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## Participation in Higher Education of Youths with a Migrant Background in Switzerland<sup>1</sup>

Dorit Griga\*

### 1 Introduction

In 2000, 20 per cent of the Swiss resident population was constituted by foreigners (Fibbi and Wanner 2009). How this immigrant population and their children integrate into the Swiss educational system is crucial for the integration of the Swiss society as a whole. As in other European countries, in Switzerland, the migrant population can broadly be differentiated into three groups: migrant groups that are relatively successful, though still somewhat behind the majority population; migrant groups from less-developed regions with substantially lower educational attainments or qualifications than those of the reference population; and migrant groups who outperform the majority population (Heath et al. 2008). With reference to Switzerland, this differentiation is consistent with the different waves of immigration as well. For example, in the first immigration wave, which began in the 1940s and peaked in the 1970s, labour migrants from Spain and Italy made up the majority of the migrant population. Since then, these migrant groups have demonstrated some upward mobility. In the second immigration wave, which ensued in the 1980s, labour migrants from former Yugoslavia and Portugal and refugees from former Yugoslavia and Turkey were increasing in number among the Swiss migrant population (Beck et al. 2010). Unlike the earlier migrants from Spain and Italy, people with a migrant background from these countries (former Yugoslavia, Turkey and Portugal) still differ strongly from the Swiss reference population with respect to their socioeconomic status. After the establishment of the three-circle-model in 1994, however, migrant groups from highly industrialised Northwestern European countries, e. g., Germany, Austria, France and Belgium, were attracted to Switzerland.<sup>2</sup> Apart from having a strong command of at least one of the official languages of Switzerland, these migrant groups exceeded even the non-migrants in terms of their

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2 The reduction of the performance gap between students with and without a migrant background from 2000 to 2009 measured in PISA was thereby mainly driven by the changed composition of the group of youths with a migrant background in terms of their average socioeconomic status and knowledge of at least one of the official languages in Switzerland (Cattaneo and Wolter 2012).

educational attainment and occupational positions (Meyer 2003). In the course of these and other developments, the motives for immigration changed. While at the end of the 1990s, family reunification was the most frequent motive, participation in the labour market has advanced to become the most important motive for immigration during the last several years. Furthermore, the share of newcomer migrants who have attained a higher education degree has tripled in the last 15 years, currently standing at 60 per cent. Educational attainment varies by country of origin. While only 13 per cent of those from Southern Europe have higher academic backgrounds (and only 8 per cent of those from Turkey or the Balkans), those coming from Northern and Western European regions have attained educational levels that exceed those of the non-migrant Swiss citizens. Accordingly, within the last several years, people whose occupational backgrounds are in the fields of science, management and engineering have immigrated to Switzerland. Consistent with these differences in professions and educational attainment, employment success differs between/among migrant groups. While the share of migrants from the Western Balkans and Turkey who are unemployed stood around 10 per cent in 2007, the corresponding share among migrants from Northern and Western Europe was around 3 per cent, which was, more or less, equal to the share of unemployed in the Swiss reference population (Avenir Suisse 2008). To some extent, these inequalities correspond to the differing juridical status of migrant groups.<sup>3</sup> Whereas EU citizens are entitled to equal social and economic opportunities in Switzerland by virtue of the Bilateral Agreement of 2002, migrants whose origins are Albania/Kosovo or Turkey can only consolidate their entitlements by acquiring Swiss nationality (Fibbi et al. 2007). Accordingly, for naturalised migrant groups, Mey et al. (2005) observed a positive effect on educational attainment even when controlling for socioeconomic status.

Given the structural similarities, the educational participation patterns of youths with a migrant background largely mirror those observed in many other European countries as well. Thus, at the aggregate level, these youths do not perform as well in school (OECD 2006; OECD 2010), exhibit an increased risk for dropping out of school (Meyer 2003), and are underrepresented among those eligible for higher education (HE) as well as those enrolled in the HE system (SKBF 2010). As in other countries, the general disadvantage of these youths in the Swiss school system is mainly explained by their socioeconomic backgrounds. For example, at the first branching point in one's educational career, which is primarily determined by teachers' recommendations, Beck et al. (2010) observed an increased risk for migrant children who speak languages other than the official languages of Switzerland as their mother tongue to be transferred to secondary schools with only basic requirements, rather than to secondary schools with extended requirements. Although smaller in size, the observed disadvantages persist for some subgroups even when controlling for their disadvantaged social origins. Only when performance is controlled, the

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3 Compare Söhn (2012) for a theoretical discussion.

transition patterns cease to differ between youths with such migrant background and the reference population. Regarding absolute numbers, youths with such migrant backgrounds are underrepresented in secondary schools with extended requirements and overrepresented in secondary schools with only basic requirements (Kronig 2003).

