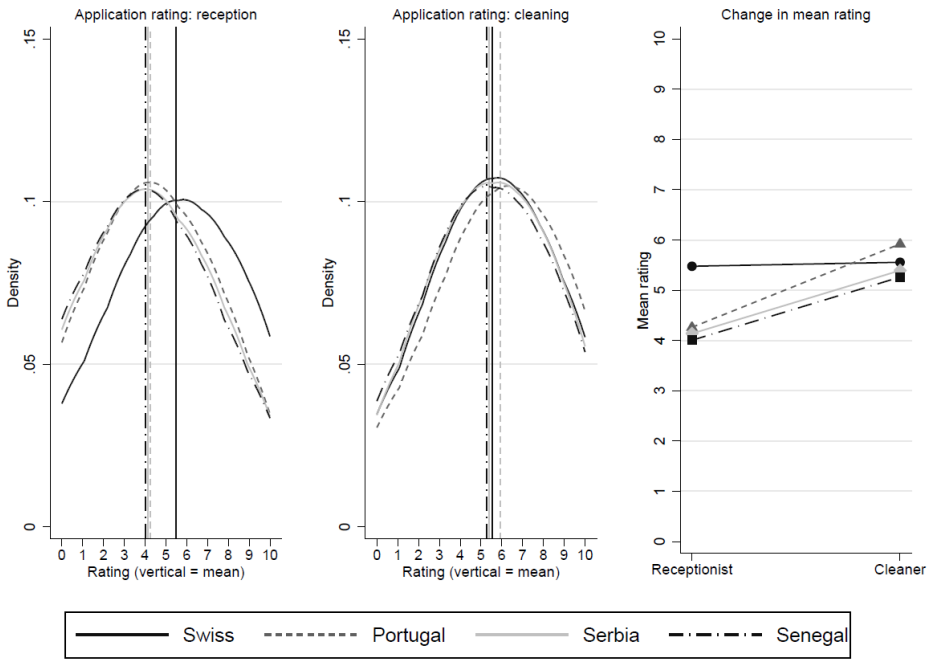

Figure 3: Vignette ratings by job type and applicant nationality

The descriptive finding that the effects of immigrant background differ by occupation (Figure 3) is confirmed by the regression analysis (Table 1).

Table 1: The determinants of employers' evaluation of applicants in two occupations

	Cleaning		Reception	
	(1)	(2)	(3)	(4)
Nationality (reference: Switzerland)				
Portugal	0.06	0.05	-0.12****	-0.13****
	(0.04)	(0.04)	(0.03)	(0.04)
Serbia	-0.05	-0.05	-0.19****	-0.20****
	(0.04)	(0.04)	(0.04)	(0.04)
Senegal	0.00	-0.01	-0.19****	-0.20****
	(0.04)	(0.04)	(0.04)	(0.04)
Gender (reference: male)				
Female	0.02	0.02	0.06****	0.06****
	(0.01)	(0.01)	(0.01)	(0.01)
Age (reference: 25 years)				
32 years	0.00	0.01	0.01	0.02
	(0.03)	(0.03)	(0.03)	(0.03)
40 years	-0.06*	-0.06	-0.12***	-0.12***
	(0.03)	(0.04)	(0.04)	(0.04)
Education (reference: obligatory)				
Secondary	0.21****	0.21****	0.16****	0.15****
	(0.03)	(0.03)	(0.03)	(0.03)
ALMP (reference: none)				
Training	0.00	0.00	0.04	0.03
	(0.04)	(0.04)	(0.04)	(0.04)
Subsidy	0.11**	0.09**	0.06	0.05
	(0.04)	(0.05)	(0.04)	(0.04)
Occupation	0.09**	0.09**	-0.04	-0.05
	(0.04)	(0.04)	(0.04)	(0.05)
Two occupations	0.09**	0.08**	-0.14****	-0.15***
	(0.04)	(0.04)	(0.04)	(0.04)
Hobbies (reference: none/music)				
Volunteering	0.02	0.02	0.02	0.03
	(0.04)	(0.04)	(0.04)	(0.04)
Team sports	-0.08*	-0.07*	-0.09*	-0.09*
	(0.04)	(0.04)	(0.05)	(0.05)
Kickboxing	-0.09*	-0.09**	-0.08*	-0.07*
	(0.04)	(0.04)	(0.04)	(0.05)
Chess	-0.05	-0.05	-0.08*	-0.08*
	(0.04)	(0.04)	(0.04)	(0.04)
Respondent characteristics+	**no**	**yes**	**no**	**yes**
Observations	948	920	962	926

SE in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, and **** $p < 0.001$

+ Respondent characteristics include age, gender, educational attainment, whether the respondent was born in Switzerland, as well as the language region in which the hotel is located, the local unemployment rate (cantonal level), and the share of foreigners employed in the hotel (as derived from the respondent's answers in the accompanying survey).

In more detail, Column 1 in Table 1 presents the regression of the choice variable for the cleaning position on the full battery of vignette dimensions. The results depict no significant differences between the four nationalities in the probability of being the preferred candidate for the cleaning position . However, in descriptive terms, we find the ethnic hierarchy is predicted by our model. In Column 2, we added respondent characteristics to the model, whereby the results remain unchanged. These respondent characteristics include individual attributes of age, gender, origin, educational attainment, and years of experience in hiring staff, in addition to hotel-specific criteria (i.e., the Swiss language region in which the hotel is located, the share of foreign staff in the hotel, and the local unemployment rate) to account for segregation at the firm level and possible variation in labor supply (see Section 2.4. above).

Generally, the sign of the particular coefficients is as expected. For instance, older age and

the individualistic and competitive sport of kickboxing lead to a negative sign that is significant at the 10% level. The effects of education and specific active labor-market measures are instead positive and thus associated with a higher probability of being the preferred candidate, indicating that employers tended to choose the most employable individuals within a specific group. Thus, among minority candidates for the cleaning position and majority candidates for the receptionist positions, employers preferred those applicants who could be expected to be most productive.

Columns 3 and 4 (with respondent characteristics) present the results for the reception position. Although age and hobbies have similar effects, respondents seem to prefer female candidates in the reception position and are more skeptical of activation measures . The preference for women might result from the higher female share in this occupation(s), although we made sure that both positions were described as gender neutral. In terms of immigration background, we find a negative effect that is large in magnitude and statistically highly significant. The probability of moving from 0 to 1 (i.e., to be the preferred candidate) decreases for all immigrants. The average disadvantage of the different nationalities roughly follows that predicted by the social distance literature and conforms to our matching theory, whereby the negative effect size for Portuguese remains substantial (-0.13 points) but smaller than for the Serbian and Senegalese candidates (-0.20 points).

Overall, the analysis seems to corroborate the hypothesis that ethnic rankings are mirrored in the labor-market chances of the respective communities, as expressed by the hiring preferences of employers in Switzerland. We predicted that immigrants would experience increased disadvantage for positions that are high on the occupational hierarchy. With regard to employers' assessments in the cleaning services – an occupation that is not attractive for native workers – we find that Swiss natives are no longer the preferred group. However, for a medium-skilled position at the hotel reception, immigrants are strongly disadvantaged compared to Swiss natives. In fact, nationality turns out to be the strongest driver of our sample of applicant characteristics. At times, the literature argues that employers' preference for natives over minorities is affected by the level of customer contact expected in an occupation (e.g., reception versus back office). Employers may be more reluctant to hire minority candidates who are easily identifiable because they have trouble speaking the local language, have a strong accent, or are easily identifiable due to physical characteristics. In our study, this customer contact should not decisively influence the hiring choice because we specified that all candidates completed their education in Switzerland and because there should be no expected difference in either the quality of education or language mastery between immigrant applicants and Swiss natives in this test. Moreover, in term of facial traits, applicants from Serbia and Portugal are often indistinguishable from Swiss natives . In other words, an employer seeking to guarantee that his or her customer will have a "local" experience when interacting with a receptionist will find all our candidates – except maybe those with a Senegalese background – should be interchangeable in terms of productivity. We conclude that the degree of customer contact should not affect our results substantially.

We demonstrate the change in preferred choices from the receptionist to the cleaning position for each nationality in Table 2 below. Although the Swiss demonstrate a strong and significant

decrease in being the preferred group when shifting the job from receptionist to cleaner, all immigrant groups exhibit an increase in their favoritism, with the difference for the Senegalese – arguably the most distant of the three immigrant groups – being significant at the 10% level.

As a robustness check, we retained the (normalized) ratings of each candidate and repeated the analysis. The results shown in Table A3 in the Appendix do not differ from those presented in Table 1 above.

Table 2: Student's t-test results for employer evaluation differences for cleaners and receptionists, by nationality

	(1) **Swiss**	(2) **Portuguese**	(3) **Serbian**	(4) **Senegalese**
Stated choice	-0.15****	0.06	0.02	0.07*
E(cleaner) - E(receptionist)	(-4.06)	(1.59)	(0.65)	(1.91)
Observations	467	481	486	476

t statistics in parentheses
* p < 0.10, ** p < 0.05, *** p < 0.01, and **** p < 0.001

2.4.1 Experimental robustness

To test our experimental results' robustness, we performed a number of diagnostics, as suggested by Hainmueller et al. (2014b). Initially, we measured the possibility of carryover effects. Given the AMCE's underlying assumptions described above, a respondent should maintain the same choice regardless of any candidates she would see later or has seen already. We test this assumption by estimating the AMCE separately for the two rounds of vignette-pairs for each job. In Table A4.1 in the Appendix, the columns are labeled Round 1 and Round 2, respectively. Given the small sample size, the results remain relatively stable for both jobs, which excludes the possibility of strong bias in the results from strong carryover effects.

Next, we tested for profile order effects. According to the AMCE's second assumption, respondents should make choices in a given pair of vignettes independently of the candidate's ordering. Again, we test the AMCE separately, this time by the ordering of the candidate's nationality. The results shown in Table A4.2 remain stable, which indicates that the overall effects are not influenced by whether a given nationality was assigned to the first or second candidate in a given vignette pair.

Eventually, we tested for successful randomization of the candidates' characteristics within our sample of respondents. Since survey experiments are conducted based on respondents' information within the questionnaire, it is impossible to compare the sample groups' attributes with those of the overall population. However, whether experimental groups are balanced within a given sample can be tested by regressing respondents' characteristics on the nationality of candidates. As shown in Table A4.3, all candidate nationalities are statistically insignificant. In addition, the omnibus F-test shows a p-value that is generally above 0.9, indicating that randomization has worked well.

2.5 Conclusions

We set out to test our theoretical model postulating that natives should not always be advantaged compared to candidates with an immigration background and that the degree of disadvantage instead depends on the occupation at stake. Indeed, we find applicants for more attractive, medium-skilled positions (such as a receptionist) to be clearly advantaged if they are native. In other words, in Switzerland immigrants suffer from high levels of disadvantage for positions that are desirable for native workers based on occupational stereotypes. However, when an occupation is considered not "attractive enough" for native workers, an applicant from the out-group is not disadvantaged because the occupational profile corresponds to the immigrant candidate's position in the system of ethnic hierarchies. In sum, foreign nationality seems to be a source of double disadvantage: it not only hampers hiring chances in good jobs but also seems to increase potential lock-in effects in bad jobs. In fact, individuals with a non-Swiss background have an easier route than Swiss nationals in terms of accessing the least desirable positions in the occupational hierarchy.

This paper makes both theoretical and empirical contributions to the literature on these themes. First, we add to the theoretical debate on the causes of discrimination by proposing a more refined theory explaining why and when individuals with foreign backgrounds encounter difficulties on the job market. We argue that a simple insider-outsider dichotomy does not do justice to employers' hiring strategies, in fact, our results show that these differentiate depending on the occupation a (minority) candidate postulates for. Second, experimental data on discrimination remain rare in the Swiss context (for a laudable exception see Fibbi et al., 2006). Thus, our results add to understandings of the patterns of disadvantage in Switzerland. Third, we base our analysis of discrimination on responses of involved actors – the hotel managers – rather than relying on readily available convenience samples (cf. Baert and De Paw, 2014). In fact, many survey experiments proxy employers' hiring behaviour relying on student samples. Conversely, we provide results reflecting the preferences of individuals directly involved in real-world recruiting decisions.

We are aware that our study has shortcomings, not least because employers are a notably difficult population to study (see Abraham and Damelang, 2017). Thus, we have low response rates even when exerting rigorous efforts to increase participation. Nonetheless, given the response/non-response comparison for the variables available for both groups, we have no reason to believe that the analyzed sample deviates significantly from the target population (see supplementary material).

However, the question remains whether our results are generalizable to other sectors. We believe that the matching hierarchy logic applies to most occupations from low- to medium- to high-skilled and particularly to jobs in which requirements and qualifications are flexible, as such jobs make more room available for discrimination (Moss and Tilly, 2001; Dovidio and Gaertner, 2000). However, further research should test this question using more sectors, different occupations, different immigrant backgrounds, and possibly comparative settings. It would also be interesting to add further dimensions such as language proficiency, cultural and ethnic attach-

ment, or foreign education to explore the patterns of immigrant disadvantage in more detail. When seeking to understand the patterns of disadvantage of individuals with a foreign background, we conclude that it is important to be aware of the contextual factors that may change the nature of obstacles that immigrants face. In particular, we show that nationality-based signals may be contingent on occupational characteristics and may also interact with active labor market policy participation, (Liechti et al. 2017), as we show elsewhere (Liechti et al. 2017).

These findings have several policy implications. First, more effort should be devoted to eliminating access difficulties to medium-skilled jobs and to preventing lock-in effects in low-desirability jobs. Research has shown that standardized application assessments and blinded application procedures help reduce discrimination (for gender e.g., Bohnet, 2016). Thus, introducing minimal requirements for hiring professionals and anti-discrimination legislation – which Switzerland does not have – might be helpful tools for reducing this disadvantage. Second, it is important to foster promotion possibilities in low-skilled jobs to increase the social mobility of individuals who have difficulties accessing medium-skilled occupations immediately. This might be achieved by investing in on-the-job training programs. Finally, awareness campaigns and specialized training for employers with recruitment duties might alleviate the problem, in addition to fostering a (seemingly) much-needed debate on inequality in the age of migration.

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Appendix

Table A.1: Descriptive statistics of survey respondents (employers)

	Mean / column % (Std. dev.)
Language region (of hotel, col %)	
German	0.69
French	0.22
Italian	0.08
Romanesque	0.02
Regional unemployment rate	0.03
	(0.01)
Share of foreign employees (of hotel)	0.60
	(0.24)
Female	0.45
	(0.50)
Age	49.56
	(10.28)
Educational attainment (col %)	
Mandatory or other	0.10
Professional education	0.16
Professional higher education	0.51
University	0.24
Hiring experience in years	15.55
	(9.74)
Born in Switzerland	0.73
	(0.44)
N	237

Table A.2: Dimensions and levels of vignettes (cleaning and reception)

Dimension	Level	
Gender	-	Mr. (reference category)
	-	Ms.
Nationality	-	Swiss citizen, unmarried, without children (reference category)
	-	Portuguese citizen, unmarried, without children
	-	Serbian citizen, unmarried, without children
	-	Senegalese citizen, unmarried, without children
Age	-	25 years old (reference category)
	-	32 years old
	-	40 years old
Education	-	Completed mandatory school in Switzerland
	-	Completed a 3-year apprenticeship[1] program as merchandiser (*receptionist*)
	-	Completed a 2-year apprenticeship as hotel employee (*cleaning*)
ALMP	-	(no mention) (reference category)
	-	Russian course paid by the job center (Training)
	-	40% wage subsidy paid by the job center (Subsidy)
	-	Temporary employment program in the field of clothing recycling (Occupation)
	-	Temporary employment program in the field of clothing recycling and temporary employment in the packing sector (Two occupations)
Hobby	-	Loves listening to music (reference category)
	-	Two times a week plays checks in the local association
	-	Two times a week practices kick-boxing
	-	Two times a week plays soccer (volleyball for female) with a local club
	-	Volunteers for an association taking care of the elderly

[1] Switzerland has a strong vocational education and training system (VET) in which most adolescents follow a dual track program that combines practical training at a company with theoretical classes for one or two days. There are programs for over 230 occupations, and most are three- or four-year VET programs with a federal diploma, there are shorter two-year programs years with a federal certificate. The two-year VET program as hotel employee consists of courses in laundry service, looking after guests, housekeeping, logistics, interior decoration. The three-year VET program as merchandiser consists of a course in German, a foreign language, economics, and communications.

Table A.3: The determinants of employers' evaluation of applicants for cleaning and reception position using normalized ratings

		Cleaning		Reception	
		(1)	(2)	(3)	(4)
Nationality (ref. Switzerland)					
	Portugal	0.03*	0.03	-0.10****	-0.11****
		(0.02)	(0.02)	(0.02)	(0.02)
	Serbia	-0.02	-0.02	-0.12****	-0.13****
		(0.02)	(0.02)	(0.02)	(0.02)
	Senegal	-0.03	-0.03	-0.14****	-0.15****
		(0.02)	(0.02)	(0.02)	(0.02)
Gender (ref. male)					
	Female	0.14****	0.14****	0.09****	0.09****
		(0.02)	(0.02)	(0.02)	(0.02)
Age (ref. 25 years)					
	32 years	0.01	0.02	0.01	0.01
		(0.02)	(0.02)	(0.02)	(0.02)
	40 years	-0.01	-0.01	-0.07****	-0.07****
		(0.02)	(0.02)	(0.02)	(0.02)
Education (ref. obligatory)					
	Secondary	0.11****	0.12****	0.09****	0.09****
		(0.01)	(0.01)	(0.02)	(0.02)
ALMP (ref. none)					
	Training	-0.01	-0.00	0.01	0.01
		(0.02)	(0.02)	(0.02)	(0.02)
	Subsidy	0.03	0.04*	0.01	0.00
		(0.02)	(0.02)	(0.02)	(0.02)
	Occupation	0.00	0.01	-0.04*	-0.04*
		(0.02)	(0.02)	(0.02)	(0.02)
	Two occupations	0.03	0.03	-0.07***	-0.08***
		(0.02)	(0.02)	(0.02)	(0.02)
Hobbies (ref. none/music)					
	Volunteering	0.02	0.02	-0.01	-0.00
		(0.02)	(0.02)	(0.02)	(0.02)
	Team sports	-0.00	-0.00	-0.01	-0.01
		(0.02)	(0.02)	(0.02)	(0.02)
	Kickboxing	-0.03	-0.03	-0.04*	-0.04
		(0.02)	(0.02)	(0.02)	(0.02)
	Chess	-0.01	-0.01	-0.02	-0.02
		(0.02)	(0.02)	(0.02)	(0.02)
Respondent characteristics		**no**	**yes**	**no**	**yes**
Observations		958	928	967	931

SE in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, and **** $p < 0.001$

+ Respondent characteristics include: age, gender, educational attainment, whether the respondent was born in Switzerland, the language region in which the hotel is placed in, the local unemployment rate (cantonal level), and the share of foreigners employed in the hotel (as derived from the respondent's answers to the accompanying survey.)

