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Pathways to higher education in France and Switzerland: the aspirations of first and second generation immigrants and the permeability of the educational system

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1. Introduction

Over the past decades, educational policy implementations in France and Switzerland have increased the eligibility of those completing (upper- or post compulsory) secondary education to access higher or tertiary education, by introducing vocationally orientated programs on the upper secondary level that offer access to higher education. Such policies should help to elevate some of the well known inequalities in the educational system by improving the educational achievements of disadvantaged groups such as students with an immigrant background or those coming from socio-economic disadvantaged households. Despite their different histories and policies as countries of immigrations, both France and Switzerland have a sizeable immigrant population, some of which do experience obstacles in their educational and professional careers (Fibbi, et al. 2006; Frickey et al. 2006; Hupka & Stalder, 2011; Brinbaum & Guégnard, 2012).

In France, over half of the total immigrant population is second generation, which is a particularity of the immigrant population in this country compared to most Western European countries. Moreover, the second generation population that is at the age to enter tertiary education is proportionately higher than for other groups. Indeed, 19 percent of the second generation immigrant population are between 18 and 24 years old compared to 7 percent for the first generation and 10 percent for non-immigrants (Bouvier, 2012). In addition, 90 percent of the immigrant population aged between 20 and 35 have been schooled only in France. However, in general, slightly less immigrant youths obtain the *baccalauréat* (which enables access to higher education) compared to non-immigrants (61 versus 68%). In addition, only one in four immigrant youths obtain at least a bachelor diploma compared to a quarter for non immigrants (Brinbaum et al., 2012)..

Even though 20 percent of students in Swiss higher education institutions are foreign nationals, only one out of four of them have been schooled in Switzerland itself (OFS 2005). Given that young people with a migratory background represent almost a third (29%) of the resident population aged between 15 and 24 (Fibbi et al. 353), Swiss-educated immigrant students are thus considerably underrepresented in higher education. Indeed, Picot (2012) shows that 35 percent of non-immigrants, 26 percent of second generation students, but only 17 percent of first generation students have attended a tertiary education program by age 23 in 2007.

In relation to the second generation Turkish students in France and Switzerland, Crul et al. (2009) for example indicate that a relatively low proportion of second generation Turkish students enrol in higher tertiary educational in Switzerland compared to France (13.8% compared to 52%). Moreover, the dropout rate among those second generation Turks in tertiary education appears to be lower in Switzerland than in France (9.3% compared to 15% in France). In addition, comparative findings on the accessibility to higher education programs by majority and immigrant group students in both countries by Griga et al. (2013) show that once students possess a higher education entrance qualification, and once social origin of students is taken into account, the chances of accessing higher education may be even higher for high-school graduates with immigrant background. This holds especially true for women with a North African origin in France and for men from south-eastern European, Turkish and Portuguese origin in Switzerland.

In this paper we wish to clarify not only if, but also how—through which institutional pathways higher education is accessed by immigrant group students in Switzerland and France, and if the institutional make up of education systems fosters their access to higher education. We have chosen these two countries because they differ from each other both in their education system and in the ways how new routes to higher education through vocationally orientated programs have been set up. The educational systems in France and Switzerland are indeed very different. France has a more school-based educational system and a greater tradition of prestigious tertiary education institutions. In France, traditional vocational education does not have a very high status and therefore fails to attract a large proportion of well-performing students. The situation in Switzerland is more or less reversed with less people following academic education and over two thirds of students enrolling in a variety of vocational (VET) programs. In Switzerland most of these programs are offered as dual vocational programs (apprenticeships), meaning that on average students will go to school one or two days per week and spend the remaining time at a training company.

Using panel data from France (Panel d'élèves DEPP 95) and Switzerland (Transitions from Education to Employment TREE) we will analyse the pathways to higher education in both countries in more detail, looking specifically at the accessibility of higher education through different educational tracks while taking in account different characteristics of the students, i.e. gender and different immigrant backgrounds. Our paper is structured as follows. Firstly, we will outline the different educational systems of France and Switzerland with a special focus on new routes to higher education and what is known about the according positioning of immigrant students from existing research. Next, we introduce our data and our strategy for analysis. In section 4, we compare characteristics and pathways of first and second generation young adults coming from Turkey and former Yugoslavia who study in Switzerland, comparing their characteristics and their pathways with the Swiss students. For the French sample, we look at the second generation youths particularly from North African origin (Algeria, Morocco and Tunisia) comparing their characteristics, aspirations and pathways with those of French natives. In section 5, using multinomial logistic regressions, we will analyse and compare the different educational pathways that lead to higher education in France and Switzerland. We finally summarise our findings and conclude in section 6.