In spite of the research, less is known about educational inequalities at later branching points and stages. For example, with regard to the transition from lower to upper secondary school – in cantons with a *Kurzzeit-Gymnasium* (short-term grammar school) – and the transition to higher education, a research gap in Switzerland must be acknowledged. Although there is an evident underrepresentation of migrant youth being advanced in the early stages, it is unclear whether these inequalities generated at the earlier branching points remain constant, whether they increase or decrease over the course of the educational cycle or whether possible reductions in inequality are sustained or thwarted due to decreased success probabilities or reduced degrees of progress, for example, within the HE system. With respect to these branching points and educational stages, this article concentrates on the transition to higher education, and two main research questions structure the analysis: First, with regard to quantitative aspects of educational inequalities, the question we address is as follows: Are there differences in the transition rates to higher education between migrants and non-migrants? Second, with regard to qualitative aspects of educational inequalities, the question we address is as follows: Do students with a migrant background prefer institutions of higher education different from those preferred by non-migrants? Given these research questions, the article aims to shed light on the issue regarding the disadvantages encountered by many migrant groups in the Swiss stratified school system and whether these disadvantages are reinforced or counterbalanced at various educational stages, thereby allowing for student choices (Kerckhoff 2001). While a high degree of stratification in the secondary school system has proven to be disadvantageous for migrants whose first language (language spoken in the home) differs from the language of instruction, educational transitions being structured by choice may be advantageous for high aspiring youths with a migrant background (Jackson et al. 2012; Griga and Hadjar 2014).<sup>4</sup> Analysing the transition behaviour of juveniles who are eligible to enter the Swiss HE system, this article focusses on a select group of youths. This holds for both non-migrant and migrant groups, from which only a few are able to ascend the educational ladder. By doing so, the paper analyses educational outcomes that have rarely been studied in second-generation research.

This paper is structured as follows. In section 2, approaches at the micro-level that aim to explain educational inequalities between social as well as migrant and non-migrant groups in transition to higher education are considered. Arguments that may explain the inequalities associated with the choice of HE institutions as

4 Other institutional characteristics may also support or impede their educational success: e.g., provisions for second language learning (Crul and Schneider 2010).



well as differences in HE completion are also presented. In section 3, the theoretical expectations and strategy for analysis are formulated. Section 4 introduces the dataset and the measures used and discusses methods of data analysis. Section 5 centres on the estimated regression models and the relevant results. Section 6 concludes with a discussion of the findings, study limitations and recommendations for further research.

## 2 Explaining social and migrant inequalities in higher education

### 2.1 Inequalities regarding the transition to higher education

To explain educational inequalities between migrant and non-migrant groups, it must first be noted that many migrant groups differ from the Swiss reference population with respect to socioeconomic status. Thus, much of the educational disadvantage experienced by many of the migrant groups in Europe is explained by the migrant parents' socioeconomic position (Heath and Brinbaum 2007). To capture educational inequalities owing to *social origin*, two main theoretical approaches are commonly used. Whereas Bourdieu and Passeron (1977; 1978) focus on socialised habits and resources from the perspective of conflict theory, rational-choice approaches (Erikson and Jonsson 1996; Breen and Goldthorpe 1997) based on the concept of educational transitions (Mare 1980) refer to educational decisions based on cost-benefit considerations. For the study of inequalities related to educational transitions as dictated by student choices, the concept of primary and secondary effects of social origin (Boudon 1974) is the most suitable, as it considers both (material and socialised) resources and decision-making in terms of subjectively expected utility (Becker 2003) and cognitive rationality (Boudon 2003) respectively. According to the approach of Boudon, primary effects of social origin describe educational differences that are the result of socially biased performance levels that may originate from class-specific differences in parental support and learning environments at home. Whereas primary effects of social origin may, therefore, explain why members of the lower socioeconomic classes perform less well in school, secondary effects of social origin refer to the inequalities associated with the choices of the students and their parents when controlling for social origin and previous school performance. Typically, secondary effects are explained by class-specific variations in the evaluation of costs, benefits and the probability of success associated with an educational alternative. Because of the interplay between primary and secondary effects of social origin, eligible individuals with a privileged social origin will be more likely than those from lower strata to enrol in higher education. With respect to Switzerland, Buchmann et al. (2007) indicate that students with an advantaged social origin are comparatively privileged in both achieving eligibility as well as enrolling in higher education.

In addition to social origin, the concept of primary and secondary effects has recently been extended to *migrant origin* (Van de Werfhorst and Van Tubergen 2007; Kristen and Dollmann 2010).<sup>5</sup> Although primary effects of migrant origin, e.g., in the form of language barriers, may explain the disadvantages of migrant youths encountered in earlier transitions (Becker et al. 2013), no such effects seem realistic when considering the select group eligible for higher education. Rather, if the focus is on educational branching points associated with student choice, the literature points to arguments indicating that educational decisions of youths with a migrant background are subject to positively directed *secondary effects of migrant origin*. In the few studies that have focussed on such transitions and controlled for socioeconomic status and performance, increased transition propensities in the academically more demanding educational alternatives were revealed for many migrant groups of disadvantaged social origins. Corresponding results were obtained for the transition to upper secondary education in England and Wales (Jackson 2012), Finland (Kilpi-Jakonen 2011), Germany (Kristen and Dollmann 2010) and Sweden (Jonsson and Rudolphi 2011; Jackson et al. 2012) as well as the transition to higher education in England and Sweden (Jackson et al. 2012) and for Germany (Kristen et al. 2008). To explain the increased transition rates, several studies in the US (Kao and Tienda 1995; Kao and Tienda 1998), France (Vallet 2005; Brinbaum and Cebolla-Boado 2007) and the Netherlands (Van de Werfhorst and Van Tubergen 2007) have shown that students of migrant origin exhibit higher educational aspirations than their non-migrant counterparts. *Selection* and the immigrant optimism-hypothesis, respectively, are often referred to in the literature as one explanation. Accordingly, migrants are assumed to have more drive or higher ability than those who remain in their countries of origin (Feliciano 2005; Kasinitz et al. 2008; Levels et al. 2008). Because migrating induces both high costs and significant losses (e.g., in the form of social networks), only those people who differ from their peers in terms of their motivation and are seeking social advancement will elect to emigrate from their countries (Ogbu 1987; Kao and Tienda 1995). Another argument is provided by Jonsson and Rudolphi (2011) who indicate that migrant parents may value education differently than native-born parents. Thus, the migrant parents and their children may wish to return to their home countries. The transferability of HE degrees contributes additional value to the returns of higher education for this group of people. In addition, pursuing the more demanding educational tracks may be perceived as