Table A.4: Diagnostics tests for carryover, profile order, and randomization effects

	(1)	(2)	(3)	(4)

Table A.4.1: Carryover Effects

	Cleaning Round 1	**Cleaning Round 2**	**Reception Round 1**	**Reception Round 2**
Portugal	0.04	0.08	-0.11*	-0.13**
	(0.06)	(0.06)	(0.06)	(0.05)
Serbia	-0.04	-0.05	-0.14**	-0.24****
	(0.05)	(0.07)	(0.06)	(0.07)
Senegal	0.01	-0.01	-0.15***	-0.21****
	(0.05)	(0.06)	(0.05)	(0.05)
Observations	460	460	464	462

Table A.4.2: Profile Order Effects

	Cleaning First	**Cleaning Second**	**Reception First**	**Reception Second**
Portugal	0.03	0.07	-0.11***	-0.13***
	(0.05)	(0.06)	(0.04)	(0.05)
Serbia	-0.09*	-0.05	-0.15**	-0.24****
	(0.05)	(0.06)	(0.06)	(0.05)
Senegal	-0.02	-0.01	-0.15****	-0.25****
	(0.05)	(0.06)	(0.04)	(0.06)
Observations	460	460	463	463

Table A.4.3: Randomization

	clean gender	**recep gender**	**clean age**	**recep age**	**clean educ**	**recep educ**	**clean exper**	**recep exper**
Portugal	0.01	-0.00	-0.02	0.02	0.01	-0.02	-0.15	0.02
	(0.01)	(0.01)	(0.21)	(0.15)	(0.02)	(0.02)	(0.21)	(0.16)
Serbia	-0.02	-0.00	-0.42	-0.24	0.01	0.00	-0.19	-0.08
	(0.01)	(0.01)	(0.31)	(0.22)	(0.02)	(0.02)	(0.29)	(0.20)
Senegal	0.00	-0.01	-0.08	-0.22	-0.01	0.00	-0.05	-0.14
	(0.01)	(0.01)	(0.19)	(0.17)	(0.02)	(0.01)	(0.21)	(0.14)
p omnibus F	0.92	0.99	0.96	0.99	0.99	0.99	0.99	0.99
p Bartlett's	1.00	1.00	0.99	1.00	0.99	0.99	0.98	0.99
Observations	972	972	972	972	972	972	972	972
	clean ch-born	**recep ch-born**	**clean foreign share**	**recep foreign share**	**clean lang. reg**	**recep lang. reg**	**clean unempl**	**recep unempl**
Portugal	-0.00	0.01	0.00	-0.01	0.00	0.01	0.02	0.03
	(0.01)	(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)
Serbia	-0.00	-0.01	-0.01	0.01	0.03	-0.02	0.05	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)	(0.03)	(0.02)
Senegal	0.01	-0.01	0.01	0.00	-0.01	0.00	-0.01	0.02
	(0.01)	(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)
p omnibus F	0.97	0.96	0.97	0.95	0.93	0.96	0.96	0.98
p Bartlett's	0.99	0.98	0.99	0.96	0.89	0.97	0.99	0.98
Observations	972	972	972	972	972	972	972	972

SE in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, and **** $p < 0.001$

Supplementary Material

Table S1a: Experimental Protocol

Date	Step
9 November 2015	Postal letter announcing the survey and a leaflet with more information on the survey
11 November 2015	Electronic survey link
16 November 2015	Reminder to those that had not yet responded
23 November 2015	Second reminder to those that had not yet responded
19 January 2016	Survey closed

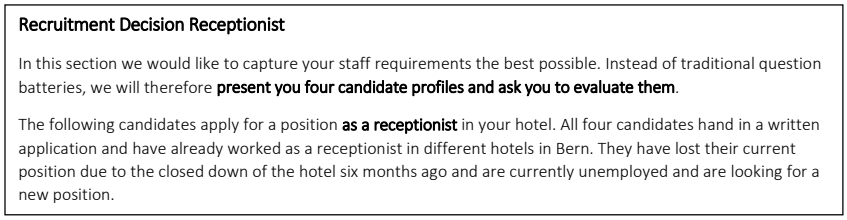


Figure S1b: First screen vignette experiment

Please indicate for each candidate the likelihood that you would engage him for a position as a receptionist.

(1=very unlikely; 10=very likely)

You receive the written application of the candidates below. Both have already worked as a receptionist in different hotels in Bern. They have lost their current position due to the closed down of the hotel six months ago and are currently unemployed and are looking for a new position.

	Candidate 1	**Candidate 2**
	Mr. G.	Ms. F
	Serbian citizen, unmarried, no children	Swiss citizen, unmarried, no children
	Is 32 years old	Is 40 years old
	Has completed a 2-years education as hotel employee	Has completed compulsory education in Switzerland
	Is currently in an occupational programme for the recycling of old cloths, before he completed one in packaging.	
	In his free time he is volunteering for an organisation that support elderly people	In her free time she likes to listen to music.
Hiring	**(--)□ □ □ □ □ □ □ □ □ □(++)** **1 2 3 4 5 6 7 8 9 10**	**(--)□ □ □ □ □ □ □ □ □ □(++)** **1 2 3 4 5 6 7 8 9 10**

Third screen vignette experiment: Two additional candidates in the same form as in the second screen

Forth screen vignette experiment: All four candidates are presented next to one another and participants are asked to place them in their preferred order from 1 (liked best) to 4 (liked least).

This experiment was followed by a second experiment for the position of a room-cleaner. The set up was the same as presented above.

Figure S1c: Second screen vignette experiment

Table S2: Correlation Matrix for applicants' and respondents' attributes

The tables below show the correlation between the different vignette dimensions from the rated vignettes and the correlation between the vignette dimensions and the respondents' characteristics. As not every vignette of the entire vignette universe was rated, we draw a d-efficient sample, and the vignette dimensions are correlated with one another, although this correlation is close to 0. The correlation between the observed respondent characteristics and vignette dimensions indicate whether the random allocation of vignettes to the respondent has worked out. The vignette dimensions should not be correlated with the respondent characteristics, which would mean, for example, that female respondents should not have rated significantly more female vignettes than male respondents. The correlation indicated below indicates that randomization was successful, as all correlations are near 0 and non-significant.

Table S2a: Pairwise correlation for the cleaning position vignettes, applicant and respondent characteristics

	Gender	Nationality	Age	Education	ALMP	Hobby
Applicant/vignette variables						
Gender	1.00					
Nationality	0.01	1.00				
Age	0.00	0.04	1.00			
Education	0.04	-0.01	0.08**	1.00		
ALMP	0.01	0.02	0.06*	-0.01	1.00	
Hobby	0.01	-0.02	0.04	0.00	0.00	1.00
Employer/respondent variables						
Gender	0.00	0.00	-0.01	0.00	0.01	0.00
Age	0.00	0.00	0.01	0.00	0.14	0.00
Education	0.00	-0.01	-0.02	-0.01	0.01	-0.01
N Employees	0.00	0.00	-0.01	0.00	0.00	-0.02
Lang. Region	0.00	0.00	0.00	0.00	0.00	-0.01
Unemployment	0.00	0.00	0.00	0.00	0.00	0.00

Note: **Significant at the 5%-level and *Significant on the 10%-level.

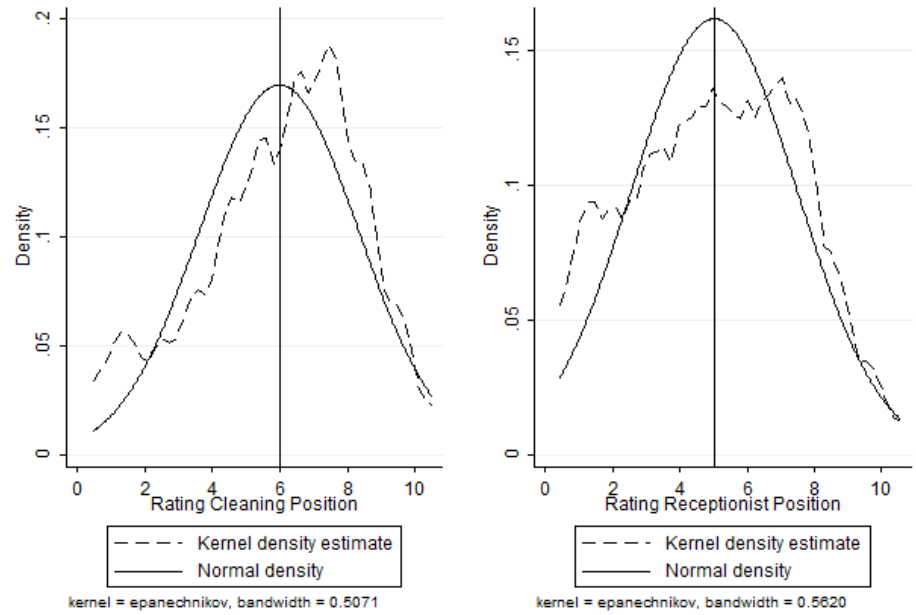
Table S2b: Pairwise correlation for the receptionist vignettes, applicant and respondent characteristics

	Gender	Nationality	Age	Education	ALMP	Hobby
Applicant/vignette variables						
Gender	1.00					
Nationality	0.04	1.00				
Age	0.00	0.01	1.00			
Education	-0.01	-0.06*	0.03	1.00		
ALMP	0.04	0.02	0.08**	-0.05	1	
Hobby	0.04	0.04	-0.01	-0.01	0.02	1.00
Employer/respondent variables						
Gender	0.01	0.00	0.00	0.00	-0.01	0.00
Age	0.01	0.00	0.01	-0.02	0.01	0.01
Education	0.01	0.01	0.00	-0.01	0.00	-0.01
N Employees	0.03	0.00	-0.02	0.00	0.00	-0.01
Lang. Region	0.00	0.00	-0.01	0.00	-0.01	0.00
Unemployment	0.00	0.00	-0.01	0.00	-0.01	-0.01

Note: **Significant at the 5%-level and *Significant at the 10%-level.

Table S3: Descriptive statistics comparing employers (respondents and non-respondents) for specific macro variables

	Non-Respondents	Respondents
Language Region		
German-speaking	0.69	0.69
French-speaking	0.21	0.21
Italian-speaking	0.08	0.08
Romanesque-speaking	0.03	0.02
City Type		
Central city of agglomeration	0.26	0.29
Agglomeration	0.23	0.25
Isolate city	0.02	0.02
Rural area	0.49	0.43
Category		
1 star	0.01	0.01
2 stars	0.09	0.07
3 stars	0.47	0.46
4 stars	0.24	0.24
5 stars	0.04	0.07
Swisslodge	0.11	0.11
Other classification	0.04	0.05



Dependent variable is measured on a scale from 1-10. The vertical line represents the mean

Figure S2: Distribution of dependent variables (evaluation of applicants for cleaning and receptionist position)

3 Article #2: Access Bias

Compensation or Competition: Bias in Immigrants' Access to Active Labour Market Measures

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Under Review: Social Problems

Abstract

Participation in active labour market measures is often beneficial for unemployed individuals, particularly if their employability is low. However, some measures can affect labour market outcomes, such as unemployment duration or post-unemployment wages, even in a negative manner, because of factors such as human capital deprivation or lock-in effects. Based on encompassing registry data that allows researchers to control for usually unobserved employability variables, we find evidence of a systematic access bias whereby caseworkers in Switzerland assign unemployed immigrants to activation measures based on what we call a *competition logic* that is mainly driven by and conforms to an economic rationale and to the job centre's performance evaluation. From the perspective of the immigrants' labour-market integration, this may be problematic because it results in an overrepresentation of immigrants in measures with little efficacy rather than in the placement of immigrants in measures that could *compensate* for (some of) their employability disadvantages. Conversely, we find that Swiss citizens are relatively advantaged in being able to access more measures that promote human capital enhancement (compensation logic) and that have been shown to be successful tools for labour-market reintegration. It is plausible that a stronger reliance on the *competition logic* by caseworkers and the consequential overrepresentation of migrants in low-efficacy measures amplifies the migrants' general labour market disadvantages.

Acknowledgments

We are grateful to Jonathan Gast, the State Secretary of Economic Affairs, for providing the data. We also thank Fabienne Liechti, Delia Pisoni, Philipp Trein, Anna Wilson, Laure Athias, Pieter Bevelander, Giuliano Bonoli, Rafael Lalive and the participants of the 2016 ISA conference in Vienna, the 2016 nccr-on the move Summer School in Neuchâtel, and of the 2017 IMISCOE Annual Conference in Rotterdam for valuable feedback.

3.1 Introduction

Welfare states insure individuals and help them to address different risks that arise during their life. In modern work- and knowledge-based societies, an essential aspect of welfare state intervention is the insurance against unemployment and the support for entering or re-entering the labour market, particularly re-entering the labour market through participation in Active Labour Market Programmes (ALMP). While labour market integration plays an important role in the social and economic life of any individual, it has been shown to be of pivotal importance for immigrants, as it accelerates their integration in a host society (e.g., Fleischmann and Dronkers, 2010). Moreover, immigrants are overrepresented among the unemployed and are thus more likely to be confronted with placement in ALMPs. This circumstance will be intensified due to the recent influx of migrants to 'Western' labour markets. Hence, understanding the advantages and disadvantages of labour market activation measures is essential.

Against this backdrop, more attention should be paid to whether these measures that should ease labour market access are indeed assigned to and are effective for these particularly vulnerable groups and are thus helping to mitigate social inequalities. Whether an equalisation of chances through ALMPs actually occurs has been hotly debated (e.g., Hemerijk, 2014; Van Vliet and Wang, 2015). More generally, Cantillon (2011) has shown that social policies may carry unintended consequences. She suggests that policies designed to reduce poverty do not always benefit those who - in absolute terms - are the most in need, and at times, these policies serve those who constitute the more 'advantaged' among the disadvantaged. This phenomenon is known as the Matthew Effect (Merton, 1968, see also Grand, 1982; Bonoli and Liechti, 2015).

We contribute to this literature by inquiring whether the allocation of unemployed immigrants to different ALMPs is biased by the caseworkers' anticipation of the difficulties that the immigrants are likely to face when looking for employment. In fact, immigrants suffer from 'employability penalties', that is, the reduction of their (true) employability, due to employers' perceptions of social distance (for a similar argument regarding wages see Ebner and Helbling, 2016). Therefore, social distance perceptions capture the notion of a graded understanding of an immigrant's compatibility with a host society, driven by socio-cultural factors, such as shared culture or language, religion, or history (see Hagendoorn and Hraba 1987; Hagendoorn, 1993 and 1995; Auer et al., 2018) as well as by the (perceived) distance of the educational and labour market context of their country of origin. When assessing a jobseeker's employability, counsellors in public employment services are thus likely to anticipate that social-distance driven statistical and/or taste-based discrimination will be encountered particularly but not exclusively by low-skilled immigrants in the labour market (for studies documenting discrimination for higher skilled positions see Auer et al., 2018; Author, 2018a). Accordingly, we assume that a greater perceived social distance translates into a greater exposure to scepticism about the immigrants' labour market compatibility and ultimately to discrimination by employers. Consequently, immigrants are likely to be perceived as less employable, ceteris paribus.

While we do not contest the general importance of individual support services provided by caseworkers, we argue that the anticipation of labour market discrimination combined with a

strict evaluation culture of job centres creates strong incentives for caseworkers to follow what we label a *competition logic* when assigning unemployed persons to ALMP measures. To optimise their placement statistics, caseworkers have an incentive to focus on those unemployed who are easiest to employ because the unemployed individuals are objectively or subjectively perceived to be better adapted to the Swiss labour market context. Consequently, caseworkers may apply creaming strategies to reduce costs for the job centres, increase placement success and eventually lower unemployment rates (McKinlay 1975; Muffels et al. 2002). Therefore, human-capital intensive measures that aim at the *upskilling* of the unemployed are likely to be attributed to those beneficiaries who are already closer to meeting the requirements of the labour market and therefore have higher chances of being *pushed* into employment with the help of an activation measure. While a placement strategy following incentives of a market-based competition logic is rational from an institutional and possibly from a social perspective, it results in an over-representation of immigrants with lower employability in ALMP measures with limited or no human-capital component, which 'park' participants in so-called *occupational programmes*. This placement strategy is diametrically opposite to what we label the *compensation logic*, in which the existing lacunas of skills of the least employable people are addressed by providing training and other types of support to prevent a perpetuation of labour market disadvantages. In fact, a placement strategy prioritising a swift unemployment exit and focusing on the strongest candidates might lead to a situation in which the existing inequality is exacerbated over time instead of mitigated because the unemployed are allocated to ALMP measures based on an economic rationale rather than based on egalitarian thinking (to which policy makers have often claimed to aspire; e.g., Cantillon, 2011; Esping-Andersen, 1990).

We analyse the occurrence of an access bias in upskilling and in the placement of the unemployed in occupational ALMPs, based on Swiss administrative data from the State Secretary of Economic Affairs for the entire population of newly unemployed individuals between 2010 and 2012. These data contain precise socio-economic information about the jobseekers as well as details about the ALMP measures they followed. The advantage of our dataset is that beyond providing extensive controls for individual human capital and other relevant characteristics, it includes the caseworkers' evaluations of a jobseeker's employability (i.e., *placeability*). Notably, the term placeability is able to capture otherwise hard to observe characteristics, such as attitude, motivation, and appearance.

The paper proceeds as follows: in section 2, we lay out the institutional framework of different ALMP types, their performance and the general allocation regulations. In section 3, we elaborate on the two competing assignment logics that caseworkers can follow (*competition vs. compensation*). Section 4 expands the two assignment logics with the perspective of multicultural societies. Section 5 describes the data, operationalisation and estimation strategy. The results are presented in section 6, and section 7 concludes.

3.2 Classification of and assignment to ALMPs

Today, a plethora of different activation measures exist, and these measures can be classified in different ways. Initially, the literature makes a broad distinction between Nordic human capi-

tal and liberal incentive-based or sanctioning ALMPs (Barbier and Ludwig-Mayerhofer, 2004; Daguerre, 2007; Torfing, 1999), closely resembling Esping-Andersen's (1990) *worlds of welfare* categories. More recently, Bonoli (2010) proposed a refined distinction of ALMPs along two dimensions. Programmes may differ with respect to their human-capital component (upskilling) as opposed to differing with respect to their pro-market employment orientation, that is, the degree to which a measure creates alternatives to 'real' jobs in the labour market.