2. Education systems and routes to higher education in France and Switzerland

As far as the gateway to higher education institutions is concerned the *baccalauréat* is the standard final diploma of upper secondary education in France. There are two particularly

important decision stages in the secondary system for both families and their children. The first occurs at the age of 14 at the end of lower secondary (*collège*), where the choice is between academic *baccalauréat* (i.e. *baccalauréat général*) and vocational tracks. The second arises when students are 18 years old and concerns access to tertiary education. The latter has expanded considerably as a result of the increasing number of pupils in secondary education, the increasing number of *baccalauréat* holders and the high social demand for training.¹ In the context of the democratization of secondary education and the expansion of higher education, second generation immigrants have become more numerous to access higher education in France. Another measure that has increased the access to higher education is the creation of a vocational *baccalauréat* in 1985, which offers new opportunities, particularly to children of working-class or immigrant origins. After the end of lower secondary school, youths can first follow a short school based vocational course for two years (CAP/BEP) and then access *baccalauréat professionnel* for two years.² Today, half of young people from immigrant families and two-thirds French natives obtain a *baccalauréat* (Brinbaum & Kieffer, 2009). These same inequalities remain in the access to higher education, where around forty percent of the former group have access higher education compared to over half for the latter one. Immigrants, especially a significant proportion of youths of North African origin, have a preference for selective short vocational tertiary programs but are often diverted towards the non-selective university sector as the former programs frequently attempt to select academic *baccalauréat* holders with good grades. It is possible also that discrimination takes place in selecting students in the vocational tertiary programs (Brinbaum & Guégnard, 2012). This in turn leads to higher dropout rates for these youths (particularly for *baccalauréat professionnel* holders) in the university sector, as this was not their initial choice. This unequal access to higher education impacts on degree completion and the subsequent entry into the French labour market (Frickey et al. 2006; Brinbaum & Guégnard, 2012).

Unlike in France, the majority of students that finish compulsory education in Switzerland at age 15 enrol in some form of vocational training (VET) that typically last between two to four years (Cortesi & Imdorf, 2013). A majority of these VET offers are organised as dual programmes where apprentices divide their time between the training institution and a training company. Each year the availability of apprenticeship places at these training firms therefore determines the number of places available (there are basically no intermediaries). Because these places can be in high demand, training companies can be selective in the allocation of available apprenticeship places. Previous research has indicated that this selection process forms an obstacle for school leavers with an immigrant background (Imdorf, 2010). Only one out of five students enrol in gymnasium schools to receive an academic baccalaureate, granting the student access to higher education institutions (to universities in general, or, after an additional year of work experience, to a university of applied science). With a participation rate of 13 percent in baccalaureate schools (SKBF 2011, 200), foreign nationals are considerably underrepresented in schools granting the traditional higher education entrance qualification. Lastly, a minority will enrol into an upper-secondary specialized school (*Fachmittelschule*, formerly *Diplommittelschule*), a kind of hybrid institution offering school-based programmes that lies somewhere between VET programmes

¹ The educational policy of the French Ministry of Education has three objectives; 1) the access to a minimum level of education such as the *Certificat d'aptitude professionnelle* (CAP, the first vocational diploma in secondary school); 2) the end of upper secondary level, i.e. *baccalauréat* for 80 percent of an age group, and; 3) one in two youths to obtain a *licence* (a bachelor diploma).

² The remodelling of the vocational track, which has already been in motion for a number of years, aims to enable the highest number of youths to reach the *baccalauréat* level and also to encourage further study in tertiary education. 20 percent of CAP holders continue onto the *baccalauréat professionnel* (DEPP, 2010)

and academic baccalaureate schools and are geared towards Universities of Applied Sciences (Stalder & Nägele, 2011). Today, the official education policy in Switzerland is to insure that 95% of young people reach the level of upper-secondary certification by 2015 (SERI, 2013). To increase the permeability between VET and higher education, a double-qualification certificate that enables the simultaneous acquisition of a dual VET qualification and a higher education entrance qualification was introduced in Switzerland in 1994 as part of the Europeanization of the Swiss higher education policy (Nikolai & Ebner, 2012; Gonon, 2013). This so called Federal Vocational Baccalaureate (*Berufsmaturität, maturité professionnelle*), which grants access to universities of applied sciences³, requires enrolment or completion of a school or (mostly) company based vocational study program. Hence access to the vocational baccalaureate is confined to those who are recruited as apprentices by training companies. Such obstacles might affect the educational pathways of immigrant students, some of them facing employer discrimination in accessing company-based apprenticeships. The number of students opting for this vocational baccalaureate has steadily increased until 2005. In 2010, vocational baccalaureates accounted for almost 13 percent of all received diplomas in Switzerland (BFS, 2012). Whereas nine out of ten students with a general baccalaureate passed over to a Swiss higher education institution in the years following their graduation, the transfer rate of vocational baccalaureate holders to universities of applied sciences fluctuates between 55 and 60 percents (Gallizzi 2013). Schmid and Gonon (2011) did not find any direct effect of immigrant background on access rate to tertiary education of those holding a vocational baccalaureate. Indeed, some second generation immigrants manage to access tertiary education more often than their Swiss peers (Mey et al. 2005). Still, Swiss-educated foreign nationals remain underrepresented both at conventional universities and at the universities of applied sciences (6% and 6.7% respectively in 2007 according to SKBF 2011, 200). Students with a migration background have to overcome major hurdles at various transition points to make it through the Swiss education system, and the proportion of Swiss-educated foreign nationals decreases with each subsequent level of the Swiss education system (SKBF 2011, 200)