5 Notwithstanding that the terminology used by Kristen and Dollmann (2010) and Van de Werfhorst and Van Tubergen (2007) was slightly different (e.g., secondary effects of “ethnic origin”), in this paper, I speak of the secondary effects of “migrant origin.” Using the term “migrant” is more suitable for emphasising the strong determination towards social upward mobility observed for first and second-generation migrants. Moreover, the term suggests that such effects may fade over the course of generations and in the case of assimilation into mainstream society. Consistent with this reasoning, Kao and Tienda (1995) observed for both first- and second-generation migrants in the US that they tend to outperform their third-generation or higher-generation counterparts on various education-related indicators.

less difficult by the select group of youths with a migrant background who attain the HE entrance certificate. From the beginning of their educational career, these students had to catch up with their native peers, for instance in language learning. When these youths look back, these extra hurdles they overcame may render them more confident regarding their probabilities to succeed in HE (Kristen et al. 2008).

Finally, some migrant groups may perceive staying in education as an alternative to being unemployed. This could be the case if students with a migrant background are less well informed about alternatives to higher education, for example, the so-called dual system, or if they experience or expect discrimination when searching for employment or for an apprenticeship. Seibert and Solga (2005) refer to a specific form of discrimination to explain the disadvantages experienced by Turkish youths at the German labour market. They see their reasons in employers' ethnic-specific expectations modifying the signalling value of their educational degrees. Regarding the assumption that educational decisions are based on cost-benefit calculations, the expectation of discrimination when searching for an apprenticeship would increase the costs of this educational alternative for youths with respective migrant backgrounds. Vice versa, their opportunity costs of continuing with higher education would be less than those for the majority population, thereby increasing the probability of their deciding in favour of higher education (Kristen et al. 2008). This reasoning is consistent with observations of ethnic employment gaps for secondary and post-secondary educated youths in branches characterised by manual labour (Riach and Rich 2002; Carlsson and Rooth 2007; Nekby et al. 2007) in countries where for university educated 30-year-olds, neither employment nor income gaps are observed (Jonsson and Rudolphi 2011). For Switzerland a recent study of the ERK (2012) revealed that even graduates from Swiss institutions of higher education with a migrant background encounter more problems when searching for a job compared to non-migrants.

Related to this argument is the question of a possible interaction effect between specific migrant backgrounds and gender. With respect to Switzerland, there is some empirical evidence that male youths from former Yugoslavia, Albania/Kosovo, Portugal and Turkey are the least well-regarded subgroup by companies situated in the German-speaking part of Switzerland (Haeberlin et al. 2004) and may be objects of discrimination. Using an experimental design, Fibbi et al. (2006) demonstrate that compared to (fictitious) males with a Swiss name, (fictitious) males with a Yugoslavian, Turkish or Portuguese name were less often invited for interviews. To explain this finding, the authors assume that particularly small companies or companies in the field of manufacturing that mainly employ males use nationality as a criterion to select applicants, thereby closing the labour markets to certain youths (Hupka et al. 2006). Notwithstanding these results, assuming discrimination procedures on the part of the employers as causes for the observed inequalities is highly requiring from a theoretical viewpoint. To explain the disadvantages experienced by Turkish

youths in Germany, for example, a recent study conducted by Kalter (2006) rather hints at inequalities in the endowment with relevant human capital being specific to the country of receiving and not being incorporated by educational degrees. As regards interactions also gender roles may vary between people with and without migrant backgrounds. Given that gender roles are rather traditional in some countries of origin, this may account for possible interactions between the two dimensions of inequality – gender and migrant background. Provided that the gender roles are maintained in the country of destination, respective families could, in this case, be assumed to differ from non-migrants by investing in the educational attainments of their sons before their daughters. However, a study regarding the educational attainments and performances of second-generation migrants in different European countries could not provide evidence consistent with this assumption (Fleischmann and Kristen 2011).

## 2.2 Inequalities in the choice of higher education institutions

Related to the general decision whether to enrol in higher education is the selection of a specific field of study and the decision of an HE institution. With regard to *social origin* and consistent with the motive to maintain the social status of the family (Esser 1999), in the field of research regarding higher education, there is significant evidence that youths of an advantageous social origin are more likely to enrol in subjects leading to the more traditional professions (e. g., medicine or law) and the academically more challenging educational institutions (e. g., traditional universities instead of universities of applied sciences). Regarding field of study selection, in Switzerland Becker (2012) confirmed the social bias. Concerning institutions, Denzler (2011) showed in Switzerland that a more advantageous social origin has a positive effect on the probability of enrolling in a traditional university, whereas it decreases the probability of choosing a university of applied sciences or a university of teacher education.

Referring to *migrant origin*, studies in other countries reveal that youths with a migrant background favour medicine, law and business and are, therefore, less inclined to enrol in the humanities (cf. Burkhart et al. 2011 for Germany). To explain this pattern, Kristen et al. (2008) argue that certain fields of study, such as medicine and law, which are usually taught at traditional universities, are more attractive to youths with a Turkish migrant background owing to their higher reputation and prestige in their country of origin. As regards medicine and law, these subjects also go along with comparatively highly regulated employment opportunities and earnings which might be regarded an advantage particularly by these youths. In addition, youths with a migrant background (and their families) may be less familiar with the fields of study taught at universities of applied sciences. Consequently, these migrant youths may be more strongly attracted to traditional fields, which may explain their

increased transitions to respective institutions when compared to the comparatively young institutions of universities of applied sciences.