The evaluation literature shows that these two activation strategies also differ with respect to their effectiveness. Both meta-analytical as well as evaluation studies in Switzerland and elsewhere reach the conclusion that temporary employment programmes (henceforth labelled *occupational* programmes) are even detrimental to labour market success (e.g., Card et al., 2010; Gerfin and Lechner, 2002; Kluve, 2010; Author 2017). These programmes aim at broadening competencies and skills on a learning-by-doing basis as well as at maintaining a daily routine. These measures are organised in the context of public administration, private companies or NGOs and consist mostly of basic activities, such as recycling clothes or packaging. As a source of employment training for the common good, occupational programmes are designed to avoid competition with private sector activities (e.g., Duell et al., 2010: 26). Tellingly, these measures are also referred to as parking strategies (Considine, 2001; Finn, 2011; Van Berkel et al., 2007). Gerfin and Lechner (2002) convincingly show that occupational measures systematically perform worse than do any other ALMP type, and the assignment of an individual to occupational measures provides even worse results for improving an individual's employability than the non-assignment of an individual to an ALMP. Their explanation for this result is that in occupational schemes, the human capital effect is too low to compensate for the lower job search effort of participants. As an alternative explanation, Liechti et al. (2017) argue that ALMP participation conveys a signal for prospective employers that varies across different measures. They show that employers evaluate (fictitious) candidates as being substantially worse if they participated in occupational programmes, ceteris paribus. This notion of occupational measures being inefficient at best and partly even harmful for participants' re-employment chances was also conveyed to us during several interviews with caseworkers at local job centres, which we conducted for this study and during informal talks with involved senior officials at the State Secretary for Economic Affairs in Switzerland. As described by one interviewee:

"It [occupational programmes] is a programme which - true to its name - aims at occupying time." (see Table A.1 in the appendix)

Another interviewee elaborates: *"If I have to put a person who is HR assistant in a temporary employment [occupational] programme (. . .) she will be answering the phone all day. It will keep the person occupied. However, at the level of competence valorisation . . . [respondent lifts shoulders]."*

On the other end of the ALMP spectrum, human-capital intensive, that is, *upskilling* measures, aim to improve vocational qualifications through offering trainings on a range of topics (computer literacy, language, business administration, etc.). These measures seem to have a

moderately positive effect in the long run (Gerfin and Lechner, 2002; Strandh and Nordlund, 2008). Similarly, Butschek and Walter (2014) and Author (2017) find indications that public employment programmes fare worse than do training programmes. Moreover, despite some differences, the overall benefits (or detriments) of participation in different ALMPs are not tied to migration background (e.g., Author, 2017; Nekby, 2008).
In summary, from evaluations and experimental studies and the assessment of PES counsellors, we expect that occupational programmes are less likely than upskilling measures to compensate for the jobseekers' pre-existing disadvantages.

3.3 ALMP placement mechanisms: competition versus compensation logic

In Switzerland, entitlement to ALMPs is granted to all unemployed individuals fulfilling the requirements for unemployment benefits (UB), which is defined as having a contribution record to the unemployment insurance of at least one year during the previous two years. In other words, ALMP eligibility is not affected by individual characteristics, such as age, gender, residence permit or other factors. Upon becoming unemployed, jobseekers register with the Public Employment Service (PES) where they are assigned to a caseworker that monitors their job search effort and - if necessary - assigns them to an ALMP to accelerate their labour market reintegration. This allocation is based on the counsellors' *assessment of a jobseeker's employability*.[6] The employability of a jobseeker is influenced by a set of more or less easily observable characteristics. Most importantly, the counsellor must consider the human capital of the unemployed individual in terms of qualifications, work experience, language competencies and other factors and identify the weaknesses that could be addressed by ALMPs (e.g., insufficient qualifications, obsolete skills, lacking practical experience). However, the PES staff also must take other factors into account, such as soft skills (communication skills) and behavioural traits (e.g., reliability or engagement). These unobservable traits are reflected in the routine classification that counsellors make during the first visit to the job centre, whereby they assign the unemployed to three categories of *placeability*: easy, middle and hard to place[7] in the labour market (see interview 2, citation 9). In cases in which the unemployed fail to comply with the PES counsellor's ALMP allocation decision, they face sanctions in the form of a suspension of unemployment benefits of up to several weeks. In other words, the caseworker has high discretionary power regarding ALMP assignment vis-à-vis her clients (see interview 1, citation 5; interview 2, citation 10).

Consequently, *competition-based* allocation strategies aim at a swift and cost-efficient reinsertion of the unemployed, which is not only a direct response to society's overall interest in lowering the unemployment rate and in reducing social spending but also a response to organisational goals, such as decreasing the caseworkers' workload. Moreover, the institutional pressure to achieve swift placement is high in Switzerland, as the local job centres are closely monitored. Each job centre is evaluated periodically by means of four indicators, which are assigned different weights: (i) the reinsertion speed (weight 50%); (ii) the prevention of long-term unemployment (weight 20%); (iii) benefit exhaustion (weight 20%); and (iv) repeated registration for benefits (weight 10%; Duell et al., 2010: 17; 53ff.). These evaluations, which are made available to the

[6] In principle, the unemployed person can make suggestions to participate in a specific measure herself; however, ALMP measures are usually suggested by PES personnel (Duell et al., 2010).
[7] We use this classification to account for selection on unobservables.

job centres, create a form of direct competition between different sites because if a job centre is marked as underperforming twice in a row, official admonishments are issued, and measures are put in place. Overall, Duell et al. (2010: 54) argue that this kind of monitoring and evaluation system creates strong incentives for counsellors to optimise their placement rates and to prioritise quick placements over durable ones and that *"[...] performance indicators have probably an important influence on the activation strategy implemented by the cantonal and local employment offices."*

Hence, from a rational choice perspective, the institutional constellation of monitoring mechanisms and evaluation criteria incentivises PES counsellors to systematically allocate the most effective ALMPs to clients who are closest to the demands of prospective employers. Of course, this focus on easy-to-place jobseekers with already higher employability is to the detriment of individuals with difficult profiles and larger skill lacunas.[8] In other words, a competition logic results in a prioritisation of individuals who are closer to the requirements of employers for participation in the labour market (Fraser, 1999; Nicaise et al., 1995). On the other hand, PES counsellors are expected to provide long-lasting results for the unemployed individual. Such durable solutions usually presuppose successful retraining and upskilling efforts, thereby allowing the unemployed to interrupt precarious working biographies, which exacerbate the poverty risk (e.g., Gallie et al., 2003; Strandh and Nordlund, 2008). The use of ALMPs as a way to compensate for individual difficulties in terms of employability have been (and still are) the fundamental aspiration of this policy field. This goal dates back to labour market policies that were developed in Sweden during the 1950s. According to its egalitarian ideological foundations, the Swedish Social Democratic welfare system intervened by means of human capital-based ALMPs to avoid the marginalisation of unemployed workers (Fraser, 1999; Nicaise et al., 1995). Following this *compensation logic*, human capital orientated ALMPs aim to improve the match between employment demand and supply by providing a form of skills compensation for individuals with low or obsolete qualifications (Bonoli, 2013). By providing targeted training and support, the activation policies that follow the compensation logic seek to prevent an accumulation of disadvantages that potentially lead to recurring sequences of unemployment and reduced social mobility (Strandh and Nordlund, 2008: 360).

In summary, we argue that PES counsellors experience a trade-off between the most cost-effective but possibly short-sighted strategy and the most egalitarian but possibly more long-term oriented placement strategy. Following the *competition logic*, among all recipients, we expect the likelihood of being assigned to a more efficacious ALMP measure to increase with a person's likelihood for initial employability, that is, her proximity to meeting the requirements of employers in the labour market, and with her derived benefit from a specific measure. Attempts to achieve more egalitarian outcomes instead demand compensating for the individuals' skill lacunas and investing more in those individuals who are the farthest away from the labour market. As we elaborate in the next section, this argument is particularly salient for immigrants. In fact, they are generally perceived as being less employable because they are associated with

[8] An incentive for PES counsellors to assign individuals with low employability to (underperforming) ALMPs may be due to ALMP participants not counting as unemployed in the official statistics (State Secretary of Economic Affairs 2015).

lower productivity (statistical discrimination, e.g., Baumle and Fossett, 2005) or disliked (taste discrimination, e.g., Becker, 1957). According to the *compensation logic*, immigrants should thus constitute the biggest recipient group of effective ALMPs.

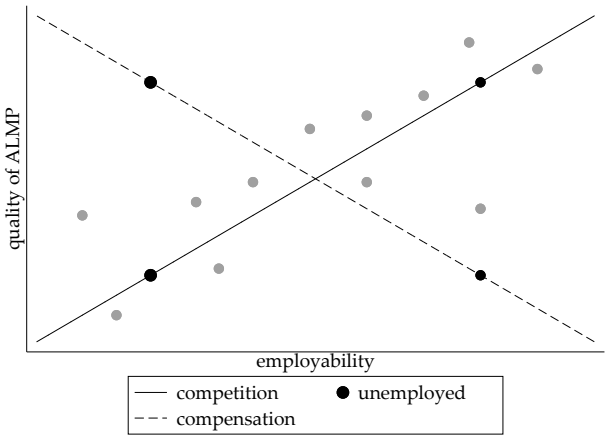


Figure 1: Competition vs. compensation

Figure 1 above illustrates the two competing assignment mechanisms. The *competition logic* creates an incentive for PES counsellors to place unemployed individuals into ALMP measures along the solid line. From a *compensation perspective* (dashed line Figure 1), this prevents less employable individuals from catching up with individuals who possess higher levels of employability. In fact, the *employability gap* should widen if individuals with higher employability levels have the possibility of increasing their skill sets, while less employable individuals are excluded from upskilling measures.[9]

3.4 Social distance and labour market disadvantage

Many studies have shown that individuals with an immigration background[10] encounter higher hurdles to entering or re-entering the labour market than do so-called natives (Riach and Rich, 2002; Heath and Cheung, 2007; Heath et al., 2008; Zschirnt and Ruedin, 2016; Auer et al. 2017; Author 2018b). The *social psychology* literature explains this disadvantage by showing that individuals automatically classify people according to their in-group or out-group membership (Fiske, 1998). Generally, interaction with in-group members is preferred. Shared characteristics, such as a common cultural understanding - particularly related to norms and values - and a common language (e.g., Hutnik, 1991; Reskin, 2000) ease the mutual understanding and help to strengthen sentiments of support and belonging (Tajfel, 1982; Snellman and Ekehammar, 2005). Research also shows that individuals not only prefer interacting with in-group members but also that individuals *evaluate* them more positively (Reskin, 2000). In the labour market, and particularly in a hiring situation, this favours native candidates compared to candidates with a foreign background.

[9]Note that these competing logics only apply to individuals who are generally deemed to benefit from ALMP participation. The majority of the unemployed have relatively little difficulty re-entering the labour market and, therefore, do not participate in activation measures.

[10]We define this term to include both foreign-born immigrants and Swiss-born individuals with a foreign nationality.

However, this dichotomous preference structure does not seem adequate in the context of modern multi-ethnic societies. In fact, many studies find evidence for *heterogeneous* disadvantage patterns among the immigrant population. In other words, some groups of immigrants are perceived as being more socially distant from nationals than others. This differential perception of distance generates so-called ethnic hierarchies (Hagendoorn, 1993 and 1995; Auer et al. 2018). Thus, in the context of multi-ethnic societies, a more graduated approach to this in-group favouritism applies. The expectation is that immigrants from a cultural background that comes with a higher degree of social proximity integrate more easily in the society (Hagendoorn, 1995) and, thus, into the labour market[11] (Portes and Rumbaut, 2001; Van Tubergen et al., 2004). The concept of social distance is commonly defined as the perception or feeling of "sympathetic understanding", that is, a feeling of closeness between people and groups (Alba and Nee, 1997; Bogardus, 1959; Ebner and Helbling, 2016; Van Tubergen et al., 2004: 709). It is an inherently multidimensional concept that is informed by both objective and subjective factors and is influenced by different mechanisms (cf. Portes and Rumbaut, 2001).

We argue that three mechanisms influence social distance perception in the labour market. First, social distance perceptions can be based on physical appearance, a general perception of cultural difference and perceptions of socio-economic distance, as immigrants often cluster in groups with a lower socio-economic status. Although these different sources of social distance perception inducing characteristics can be correlated, they need not be correlated.[12]

The literature shows that immigrants who stem from distant geographical regions, who are easily identifiable due to facial traits and who are characterised by marked cultural differences (e.g., wearing noticeable religious symbols, speaking a non-Western language, etc.) suffer from increased levels of disadvantage (cf. Lindley, 2002; Weichselbaumer, 2016) that likely is due to so-called taste-based discrimination (see Becker 1957). In Western societies, immigrants from majority Muslim countries are particularly exposed to this form of discrimination (e.g., Di Stasio et al. 2018). Switzerland is no exception; individuals of the Muslim faith have been in the political spotlight. As the results of several popular votes suggest, a large share of Swiss voters perceive this group of immigrants as being culturally threatening, both in terms of their adherence to a non-Christian faith and with regard to their views on issues linked to liberalism, egalitarianism and particularly gender differences (cf. Dolezal et al., 2010; Ebner and Helbling, 2016; Helbling, 2010, 2014). Accordingly, we expect that individuals coming from Muslim-dominated countries are also more disadvantaged in the labour market (e.g., Constant et al., 2009; Lindley, 2002; Van Tubergen et al., 2004; Di Stasio et al. 2018). Similarly, we expect that individuals who speak languages that are (perceived as being) particularly distant from the host-country language(s) should suffer more disadvantages in a host country (e.g., West and Graham 2004; Koopmans 2016; for Switzerland see Auer 2018; Slotwinski et al. 2018).

[11] This is particularly applicable to immigrants from traditional sending countries, that is, those countries in which the Swiss government actively recruited its guest workers starting from the 1950s. In terms of social distance, these countries seemed to conform to the State Secretary for Migration's policy of prioritizing immigrants from the 'inner immigration circle', i.e., Italy, Portugal and Spain because of a shared cultural background (State Secretary for Migration, 2015; see also D'Amato, 2010; Liebig et al., 2005).

[12] For this reason, we construct a general social distance indicator that summarizes different mechanisms in one measure.

Second, beyond the influence of these general social distance perceptions, there are characteristics that are more closely related to labour market performance and thus should be particularly salient to employers when hiring. The literature shows that when making recruitment decisions, employers strive to find productive candidates by considering both individual- (e.g., grades, certificates, etc.) and group-based characteristics (e.g., gender, nationality/ethnicity, see Author 2018c). Several studies on *statistical discrimination* have shown that employers generally interpret a foreign nationality as an indication of a lower level of productivity (cf. Baumle and Fossett, 2005; Midtbøen, 2013). On the one hand, expectations of lower productivity can be linked to the employers' *perception* that foreign candidates have human capital of inferior quality (e.g., Damelang and Abraham, 2016). On the other hand, the employers could be likely to expect that immigrants *have* lower levels of human capital endowment, for instance, because the immigrants are more likely to have come from a disadvantaged socio-economic background (e.g., Arrow, 1973; Friedberg, 2000; Phelps, 1972; for an overview see Guryan and Charles, 2013). Alternatively, human capital theory suggests that immigrants suffer from disadvantages when coming from less developed countries, whereas immigrants from economically more developed regions adapt with more ease to Western skill requirements and technology (Van Tubergen et al., 2004, see also Ebner and Helbling, 2016). This is particularly true because similar economic conditions presuppose similarly efficient educational systems and thus train their workforce in a fashion that enables a smoother professional transition into Western labour markets (e.g., Friedberg, 2000). Again, actual differences in the quality of human capital provided by education and labour market socialisation in specific countries of origin and the employers' perception of their differences are likely to be highly correlated. However, discrimination against foreign workers can also be explained from a *taste-based perspective* (Becker, 1957) whereby immigrants are disadvantaged because of individual dislikes or because employers *anticipate* problems related to either their current employees' or their clients' preferences for interacting with natives (Andriessen et al., 2012).

Third, the ethnic threat hypothesis suggests that the size of an immigrant community influences the level of distance perception and thus the level of discrimination. Therefore, large groups of immigrants are perceived as threatening the social and economic hegemony of the natives, triggering fears of downward social mobility that lead to increased levels of prejudice and closure towards out-groups (e.g., Blalock, 1967). The reverse effect should apply if we lend credence to the contact hypothesis. The contact theory suggests that individuals who are embedded in networks with a high prevalence of immigrants are more used to interacting with non-natives and are, consequently, given the opportunity to form positive out-group stereotypes owing to face-to-face interaction with immigrants (Allport, 1954). It is ultimately an empirical question as to which of these explanations applies.

In summary, social distance perceptions are informed by general feelings of social and cultural closeness (geographical proximity, appearance, language, religion, values, etc.), by the perception of a similar level and quality of human capital endowment (quality of education, similarity of economic and technological development, etc.) and by the in- vs. out- group interaction

frequency. In general, employers should prefer hiring individuals who are as close as possible to natives in terms of these three groups of elements that inform social distance perceptions (for a similar argument for wages see Ebner and Helbling, 2016). Put differently, labour market discrimination translates into an *employability penalty* that increases with an individual's perceived social distance from the host society.

Hypotheses: We expect that to comply with their reinsertion targets, PES counsellors, who are aware of employers' preferences and perceptions, must assess the employability of jobseekers and decide whether to allocate them according to the compensation or the competition logic (see Figure 1). In Figure 2, we add an unemployed person's origin to the equation. We hypothesise that PES caseworkers when setting out a placement strategy for immigrants *anticipate* the objective or perceived origin-based employability penalty, including the anticipation of employers' discrimination, and assign ALMP accordingly. With a perception of increasing social distance, ceteris paribus, employability decreases (because the penalty increases). Accordingly, given equal human capital endowment, employability is lowest for the immigrants perceived as being the most distant (black dots in Figure 2), increases with the perceived social proximity of the immigrants to the host society (black diamonds) and is highest for natives (black triangles).

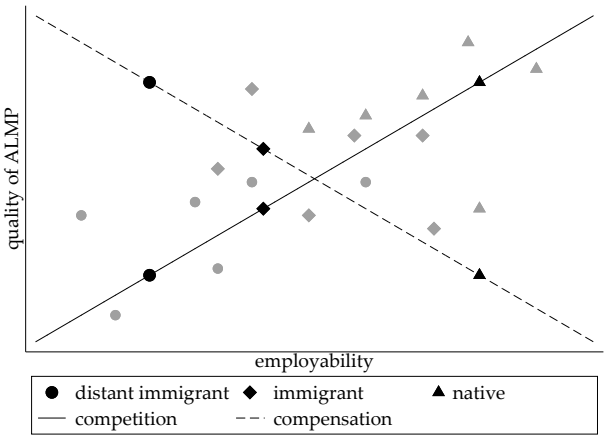


Figure 2: Competition vs. compensation based on social distance

If PES counsellors follow a *compensation logic*, they should assign the *unemployed with little (perceived) employability* to better performing activation measures (i.e., upskilling; black dot crossing the dashed line). Conversely, if they follow a *competition logic*, they should assign the *unemployed with little (perceived) employability* to occupational measures (black dot crossing the solid line). We synthesise this theoretical expectation into two mutually exclusive hypotheses:

Competition hypothesis: The probability of participating in upskilling rather than in occupational measures *decreases* with an individual's perceived social distance from the host society.