The unequal access of immigrant students to higher education in both countries raises the question of how the institutional settings in France and Switzerland enable vulnerable groups to have educational and social mobility. Because of the different educational system it is likely that this will play out differently for different groups of students in each country. We will use the concept of educational pathways to analyse educational careers of youths and to draw a comparison between France and Switzerland. We ask how educational institutions shape pathways from secondary to tertiary education for male and female students of immigrant origins. We are primarily interested in the possible reinforcement or elevation of educational inequalities arising from policies designed to increase the enrolment in tertiary education and programs that increase the flow from upper-secondary vocational educational tracks to higher tertiary ones.

3. Data and methodology

The analysis presented in this paper is based on data taken from the DEPP and TREE longitudinal surveys. Both these surveys follow students through their educational career but differ slightly with regard to their sampling and overall design.

³Students completing VET programmes with the supplementary vocational baccalaureate have a further option to complete another annual bridge course ('Passerelle') to enrol into regular universities. However, this formal pathway to conventional universities is in reality very rarely used.

For the DEPP survey, the French Ministry of Education tracked the educational pathways of a national representative sample of pupils (panel) who entered the first year of secondary school in September 1995 (N= 17,830 youths) until 2005. They were surveyed through lower secondary (*collège*) and upper secondary (*Lycée*) and subsequently tertiary education. For this study we focus on second generation Maghrebians whose parents are North African, born either in Tunisia, Morocco, or Algeria. Our sample of Maghrebians in the DEPP survey amounts to 769 individuals (of which 45% are girls). The children of immigrants from these three countries have been grouped together in one group, given the number of observations, as well as similar educational experiences and long-standing migration. This migrant population is very visible and vulnerable (Vallet, 1996). This target population will be compared with the reference category which is the youths born in France of two native French parents (13,806 of which 48% are girls). For the target group we have not included the first generation as their number was too small. Moreover, children of mixed parenthood have also been excluded as their educational pathways are similar to French natives (Brinbaum & Kieffer, 2005). From this initial sample of 14,575 individuals in 1995, 13,802 (90%) are still surveyed by the year 2005.

The Swiss TREE study has been designed as a PISA follow-up and surveyed a national representative sample (panel) of student finishing compulsory schooling in Switzerland, focusing on their educational pathways and transitions into employment. School-leavers were followed after their participation in PISA 2000 and surveyed on an annual basis until 2007. An eighth, and as of yet final wave, has been realised in 2010 and a following ninth wave is planned for 2014. From the initial 6,343 sampled school-leavers in 2001, 3,979 (63%) still participated in the last wave in 2010. Since Maghrebians do not constitute a considerable migrant group in Switzerland we have selected school-leavers with a Turkish or former Yugoslavian migration background as a comparison. As is the case with Maghrebians in France, migrants from Turkey and former Yugoslavia are among the most vulnerable in terms of societal acceptance and socio-economic position (Hupka & Stalder, 2011, Stolz, 2001). In the TREE sample there are 328 such individuals (of which 52% are girls)⁴. We will compare this group against school-leavers that have two Swiss parents (4,430, of which 55% are girls). Due to sample restrictions we include both first and second generation migrants to insure sufficient observations. Of those born in Switzerland, only those who did not receive Swiss nationality by birth have been included, thus filtering out school-leavers that have at least one Swiss parent because, unlike France, Switzerland does not have a policy of *jus soli* in its citizenship regime.

4. Youth characteristics and educational contexts in France and Switzerland

4.1 Lower secondary education

In recent decades, the level of education in France has risen steadily. However, children from immigrant origins appear to experience specific educational difficulties (Vallet, 1996), due to belonging in majority to working class backgrounds, and possessing less knowledge of the workings of French educational system (given notably a lower level of French language of immigrant families). According to the panel data, North African parents have low levels of education. They possess frequently primary or no education at all (four out of ten fathers and mothers have no education). Concerning higher education, 27 percent of French native have

⁴These as well as the following figures of immigrant students in the Swiss data represent unweighted numbers.

at least one of their parents with a higher education diploma compared to only one percent of North African parents (*cf. table 1*). Moreover, they are generally in low level occupations (manual workers, unskilled service workers, or out of the labour market). Amongst the North African migrants, 16 percent of the fathers are unemployed and eight out of ten mothers are housewives. The respective figures for French parents are four percent and a third. We thus can define into three categories (high, middle, low status) the socio-economic parental status using the occupations and the employment situation. 92 percent of the North African families are in a low socio-economic status versus 51 percent for French families.