### 2.3 Inequalities in higher education progression

Apart from inequalities in the transition to higher education, social groups may also differ in their degrees of HE progression or in their likelihood to complete their studies on time. To explain inequalities related to the degree of progress made by students, again the approach of primary and secondary effects of social origin must be considered (Schindler 2006). With regard to the primary effects of social origin, students from higher status backgrounds are better equipped with relevant academic skills and parental support, which, as a result, may increase their probability to pass their examinations. In addition, these students are less often forced to work during their education to earn a living, a factor that may impact on-time completion of one's studies. Apart from primary effects, secondary effects of social origin can affect both degrees of progress in the HE system and completion probabilities in general. Thus, the considerations of benefits, success probabilities and costs undertaken before enrolling in higher education may change during the course of study. While upward corrections of subjectively expected benefits and probabilities to pass examinations have no further effect once the decision in favour of a study programme is made, downward corrections of these indicators may cause students to quit their studies or change their fields. Because they are more familiar with the HE system and have a larger social network that may help them to progress in the HE system or to find a job after graduation, fewer (downward) corrections can be expected for those with a privileged social origin. Consistent with the reasoning of primary and secondary effects of social origin that affect degrees of progress and chances for timely completion, an increased risk for dropping out of HE programmes was observed for Turkish students who are of a disadvantaged social origin in Germany (Burkhart et al. 2011).

## 3 Hypotheses and strategy of analysis

Based on the presented theoretical framework, hypotheses on migrant-specific inequalities regarding the transition to higher education in Switzerland can be derived. The arguments presented in the previous section mostly apply to youths with a migrant background from former Yugoslavia, Albania/Kosovo, Turkey and Portugal as they are disadvantaged in terms of social origin and the language spoken at home, and in the case of males, they are viewed less favourably by employers. Because of their high educational aspirations, in the first hypothesis (H1), increased transitions to HE are assumed for this migrant group if controlled for their lower social origin and school grades (*secondary effects of migrant origin*). Given the in-



creased reputation of and returns to education at traditional universities (compared to other tertiary tracks) as well as the higher degree of familiarity of and regulation in specific professions presupposing studies at a traditional university, in the second hypothesis (H2), these youths are also expected to be more likely to enrol in such institutions over alternative institutions of HE.

As regards the strategy of analysis, a stepwise model composition is used to test H1, the assumption of positive *secondary effects of migrant origin* for youths originating from former Yugoslavia, Albania/Kosovo, Turkey and Portugal. Firstly, the chance of enrolling in HE is regressed on this migrant background. Secondly, socioeconomic status and school performance are controlled for as well. Moreover, separate estimations for males and females are conducted to determine whether there are interactions between specific migrant backgrounds and gender. To test H2, the probability of enrolling in a traditional institution, is analysed using a similar stepwise model composition. Finally, and against the background of an increased risk of HE dropout observed for Turkish students in Germany, the researcher analyses whether youths with a migrant background from former Yugoslavia, Albania/Kosovo, Turkey and Portugal make less progress in their studies than Swiss students. Therefore, the likelihood to complete their studies on time is regressed on this migrant background.

## 4 Data and methods

### 4.1 TREE data

The TREE-data were used for the analysis. TREE stands for transitions from education to employment. As a prospective longitudinal study, the data set surveys the post-compulsory educational and labour market pathways of 14 to 16 year-old students who participated in the PISA study in the year 2000. Accordingly, the data are based on a sample of approximately 6 000 young students who graduated from compulsory school in the first year of study. In all, eight waves of data were collected between the years 2001 and 2007 and 2010. With regard to selection, participation bias and panel mortality, the PISA sample was designed to be representative of 15-year-olds irrespective of the grade in which they were enrolled at the time. With regard to TREE, a significant amount of sample attrition occurred prior to the first survey as the address survey was conducted consistent with the administration of the PISA test (55.3% response rates). Thereafter, the remaining sample size declined gradually across the panel waves (cumulative participation TREE T1 – T8: 54%). With respect to data collection methods, in addition to self-administered questionnaires, potential dropouts were given the alternative option of responding to the survey questions via telephone, if necessary, and a considerably shorter instrument was used (short CATI interviews). From the fifth wave on, a



combination of telephone interviews and written questionnaires was implemented as the standard mode of survey administration (Sacchi 2008).

To correct for the bias in the participation probability, the data-set includes (wave-specific) longitudinal weights. The specifications of the models that corrected for the bias were based on the arguments and findings of non-response research (cf. Koch and Porst 1998) as well as theoretical reasoning. To the extent that the factors identified proved statistically significant ( $\alpha \leq 1\%$ ) and robust, they were included in the definite models for the respective panel waves. Among others, particularly in earlier waves, country of birth was corrected for in these procedures. To compute the longitudinal weights for the transition to HE, I followed the procedure suggested by Sacchi (2008). To analyse differences in on-time completion, I used the truncated sample weights of the eighth wave collected in 2010 (cf. selection of cases).