Compensation hypothesis: The probability of participating in upskilling rather than in occupational measures *increases* with an individual's perceived social distance from the host society.

3.5 Data and estimation strategy

To test these hypotheses, we rely on registry data provided by the State secretary of economic affairs that cover all newly unemployed individuals in Switzerland from 2010 until 2012. The data contain a battery of socio-economic variables, as well as information on the specific ALMP measure(s) that were followed for the unemployed individuals. This allows the operationalisation of the key criteria of employability and of ALMP participation with great precision. We base our analysis on a sample of approximately 116,000 unemployed individuals. For a maximum of 24 months, we follow each individual until their transition into employment or their exit from the unemployment registry. Two years after the registration with the PES, the observation is censored. This usually corresponds with the loss of eligibility for unemployment benefits, which in turn is the requirement to gain access to ALMP measures.[13]

Dependent variable: Swiss authorities define three main categories of activation measures (i.e., occupational and upskilling measures[14] and subsidies), which correspond to the following: the theoretical classification by Bonoli (2010); the empirical study by Gerfin and Lechner (2002), who rely on the same data source (previous years); and other ALMP evaluation studies (e.g., Butschek and Walter, 2014; Card et al., 2010; Kluve, 2010). Consequently, we define *occupational measures* as all temporary employment programmes in both the public and the private sector. *Upskilling measures* are defined as courses and trainings that relate to professional development (professional courses). These include IT and professional courses for different domains (sales and commerce, technical jobs, hotel and gastronomy or social and health sector). Among upskilling measures, we exclude those that are specifically targeted to certain groups, such as language courses for migrants, which can be considered primarily integration support rather than as professional upskilling. We define other measures as a control variable consisting of ALMP measures that do not belong to either category of upskilling or occupational measures. These include basic courses, such as application training, stages and measures supporting self-employment, as well as courses that could not be allocated to a category (unknown). In the evaluation literature, the effect of these different ALMPs on labour market outcomes is either contested or unresearched.

Independent variables: To ensure that the results are not biased by a single (incomplete or flawed) approximation of social distance, we base our analysis on seven indicators that mirror the threefold theoretical distinction, as well as on an overall measure based on all seven equally weighted proxies. Individual country association is based on citizenship as recorded by the registry. In combination with individual employability attributes, these proxies should capture the most important determinants of objective and subjective social distance perceptions,[15] ranging from *perceived social distance to labour market compatibility of the host and sending country* and the *host-country population's exposure to sending country nationals.*

[13]Therefore, it is extremely unlikely that we would observe a person accessing an ALMP measure after two years of unemployment.

[14]We exclude basic courses, such as CV checks from upskilling measures, as these do not increase the human capital endowment of an unemployed person.

[15]Social distance perceptions may originate from both subjective and objective factors. This is why our operationalisation strategy captures a range of variables that may influence this perception, as suggested, for instance, by Ebner and Helbling (2016).

First, we measure the *geographical distance* (capitals) between Switzerland and each individual's country of origin (provided by Gleditsch 2018) and the *language distance* between the language of the canton where the jobseeker lives and his/her country of origin countries (based on the Automated Similarity Judgment Program ASJP; Wichmann et al. 2018) as proxies for a general social distance perception.[16] Moreover, in Switzerland, as in many other Western countries, Islam has been placed in the centre of public contestation. Accordingly, we introduce the share of individuals with *Muslim faith* in the country of origin (based on United Nations 2016) as an additional indicator of cultural closeness (Helbling, 2010, 2014).

Second, we introduce three measures that should capture differences in terms of the countries' human capital composition and regarding labour-market compatibility. The first indicator we rely upon is the *Human Development Index* (United Nations, 2015). This index is associated with a variety of aspects that - objectively and subjectively - determine social distance perceptions. For instance, the quality of education, exposure to modernisation and technological developments, the means of production, or the labour market's sectoral composition are all determinants of an individual's *compatibility* with the advanced Swiss labour market. Given that Switzerland ranks among the three highest countries in terms of the Human Development Index (HDI), it is safe to assume that higher HDI scores correlate with a better perceived conformity of a given country's citizens with the Swiss society and its labour market. Henceforth, we calculate *distance HDI* as one minus a country's HDI score. Moreover, we introduce the immigrant's country of origin's *GDP per capita* in 2012 US$ (World Bank 2016) and its *share of the adult population achieving a tertiary education* certificate (Barro and Lee 2013) to capture labour market compatibility and thus the expected ease of professional transition. Particularly, tertiary schooling should not only have a positive influence on the outcomes of first-generation immigrants but should also have a positive influence on the outcomes of the second-generation immigrants, as it is expected to be a pattern that is *inherited*, at least in part, by the second generation. This dynamic is exemplified in several studies showing that the parents' socio-economic background explains a substantial part of students' performance and, thus, affects the students' later labour market outcomes (e.g., Levels and Dronkers, 2008; Fossati, 2011).

Third, to measure the mechanism proposed by the threat and contact theory, we capture the *size of each immigrant community residing in Switzerland* (Federal Statistical Office 2016). According to the theory, the larger the size of the immigrant community is, the higher the possibility of developing feelings of competition and alienation. On the other hand, a larger immigrant community increases face-to-face interactions and thus decreases perceptions of social distance (Allport, 1954 vs. Blalock, 1967; see also Laurence, 2014). To enhance comparability, we perform unity-based normalisations for each indicator to range from 0 to 1. Eventually, we create a simple composite measure of social distance based on the equally weighted mean of the seven indicators.

[16]Switzerland consists of three main language regions (German, with a Romansh enclave; French; Italian). These have relatively clear geographical dimensions that largely follow political borders at the cantonal level. We measure language distance based on the dominant local language of the municipality an immigrant in residing in.

Control variables: To fulfil the ceteris paribus condition of non-discrimination-based employability, we include a large battery of individual control variables in our estimation. These comprehend the person's *quarter of the year* of registration with the job centre, which takes possible seasonal effects into account. We measure the standard socio-economic variables, such as *age, gender, marital status, years of schooling,* and *local Swiss language skills*. In addition to educational attainment, we capture whether a *certificate* for a professional education (e.g., apprenticeship) is available and whether it stems from a Swiss or a foreign institution. Furthermore, we capture whether a person possesses a *permanent residence permit* in Switzerland. Although permit status is not a criterion for ALMP eligibility, it can affect employability because more bureaucratic effort for hiring is required without permanent residency. In addition, unemployed persons with a temporary residence permit may be seen as more likely to leave the country, which would encourage PES counsellors not to place them in particularly effective or prolonged, or even any, ALMP measures. The models also consider the person's *experience* (more or less than 3 years of work experience) and *skill level*, as well as the *economic sector* of the person's previous job and whether the person is now looking for a job in a *different sector*.[17] In addition, we account for a person's likelihood to participate in a measure 'by default'; that is, the assignment of measures increases with a person's unemployment duration. Especially after around six months of an unsuccessful job search, the unemployed are usually assigned to a measure to counteract the threat of long-term unemployment. Hence, we capture whether a person has been unemployed for more than six months.[18] Eventually, we control for the *regional unemployment rate* (greater economic areas) at the time the unemployed registration occurred since it is likely to affect job perspectives in general. Our modelling strategy builds on a simple model of individual skills (i.e., employability) in order to determine an assignment to (specific) activation measures:

$$y_i = \beta_1 \mathbf{S}_i + \beta_2 A_i + \beta_3 T_i + \epsilon_i$$

where y_i is the individual probability of ALMP participation for both Swiss and foreign unemployed, $\mathbf{S}_i$ represents a vector of observable skills affecting individual labour-market compatibility, and A_i is the caseworker's assessment of a person's placeability, that is, how easy or difficult it is for the person to find employment from the caseworker's perspective, taking both observable as well as unobservable characteristics (e.g., punctuality, demeanour, etc.) into account. Eventually, T_i is the binary indicator for unemployment durations of more than 6 months, to account for a higher likelihood of ALMP assignment based on longer job-search status (rather than mere utility). Based on the theoretical argument, we expand this model by the social distance proxy D_i, which is measured by one of seven different characteristics associated

[17] It is important to note that ALMPs are not measures aimed at changing the professional orientation of the unemployed but measures aimed at enhancing employability. Looking for a similar job in a different economic sector, however, might render assignment to a supportive measure meaningful.

[18] Note that it is not clear whether individuals have a longer unemployment period because they lack employability, because they intentionally prolonged unemployment to participate in a measure, or because they were impacted by the lock-in effects of ALMP participation. As a robustness check, we avoid this possibility of post-treatment bias (c.f. Rosenbaum 1984) by performing the analysis without controlling for unemployment duration, with similar results.

with the unemployed individual's country of origin (including Swiss), such that

$$y_i = \beta_1 \mathbf{S}_i + \beta_2 A_i + \beta_3 T_i + \beta_4 D_i + \epsilon_i$$

As mentioned, the efficacy of activation programmes depends largely on their human-capital component. At the same time, no ALMP participation - which is true for the majority of unemployed - can be interpreted as a signal of no necessity of upskilling and general support to be pushed back into the labour market (see Liechti et al., 2017).

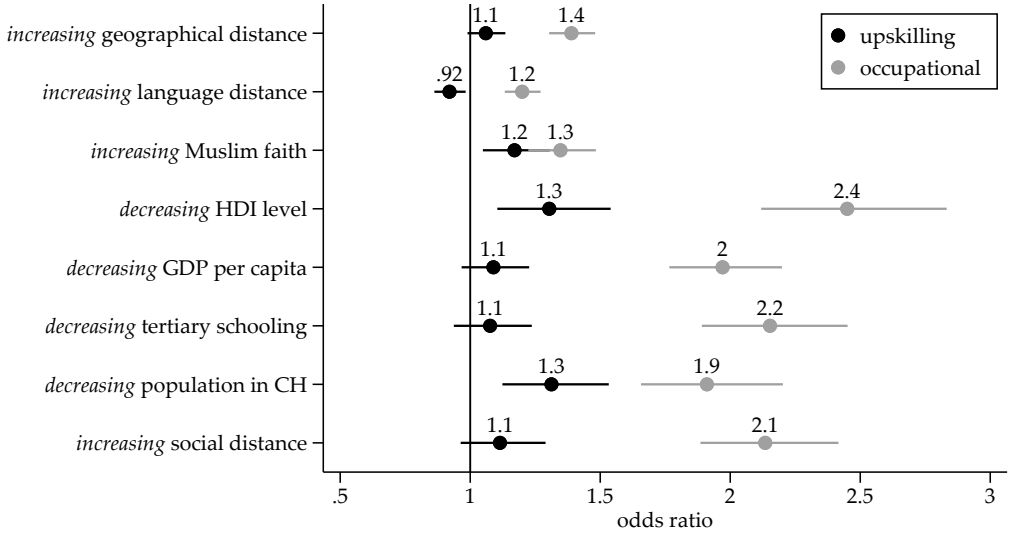
To account for the fact that participation in different ALMP types is not mutually exclusive, we estimate y_i separately for upskilling and occupational measures, using logistic regression of participation and controlling for participation in other ALMPs. Note that the unemployed regularly participate in more than one ALMP. This is specifically the case for initial short-term programmes, such as application trainings, which are subsequently followed by longer-term upskilling or occupational measures. However, it is also possible to take part in both an occupational and an upskilling programme. Eventually, we introduce canton fixed effects to capture the potential variation in job-centre quality (e.g., Duell et al., 2010), such as variation in the quality and provision of very specific programmes in less populated cantons, and general labour-market differences between regions in Switzerland. Moreover, cantons enjoy a high degree of flexibility in terms of designing and implementing active labour market policies.

A usual drawback of registry data is the fact that potential additional determinants of assignment decisions remain unobserved. For instance, demeanour, appearance or non-cognitive skills are usually not observed but might influence a PES counsellor's evaluation and the consequential placement of an individual in an ALMP measure. Our data, however, include information on the caseworkers' subjective perception of a jobseeker's employability that may capture a substantial part of these unobservable characteristics. This variable reflects a direct assessment, ranging from easy to hard to place, in other words, the employability assessment covers a person's characteristics that usually cannot be captured by administrative data. The availability of these assessments, however, is limited. Overall, approximately 14% of the entire population of registered unemployed have complete covariate information in the registry. The summary statistics in Table A2 in the appendix, however, show that the distribution of confounding factors is very similar between the population of jobseekers and our sample with complete information.

In summary, we estimate individual ALMP participation probabilities and whether these are affected by social-distance association, at the group level. In other words, given the exceptionally encompassing measure of individual labour-market compatibility, we would expect no effect of social distance proxies whatsoever if caseworkers assign ALMPs by ignoring the origin of immigrants. In contrast, if caseworkers assume a penalty for (perceived as more distant) immigrant jobseekers in terms of labour market chances, we would either expect them to be overrepresented in upskilling measures (*compensation*) or overrepresented in occupational measures (*competition*).

3.6 Results

Figure 3 presents the odds of participation in upskilling and occupational measures with increasing social distance perceptions. The corresponding regression results are shown in Table A.3 (upskilling) and A.4 (occupational) in the appendix. The grey markers in Figure 3 show the odds ratios of participating in occupational measures, and the black markers indicate upskilling participation probabilities. After controlling for individual employability (objective labour market compatibility and the caseworkers' assessment of their employability), participation in less beneficial occupational measures increases with the increase in all individual approximations of social distance as well as with increases in the aggregate index. Therefore, the odds of participation in less beneficial occupational measures are up to two times higher than the odds of participating in human-capital intensive upskilling measures. In other words, individuals whose country of origin is associated with a greater perceived distance from the Swiss society and its labour market are substantially over-represented in low-quality ALMPs, even after controlling for differences in employability. This is a clear indication of caseworkers being driven by *competition* incentives. The fact that both participation probabilities - occupational and upskilling - increase with perceived social distance is in line with our ranking assumption: individuals closest to the labour market should not participate in any ALMP, and the efficacy of measures decreases with increasing perceived distance from the Swiss labour market.



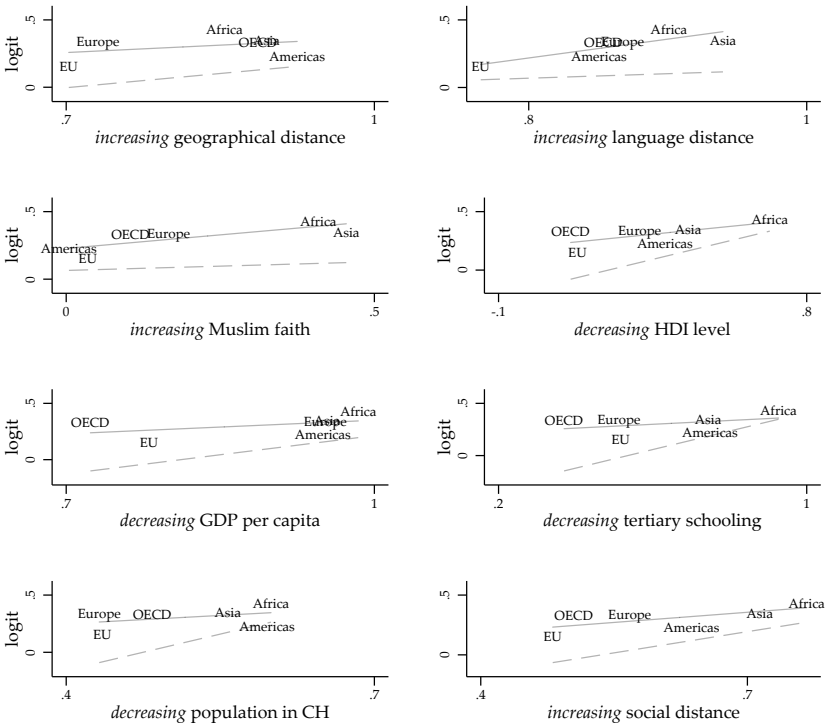
Note: odds ratios separate logit regressions, canton-FE, robust SE, 95% CI.
Covariate adjustment for: participation in other measures, age, gender, marital status, permanent residence permit, years of education, local language proficiency, job experience, Swiss/foreign educ-credentials, previous qualification, previous sector, quarter of registration, jobsearch in same sector, caseworker assessment, unemployment >6 months, regional unemployment rate.
N=116'620

Figure 3: Marginal effects on participation in upskilling and occupational programmes, by social distance measurement

The coefficients for background characteristics in Tables A.3 and A.4 show that people who arguably face more difficulties in re-entering the labour market, independently of their origin, have a higher propensity of participating in any activation measure. This intuitive result is re-

flected, for instance, in the coefficients for age, educational attainment, and skill level. The fact that individuals with lower objective employability are more likely to take part in any measure but that - as shown in Figure 3 above - among those recipients, *perceived social distance shifts participation likelihood towards ineffective occupational measures*, indicates that the caseworkers' compensational approach is crowded-out by competition logic. At the same time, the coefficients for the caseworkers' employability assessments differ in direction, indicating that caseworkers prefer to assign higher-quality upskilling measures to those unemployed who seem to face little difficulties in re-entering the labour market, while occupational measures are reserved for the hard-to-place people.

As a robustness check, we replaced social distance proxies with dummies for geographical regions. These regions - European Union countries, non-EU Europe, non-EU OECD, Americas, Asia, Africa - reflect a crude approximation of social distance perception to the Swiss society as has been shown in both the Swiss regulations regarding its immigration regime (State Secretary for Migration 2015) and in the scientific literature (e.g., Ruedin et al. 2015). Hence, we estimate region-specific participation probabilities using the main logit model specification. Subsequently, we calculate the average values on this regional level for each social distance proxy and plotted them against the estimated coefficients for upskilling (dash linear fit in Figure 4) and occupational measures (marker and solid linear fit). The location of regional-specific distance perceptions as well as the estimated coefficients for ALMP participation (see corresponding summary Table A.5 in the Appendix) provide a ranking of presumed distance perception that is reflected in both the public as well as in related studies (e.g., Fibbi et al. 2006; Auer et al. 2018). Moreover, the absence of "outliers" and a stable positive regression line across all social distance measures supports their robustness as a proxy of actual distance perception.



Note: logit regression coefficients for individuals' origin (geographical region) plotted against country-averaged social-distance proxies.
solid fit = occupational coefficients, *dashed fit* = upskilling coefficients.
Covariate adjustment for age, gender, marital status, permanent residence permit, years of education, local language proficiency, job experience, Swiss/foreign educational credentials, prev. qualification previous sector, quarter of registration, jobsearch in same sector, caseworker assessment, unemployment >6 months, participation in other measures, regional unemployment rate.

Figure 4: Participation probabilities for geographical regions against the mean of social distance proxies

In summary, the results suggest that the net effect of caseworker assignment follows a competition logic in two ways: on a general level, individuals with higher employability among ALMP recipients are less likely to be parked and more likely to be placed in upskilling programmes. On a more detailed level, in terms of perceived social distance, assignment policies clearly favour natives or those immigrants who are arguably more compatible with the Swiss labour market. While the probability of participating in either of the two measures increases with a greater perceived distance from the host society, the coefficients of participation in occupational measures are more than two times higher than the coefficients of participation in upskilling measures. Ceteris paribus, this translates into the prioritisation, in terms of access to better ALMPs, of those individuals who are already closer to the labour market. Conversely, unemployed individuals with low employability and larger perceived distance are overrepresented in occupational measures and do not benefit from measures that would help them compensate for their skill lacunas and that would thus enhance their labour-market opportunities.