Table 1. Social and schooling characteristics in secondary school (%)

Country of parental origin	Parents higher education diploma	High socio-eco status	Low socio-eco status	Late on entering in secondary school	Above average marks (language)	Above average marks (maths)	Aspirations to study in HE
North Africa (N= 769)	1	1	92	38	27	23	45
France (N= 13806)	27	26	51	18	59	58	53

Source : *panel d'élèves du second degré, recrutement 1995- 1995-2011 - (2006) [fichier électronique], DEPP / INSEE [producteur], Centre Maurice Halbwachs [diffuseur].*

The children of immigrants do not enter secondary school with the same educational assets or experience. They have more frequently repeated years in primary school than French native children. Four out of ten North African youths are late on entering secondary compared to two out of ten French natives. This situation will affect subsequent educational pathways. Differences also in educational performance appear from the beginning of secondary school (lower performance for North African youths) (*table 1*). In Maths, only a quarter of the latter have over average marks versus 58 percent for the French natives. Moreover, in French, 27 percent of North African youths have above the average marks versus 59 percent for French natives. Finally, for North African youths, 45 percent envisaged studying in higher education compared with 53 percent of French natives (*table 1*).

When it comes to the case of Switzerland, the educational context is rather complex due to its decentralized nature and the ability of citizens to directly influence legislative procedures under the principles of direct democracy. Especially compared to centralist France, the 26 individual Swiss cantons have much more autonomy when it comes to organising their schooling and training. Important for the comparison of the two countries is the fact that the Swiss system is highly differentiated. Allocation of students to different secondary school tracks starts early at the end of primary schooling (ISCED level 1 years 4 to 6, depending on the canton), and is based on academic selection. In most cantons students are placed in two to four different lower secondary education tracks that range from basic to more extended curricula and intellectual requirements. While the assignment of these lower tracks is formally and mainly based on student performance, research has indicated that other factors, like cultural and family background, influence the allocation of students to the different types of tracks (Kronig, 2007).

Since the early 80s, a continuously growing overrepresentation of immigrant origin students in the lowest track of lower secondary school can be observed at a national level (Imdorf 2005). In 2000, one out of two foreign nationals but only one out of four Swiss nationals is enrolled in the lowest track. Our own panel data are consistent with this: nearly half of the Ex-Yugoslav and Turkish students are in the lower secondary school track with only basic

intellectual requirements compared to only 22 percent of the Swiss students (*table 2*). In addition, Ex-Yugoslav and Turkish students are more frequently enrol in bridge-year courses before entering upon upper-secondary education. This extra year can function as a ‘waiting room’ for those unable to secure an apprenticeship place (Stalder & Nägele, 2011; Meyer, 2003). As already mentioned, Previous research indeed shows that the recruitment process of training companies who discriminate forms an obstacle for students with an immigrant background to access vocational education and training, and that bridge-year courses have become an increasingly used institutional offer for foreign nationals to manage the transition from school to VET (Imdorf, 2006). In terms of school performance, between 55 and 59 percent of Ex-Yugoslav and Turkish students have grades in mathematics and language (French, German, or Italian) that are above the mark. Their Swiss counterparts outperform them in this regard and receive grades above the mark in mathematics and language in 64 and 74 percent of all cases.⁵

Table 2. Social and schooling characteristics in secondary school (%)

Country of parental origin	Parents higher education diploma	High socio-eco status	Low socio-eco status	Basic req. lower sec. school track	Bridge-year courses	Above the mark (language)	Above the mark (maths)	High future job aspirations
Turkey and Former Yugoslavia (N= 328)	20	10	62	47	17	59	55	18
Switzerland (N= 4430)	38	37	23	22	9	74	64	25

Source: TREE panel (Transition from education to employment) 2000-2010 University of Basel.

Similar to France, the most visible difference between the two groups appears in family cultural and socio-economic background. However, in Switzerland these differences seem to be much less extreme. The parents of Swiss students have, for example, completed higher education in twice as many cases, but the number of Ex-Yugoslav and Turkish students that have at least one parent that has completed some form of higher education is high in comparison to the Maghrebians in France, and approaches more the level of native French. In terms of occupational or socio-economic status the same can be observed. Although there still appears to be a clear difference between Swiss and immigrant parents (with 10 percent of immigrant parents having a high socio-economic status compared to 37 percent of Swiss parents and 62 percent having a low socio-economic status compared to 23%) this difference between migrant and native control group is again not nearly as pronounced as in the French case.

Student aspirations have been measured slightly different in France and Switzerland. Unlike the DEPP study, the TREE data does not allow us to directly measure students’ initial desires to reach and or complete higher education. Instead, we use a proxy variable that measures at the end of compulsory schooling the students’ preferred occupation at age 30. These occupational categories are then recoded into the ISEI scale in order to group students’ aspirations into high, mid and low categories. *Table 2* shows that the migrant students score slightly lower than their Swiss counterparts, but, like in France, the difference only amounts to a few percentage points.