#### 4.2 Selection of cases

With regard to the selection of cases, a student had to have obtained a type of HE entrance certificate before the 1st of February 2007. Regarding entitlement certificates, in principle, four forms of HE entrance certificates exist in Switzerland: the *Matura* is the most common and direct way to enter a university (59% of eligible individuals possess this documentation). Additionally, the *Berufsmaturität* (29%), the *Diplom* after *Diplommittelschule*/ *Fachmittelschule* (11%) and the *Fachmaturität* (1%) allow students a more or less restricted access to the system. For example access to a traditional university is rather restricted to those who have obtained the *Matura*. Apart from those who obtain the *Matura*, those with the *Berufsmaturität* can gain access to a traditional university by means of an additional examination.<sup>6</sup> Accordingly, transitions to HE vary by entitlement certificate. Thus, 90% of those who obtain the *Matura* and 50% of those with the *Berufsmaturität* proceeded to higher education in 2004 (SKBF 2010). To indicate possible differences in the choice of HE institution (H2), among these cases, only those youths who possessed the *Matura* entrance certificate (the least restrictive certificate) and who had entered higher education within three years after leaving school were selected. To analyse the differences in on-time completion, estimations were restricted to those who, in addition to the entrance certificate, participated in the last wave of the TREE survey, as information on academic degrees attained was collected from that final survey. Youths with overlapping migrant backgrounds (e.g., a Turkish father and a German mother) were excluded from the analyses.

6 The *Berufsmaturität* is the typical way to enter a university of applied sciences. The *Fachmaturität* enables subject-specific access to a university of applied sciences or a university of teacher education. At some institutions of HE and in some programmes youths can enrol via the *Diplom*.

### 4.3 Methods and Variables

With respect to methods of data analysis, different binomial logistic regressions are run using Stata software to answer the research questions and to test the hypotheses. Because logistic regression estimates are affected by omitted variable bias, which is why coefficients cannot be compared across models, I follow the alternative suggested by Best and Wolf (2012) and also recognised by Mood (2010) of computing average marginal effects (AME). Compared with other alternatives, the advantage is that they can easily be interpreted and are not affected by the unobserved heterogeneity problem. Thus, they can be compared across hierarchical models.

As the first dependent variable, *higher education entry* was operationalised as a dummy variable and coded one whenever a student entered an institution of HE within three years of obtaining the entrance certificate (cf. appendix for distribution of model variables). The second dependent variable differentiated between *traditional universities*, including federal institutes of technology – ETH (value 1), and universities of applied sciences, including universities of teacher education. The third dependent variable, *on-time completion*, obtained the value one whenever a student completed his or her studies within the time span normally needed to finish a study programme plus one additional year.

As the independent variable, a migrant background was coded whenever the student or one or both parents were not born in Switzerland. As no country-specific analysis of the migrant groups was possible due to the low number of cases, different countries of origin were aggregated to four groups collating similar migrant groups in terms of social origin, wave of immigration, language and legal entitlements. With regard to country groups, apart from those from *former Yugoslavia, Albania/Kosovo, Turkey and Portugal* (group 1), youths originating from *Spain or Italy* (group 2), *Germany, Austria, France or Belgium* (group 3) and *other countries* (group 4) were differentiated. Although it would be interesting to account for generational differences<sup>7</sup> within these groups, again, due to low case numbers, only first-generation migrants were generally controlled for. The reference population of Swiss students without a migrant background was defined as those who were born in Switzerland to parents who were also born in Switzerland.

To operationalise school grades, the final grades of the HE entrance certificate were differentiated into four categories (grades in the *lowest tercile*: 4.00 to 4.55, grades in the *middle tercile*: 4.60 to 4.95, grades in the *highest tercile*: 5.00 to 6.00, *school grades missing*). Because missing values for school grades are related to lower performances (TREE, own calculations), they were controlled for with an extra dummy-variable. Regarding type of secondary school, a dummy variable controlled for those who held the typical university entrance certificate, the *Matura*. Due to

7 Instead of country of origin, in particular, in studies analysing differences in school performances, generation is often used to analyse and compare educational outcomes between migrant and non-migrant groups (Gresch and Kristen 2011).

the high degree of correlation between Matura and social origin, the variable was controlled for only in the second models. To control for the secondary effects of social origin, the highest occupational status attained by students' parents (PISA 2000), *HISEI*, which is based on international data for income and education (Ganzeboom et al. 1992), was included as well.<sup>8</sup> Because male students, who are underrepresented at *Maturitätsschulen*, are more likely to enrol in higher education (Buchmann et al. 2007), a *male* gender was controlled for in the models as well. Because of Denzler and Wolter's (2010) observation that the provision of opportunities for higher education and the distance to an institution of higher education influence study decisions, language region (*French- and Italian-speaking parts*) and an *urban area of residence* were also controlled for in the models. Among those with an increased socioeconomic status, however, study decisions were not shown to be biased by regional factors (Denzler and Wolter 2010).

## 5 Results

### 5.1 Higher education entry

With respect to whether eligible youths originating from former Yugoslavia, Albania/Kosovo, Turkey and Portugal (group 1) less often decide in favour of higher education, the results show no disadvantages for these youths regarding their transition to higher education compared to non-migrants (table 1, model1). With regard to (second-generation) migrants from "other" countries of origin (group 4), if all other variables are at their means, these youths have an increased probability of enrolling in higher education of 13.2 percentage points. Compared to second-generation migrants, being a first-generation migrant decreases the chance of entering HE by 15.8 percentage points. Moreover, and consistent with Denzler and Wolter (2010), the chance to become an HE student is influenced by area of residence and local infrastructure of educational opportunities. Accordingly, living in an urban area is related to an increased probability of enrolling in higher education compared with residents in rural areas.

In model 2, it is evident that good marks obtained in school (middle or highest tercile) positively affect the probability of enrolling in higher education in Switzerland. Even more decisive than grades, however, is the type of HE entrance certificate the individual possesses. Obtaining the Matura increases the probability of enrolling in HE by 51.2 percentage points. Moreover, the results show that a higher occupational status attained by students' parents has a highly significant and

<sup>8</sup> Although the argument is found in the literature that the connection between educational and occupational status is lower for migrants owing to their limited access to the labour market (Söhn 2012), in the case of migrants from former Yugoslavia, Albania/Kosovo, Turkey or Spain, the relation between the two variables was not decreased when compared with the reference population (TREE, own calculations).