3.7 Conclusion

Individuals with an immigration background face multiple challenges when trying to access the labour market in a host society (e.g., Heath and Cheung, 2007; Fleischmann and Dronkers, 2010; Ballarino and Panichella, 2015). These individuals are oftentimes confronted with longer unemployment spells (e.g., van Tubergen, 2006; Auer et al., 2017), the necessity of completing more applications to be invited to an interview (Riach and Rich, 2002; Zschirnt and Ruedin,

2016) or the experience of overt or hidden discrimination with respect to wages or promotions (Blinder, 1973; Pierce, 2012).

In this study, we tested whether disadvantages also occur when accessing active labour market measures, a field that derives its raison d'être from mitigating disadvantages by providing upskilling and placement support for individuals experiencing labour market difficulties (e.g., Fraser, 1999; Nicaise et al., 1995). It is particularly important to inquire whether or not immigrants are more or less likely to be assigned to better-performing ALMPs because the vast majority of activation measures are not tailored to specific groups of jobseekers. Instead, these measures take an integrative approach and are open to all jobseekers (except for language or alphabetisation courses which are developed specifically for immigrant jobseekers). Moreover, despite some differences, the overall benefits (or detriments) of participation in different ALMPs are not tied to specific groups (e.g., Nekby, 2008; Author 2017).

Based on the theory, we formulated two competing hypotheses about PES counsellors' assignment strategy of unemployed persons into over-performing (training courses, upskilling) and under-performing ALMPs (temporary employment programmes, i.e., occupational programmes). Following a competition logic, individuals who are perceived as socially distant and therefore less employable should be more likely to be assigned to underperforming ALMPs. Conversely, if PES counsellors were to follow a compensation logic, they would assign the best performing measures to the most disadvantaged individuals.

Our main results, which are robust to various specifications, indicate that PES counsellors in Switzerland assign unemployed individuals based on a competition logic that is driven by economic incentives and the job centres' performance evaluation and is most likely based on creaming strategies. Hence, PES counsellors seem to *anticipate the employability penalty* that immigrants must face when entering the labour market. From a migration perspective, this dynamic results in a systematic access bias such that more distant immigrants are more likely to be parked in ALMP measures with little efficacy.

The competition logic amplifies the general labour market disadvantages that immigrants face, which puts today's role of ALMPs at odds with the ideological origins of the activation model and its attempts to upskill particularly vulnerable groups. Consequently, one policy recommendation includes the implementation of targeted (labour market) measures that focus specifically on groups that are perceived to be socially distant from a host society to avoid further disintegration (Ebner and Helbling, 2016).

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Appendix

Table A1: PES interviews

		Interview 1 with two PES counsellors, Murten, Switzerland, 17.02.2016
Control function **Translation**	1	« *Aber man sagt den Leuten einfach auch, dass das (Beschäftigungsprogramm) kommen kann, weil dadurch (…) der Eigenantrieb gefördert wird, weil manche sagen `oh Gott und bloss kein Beschäftigungsprogramm'.* » «One tells the jobseekers that they can be assigned to a temporary employment programme because this will incentivize them (to seek work) because they will say "oh my god please (do) not (assign me to) a temporary employment program".»
	2	*« (…) ich muss die Vermittlungsfähigkeit prüfen. Dann ist es gezwungenermassen, dass ich die Person mit einer Beschäftigungsmassnahme konfrontiere. »* «(…) I need to assess the placeability/employability of a jobseeker. It is necessary that I confront this person with a temporary employment programme. »
Negative signal of occupational programmes	3	*« Wenn natürlich Schweizer, Herr Egger, Herr Müller, Herr Meier aus dem Beschäftigungsprogramm kommt, das ist und bleibt einfach schwierig. »* «Of course, if a Swiss(citizen), i.e., a Mr. Egger, Mr. Müller or Mr. Meier, comes from a temporary employment programme, this is and will remain difficult.»
	4	*« [referring to immigrants in case they have no reference, they can give other than occupational programme] (…) Beschäftigungsprogramm als Referenz angeben und haben zumindest irgendwas, und insofern ist das bei der Gruppe, finde ich, wieder ein Vorteil. »* « *[referring to immigrants in case they have no reference, they can give other than participation in a temporary employment programme]* (…) temporary employment programmes as a reference is better than nothing; for *this group* of people, I think it is an advantage. »
Independence of ALMP assignment	5	« *Wir haben in diesem Sinne kein Gerüst (Standardablauf).* » «We do not have a standard procedure. »

Table A1: PES interviews, continued		
		Interview 2 with two PES counsellors, Bulle, Switzerland, 27.11.2015
Control function	1	*« (…) C'est aussi quelque chose qui est important de voir [avec la participation programme d'occupation] si la personne joue le jeu, si elle est assidue, si elle va pas faire d'histoires, si elle se rend à son travail comme si elle devait se rendre à son travail "normal" j'ai envie de dire. »* « With an occupational programme, it is important to see whether the person plays the game, if s/he is assiduous, if s/he does not make a fuss, and if s/he goes to the measures as if s/he went to a "normal" work, I would like to say. »
	2	*« [Reasons to assign an occupational programme] (…) peut être de différents types, la personne a besoin d'être encadré, placée dans une mesure entre guillemets pour travailler, parce qu'il y a nécessité d'acquérir une expérience ou ça peut être une mesure de contrôle. »* « (reasons to assign a temporary employment programme) it can be because of different reasons: maybe because the person has to be managed, placed in a measure to work, because s/he needs to acquire an experience or because it is a control measure. »
	3	*« Alors ça [referring to occupational programme participation] a une fonction de formation professionnelle, acquisition d'expérience mais aussi une fonction de contrôle. Le but est pas le même pour les cours. »* «Well [referring to temporary employment program], it can have a training function, i.e., a way to acquire experience but also a control function. The goal is different for the courses. »
	4	*« [referring to beneficiaries] (…) qui refusent (…) [participation programme d'occupation] et il y a toujours une raison: la personne travaille au noir, elle garde ses enfants... La personne qui refuse pour refuser simplement par ce qu'elle n'a pas trop envie, si on la pousse un peu en expliquant les raisons en général ça passe. Avant de mettre les pieds au murs, la personne va trouver une excuse en disant mais moi je ne peux pas faire ça, j'ai ça… »* « (referring to beneficiaries » for those who refuse (…) (temporary employment programme participation) there is always an excuse: the person works on the block; s/he looks after his/her children…; and the person, who refuses just to refuse because s/he does not feel like going, and if we push him/her and explain our reasons, normally, they will take up the measure. When forced to act, the person will find an excuse and say, "I have to do this or this is the reason why." »
Low quality of occupational programmes	5	*« (…) le PET, il y a dix ans, était beaucoup plus intéressant et revalorisant pour l'assuré, et ça c'est vraiment très important. Aujourd'hui, je dois dire, c'est aussi une question de politique ne faut pas l'oublier, on est sémantiquement obligé, façon de parler, obligé de mettre les gens en mesure pour voir leur aptitude professionnelle. »* « ten years ago, the temporary employment programmes were much more interesting and valorising, and this is very important. Today, I have to say, it is also a political question; we are obliged to put people in a measure to see whether they are placeable. »
	6	*« (…) là je dois mettre une personne en programme d'emploi qui est employé de commerce avec direction RH, ben le Coup de Pouce [name of a particular occupational programme] ça va être « répondre au téléphone toute la journée », on va l'occuper. Mais au niveau revalorisation des compétences … voilà [respondent lifts shoulders indicating that the benefit is low]. »* « I have to put a person in a temporary employment programme, Coupt de Pouce, who is an HR assistant and will be answering the phone all day long; it will keep her/him occupied. However, at the level of competence valorisation … that is it [respondent lifts his shoulders indicating the benefit is low]. »
	7	*« (…) c'est des programmes [referring to occupational programme] comme le nom l'indique d'occupation, d'emploi temporaire mais d'occupation, et c'est vrai que le terme a été shooté mais ça veut bien dire ce que ça veut dire. »* « It is the programme [referring to occupational measure] which - as the name indicates - aims at occupying the time; the name means what the word tells. »
Non-adapted occupational **measures**	8	*« (…) au niveau des programmes [referring to occupational programme)], on n'a pas un panel qui est extrêmement large, donc on est obligé de mettre des personnes dans ces mesures qui sont pas forcément souvent parfaitement adapté. »* « at the level of programmes, we do not have a lot of options; sometimes, we need to place a person in a measure, although the (occupational) measure is not ideally suited.».
employability	9	*« (…) c'est-à-dire quand la personne vient, on voit tout de suite si elle va être facilement plaçable ou pas. »* « this is to say, when the person comes, we immediately see if s/he will be easy to place. »
Independence of ALMP assignment	10	*« On a une marge de manœuvre mais à certaines conditions. Moi j'ai un Monsieur qui vient me demander un cours qui dure une année et demi, ça ne va pas être possible. J'ai un Monsieur qui vient avec une certification en informatique à 9'400.- pour une semaine, ça ne va pas non plus. »* « We have leeway but within specific boundaries. I have a jobseeker who asks me to participate in a course that lasts one-and a half years; this is not possible. I have a jobseeker who asks to obtain an IT-qualification that costs 9400.- Swiss francs for one week; that will not be possible either. »
Budget restriction	11	« No. »

Table A.2: Summary statistics

	(1) Swiss in sample[1]		(2) Foreigners in sample[1]		(3) Total sample[1]		(4) Unemployed population[2]	
No ALMP participation	0.82	(0.39)	0.78	(0.41)	0.80	(0.40)	0.81	(0.39)
Upskilling measures	0.11	(0.31)	0.14	(0.35)	0.12	(0.33)	0.12	(0.33)
Occupational measures	0.10	(0.29)	0.11	(0.31)	0.10	(0.30)	0.09	(0.28)
Other measures	0.02	(0.14)	0.02	(0.13)	0.02	(0.14)	0.02	(0.15)
HDI level[3]	0.03	(0.00)	0.20	(0.15)	0.10	(0.13)	0.11	(0.15)
Muslim faith (population share) [3]	0.06	(0.00)	0.12	(0.27)	0.08	(0.18)	0.10	(0.20)
GDP per capita (2012 USD) [3]	0.44	(0.00)	0.84	(0.10)	0.61	(0.21)	0.62	(0.22)
Language distance[3]	0.31	(0.43)	0.72	(0.26)	0.49	(0.42)	0.48	(0.42)
Tertiary schooling (% adult pop.) [3]	0.44	(0.00)	0.69	(0.17)	0.55	(0.17)	0.55	(0.17)
Capital distance (km) [3]	0.00	(0.00)	0.72	(0.09)	0.30	(0.36)	0.32	(0.36)
Size of resident pop. in CH[3]	0.00	(0.00)	0.28	(0.10)	0.12	(0.15)	0.13	(0.16)
Social distance index[3]	0.18	(0.06)	0.51	(0.11)	0.32	(0.18)	0.32	(0.19)
Quarter of registration	2.65	(1.12)	2.71	(1.15)	2.67	(1.13)	2.58	(1.15)
Age at registration	35.01	(12.71)	35.74	(10.71)	35.32	(11.92)	35.43	(12.04)
Male	0.49	(0.50)	0.41	(0.49)	0.46	(0.50)	0.45	(0.50)
Single	0.59	(0.49)	0.39	(0.49)	0.51	(0.50)	0.48	(0.50)
Permanent residence permit	0.87	(0.33)	0.44	(0.50)	0.69	(0.46)	0.69	(0.46)
Years of education	12.62	(2.62)	11.56	(3.16)	12.18	(2.91)	11.87	(2.78)
No professional education	0.47	(0.50)	0.68	(0.47)	0.56	(0.50)	0.64	(0.48)
Professional Swiss education	0.51	(0.50)	0.15	(0.36)	0.36	(0.48)	0.30	(0.46)
Professional foreign education	0.02	(0.14)	0.17	(0.38)	0.08	(0.28)	0.06	(0.24)
Local Swiss language skills	0.99	(0.11)	0.93	(0.26)	0.96	(0.19)	0.95	(0.23)
>3 years work experience	0.58	(0.49)	0.57	(0.50)	0.58	(0.49)	0.55	(0.50)
Unskilled	0.18	(0.38)	0.29	(0.45)	0.23	(0.42)	0.27	(0.44)
Semi-skilled	0.18	(0.38)	0.30	(0.46)	0.23	(0.42)	0.20	(0.40)
Skilled	0.64	(0.48)	0.41	(0.49)	0.54	(0.50)	0.53	(0.50)
Job search in different sector	0.20	(0.40)	0.15	(0.35)	0.18	(0.38)	0.18	(0.39)
Previous sector: agriculture	0.02	(0.14)	0.02	(0.14)	0.02	(0.14)	0.02	(0.14)
Industry	0.11	(0.32)	0.12	(0.32)	0.11	(0.32)	0.12	(0.33)
Technical and computing	0.07	(0.25)	0.06	(0.24)	0.06	(0.25)	0.06	(0.24)
Construction	0.06	(0.25)	0.16	(0.36)	0.10	(0.30)	0.11	(0.31)
Trade and transport	0.20	(0.40)	0.13	(0.34)	0.17	(0.38)	0.16	(0.37)
Catering and tourism	0.13	(0.34)	0.28	(0.45)	0.19	(0.40)	0.19	(0.40)
Bank and insurance	0.21	(0.40)	0.10	(0.30)	0.16	(0.37)	0.15	(0.36)
Health and social	0.14	(0.34)	0.08	(0.27)	0.11	(0.32)	0.10	(0.30)
Other	0.06	(0.24)	0.05	(0.23)	0.06	(0.23)	0.08	(0.27)
Placeability hard	0.17	(0.38)	0.22	(0.41)	0.19	(0.39)	0.21	(0.41)
Placeability medium	0.60	(0.49)	0.58	(0.49)	0.59	(0.49)	0.60	(0.49)
Placeability easy	0.23	(0.42)	0.20	(0.40)	0.21	(0.41)	0.19	(0.39)
Unemployed for >6 months	0.38	(0.49)	0.41	(0.49)	0.39	(0.49)	0.38	(0.49)
Regional unemployment rate	4.64	(1.53)	4.86	(1.57)	4.73	(1.55)	4.47	(1.42)
No. of jobseekers	67'685		48'935		116'620		840'625	

Note: Mean, SD in parentheses

[1] registered unemployed with complete covariate information;

[2] registered unemployed 2010-2012.

[3] Social distance proxies are unity-based normalised to range [0,1]

Table A.3: Odds ratios of participation in **upskilling measures**

	(1) HDI[2]	(2) Muslim[3]	(3) GDP[4]	(4) Language[5]	(5) Schooling[6]	(6) Distance[7]	(7) Population[8]	(8) Social D.[9]
Social distance proxy[1]	1.06*	0.92**	1.17***	1.30***	1.09	1.08	1.31***	1.11
	(0.04)	(0.03)	(0.07)	(0.11)	(0.07)	(0.08)	(0.10)	(0.08)
Quarter of registration	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age at registration	1.01***	1.01***	1.01***	1.01***	1.01***	1.01***	1.01***	1.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Male	0.84***	0.84***	0.84***	0.84***	0.84***	0.84***	0.84***	0.84***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Single	0.91***	0.90***	0.91***	0.92***	0.91***	0.91***	0.92***	0.91***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Permanent permit	1.08***	1.07***	1.07***	1.09***	1.08***	1.08***	1.10***	1.08***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Years of education	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***	0.97***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
No professional educ.	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Professional Swiss	0.95*	0.95*	0.94*	0.95*	0.95*	0.95*	0.95	0.95*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Professional foreign	1.01	1.01	1.02	1.01	1.01	1.02	0.99	1.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Swiss language skills	1.19***	1.16***	1.18***	1.19***	1.19***	1.18***	1.20***	1.19***
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
>3 years experience	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unskilled	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Semi-skilled	1.09***	1.09**	1.09***	1.09***	1.09***	1.09**	1.09***	1.09***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Skilled	1.01	1.00	1.01	1.02	1.01	1.01	1.02	1.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Different sector search	1.09***	1.09***	1.09***	1.10***	1.09***	1.09***	1.10***	1.09***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Sector: agriculture	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Industry	1.62***	1.62***	1.61***	1.61***	1.62***	1.62***	1.61***	1.62***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Tech. and computing	1.35***	1.35***	1.35***	1.35***	1.35***	1.35***	1.35***	1.35***
	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Construction	0.95	0.96	0.96	0.95	0.95	0.95	0.95	0.95
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Trade and transport	1.39***	1.39***	1.38***	1.39***	1.39***	1.39***	1.38***	1.39***
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Catering and tourism	1.05	1.06	1.05	1.04	1.05	1.05	1.04	1.05
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Bank and insurance	1.45***	1.45***	1.44***	1.45***	1.45***	1.45***	1.45***	1.45***
	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Health and social	1.08	1.08	1.07	1.07	1.08	1.08	1.07	1.08
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Other	0.81**	0.82**	0.81**	0.81**	0.81**	0.81**	0.81**	0.81**
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Placeability hard	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Placeability medium	1.50***	1.50***	1.51***	1.51***	1.50***	1.50***	1.50***	1.50***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Placeability easy	1.29***	1.28***	1.29***	1.29***	1.29***	1.29***	1.29***	1.29***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Unemployed >6 m.	2.70***	2.71***	2.70***	2.70***	2.70***	2.71***	2.70***	2.70***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Reg. unempl. rate	0.97**	0.97**	0.97**	0.97**	0.97**	0.97**	0.97**	0.97**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other measure	1.87***	1.87***	1.87***	1.86***	1.87***	1.87***	1.87***	1.87***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Observations	116'620	116'620	116'620	116'620	116'620	116'620	116'620	116'620

Note: Mean; SE in parentheses; * p<0.10 ** p<0.05 *** p<0.01

[1] Social distance proxies are unity-based normalised to range [0,1]

[2] HDI level; [3] Muslim faith (population share); [4] GDP per capita (2012 USD); [5] Language distance; [6] Tertiary schooling (% adult pop.); [7] Geographical distance (capital, km); [8] Size of resident pop. in CH; [9] *Social distance index*