⁵However, the reading ability as measured by PISA scores was much lower among immigrant students (Picot 2012). Felouzis and Charmillot (2013) argue that such educational inequalities of academic performance, which result from early tracking, are mainly due to the social segregation that goes hand in hand with the available educational tracks.

4.2. Upper-secondary and tertiary education

The educational pathways of pupils are the result of a process of key decision-making moments, tracking, opportunities and constraints, within an institutional context. In our analysis, the educational pathways have been constructed, in the two countries, to take into account in a comparable way, the educational trajectories and the diplomas obtained up until tertiary education.

In France, after the undifferentiated lower secondary (*collège*) track, the pupils have two choices: enrol in a *lycée* to follow an upper secondary academic *baccalauréat* track (theoretically three years); or to follow an upper secondary vocational track (VET system) to obtain in two years a *Certificat d'aptitude professionnel* (CAP) or *Brevet d'études professionnelles* (BEP), and possibly a vocational *baccalauréat* track (*baccalauréat professionnel*) after another two years. However, a certain number of all youths also leave the secondary school system without a diploma, either after lower secondary (*collège*) or during upper secondary (*lycée*).

Table 3. Upper-secondary diploma and tertiary enrolment in France and Switzerland

<i>FR</i> (<i>N</i> = 14575)	University	IUT-STS	Other HE	No tertiary enrolment	Total (row)	Column percentages
Academic baccalaureate	47% (2346)	17% (826)	23% (1141)	13% (622)	100% (4935)	34% (4935)
Vocational baccalaureate	9% (374)	42% (1769)	10% (410)	39% (1621)	100% (4174)	29% (4174)
Other upper secondary diploma	.	.	.	.		17% (2485)
No upper secondary diploma	.	.	.	.		10% (1488)
No data/sample attrition	.	.	.	.		10% (1493)
<i>CH</i> (<i>N</i> = 6343)	University	University of Applied Science	Tertiary B ⁶	No tertiary enrolment	Total (row)	Column percentages
Academic baccalaureate	74% (1127)	17% (253)	2% (37)	7% (113)	100% (1530)	24% (1533)
Vocational baccalaureate	4% (30)	39% (326)	10% (81)	47% (395)	100% (832)	13% (835)
Upper-secondary specialized school	2% (4)	49% (101)	18% (38)	31% (64)	100% (207)	3% (210)
Other upper secondary diploma	.	.	.	.		29% (1845)
No upper secondary diploma	.	.	.	.		3% (174)
No data / sample attrition	.	.	.	.		28% (1746)

In terms of figures, the category of school leavers with no diploma in France accounts for 10 percent of the youths (10% of French natives and 13% of North African youths) (*table 3*).

⁶ Higher vocational education and training leading to an Advanced Fed. Certificate or a Fed. Diploma of higher vocational education and training (see SERI 2013 for further information).

Around 17 percent of all the youths in the sample enrol on the aforementioned vocational track (VET system) and obtain a diploma but do not go on to the vocational *baccalauréat* (17% for French natives and 19% of North African youths). Finally, the access to the *baccalauréat* tracks represents two thirds of the youths (i.e. 63% of French natives and 53% of North African youths). For this latter group the vocational *baccalauréat* plays a key role. Across the whole population, almost half of academic *baccalauréat* holders enter university, whereas, on the other hand, forty percent of those with vocational ones enrol in selective short vocational tertiary programs (*Instituts Universitaires de Technologie* (IUT)/ *Sections de Techniciens Supérieurs* (STS)). Moreover, forty percent of *baccalauréat* holders do not take up tertiary studies compared to 13 percent for academic *baccalauréat* holders.

In the TREE panel data, we find around a quarter of students acquiring an academic baccalaureate (table 3). The majority of those students enrol into university or a university of applied science (74% and 17% respectively) with only a minority (7%) not using their diploma to continue on to any form of tertiary education. Of the 13 percent obtaining a vocational baccalaureate we see that only 43 percent of the students continue on to a university of applied science (39%) or a conventional university (4%), leaving one half of the vocational baccalaureate holders not enrolling for any tertiary studies. A similar pattern can be observed for those graduating from an upper-secondary specialized school with about half of the students going to a university of applied science and nearly a third not enrolling for any tertiary education.

5. Pathways to higher education in France and Switzerland

What is the likelihood of being in a particular educational pathway in Switzerland and France for immigrant students compared to the national majority? To analyse the educational pathways from secondary education to tertiary education, we choose to focus on four educational pathways for both France and Switzerland:

Path 1: Those who access tertiary education with a general (FR) or academic (CH) baccalaureate.

Path 2: Those who access tertiary education with a professional (FR), technical (FR) or vocational baccalaureate (including those graduating from an upper-secondary specialized school) (CH).

Path 3: Those with any type of baccalaureate who do not enrol into any tertiary institution.

Path 4: All other upper-secondary diploma holders (those not eligible for higher education).