Table 1 Logistic regression, dependent variable: Higher education entry, average marginal effects

	Model 1		Model 2		Model 2 male		Model 2 female	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Migrant groups (Ref. non-migrants)								
Former Yugoslavia/Albania/Kosovo/Turkey/Portugal (group 1)	-0.021	0.09	0.140**	0.05	0.246***	0.04	-0.067	0.10
Spain/Italy (group 2)	-0.010	0.06	0.031	0.05	0.080	0.07	-0.043	0.07
Germany/Austria/France/Belgium (group 3)	0.047	0.06	0.007	0.06	0.013	0.08	0.024	0.07
Other (group 4)	0.132**	0.05	0.044	0.05	0.042	0.08	0.012	0.06
1 <sup>st</sup> generation all migrant groups	-0.158†	0.09	-0.142	0.09	-0.288*	0.12	0.016	0.09
School grades (Ref. lowest tercile: 4.00–4.55)								
Middle tercile: 4.60–4.95			0.107*	0.04	0.112†	0.06	0.109†	0.06
Highest tercile: 5.00–6.00			0.115**	0.04	0.148*	0.06	0.102†	0.06
School grades missing			-0.006	0.05	-0.029	0.07	0.024	0.06
Matura (Ref. restricted type)			0.512***	0.03	0.452***	0.04	0.570***	0.03
Highest ISEI			0.004***	0.00	0.005**	0.00	0.003†	0.00
Male (Ref. female)	-0.006	0.03	0.067*	0.03				
Urban area of residence (Ref. rural area of residence)	0.218***	0.04	0.122**	0.04	0.090†	0.06	0.149**	0.05
Language region (Ref. German-speaking part)								
French-speaking part	0.010	0.03	-0.006	0.03	0.015	0.05	-0.033	0.04
Italian-speaking part	-0.035	0.05	-0.061	0.05	0.005	0.01	-0.155*	0.06
McFadden's pseudo R-squared		0.0463		0.3039		0.2846		0.3419
N (unweighted)		2 228		2 228		886		1 342

Ref.: Vocational, other or no further education. Significance levels: † ≤ 10%, \* ≤ 5%, \*\* ≤ 1%, \*\*\* ≤ 0.1%. ISEI: international socio-economic index of occupational status. Source: PISA, TREE data 2000–2010, weighted.

positive effect on the probability of an individual preferring university studies to other alternatives.

With respect to H1, which assumed positive secondary effects of migrant origin for youths originating from former Yugoslavia, Albania/Kosovo, Turkey and Portugal, when controlling for their lower social origin and performance, an increased probability (14.0 percentage points) of enrolling in higher education for this migrant group is observed in model 2. Moreover, the increased transition probabilities to higher education observed for migrant group 4 in model 1 decrease and cease to be statistically significant. This change is explained by the high number of (second-generation) youths originating from “other” countries whose parents have highly skilled occupational positions, e. g., children of diplomats or high-level managers (cf. appendix).

When examining the male- and female-specific versions of model 2, a slightly smaller degree of women’s educational decisions seems to be stratified by social origin. In turn, regional factors (urban area of residence, Italian-speaking part) seem to affect women’s decisions and behaviours more strongly than they do men’s decisions and actions. Furthermore, (second-generation) males originating from Former Yugoslavia, Albania/Kosovo, Turkey or Portugal (group 1) demonstrate a highly significant increased probability to enrol in HE of 24.6 percentage points. In contrast, for second-generation females originating from these countries a negative, though not significant, effect is observed. Although the motives of the educational choices could not be included in the models, apart from (expected) discrimination in the labour market, differing gender roles could explain the differences between the males of group 1 and the males in the Swiss reference population. With respect to H1 and in line with the theoretical reasoning about a possible interaction effect between specific migrant backgrounds and gender, support consistent with the assumption of positive secondary effects of migrant origin can only be provided for (second-generation) males (group 1).

## 5.2 Choice of higher education institutions

When considering the decision to enrol in a traditional university (including federal institutes of technology – ETH) rather than a university of applied sciences, including universities of teacher education, the results presented in model 1 in table 2 indicate that male gender (9.6 percentage points) and urban area of residence (7.5 percentage points) positively influence this decision. The results are, again, consistent with Denzler and Wolter (2010). Moreover, being a resident in the French- or Italian-speaking part of Switzerland also positively influences this decision.

With regard to H2 – youths originating from former Yugoslavia, Albania/Kosovo, Turkey and Portugal (group 1) prefer traditional universities rather than universities of applied sciences – the results show that when compared to non-migrants, these youths have a 13.8 percentage points increased probability of opting for a traditional institution, as expected. Apart from migrant group 1, youths

Table 2 Logistic regression, dependent variable: Entering a traditional university or ETH, average marginal effects