Table A.4: Odds ratios of participation in **occupational measures**

	(1) HDI[2]	(2) Muslim[3]	(3) GDP[4]	(4) Language[5]	(5) Schooling[6]	(6) Distance[7]	(7) Population[8]	(8) Social D.[9]
Social distance proxy[1]	1.39****	1.20****	1.35****	2.45****	1.97****	2.15****	1.91****	2.13****
	(0.05)	(0.04)	(0.07)	(0.18)	(0.11)	(0.14)	(0.14)	(0.14)
Quarter of registration	0.96****	0.96****	0.96****	0.96****	0.96****	0.96****	0.96****	0.96****
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age at registration	1.01****	1.01****	1.01****	1.01****	1.01****	1.01****	1.01****	1.01****
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Male	0.92****	0.91****	0.92****	0.92****	0.92****	0.92****	0.92****	0.93****
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Single	1.05**	1.03	1.03	1.07***	1.07***	1.05**	1.05**	1.07***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Permanent permit	1.09****	1.01	1.00	1.06**	1.10****	1.07***	1.07***	1.08****
	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Years of education	0.99***	0.99***	0.98****	0.99**	0.99**	0.99	0.99****	0.99**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
No professional educ.	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Professional Swiss	1.11****	1.07**	1.07**	1.08***	1.11****	1.09***	1.10***	1.10***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Professional foreign	0.83****	0.88***	0.88***	0.88***	0.84****	0.87***	0.84****	0.85****
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Swiss language skills	0.98	0.96	0.95	0.99	1.00	0.97	0.98	1.00
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
>3 years experience	0.96	0.97	0.97	0.97	0.97	0.97	0.97	0.97
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unskilled	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Semi-skilled	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Skilled	0.75****	0.75****	0.74****	0.76****	0.76****	0.76****	0.75****	0.76****
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Different sector search	0.97	0.97	0.96	0.98	0.98	0.98	0.97	0.98
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Sector: agriculture	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Industry	0.99	0.99	0.98	0.98	0.99	1.00	0.99	0.98
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Tech. and computing	0.81***	0.81***	0.81***	0.81***	0.81***	0.82**	0.81***	0.81***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Construction	0.83***	0.84**	0.85**	0.84**	0.82***	0.83**	0.84**	0.83***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Trade and transport	0.88*	0.88*	0.87*	0.88*	0.88*	0.89	0.88*	0.88*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Catering and tourism	1.02	1.04	1.05	1.03	1.02	1.03	1.03	1.02
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Bank and insurance	0.70****	0.69****	0.69****	0.70****	0.70****	0.71****	0.70****	0.70****
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Health and social	0.78****	0.78****	0.78****	0.77****	0.78***	0.79***	0.78****	0.78****
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Other	0.82**	0.81***	0.82***	0.81***	0.81***	0.82**	0.81***	0.81***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)
Placeability hard	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*	*ref.*
Placeability medium	1.02	1.03	1.03	1.03	1.02	1.02	1.02	1.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Placeability easy	0.76****	0.76****	0.77****	0.78****	0.77****	0.76****	0.77****	0.77****
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed >6 m.	3.56****	3.57****	3.56****	3.54****	3.55****	3.57****	3.56****	3.55****
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Reg. unempl. rate	0.94****	0.94****	0.94****	0.94****	0.94****	0.94****	0.94****	0.94****
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other measure	1.70****	1.70****	1.70****	1.70****	1.70****	1.70****	1.70****	1.70****
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	116'620	116'620	116'620	116'620	116'620	116'620	116'620	116'620

Note: Mean; SE in parentheses; * p<0.10 ** p<0.05 *** p<0.01

[1] Social distance proxies are unity-based normalised to range [0,1]

[2] HDI level; [3] Muslim faith (population share); [4] GDP per capita (2012 USD); [5] Language distance; [6] Tertiary schooling (% adult pop.); [7] Geographical distance (capital, km); [8] Size of resident pop. in CH; [9] *Social distance index*

Table A.5: Region-specific participation probabilities and average social distance proxies

	Swiss	European Union	non-EU OECD	non-EU Europe	Asia	Americas	Africa
Upskilling measure[1]	*ref.*	1.05 (0.03)	0.93 (0.05)	0.87 (0.06)	0.99 (0.08)	1.38 (0.10)	1.46 (0.09)
Occupational measure[1]	*ref.*	1.17 (0.03)	1.41 (0.06)	1.40 (0.08)	1.42 (0.09)	1.26 (0.10)	1.54 (0.10)
HDI[2]	0.03	0.13	0.11	0.31	0.45	0.39	0.69
Muslim[3]	0.06	0.04	0.10	0.17	0.45	0.00	0.41
GDP[4]	0.44	0.78	0.72	0.95	0.95	0.95	0.98
Language[5]	0.00	0.79	0.86	0.86	0.94	0.81	0.88
Schooling[6]	0.44	0.52	0.37	0.51	0.74	0.75	0.93
Distance[7]	0.00	0.70	0.89	0.73	0.9	0.92	0.85
Population[8]	0.00	0.44	0.48	0.43	0.56	0.60	0.60
Social Distance[9]	0.13	0.48	0.51	0.57	0.71	0.63	0.76

Note: [1] logit regression, 116'620 observations, region dummies. Unity-based normalized distance proxies: [2] HDI level; [3] Muslim faith (population share); [4] GDP per capita (2012 USD); [5] Language distance; [6] Tertiary schooling (% adult pop.); [7] Geographical distance (capital, km); [8] Size of resident pop. in CH; [9] *Social distance index*

4 Article #3: Language roulette

Language Roulette – The Effect of Random Placement on Refugees' Labour Market Integration

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Abstract

Placement of refugees and subsequent labour market integration within a host country represents a key challenge for policy makers and has emerged as one of the most divisive topics in the public debate. Immigration policy in Switzerland adopts random placement of asylum seekers across its different language regions. Hence, this policy allows to estimate the causal effect of language skills on employment chances, as refugees are exogenously placed across regions where the spoken language could either match or deviate from individual language skills. The results of this "natural experiment" indicate substantially higher probabilities of finding employment when asylum seekers are placed in regions with a lingua franca that matches their individual language skills. Additionally, the findings suggest that language course participation can offset the reduced likelihood of employment in cases of a language mismatch. While random placement of refugees may be desirable for political reasons, it is detrimental to the economic integration process. Thereby, the study draws relevant conclusions for a larger European immigration policy.

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4.1 Introduction

Immigration has been a politicised topic in European countries for decades, with an increasing focus in the debates on civic integration (Van der Brug et al., 2015). In Switzerland, too, a strong political right fuels resentments by warning against "over-foreignization" (Riaño and Wastl-Walter, 2006), which led, for instance, to the acceptance of a public referendum against mass immigration in 2014 (e.g., Gadient and Milani, 2015). The recent influx of refugees to Europe adds additional relevance to this debate. Rising numbers of arrivals are often used to stress the allegedly increasing pressure on public budgets because asylum seekers fail to find employment, draw social assistance benefits and are therefore perceived as a burden for the host society.

However, these refugees - when trying to enter the host country's labour market - face the same challenges as immigrants who enter a country for reasons other than persecution and war. Besides lacking language skills or a lower human capital endowment in general, they regularly face discriminatory patterns (Colic-Peisker and Tilbury, 2007). Moreover, research has shown that the physical and psychological consequences of war and the refugees' escape journey have devastating effects on a person's condition, which in turn hampers successful integration (Turner et al., 2003).

In this study, I argue that the manifold difficulties of entering the labour market are amplified when asylum seekers are assigned to their new homes through a mechanism that neglects a possible match between individual and local language habits in different regions in Switzerland. While the shares of the overall inflow of refugees are calculated for each Swiss canton based on its permanent resident population, the actual decision of an asylum seeker's canton placement is random. Furthermore, rigorous Swiss law prevents asylum seekers and temporarily accepted persons from moving to other regions, oftentimes even after their asylum request has been granted. This approach stands in opposition to many other European countries, which usually allow refugees to move freely within the country.

To analyse the importance of relevant language skills, I make use of the fact that Switzerland consists of different, sharply defined language regions: two large German- and French-speaking regions, one in which Italian is the spoken language, and a smaller region in which Romansh joins German and Italian as the official language. Consequently, a refugee who enters Switzerland and is "placed" by federal authorities might find herself in a region with a familiar spoken language or in a region in which the local language is completely unfamiliar. Based on previous studies analysing the effect of language skills on labour market outcomes, particularly on earnings, I hypothesise that a language match or mismatch affects a person's likelihood of successful labour-market integration in terms of employment probability. The analysis of this "natural experiment", that is exogenous placement of asylum seekers into one region[19], indicates a significantly higher probability of finding employment when the asylum seeker has proficiency in the local language than when her language proficiency is mismatched. This positive language effect, in economic terms, agrees with existing empirical findings (see Chiswick and Miller, 2014), while

[19]Similarly, Edin et al. (2003) use a Swedish immigration policy, where refugees are exogenously distributed across locales to analyse the causal effect on labour market outcomes of living in enclaves.

it is less prone to common issues of causal inference as described below. To improve the likelihood of transition into employment for those asylum seekers who have been misplaced, I further investigate the effect of language training provided by local jobcentres. The results indicate strong positive participation effects. In that sense, language training not only benefits refugees but also appears to offset the negative externalities that are derived from a random placement mechanism.

Overall, this article aims to contribute to the general empirical evidence on language proficiency and language training effects. Further, it seeks to provide general policy insights regarding refugee placement, such as the larger-scale refugee placement mechanism at the European Union level. While there are political reasons to support Switzerland's random placement mechanism, it obviously fails to consider a refugee's compatibility with the local labour market.

The remainder of the text proceeds as follows. In the subsequent section, I present an overview of the Swiss socio-linguistic context as well as the legal and practical foundations of the Swiss refugee placement policy. Section 3 briefly discusses previous findings on the effects of immigrants' language proficiency on labour market outcomes. In section 4, I describe the data and the identification strategy. Sections 5 and 6 present the results, which are eventually discussed in section 7.

4.2 Background

In Switzerland, persons who ask for asylum are registered by federal authorities under the state secretary for migration (SEM). After entering the country, asylum seekers are assigned to one of the 26 cantons (states). The SEM allocates asylum seekers randomly to these cantons (State Secretary for Migration, 2015). In practice, the SEM tries to ensure an equal distribution (relative to the overall cantonal share) of the largest sending nationalities, unaccompanied minors, and medical cases (State Secretary for Migration, 2016). Hence, the decision of whether an asylum seeker is placed in canton A or B is made randomly according to relative shares and without considering either individual or cantonal demands. Once assigned, asylum seekers must reside in the canton until they obtain a positive asylum decision and a residence permit as a refugee. The same spatial restriction holds for temporarily accepted persons who have their asylum request rejected but cannot be returned to their country of origin. Hence, asylum seekers and temporarily accepted persons are only free to move across Switzerland when the status of their residence permit changes from asylum seeker to short-term (accepted refugee) or permanent resident (see Schweizerische Flüchtlingshilfe, 2016). However, a spatial restriction very often remains in effect even after refugee status has been officially granted. For instance, the right to move freely across cantons is constrained when a refugee is dependent on social benefits (legal ordinance AuG, Art. 62 and 63), which is the case for nearly all refugees lacking employment.

In short, once asylum seekers and temporarily accepted persons have been assigned to a canton, Swiss law prevents them from moving to another canton or even searching for employment outside their canton of residence (legal ordinance AsylV 1, Art. 22).[20] Therefore, the exogenous

[20] Asylum seekers can file a complaint against placement in a specific canton if the unity of the family or the

placement is immune to self-selection of asylum seekers into a specific canton.

The number of asylum seekers a canton receives depends on a weighting mechanism that is determined by the size of the canton's permanent resident population. The allocation of all refugees entering within a given period ranges from 0.5% for the canton of Uri to 17% for the canton of Zurich. These shares have been in effect since 2000 (legal ordinance AsylV 1, Art. 21). Within a specific canton, access to the labour market depends on cantonal regulation and a person's permit status. In general, if cantonal borders are not crossed, asylum seekers usually receive the right to work after a retention period of 3 months (legal ordinance AslyG, Art. 43). Generally, local jobcentres in each canton and federal authorities play an important role in labour market integration. Regardless of unemployment benefits eligibility (legal act AVIG, Art. 59d; Federal Office of Migration, 2007), the local jobcentre supports each jobseeker with a platform for open positions. It also organises and funds training in the form of active labour market policies (ALMPs), and caseworkers make use of their extensive networks with companies in their region. Jobseekers, including asylum seekers[21] (c.f. Lindenmeyer et al., 2008), thus have a strong incentive to register at the local jobcentre. On average, more than 1,500 asylum seekers and temporarily accepted persons register as jobseekers with the local jobcentre yearly, which is approximately 25% of the group-specific labour force participation rate (c.f. Spadarotto et al., 2014; State Secretary for Migration, 2016b).

Moreover, Switzerland can be clustered into different language regions, with German and French as the two dominant spoken languages as well as an Italian speaking region and a Romansh language enclave, all with constitutionally equal footing (Grin, 1998; Federal Office of Statistics, 2014). These regions largely follow political borders at the cantonal level, with some bilingual rural areas and only a few bilingual cities, such as Fribourg/Freiburg. In the analysis, I will focus on the 22 (out of 26) monolingual cantons (see map 1 in the appendix). At this stage, it is helpful to briefly discuss the sociolinguistic context in Switzerland. As Grin (1998: 3) states: "Switzerland may be quadrilingual, but to most intents and purposes, each point of its territory can be viewed as unilingual. Correspondingly, living in Switzerland means living entirely in German [...], in French or in Italian." Relatedly, Grin and Sfreddo (1998) show that Italian-speaking Swiss outside the Italian language region experience lower earnings, thereby establishing their demolinguistic minority position in a socio-economic respect as well. In other words, the language spoken by a Swiss person can be regarded as a determining element of group-association that goes beyond language. This perception persists not least because cantons in Switzerland are the sovereign entities, causing an absence of federal-level language policy, which also contrasts with other multi-linguistic states such as Canada (Grin, 1998). Eventually, although English language skills are considered increasingly important, the situation in Switzerland can still be described as "linguistic particularism" (Demont-Heinrich, 2005). As presented in map 1 in the appendix, Switzerland can consequently be clustered into three distinctive monolingual regions whose boundaries follow political borders at the cantonal level, a bilingual region

individuals themselves would be threatened. A replacement requires the consent of both cantons involved (legal ordinance AsylG, Art. 27 and AsylV, Art. 22).

[21] For the ease of the reader, I henceforth refer to asylum seekers and temporarily accepted persons only as asylum seekers.

centred in between, and the before-mentioned language enclave of Romansh located in the east of the country.

Given the exogenous placement of asylum seekers into one specific canton by federal authorities, placement into one of the language regions is by consequence random as well, that is, independent of a person's individual characteristics including language ability. At the same time, as I will explain in the next section, several studies have found positive effects of immigrants' language proficiency on labour market outcomes, such as employment or wages. Assessments of such language effects often suffers from selection bias due to identification and measurement issues. Additionally, existing literature usually focuses on a country's general immigrant population. The labour market integration of refugees, although a pressing policy field, remains widely understudied. Hence, I test the following hypothesis:

H1: *The probability of successful labour market integration increases with an individual's ability to master the local language.*

Consequently, a language match in the refugee placement process increases an asylum seeker's probability of entering employment. In a second step, I focus on asylum seekers without proficiency in the regional Swiss language. Approximately 15% of these individuals participated in corresponding language training. Evaluating this part of active labour market policy, I formulate the following hypothesis:

H2: *Participation in a language course increases an asylum seeker's probability of entering employment.*

4.3 Previous findings on language effects

Several empirical studies have investigated the economic effect of immigrants' language proficiency on labour market outcomes, particularly on earnings and on the native-immigrant wage gap. Usually, these studies depart from a broader concept of immigration. As I will argue below, the focus on asylum seekers in Switzerland allows for a clearer identification of the language effect because of the absence of confounding factors such as self-selection into a language region or residence permits that are bound to (pre-)existing working contracts. Studies focusing specifically on asylum seekers and refugees overlap with analyses focusing on the broader category of immigrants in terms of providing evidence on the importance of language ability for (labour market) integration. Often, these analyses are based on descriptive information (e.g., DeVoretz et al., 2004; Konle-Seidl and Bolits, 2016) and interviews with asylum seekers and potential employers (e.g., Archer et al., 2005; Colic-Peisker and Tilbury, 2007; UNHCR, 2014). Quantitative studies trying to establish a causal link between language proficiency and refugees' labour market outcomes are still scarce (e.g. Bloch, 2007).

One of the key challenges of these studies is to account for possible estimation bias due to the endogeneity of skills. For instance, higher wages might be achieved because of some other skill that correlates with language proficiency (e.g., Bleakley and Chin, 2004; Chiswick and Miller,

1995). Dustmann & van Soest (2002) stress that unobserved heterogeneity might overestimate language effects, while they could be underestimated due to measurement errors in the language proficiency evaluations, which are often self-assessed language skills or the language spoken at home. For instance, Lindemann and Kogan (2013) find that language knowledge is essential for immigrants' labour market access in Estonia, especially for higher-status jobs. However, they stress that their survey data captures self-reported language skills that could be biased and call for "more objective measures of language skills – like independent language tests" (ibid: 121). Aldashev et al. (2009), who rely on language usage in the household as a measure of language proficiency, provide evidence for a substantial indirect language effect in Germany "at different selection stages" (ibid: 338). Language proficiency increases the likelihood of employment and the probability of working in a white-collar profession. However, after controlling for occupational characteristics, they find no evidence for a direct wage premium based on language proficiency.

Moreover, selection into an occupation (Kossoudji, 1988) and the fact that language proficiency depends on the country of origin (Espenshade and Fu, 1997) is likely to bias estimates. Bleakley and Chin (2003) introduce the age at arrival in the United States as an instrument to capture differences between immigrants from English-speaking and non-English speaking countries, which translates into language effects. They find a significant positive effect of English-language skills on immigrants' wages. A similar identification strategy has been adopted in a recent study in the United Kingdom by Miranda and Zhu (2013). They provide empirical evidence of the native-immigrant wage gap that is imposed by immigrants' English deficiency using the UK Household Longitudinal Survey. Therefore, Dustmann (1994) stresses the importance of considering both spoken language and writing fluency when estimating language effects. In his study using data from the German Socio-Economic Panel, he finds a strong positive effect of spoken language proficiency on earnings after controlling for writing fluency. In a general overview of the "economics of language", Chiswick (2008) and Chiswick and Miller (2014) draw a relatively unambiguous picture of the positive effects of language proficiency on earnings of between 5 and 30%.