.Tertiary education in Switzerland means those that enrol into conventional university or into a university of applied science.⁷In France we cover the university sector, as well as the short vocational programs (IUT/BTS, and other types of HE programs (prep schools for business and engineering schools, schools of Art, Architecture, Nursing, Social work etc.). We further exclude students who have not completed upper-secondary education⁸ or those for whom we have no or insufficient data.

⁷This excludes Professional education and training (PET)(or tertiary B in Switzerland), which prepares for professionals for highly technical and/or managerial positions (SERI 2013).

⁸ In the Swiss case, this excludes disproportionately immigrant youth from former Yugoslavia and Turkey who show a lower VET participation rates but higher youth unemployment rates than Swiss nationals (Imdorf 2006).

For France, the first pathway covers the 37 percent of the youth who obtain a general *baccalauréat* and enrol in tertiary studies (38% for French natives but only 21% North African youths) (*figure 2*). The next pathway groups together the 22 percent of youths with vocational and technical *baccalauréats* who continue onto tertiary studies (22% for French natives but 32% for youths of North African background). The third pathway covers the 19 percent of youths who do not enrol in tertiary studies after their *baccalauréat* (19% for French natives and 21% for North African youths). The last pathway (path 4) includes the 21 percent of the youths who are VET graduates but do not continue onto a vocational *baccalauréat* (21% for French natives and 26% for North African youths).

Figure 2. Educational pathways in France and Switzerland

	Upper secondary diploma		Tertiary enrolment	Majority	Migrant groups
France	Baccalauréat gen.	⇒	Tertiary	38% [4201]	21% [112]
	Baccalauréat prof. & tech.	⇒	Tertiary	22% [2377]	32% [176]
	All Baccalauréat	⇒	No Tertiary	19% [2127]	21% [116]
	Other (none) Baccalauréat diploma			21% [2342]	26% [143]
Switzerland	Academic Baccalaureate	⇒	Tertiary	37% [1067]	26% [33]
	Vocational Baccalaureate	⇒	Tertiary	13% [366]	11% [14]
	All Baccalaureate	⇒	No Tertiary	19% [563]	19% [24]
	Other (none) Baccalaureate diploma			31% [914]	43% [54]

Quite similar to France, the first pathway in Switzerland covers 37 percent of youths who acquire an academic baccalaureate and enrol into university studies (37% for native Swiss and 26% for Ex-Yugoslav and Turkish students) (*figure 2*). Hence, in both countries the immigrant groups are considerably underrepresented in the pathway to higher education via the traditional baccalaureate (path 1). The percentages of students accessing higher education with a vocational baccalaureate (path 2) appear relatively lower in Switzerland than in the French case. Only 13 percent of native Swiss and 11 percent of Ex-Yugoslav and Turkish students follow this path. Most striking is the finding, that vocational baccalaureate do not allow for the immigrant group to partly compensate their exclusion from the academic baccalaureate track, as is the case in France. The share of students not utilizing their baccalaureate diploma to access higher education (path 3) is at a comparable level with proportions in France. Of both the native Swiss and immigrant students, 19 percent obtain a baccalaureate diploma without using it to access higher education. The share of students obtaining a none-baccalaureate upper-secondary diploma (path 4) in Switzerland is relatively

high compared to France (especially with regard to the immigrant group), reflecting the relative popularity and prestige attached to VET programmes in the Swiss educational landscape.

In the next two sections we will use multinomial logistic regression models whilst controlling for the youths characteristics to explain the distribution of the different pathways among upper-secondary graduates. The first educational path (academic baccalaureate track → tertiary studies) is used as a reference. The aim is to see if there remains a residual effect of country of origin, once we control for the schooling factors, the family social and economic capital, and the aspirations of the students.

5.1 Explaining pathways to higher education in France

Model 1 (*table 4* below) takes into account only the country of origin. The youths from North African backgrounds are almost three times more likely to access tertiary studies via a vocational *baccalauréat* (path 2) than via an academic *baccalauréat* (path 1, reference track) compared to French natives (odds ratio = 2.8). Furthermore, compared to the latter, the former are twice more likely to be in the VET system (other none *baccalauréat* diploma holders) (path 4) and twice more likely not to use their *baccalauréat* to enter tertiary education (path 3), than to access HE via an academic baccalauréat. However, the predictive power of the model remains very low ($R^2=0.008$).