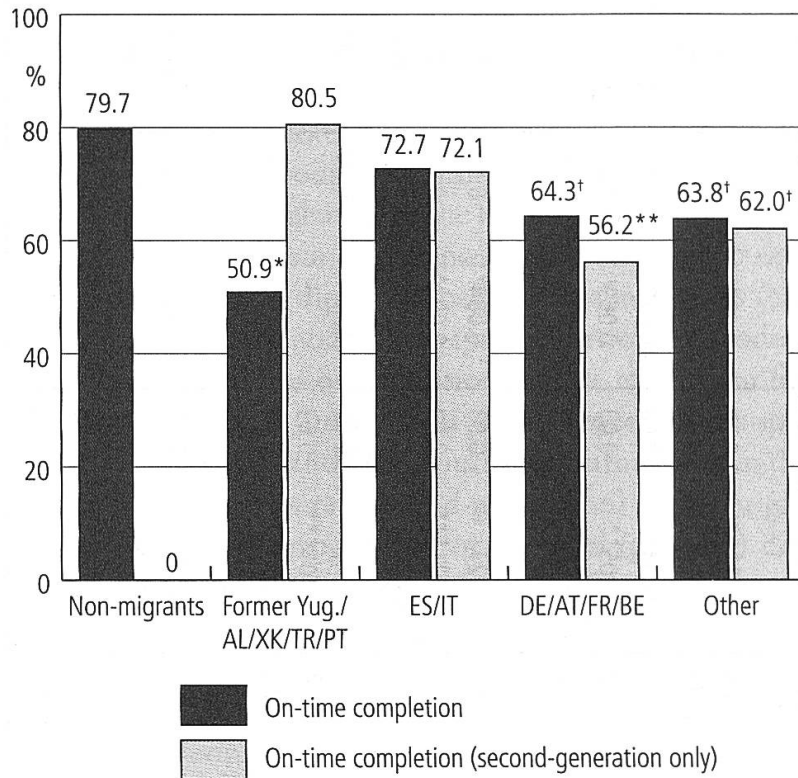
	Model 1		Model 2		Model 2 male		Model 2 female	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Migrant groups (Ref. non-migrants)								
Former Yugoslavia/Albania/Kosovo/Turkey/Portugal (group 1)	0.138***	0.03	0.133***	0.03	0.082**	0.03	0.178***	0.04
Spain/Italy (group 2)	-0.026	0.09	-0.020	0.09	0.061	0.04	-0.069	0.13
Germany/Austria/France/Belgium (group 3)	0.057	0.04	0.064†	0.04	-0.029	0.07	0.126**	0.04
Other (group 4)	0.106**	0.03	0.105**	0.03	0.069†	0.04	0.125*	0.05
1 <sup>st</sup> generation all migrant groups	-0.08	0.08	-0.065	0.08	-0.076	0.11	-0.044	0.11
School grades (Ref. lowest tercile: 4.00–4.55)								
Middle tercile: 4.60–4.95			0.027	0.03	0.084**	0.03	-0.044	0.06
Highest tercile: 5.00–6.00			0.121***	0.03	0.091**	0.03	0.128**	0.04
School grades missing			0.066*	0.03	0.053	0.04	0.066*	0.05
Highest ISEI			0.001	0.01	0.000	0.00	-0.002	0.00
Male (Ref. female)	0.096**	0.03	0.101***	0.03				
Urban area of residence (Ref. rural area of residence)	0.075*	0.04	0.077*	0.04	0.023	0.04	0.100*	0.05
Language region (Ref. German-speaking part)								
French-speaking part	0.049†	0.03	0.037	0.03	0.080*	0.03	-0.004	0.04
Italian-speaking part	0.090**	0.03	0.084*	0.03	0.080**	0.03	0.063	0.05
McFadden's pseudo R-squared	0.0525		0.0732		0.0950		0.0663	
N (unweighted)	1250		1250		472		778	

Ref.: University of applied sciences or school of teacher education. Significance levels: † ≤ 10%, \* ≤ 5%, \*\* ≤ 1%, \*\*\* ≤ 0.1%. ISEI: International socio-economic index of occupational status.

Source: PISA, TREE data 2000–2010, weighted.



Figure 1 Bivariate logistic regression, dependent variable: On-time completion, predicted probabilities per migrant group



Ref.: Non-Migrant. Significance levels: † ≤ 10%, \* ≤ 5%, \*\* ≤ 1%, \*\*\* ≤ 0.1%. N = 788. Countries abbreviations: Former Yug. = Former Yugoslavia, AL = Albania, XK = Kosovo, TR = Turkey, PT = Portugal, ES = Spain, IT = Italy, DE = Germany, AT = Austria, FR = France, BE = Belgium.  
Source: TREE data 2000–2010, weighted.

originating from “other” countries (group 4) are more likely to choose traditional institutions compared with non-migrants (10.6 percentage points).

Regarding social origin and school performance, the results presented in model 2 report a positive effect of school grades on the probability of choosing a traditional university before opting for other tertiary tracks. Moreover, the increased transition probabilities of migrant group 1 and 4 as measured in model 1 hold even when controlling for social origin and school performance and when the model is separately estimated for males and females.

However, in contrast to males with a migrant background, an increased probability of choosing more prestigious institutions is observed for all females with a migrant background except those originating from Spain or Italy (group 2). One explanation for the increased differences observed among females may be

the migrant-specific inequalities in pursuing a teacher education programme at the relevant institutions.<sup>9</sup>

### 5.3 On-time completion

Finally, the question was raised whether youths originating from former Yugoslavia, Albania/Kosovo, Turkey and Portugal make less progress in their studies than non-migrants and are less likely to complete their studies on time. As evidenced in figure 1, 79.7% of Swiss students finish their studies on time. When compared to them, only a smaller share of youths with a migrant background from Former Yugoslavia, Albania/Kosovo, Turkey or Portugal is able to finish their studies on time (50.9%). However, among the second-generation, 80.5% finish their studies on time. The share of timely completers is also smaller among youths originating from Germany, Austria, France, Belgium (64.3 and 56.2% / 2<sup>nd</sup>-gen.) as well as “other” countries (63.8 and 62.0% / 2<sup>nd</sup>-gen).