In this context, the present study has several advantages. *First* and foremost, the setting of random placement of asylum seekers by federal authorities is immune to self-selection of asylum seekers into a specific language region. A common challenge for migration research is the fact that individuals select themselves into migration and into a target country. Any inference of immigrants' characteristics on outcomes thus must consider that it is no coincidence that this person is observed in that country or region. This is not the case regarding the random placement into different regions within Switzerland. *Second*, the examined group of asylum seekers faces major disadvantages on their path to successful labour market integration (e.g., Fuller and Martin, 2012). Consequently, the variation in both the types and skill levels of the jobs that asylum seekers can find (or even look for in the first place) is very limited. In the present sample, approximately 8 out of 10 asylum seekers were looking for employment in either the agriculture, construction, or tourism sector. Hence, job heterogeneity might play only a subordinate role in this analysis, as asylum seekers are mainly employed in low-skilled and low-

paying jobs (c.f. Lindenmeyer et al., 2008; Spadarotto et al., 2014). *Third*, language proficiency is not self-reported but assessed by the caseworker at the local jobcentre. When asylum seekers first register at the jobcentre, they have a personal meeting (approximately 45 minutes to 1 hour) with a caseworker who, among other tasks, assesses the person's skills, including that person's language proficiency in speech and writing.[22] Therefore, any measurement error that might occur is not correlated with the individual jobseeker (see section 4 below). *Fourth*, it has been found that language proficiency and its effects on labour market outcomes are not a linear function. Immigration to an alien-language country at childhood, for instance, allows immigrants to acquire language skills before exposure to competition on the labour market. In addition, language skills increase at a decreasing rate with residence duration (e.g., Chiswick & Miller 2007). The fact that this study focuses on working-age asylum seekers and the fact that their duration of residence is likely to have been relatively short allows the incidence of language proficiency through schooling in the host country to be ruled out. It also rules out estimates being biased by different previous work experiences that, in turn, could have induced non-linear language effects. I provide more details on the identification strategy of this study in the subsequent section.

4.4 Data and identification

The data stems from the unemployment registry provided by the Swiss State Secretary for Economic Affairs (SECO). From 2000 to 2012, it covers all people who registered as unemployed according to ILO definition, i.e., unemployed persons with and without the right to unemployment benefits who are actively seeking a job through the local jobcentre. Individuals are followed until they exit the registry (into employment or as an exit from the labour force), censored at December 2014. Thus, if no exit from the registry occurs before that point, individual observation periods last for at least two years, which corresponds to the usual maximum benefit duration as well as the maximum monitoring obligation of the jobcentre for non-recipients.

From this entire population of registered jobseekers, I apply several steps of sample selection to allow for a clean identification. First, I restricted the sample according to residence status and retained only asylum seekers (with a request pending, including temporarily accepted persons) aged 16 to 64 for women and 16 to 65 for men. Second, I constrained the sample to asylum seekers without any rights to unemployment benefits. This step eliminates differences in labour market outcomes that may occur due to some people having an earlier employment history in Switzerland. Moreover, it functions as an indicator of recent immigration. Although theoretically possible, it is implausible that someone would enter Switzerland as an asylum seeker and decide to register as a jobseeker only after years of residence primarily because labour market integration represents one of the essential characteristics for family reunification and the possibility of achieving a permanent residence permit in Switzerland. As a third step, I selected only those asylum seekers who possess language skills that correspond to the three large language regions in Switzerland, that is, those who speak German, French, or Italian. Research (e.g., Beenstock et al., 2001) has shown that the distance between languages varies. An asylum seeker with an Italian language proficiency might face less difficulty in the German-speaking part of

[22] At least, this is the case for local/official Swiss languages.

Switzerland than a person speaking a language completely different from any Swiss language. Hence, restricting the mismatch sample to these three languages ensures greater homogeneity among the groups. In turn, any finding of a language effect should be interpreted as a conservative estimate because regardless of linguistic distances, none of the three languages are completely alien within Switzerland from a societal perspective. Ultimately, I excluded asylum seekers that have proficiency in more than one of the Swiss languages. Additionally, observations from four cantons that are defined as bi- or multilingual regions were excluded (Bern, Fribourg, Graubünden, and Valais; Federal Office of Statistics, 2016). Apart from these four exceptions, language borders follow cantonal borders, which ensures that estimates are not biased by the possibility of asylum seekers living in one language region and looking for work in another.[23]

I first test the existence of a language effect based on a narrow definition of language proficiency that only considers the person's mother tongue. This criterion is then relaxed to asylum seekers who either possess their skills based on their mother tongue or on a non-native language proficiency. I consider a person to be proficient in a particular language if the registry entry ascribes very good skills (best out of a 4-step classification) in both, reading and writing.[24] Mother tongue language is assessed identically, but reported separately. The assessment is done by the assigned caseworker in the jobcentre for each individual during the counselling session. Typically, jobseekers present language diplomas or other degrees to prove their skill level. This procedure is particularly important for branches with a focus on communication, such as teaching. On the other hand, especially for low-skilled positions or generally when diplomas are missing, it is possible to assess work-relevant language skills orally (Regionale Arbeitsvermittlungszentren, 2017). Arguably, such an assessment is not free of measurement errors, especially if non-Swiss languages are concerned. However, from a methodological perspective, the advantage is the external assessment of language skills. For instance, Dustman and van Soest (2001) show that individuals tend to over-report language abilities and that misclassification errors in self-assessed language ability bias estimates. Finnie and Meng (2005) find that test score measures of literacy perform considerably better than self-assessed language skills when analysing labour market outcomes. Similarly, Edele et al. (2015) argue that subjective measures of language ability seem to be inadequate estimates of skills as measured by competence tests. Their results also show that self-reported language proficiency is biased across groups, for instance according to gender or particular immigrant groups. In that sense, even if caseworker assessments of language proficiency are likely to deviate qualitatively from a competence test, they would not correlate with unobserved characteristics of the asylum seeker but at the caseworker level, as assignment to a caseworker is exogenous. Based on this combination of caseworker-assessed language skills and clear-cut language regions in Switzerland, I construct two different groups of asylum seekers and temporarily accepted persons:

i. **Match:** Asylum seekers who are proficient in German, French or Italian (as a mother tongue or non-native language) and who were placed in a corresponding language region.

ii. **Mismatch:** Individuals who do not speak the language of the assigned region.

[23] In the analyses, I control for family who have residence in Switzerland, which captures the possible deviation from random assignment through family reunification.

[24] Applying different criteria of language skills (e.g., including both, very good and good as proficient) did not affect the overall pattern of the results.

Table 1.A presents the shares of asylum seekers with proficiency in one of the Swiss languages (as defined above) among the population of asylum seekers registered as jobseekers during the entire observation period 2000 to 2012. Approximately 16% possess some Swiss language skills, with 4% being placed in a bi- or multilinguistic canton. These individuals were excluded from the analysis because, theoretically, they could have moved to a municipality within their assigned canton where the spoken language matches their individual skills. Among the remaining sample of 2765 asylum seekers, two thirds possess French language skills. This overrepresentation of French is also reflected in an overview of the asylum seekers' origins in table 1.B: among sending countries with more than 100 observations in the sample, 4 out of 7 are African states, partly with a strong francophone background. The overall share of African asylum seekers in the sample amounts to 65%, followed by Balkan/former Yugoslavian states and the Near East.

Table 1: summary statistics

A: asylum seekers registered as jobseekers

	N	share
language proficiency		
German	762	0.03
French	1843	0.08
Italian	160	0.01
proficient & multiling. canton	863	0.04
observations	22345	

B: country/region of origin of proficient sample[1]

	N	sample share
AGO	403	0.15
COD	385	0.14
SOM	208	0.08
SRB	173	0.06
COG	165	0.06
BIH	140	0.05
SCG	135	0.05
other Africa	610	0.22
other Near East	217	0.08
other Asia	166	0.06
other Balkan	119	0.04
rest of the world	44	0.02
observations	2765	

C: covariates (at time of jobcentre registration) of proficient sample

		mother tongue		**language proficiency**	
	[min;max]	match	mismatch	match	mismatch
female	[0;1]	0.33	0.36	0.35	0.31
age	[16;64]	30.50	32.66	28.68	33.32
years of education[2]	[7;21]	10.24	9.78	10.19	9.96
		(2.50)	(2.47)	(2.39)	(2.52)
family in CH	[0;1]	0.31	0.34	0.28	0.39
temporarily accepted[3]	[0;1]	0.65	0.68	0.65	0.64
English proficiency[4]	[0;1]	0.03	0.04	0.05	0.07
days in ALMP[5]	[0;68]	5.37	6.71	5.65	5.88
		(10.26)	(10.21)	(10.49)	(9.77)
year of registration [mdn.]	[00;12]	2005	2005	2005	2005
relative UE [6]	[0.29;2.53]	1.44	1.02	1.35	1.25
		(0.41)	(0.25)	(0.44)	(0.44)
diff. UE[7]	[-0.01;0.08]	2.84	3.11	2.88	3.10
		(1.30)	(0.95)	(1.27)	(0.99)
language training[8]	[0;1]	0.11	0.17	0.10	0.12
entry into job[9]	[0;1]	0.28	0.21	0.28	0.19
observations		1035	346	2144	621

SD in parentheses; [1]countries with more than 100 observations: Angola, Dem. Rep. of the Congo, Somalia, Serbia, Republic of the Congo, Bosnia and Herzegovina, Serbia and Montenegro; [2] accepted degrees, based on the Swiss educational system; [3] residence permit F; [4] English reading and writing skills, equally assessed as Swiss languages; [5] number of days in active labour market measures during unemployment period; [6] cantonal unemployment rate at the month of registration relative to Swiss average; [7] percentage point difference between cantonal native and foreign unemployment rate at the month of registration; [8] language training corresponding to the cantonal language, provided by the jobcentre; [9] employment within 2 years of job search period.

Based on the legislatively determined shares for each canton (c.f. legal ordinance AsylV 1, Art. 21) one can pool all asylum seekers according to their Swiss language proficiency and cal-

culate an expected probability of approximately 30% of being assigned to a monolingual canton that matches the individual language abilities. Comparing the number of observations of the matched and the mismatched group in table 1.C (both, mother tongue and relaxed language proficiency) shows a matched share of above 70%. This indicates a non-random selection at the second stage, that is, when asylum seekers register at the local jobcentre. In general, the channels through which asylum seekers register as jobseekers are not clearly defined and depend on institutional (cantons, social assistance, NGOs, etc.) promotion and incentivisation to register (c.f. Regionale Arbeitsvermittlungszentren, 2017; UNHCR, 2014: 27). However, there is only limited variance between cantons in terms of how many individuals among the population of asylum seekers register at the jobcentre. On average, around 10% of the cantonal population register as jobseeker (see map 1 in the appendix). With regard to the language regions, the shares range from 9 to 11%. Hence, it is safe to assume that language effects are not biased by regional differences in the selection process into the registry.[25]

From an individual perspective, there are two plausible explanations for self-selection into the jobseeker registry: first, the matched group might have a higher awareness of administrative procedures, especially if the mismatched group lacks translation services, for instance by NGOs. Second, it is plausible that asylum seekers who already possess the required language skills are more optimistic about successfully finding employment, whereas individuals in an alien language environment might postpone their job search until after a positive asylum decision or until they have obtained some basic language skills. Further, fluency in the dominant language is often a requirement to be considered for a job. Thus, asylum seekers with limited proficiency are likely to be discouraged about looking for a job. On the other hand, this implies that the estimate of a positive language proficiency effect is likely to be downward biased, since the mismatched group would consist of asylum seekers who, on average, possess some unobserved skill that could compensate for a lack of Swiss language ability.

To account for possible selection bias, Table 1.C further presents the variables used for the covariate adjustment of the estimator. The first two columns show the summary statistics for the matched and mismatched mother-tongue sample. Columns 3 and 4 refer to the sample with a relaxed definition of Swiss language proficiency. I consider standard socioeconomic characteristics that are likely to affect labour market outcomes, that is, gender, age, years of education (as accredited by the Swiss authorities at the time of registration at the jobcentre),[26] family status, whether the person is an asylum seeker or temporarily accepted, English proficiency, and days in a supporting measure (ALMP). Overall, asylum seekers in the unemployment registry are mostly young males, having approximately 10 years of educational attainment, which corresponds to elementary vocational training. The dummy variable for family status captures both, marriage and whether a person has registered any dependants. This is also an important characteristic because family reunification can affect the random placement process. However, as I will show below, family has a negative but statistically insignificant effect on labour market integration.

[25]This assumption is also supported by members of the State Secretary for Economic Affairs (2017).

[26]For the year 2000, the data lacked information on educational attainment. In the models presented here, I imputed years of education based on the remaining set of covariates. Alternatively, I dropped observations from the year 2000 from the analysis with similar results.

As a trend component, I include both, the year of registration and the unemployment rate of the canton in which a refugee is placed at the month of registration with the jobcentre relative to the national monthly unemployment rate. Thus, I consider the fact that asylum seekers are bound to their canton of residence but labour market participants with other residence permits are not. Hence, since the successful job searches of asylum seekers should be negatively correlated with the number of competing jobseekers, it is important not only to have a measure of local labour market competition but also to consider a canton's possible deviation from the national trend, which in turn might trigger labour migration within Switzerland. Further, I use the foreign-native difference in cantonal unemployment rates at the month of registration as a proxy for asylum seekers' probability of labour market integration at the cantonal level. In the analysis, I eventually introduce fixed effects of language region, which accounts for unobserved differences in the labour market between regions as well as the general perception towards immigration. Furthermore, the fact that the caseworker assesses language proficiency at the beginning of the job search (thereby considering possible previous language training) together with the focus on asylum seekers and temporarily accepted persons with no rights to unemployment benefits, that is, without work experience, accounts for the influence of residence duration in Switzerland (which is not captured in the data).

In terms of observable characteristics, the matched and mismatched groups for both samples are relatively similar. However, the two matched samples (columns 1 and 3 in table 1.C) experience conspicuously higher rates of transition into employment than their respective control samples who were placed in an alien language. Given that asylum seekers who register with the jobcentre constitute a group that is likely to be more motivated or confident in finding employment than those who do not register in the first place, an overall transition rate into employment of just above 20% among jobseekers within 2 years seems disillusioning. However, the rate corresponds to a recent study by Spadarotto et al. (2014), who found that the employment rate of accepted refugees does not reach 50% even after 10 years of residence in Switzerland. Moreover, this figure can be considered as average compared to recent experiences in Europe (Konle-Seidl and Bolits, 2016).

Estimations are performed using linear regressions with language region fixed effects on a dummy variable Y that is assigned a value of 1 if a job until a given time t has been found or 0 if otherwise.

$$Y_{it} = \alpha + \beta T + X_i + \epsilon_{it}$$

The treatment indicator T captures whether an asylum seeker was placed in a region with a familiar or alien language compared to her individual proficiency, while vector X depicts the set of covariates to control for possible bias of self-selection into the jobseeker registry. To identify possible trends in the effects on employment Y, I estimated effects stepwise every 3 months up to 2 years after registration at the local jobcentre. Hence, the results show 8 different effects of transition into employment up to a given point in time. In addition, I estimated the within-quarter effects, that is, the change in the probability of finding a job during a specific quarter within 2 years.

4.5 Language proficiency and transition into employment

This section shows whether a match between a refugee's language proficiency and the language spoken in the Swiss region into which that refugee is placed during the asylum process affects transition into employment. Figure 1 presents the effect of a match between spoken language in the region and individual language proficiency. Both the mother tongue sample (solid line) and the relaxed skill definition (dashed line) are presented relative to the corresponding mismatch sample (grey zero-line). The point estimates of the OLS regression of a language match on employment status at a given time are positive and steadily increasing from a 3% higher probability to enter employment within the first 3 months to a 14% higher entry probability within 2 years for the language match and a striking 20% increase for a match with a person's mother tongue. The coefficients are statistically significant throughout, which is demonstrated in the corresponding regression table 2, model A in the appendix. The results are also reflected in the covariate-adjusted within-quarter effects (dot and x markers in figure 1), which estimate the effect of a language match on the employment probability within a given quarter. In both instances, a match with the mother tongue and a general language match, the coefficients are positive and mostly statistically significant. The corresponding regression results can be found in table 2, model B in the appendix. All models are estimated with language region fixed effects. As indicated above, these results could be driven by region-specific factors instead of a language match, especially because the sample is dominated by French-speaking refugees. For instance, the results might be biased by a higher labour demand for low-skilled workers in the French-speaking part of Switzerland, or it might simply reflect regional differences in openness towards immigration. While such heterogeneity among Swiss language regions (and/or between groups of asylum seekers) is plausible, it fails to explain the difference between language match and mismatch, thereby further supporting the existence of positive language effects that are large in magnitude and statistically highly significant.

From a policy perspective, it is important to emphasise the existence of a positive effect even for non-native language skills. This should be considered as an encouraging signal for targeted language training (see below). Assuming that mother tongue proficiency is preferred over non-native language skills, it is plausible that the positive effect of a language match is greater for the former. Further, the language effect of non-native proficiency might be overestimated because language attainment could be associated with some characteristic (e.g. learning skills) that is not captured with the employability variables in the regression. By contrast, self-selection into the unemployment registry as a jobseeker (see above) could lead to an underestimation of the true language proficiency effect. Asylum seekers who register at the local jobcentre might have a higher average expectation of successful labour market integration, which is either induced by the language effect or by a higher level of unobserved self-perceived employability and/or motivation. In this case, the mismatched sample consists of more motivated or highly employable asylum seekers, while the matched sample includes individuals who rely (implicitly) on their language proficiency. In other words, the language effect would be downward biased by lower unobserved employability of the matched group.

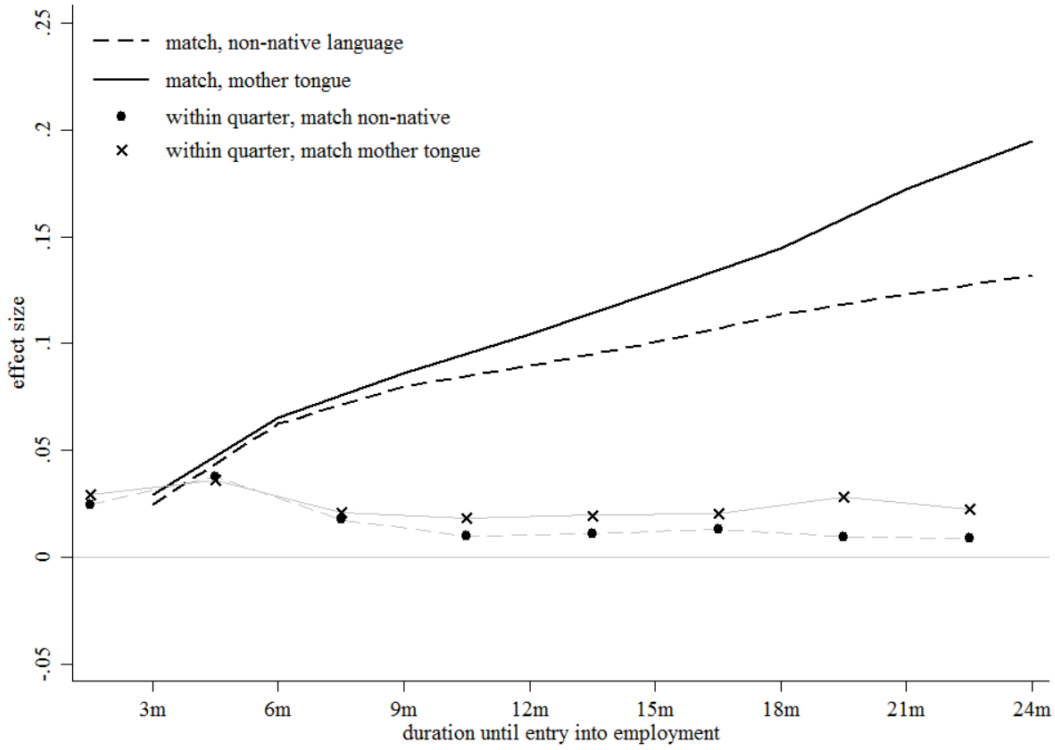

Figure 1: Effect of language match on transition into employment, covariate-adjusted

As can be seen in the full regression table 2 in the appendix, gender, age, family ties and English language proficiency have no significant effect on employment probabilities. Education, in contrast, turns out to be a strong driver of transition into employment. Further, temporarily accepted persons have a slightly higher employment probability, which can be explained by their longer duration of stay in Switzerland compared to persons who are in the asylum process. Interestingly, a larger difference in the unemployment rate between foreign and native inhabitants is associated with a higher probability of transition into employment. One explanation could be that higher immigrant unemployment rates are a result of higher immigrant labour force participation, which in turn means that work-related contacts with immigrants are more common. This could result in less prejudice and increase the potential for the formation of labour force-related networks (c.f. Bonoli and Turtschi, 2015), while it implies relatively lower native unemployment rates and therefore less perceived threat (c.f. Pettigrew et al., 2010). Longer participation duration in active labour market measures (ALMPs) decreases a person's likelihood of a successful job search. This could be because persons with an immigrant background are more likely to participate in ALMPs with few or even negative effects on labour market outcomes (so-called "parking measures"; c.f. Auer and Fossati, 2016; Gerfin and Lechner, 2002). However, the ALMP coefficient decreases over time and eventually loses its significance, which suggests the existence of lock-in effects in the earlier parts of the job search period.