Model 2 introduces the schooling variables (Maths and French marks at the beginning of secondary school and repeating primary school). The sign of the estimates changes for North African youths, who are (compared with the reference track path 1), twice less likely to be in the VET system (path 4) compared with the French natives. They are still more likely to access tertiary studies with a vocational *baccalauréat* (path 2), but the odds are reduced (close to one). There is no significant difference between the French and the North African youths in terms of not accessing tertiary studies with a *baccalauréat* (path 3) and the reference track. The predictive power of this model has considerably increased ($R^2=0.365$). In the reference track (path 1) (academic *baccalauréat* and tertiary studies) pupils are less likely to have repeated a primary school year and received better marks at the beginning of secondary school. The North African youths (who have lower marks and repeat primary school), initially enrol less on academic *baccalauréat* tracks and access less tertiary studies. However, school performance controlled for, the situation of the North African youths is close to that of French in terms of access to higher education via the vocational *baccalauréat* (path 2) and via the general *baccalauréat* (path 1). No doubt this result is due to the fact that North African students are usually geared into the vocational *baccalauréat* tracks. With similar marks and compared to French natives, North African youths are more likely to be in tertiary studies than in the VET system (path 4). Those of the North African youths who have good marks obtain an academic *baccalauréat* and access tertiary studies. Being late on entering secondary school illustrates past schooling difficulties and influences the access to tertiary studies. However, it is especially schooling performance and the weight of marks that are crucial in the educational decisions in France.

Model 3 adds the social characteristics (economic and cultural capital), aspirations and gender. The model explains 54 percent of the variance ($R^2=0.544$). The North African youths are four times less likely to be in the VET system (path 4). The probability of continuing tertiary studies with a vocational *baccalauréat* (path 2) is no longer significant for North

African youths (compared to the reference path). The North African youths are twice less likely to have a *baccalauréat* and not enter tertiary studies (path 3).

<i>Table 4. Educational pathways</i>		<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>	
FR	<i>Migration background (Maghrebians)</i>						
	Vocation bac. -> Tertiary (path 2)	2.777***	[2.180-3.538]	1.340**	[1.019-1.763]	0.820	[0.603-1.115]
	All bac. -> No tertiary (path 3)	2.046***	[1.570-2.666]	0.835	[0.617-1.131]	0.462***	[0.321-0.664]
	Other upper sec. diploma (path 4)	2.290***	[1.779-2.948]	0.476***	[0.344-0.659]	0.258***	[0.172-0.389]
	<i>School variables</i>						
	Arriving late	No		Yes		Yes	
	School grades	No		Yes		Yes	
	<i>Student characteristics</i>						
	Gender	No		No		Yes	
	Parents' education	No		No		Yes	
	Parents' socio-economic status	No		No		Yes	
	Educational aspiration (HE)	No		No		Yes	
	Pseudo R ² (Nagelkerke) [N,]	.008	[11594]	.365	[11000]	.544	[9776]
CH	<i>Migration background (Turkish & Ex-Yugoslav)</i>						
	Vocation bac. -> Tertiary (path 2)	0.959	[0.738-1.244]	0.814	[0.619-1.069]	0.748*	[0.556-1.007]
	All bac. -> No tertiary (path 3)	1.739***	[1.426-2.119]	1.371***	[1.113-1.690]	1.175	[0.924-1.571]
	Other upper sec. diploma (path 4)	1.771***	[1.495-2.097]	0.913	[0.742-1.122]	0.533***	[0.415-0.683]
	<i>Schoolvariables</i>						
	Extra year	No		Yes		Yes	
	School grades	No		Yes		Yes	
	School type	No		Yes		Yes	
	<i>Student characteristics</i>						
	Gender	No		No		Yes	
	Parents' education	No		No		Yes	
	Parents' socio-economic status	No		No		Yes	
	Student future job aspiration (ISEI)	No		No		Yes	
	Pseudo R ² (Nagelkerke) [N, weighted]	.003	[20720]	.230	[19672]	.404	[17503]

* $p > 0.1$, ** $p > 0.05$, *** $p > 0.01$, [95% confidence interval in brackets] Reference category: Academic Baccalaureate -> Tertiary enrolment (path 1).

Holding marks constant, the social and economic variables increase the differences between the two groups of country of origin, given that the North African youths come more frequently from challenged backgrounds. The *baccalauréat* holders of North African origin are over-selected in terms of schooling performance and social background (Caille & Lemaire, 2009). The North African youths are not less in path 1 (academic and tertiary studies) because they are North African, but because of their schooling performance.

5.2 Pathways to higher education in Switzerland

In Switzerland a similar yet slightly different development can be observed. There is no significant difference between Swiss and immigrants students in accessing tertiary education via a vocational baccalaureate (path 2) compared to those doing so with an academic baccalaureate (reference path 1). Ex-Yugoslav and Turkish students are nearly twice as likely not to access tertiary education after receiving a baccalaureate diploma (path 3) and twice more likely to have received a none-baccalaureate upper-secondary diploma (path 4). The predictive power of the first model is again very low ($R^2=0.003$).