Explanations that might account for these results are a lower degree of preparation as indicated by their school grades (all groups) and proportion of those holding the Matura (group 1) – as can be seen in the appendix. Unfortunately – due to the low number of cases – no multivariate analysis could be conducted in order to further analyse the differences. And the mentioned factors as well as further factors – e. g. average study duration in the fields where they are overrepresented – could not be controlled for in the models.

## 6 Conclusion

In conclusion, the specific disadvantages suffered by youths originating from former Yugoslavia, Albania/Kosovo, Turkey or Portugal in the Swiss school system do not hold for the comparatively small number of those able to gain access to higher education by means of an entitlement certificate. In contrast, as this educational transition is largely determined by student choice, a positive effect is observed for males of this migrant group when their lower social origin and their school performance are taken into account (*secondary effects of migrant origin*). For females, however, no secondary effects of migrant origin were observed. In addition to traditional role models in their countries of origin, which may affect their educational decisions in the country of destination, expectations of discrimination in the labour market could also account for the gender bias. With regard to choice of an HE institution, the analysis confirmed that youths from former Yugoslavia, Albania/Kosovo, Turkey and Portugal are more likely to enrol in traditional universities (including ETHs) rather than universities of applied sciences or universities of teacher educa-

9 However, due to the structure of the database, no further differentiation between universities of applied sciences and universities of teacher education is possible.

tion. Moreover, it was observed in two more migrant groups in the case of women (only one more group in the case of males). In line with the increased dropout rates observed for Turkish youths in Germany, the results obtained for Switzerland indicate a lower degree of HE progression for some migrant groups. The study thus emphasises the necessity also to consider the sustainability and degree of progress made once students originating from different backgrounds made up their decisions about their educational careers.

Regarding limitations – due to the small sample size – no further differentiation of the migrant groups in terms of countries of origin and generations (e. g., it would be worthwhile to isolate 1.5 and 2.5 generation migrants, too) was possible. With regard to interaction effects between gender and migrant background, the results are consistent with the theoretical reasoning though possible explanations could not be tested in the models.

When examining the article in the context of further research conducted in the field of sociology of education, for Switzerland, the common finding of positive secondary effects of migrant origin for socially disadvantaged migrant groups must be differentiated. Accordingly, in Switzerland, only second-generation males with such backgrounds are recipients of these effects. Therefore, further research should aim at analysing the mechanisms that cause the observed effects as well as the inequalities observed between the genders (cf. Griga and Hadjar 2013). In consideration of the low number of cases – decreasing the statistical power of the analysis –, the necessity to generate further information regarding this migrant-specific inequalities in on-time completion, in particular, should be emphasised.

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8 Appendix Table of the distribution of model variables and number of cases per migrant group

	Total	Non-Migrant (Ref.)	Former Yugoslavia/ Albania/Kosovo/Turkey/ Portugal (group 1)	Spain/ Italy (group 2)	Germany/Austria/ France/Belgium (group 3)	Other (group 4)
Dependant variables						
Higher education entry in % (Ref. vocational education, other or no further education) <sup>1</sup>	65.3	64.4	50.3 <sup>†</sup>	68.4	69.0	74.3 <sup>*</sup>
Traditional university in % (Ref. university of applied sciences or university of teacher education) <sup>1</sup>	81.7	78.9	92.9 <sup>*</sup>	79.3	85.4	89.4 <sup>*</sup>
On time completion in % (Ref. no timely completion) <sup>1</sup>	75.2	80.0	50.9 <sup>*</sup>	73.7	62.5 <sup>*</sup>	66.6
Migrant group <sup>1</sup>						
1 <sup>st</sup> generation in %	9.7	–	66.9	4.9	18.9	28.4
School grades (Ref. lowest tercile: 4.00–4.55)						
Middle tercile: 4.60–4.95 in %	21.2	22.3	11.5 <sup>†</sup>	15.5 <sup>†</sup>	29.6	18.6
Highest tercile: 5.00–6.00 in %	19.3	22.8	14.6	12.1 <sup>**</sup>	12.9 <sup>*</sup>	11.2 <sup>***</sup>
School grades missing in % <sup>1</sup>	37.9	33.6	55.2 <sup>**</sup>	45.5 <sup>*</sup>	34.0	49.3 <sup>**</sup>
Matura in %	53.5	52.7	31.4 <sup>***</sup>	55.8	58.6	64.9 <sup>*</sup>
Highest ISEI, average <sup>2</sup>	55.7	56.2	39.0 <sup>***</sup>	49.9 <sup>***</sup>	59.4	62.2 <sup>***</sup>
Male in % <sup>1</sup>	48.8	48.5	53.2	43.8	57.8	45.6
Urban area of residence in % <sup>1</sup>	69.4	64.3	70.7	86.6 <sup>***</sup>	78.4 <sup>**</sup>	79.7 <sup>**</sup>
Language region (Ref. German-speaking part)						
French-speaking part in % <sup>1</sup>	33.2	24.2	44.0 <sup>**</sup>	49.8 <sup>***</sup>	52.3 <sup>***</sup>	54.0 <sup>***</sup>
Italian-speaking part in % <sup>1</sup>	5.9	4.4	7.7 <sup>*</sup>	23.0 <sup>***</sup>	5.3	2.8 <sup>†</sup>
N (unweighted)	2 445	1 637	143	218	174	273

1: Chi-squared-test. 2: t-test. Significance levels: † ≤ 10%, \* ≤ 5%, \*\* ≤ 1%, \*\*\* ≤ 0.1%. ISEI: International socio-economic index of occupational status. Source: PISA, TREE data 2000–2010, weighted.