4.6 On language training

Over the last decade, Swiss authorities have gradually intensified their efforts to provide language training for immigrants (Lindenmeyer et al., 2008). The general provision of courses that should facilitate the labour market (re-)integration of immigrants and disadvantaged natives is above average in an international comparison (Duell et al., 2010). While there are several integration

programmes specifically designed for refugees, including basic language training, jobcentres also offer language courses as part of their ALMP. In the data at hand, only the latter are captured. Access to language courses as an activation measure is in principle open for all registered jobseekers. When registering at the local jobcentre, a caseworker assesses the possible benefits of a supportive measure and assigns the unemployed person to a specific course or employment programme.[27] Consequently, the mismatch sample can be categorised according to participation in a language training:

i. Asylum seekers who have German, French or Italian as a mother tongue and who were placed in a corresponding language region (mother tongue, as above).

ii. Asylum seekers who possess German, French or Italian language skills and who were placed in a corresponding language region (language match, as above).

iii. Asylum seekers possess German, French or Italian language skills, who were placed in an alien language region and who participated in a corresponding language course (e.g., German in the German speaking region) provided by the jobcentre (mismatch, language training).

iv. Asylum seekers who possess German, French or Italian language skills, who were placed in an alien language region and who did not participate in a corresponding language course (mismatch, no training).

Isphording and Otten (2014) have shown that the distance between two languages strongly affects the attainment of a new language. Therefore, to retain the highest possible homogeneity between the groups, I draw the language course participants only from the mismatched group, that is, those asylum seekers who possess potentially fitting language skills but were placed in an alien language region (see also Espenshade and Fu, 1997).[28]

[27] UNHCR conducted interviews with refugees stressing that they had to learn a new language due to placement in an alien language region (UNHCR, 2014; see also Spadarotto et al., 2014).

[28] Performing estimations on an extended sample of all registered asylum seekers produces similar, yet potentially biased results.

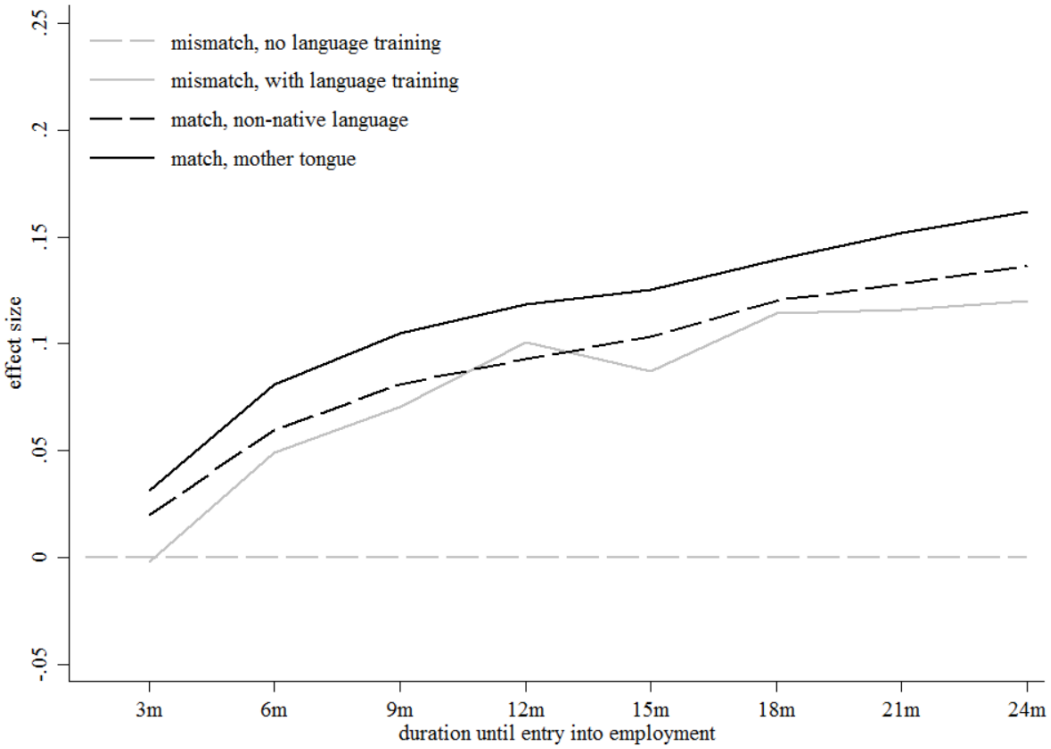

Figure 2: Effect of language training on transition into employment, covariate-adjusted

The quarterly employment probabilities in figure 2 reveal an interesting picture (see the corresponding regression table 2, model C, in the appendix). Compared to asylum seekers in an alien language region and without participating in a corresponding language course (group iv, grey dashed zero-line in figure 2), all other groups have a higher probability of entering employment in all periods. Interestingly, language course participants (iii, grey solid) show employment probabilities that are almost as high as those of asylum seekers with a general language match (ii, black dashed). Only the mother-tongue subsample (i, black solid) has a distinctively higher probability of entering employment.

There are three main explanations for this result: *First*, it shows that language centres seem to succeed in providing adequate training for their clients. This explanation is corroborated by recent research. For instance, Kaida (2013) finds that language training for recently arrived immigrants in Canada increases the chances to exit poverty. Undoubtedly, employers in most branches value language proficiency as an essential element of a candidate's skills (for Switzerland, c.f. Spadarotto et al., 2014). If language training provided by the jobcentres were ineffective, trained asylum seekers would probably not be hired at a similar rate to matched individuals. *Second*, asylum seekers who speak one of the Swiss official languages and learn a second language during a training course might obtain some comparative advantage. Despite the cantonal autonomy and regional differences within Switzerland, additional (potentially relevant) language abilities are likely to be considered advantageous (c.f. Isphording, 2013 for the returns to immigrants' non-native language skills in Spain). *Third*, employers might value asylum seekers' language proficiency more highly if their skills are accredited by a Swiss institution. If employers trust these institutions, their certification reduces uncertainty about the asylum seekers' actual language skills. In that sense, language course participation functions as a positive signal for employers and therefore provides an advantage for participating asylum seekers over

those who indicate language proficiency but fail to provide a corresponding certificate from a Swiss institution. This explanation is further supported by the positive effect of language training on asylum seekers who are placed in a familiar language region and, partly, even on asylum seekers with a matched mother tongue (not shown). While asylum seekers, particularly those with non-native language proficiency, may substantively benefit from language course participation in terms of human capital, it seems that the signalling value of a host-country certificate plays an important role when hiring under (aggravated) uncertainty about the candidates' skills (for an assessment of the signalling value of ALMPs, see Liechti et al., 2017).

In terms of active labour market policies, this result is encouraging. Independently of the actual drivers of this effect, asylum seekers seem to benefit substantially from jobcentre language training in terms of labour market access. Language course participation might be nearly as helpful as "correct" placement of asylum seekers in terms of language skills. At this stage, it is important to emphasise again that asylum seekers' language skills are assessed by the caseworker when the asylum seeker registers at the jobcentre and that individuals in the sample are proficient in only one Swiss language. While some asylum seekers possess basic skills in one of the three relevant languages, they are equally distributed across match or mismatch status. Additionally, basic skills do not predict language course participation (not shown). Hence, the estimates should not be biased by prior knowledge of a Swiss language. However, estimations might be biased because language courses are assigned by the caseworker at the jobcentre. Caseworkers have a specific understanding of the requirements of the local job market and are also strongly incentivised to fulfil reinsertion targets (c.f. Auer and Fossati, 2016). Hence, the results likely capture some selection bias induced by the intentional decision of the caseworker to offer a language course to one asylum seeker and not to another. Put differently, it might be the case that language course recipients possess some unobserved skill and/or that non-recipients come with some trait that hampers labour market integration, resulting in an over-estimation of the language-course effect.

4.7 Discussion

This study of an immigration policy in Switzerland where asylum seekers are randomly placed across regions, has shown that language proficiency is essential capital in the labour market. Being placed in a region with a familiar spoken language increases the probability of obtaining a job within 2 years by 14% and even 20% for native speakers.

Therefore, this paper contributes to the general literature on the effects of immigrants' language proficiency on labour market outcomes (c.f. Chiswick and Miller, 2014). While such studies often struggle with the endogeneity of language skills, the "natural-experimental" character of the Swiss authorities' placement policy allows for clear identification, which renders methodologically robust results. In addition, because language proficiency at the time of jobseeking is assessed by the caseworkers, any measurement error does not covary with individual characteristics of the asylum seekers, as is the usual case for self-assessed language skills.

From a labour market-oriented perspective, a strict random placement policy turns out to

be detrimental for the integration of asylum seekers and temporarily accepted persons because it excludes the possibility to match individual proficiency with local language habits. From a policy perspective, there might be reasons in favour of such a random placement mechanism. For instance, it prevents cantons (or states) with superior "bargaining power" in the political sphere from influencing placement and taking preferred (e.g., higher educated or "culturally more desirable") asylum seekers. Random placement might also function as a prevention tool against spatial segregation and increases diversity across all cantons (c.f. State Secretary for Migration, 2016). Further, single cantons introduce new policies against immigration every now and then, such as the prohibition of the Burka in Ticino (Grass, 2016).[29] To avoid cantonal boycott and to appease the public, a non-random placement mechanism will eventually have to take such specificities into account, which would render a non-random placement policy a political minefield and would potentially have a negative effect on vulnerable asylum seekers. The same difficulties are likely to occur at the European level.

The second finding of this study, however, shows that language course participation significantly increases an asylum seeker's probability of entering the labour market. While this set of results might be biased by unobserved skills and partly explained by a signalling effect of participation rather than a clean language proficiency effect, this finding is encouraging for participating asylum seekers and policy makers alike: random placement might be desirable for political reasons, as it is the most transparent and unambiguous mechanism. In addition, even in a diverse country such as Switzerland with four official languages, most arriving refugees do not possess any host-country language skills. However, encompassing provision of language training seems to be capable of compensating for misplacement and a lack of language proficiency.

It is important to stress that language depicts only one aspect within a larger array of potentially disadvantaging factors, ranging from discrimination (e.g., Zschirnt and Ruedin, 2016) to difficulties in accreditation of foreign degrees (e.g., Dietz et al., 2009). Further, the study focuses on one specific labour market outcome, that is, transition into employment. This is motivated by the fact that initial employment is considered to be crucial for subsequent integration. In addition, the results are in line with both, qualitative (e.g., Archer et al., 2005; Colic-Peisker and Tilbury, 2007) and quantitative (e.g., Lindemann and Kogan, 2013; Miranda and Zhu, 2013) findings on other economic determinants of integration. However, Spadarotto et al. (2014), for instance, find that incidences of job changes are relatively high for asylum seekers. Hence, analysing other important determinants of asylum seekers' labour market integration, such as duration of employment, re-employment chances or contract types, would be a topic worthy of further research. In addition, more detailed approaches towards language skills and language similarities might turn out to be fruitful pathways for future research.

In sum, these findings provide strong evidence supporting the hypothesis that language proficiency is beneficial for labour market integration. Further, given the substantial impact of language training, this study makes an argument in favour of extensive offering of language courses in order to offset the negative effect of random placement. The setting of Switzerland and

[29] In fact, the canton implemented a law against general coverage of the face for security reasons. Later, the Swiss Federal Council voted in favour of adopting this policy on a national level (Tribelhorn, 2016).

its distinct language regions undoubtedly constitutes a special case regarding immigration policy. However, with a European refugee placement policy looming in the horizon, policy makers may do well to learn from the multilingual Swiss laboratory. While the economic integration into the European host societies depends on manifold aspects, refugees would benefit substantially from a stronger focus on adequate language training or, if applicable, from a placement that takes pre-existing language skills into account.

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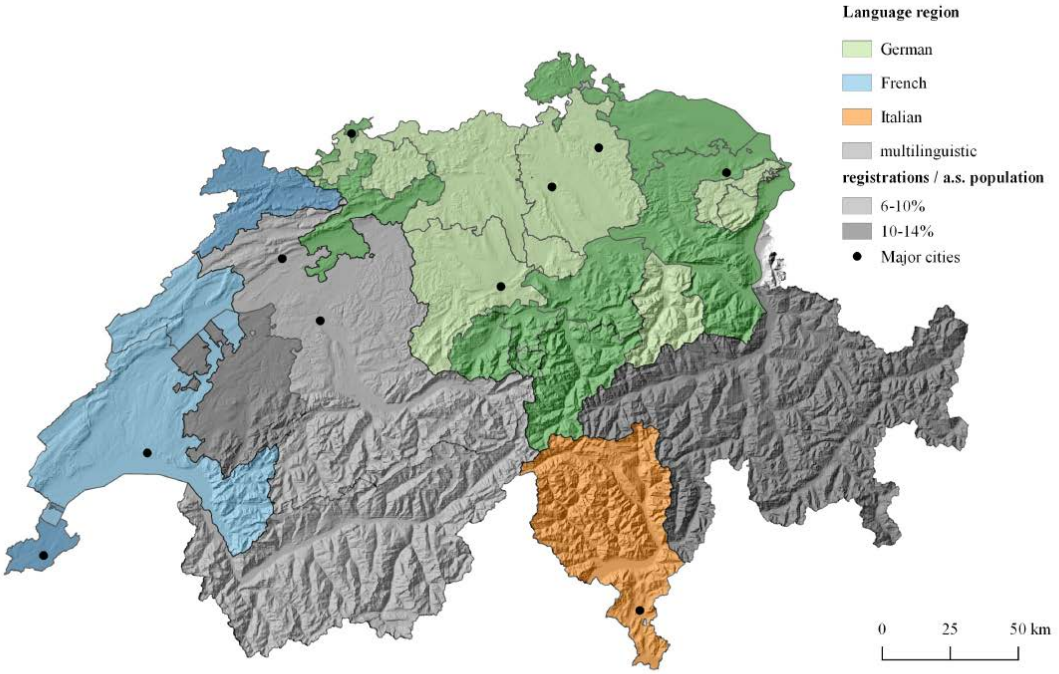
Appendix



Map 1: Language regions and share of registered jobseekers among cantonal population of asylum seekers

Table 2: effect of language proficiency on transition into employment

***Model A: cumulative effects*[1]**

	3 m	**6 m**	**9 m**	**12 m**	**15 m**	**18 m**	**21 m**	**24 m**
matched mother tongue	0.03**	0.07***	0.09***	0.11***	0.13***	0.15***	0.18***	0.20***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
female	0.01	0.01	0.01	0.02	0.01	0.01	-0.00	0.00
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
age	0.02	0.08	-0.01	-0.04	-0.05	0.02	0.02	0.07
	(0.03)	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)
years of education	0.09**	0.15**	0.22***	0.19**	0.28***	0.27***	0.29***	0.26***
	(0.04)	(0.06)	(0.07)	(0.08)	(0.08)	(0.08)	(0.09)	(0.09)
family in CH	-0.02	-0.03	-0.02	-0.03	-0.01	-0.02	-0.02	-0.03
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
temporarily accepted	-0.00	0.03	0.04**	0.03*	0.03	0.04*	0.05**	0.04
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
English proficiency	0.02	-0.01	-0.03	-0.03	-0.01	-0.03	-0.02	0.01
	(0.03)	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
days in ALMP	-0.11***	-0.24***	-0.24***	-0.22***	-0.18***	-0.16**	-0.08	-0.07
	(0.03)	(0.05)	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
year of registration	0.00	-0.00	-0.00	-0.00	-0.00	-0.00**	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
relative UE	-0.04	-0.03	0.01	-0.01	0.05	0.09	0.14	0.14
	(0.05)	(0.07)	(0.09)	(0.09)	(0.10)	(0.10)	(0.10)	(0.11)
diff. UE	0.00	0.01**	0.03***	0.03***	0.04***	0.06***	0.07***	0.07***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
observations	1381	1381	1381	1381	1381	1381	1381	1381
language match	0.03***	0.06***	0.08***	0.09***	0.11***	0.12***	0.13***	0.14***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
observations	2765	2765	2765	2765	2765	2765	2765	2765

***Model B: within-quarter effects*[1]**

	qtr 1	**qtr 2**	**qtr 3**	**qtr 4**	**qtr 5**	**qtr 6**	**qtr 7**	**qtr 8**
matched mother tongue	0.03**	0.04**	0.02	0.02	0.02*	0.02*	0.03***	0.02**
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
observations	1381	1381	1381	1381	1381	1381	1381	1381
language match	0.03***	0.04***	0.02*	0.01	0.01	0.01*	0.01*	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
observations	2765	2765	2765	2765	2765	2765	2765	2765

***Model C: cumulative effects, reference: mismatch, no language training*[1]**

	3 m	**6 m**	**9 m**	**12 m**	**15 m**	**18 m**	**21 m**	**24 m**
mismatch, training	-0.00	0.05	0.07*	0.10**	0.09*	0.11**	0.12**	0.12**
	(0.02)	(0.03)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
language match	0.02*	0.06***	0.08***	0.09***	0.10***	0.12***	0.13***	0.14***
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
mother tongue	0.03***	0.08***	0.10***	0.12***	0.13***	0.14***	0.15***	0.16***
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
observations	2536	2536	2536	2536	2536	2536	2536	2536

[1]coefficients are covariate adjusted with language region FE; SE in parentheses; *p<0.1 ** p<0.05 *** p<0.01