Compared to France the model estimates for Switzerland change somewhat less after the introduction of lower-secondary school variables. As in France, the predictive power increases considerably again once earlier school characteristics are taken into account ($R^2 = 0.230$). After controlling for lower-secondary school type and grades in mathematics and language in lower-secondary education, as well as having enrolled in a bridge-year course before accessing upper secondary education, the significant effect for Ex-Yugoslav or Turkish students obtaining a none-baccalaureate upper-secondary diploma (path 4) disappears, meaning that statistically there is no longer any significant difference between the immigrants students and their Swiss counterparts in comparison to those accessing higher education with a academic baccalaureate (reference). Only the effect for having an Ex-Yugoslav or Turkish background and not enrolling for tertiary studies after acquiring a baccalaureate diploma (path 3) remains statistically significant. Overall, after controlling for previous school performance and early tracking there appears to be less of a difference between immigrants and native Swiss students, and immigrant students are only slightly more likely to not enrol for tertiary studies after acquiring a baccalaureate diploma. For all students early tracking and spending an extra year in lower-secondary education greatly decreases the odds of acquiring a baccalaureate diploma and continuing on to tertiary education. In Switzerland tracking in lower-secondary education appears to be a major factor in determining whether or not a student obtain a baccalaureate diploma. Differences in lower-secondary school grades matter little for accessing higher education through either an academic or a vocational baccalaureate, but students with lower grades in language and mathematics are more likely not to receive any baccalaureate diploma.

Lastly, in a third model we introduce the educational level and socio-economic status of the student's parents as well as the student's future job aspirations and gender which further improves the predictive power of the model ($R^2=0.404$). Compared to the reference path, Ex-Yugoslav and Turkish students are now twice less likely to obtain a none-baccalaureate diploma (path 4). There no longer is a statistically significant difference between immigrant and Swiss students who have a baccalaureate diploma but do not use it to access higher education (path 3). However, after controlling for both the previous school type and performance, and the socio-economic and cultural background of the students there is a slight negative effect for having an Ex-Yugoslav or Turkish background and accessing higher education through a vocational baccalaureate (path 2). Similar to France, Ex-Yugoslav and

Turkish students are not less likely to be in the reference path because of their immigrant background, but because of their previous school career, early tracking, as well as the socio-economic background and cultural capital of their parents. When controlling for these factors, as well as taking student aspirations into account, we find Ex-Yugoslav and Turkish students to have high odds to be in the academic baccalaureate to tertiary education pathway.

6. Conclusion

Both in France and Switzerland, French educated students with a Northern African background and Swiss educated students with a Turkish or former Yugoslavian background respectively are underrepresented in higher education institutions. This raises the question of the main reasons for their limited access to higher education. This paper has analysed how the institutional settings in both countries influence access to higher education... We were especially interested in the integrative function of vocational baccalaureate certificates, which have recently been introduced in both countries to increase the permeability of the educational system, to allow some of those completing vocational training to access higher education, and to empower more students from vulnerable groups to access higher education.

What did we learn from the comparison of students with upper secondary degrees in France and Switzerland, and from the patterns of how native and immigrant students make use of their higher education entry certificates? At first glance, our descriptive analysis confirms that students with an immigrant background who complete upper secondary education are more likely to graduate *without* a higher education entry certificate than their native peers (26% vs. 21% in the French case; 43% vs. 31% in the Swiss one).

As far as vocational routes to higher education are concerned, immigrant students indeed seem to benefit from professional and technical baccalaureate programs to compensate for their underrepresentation among academic baccalaureate holders. In Switzerland however, such a compensation function of the vocational baccalaureate is not apparent from our data. This might be due to the difficulties of the particular immigrant groups we studied to get hired by employers for more demanding apprenticeships, which is a prerequisite to enrol in a vocational baccalaureate program in Switzerland. Their frequent relegation to bridge-year courses, where students often accept to decrease ('cool out') their occupational aspirations to a level, where a vocational baccalaureate is not anymore an option, may be provoked by employer discrimination.

However, once earlier school performance and career variables on lower secondary level are controlled for, the North African youths are no longer in retreat anymore in accessing tertiary studies via a general baccalaureate in the French case. The same holds true for Ex-Yugoslav and Turkish students in the Swiss case, once we additionally control for their socio-economic background, cultural capital of their parents, as well as for their aspirations. Our results confirm recent findings for both countries. In France, immigrant children are more likely to obtain the *baccalauréat* than the native French (Vanholffelen, 2013), when educational characteristics are taken into account. The higher probability of obtaining a *baccalauréat* for French educated immigrant youths illustrates a higher level of ambition and a strong desire for social mobility (Brinbaum & Kieffer, 2009; Caille & Lemaire, 2009; Griga et al., 2013). Picot (2012) in turn concludes for Switzerland, that the post-secondary attendance gap in favour of non-immigrant students is due almost entirely to poorer

secondary school performance among immigrant students (as measured by the PISA reading scores). Once secondary school tracking is considered, it is strongly associated with a significant part of the gap as well.

In other words, if the educational characteristics of the North African youths in France and those of students with Turkish or former Yugoslavian background in Switzerland would be similar to those of the native students, the former would have at least the same chance of obtaining a baccalaureate diploma and access to tertiary education. Hence, the main factors of inequalities in higher education participation rates between native and immigrant youth lie in the early disadvantages during primary and lower secondary schooling. They need to be tackled at this level, and not at the crossroads at the end of upper secondary education.

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