

## Naïve or Persistent Optimism? The Changing Vocational Aspirations of Children of Immigrants at the Transition from School to Work

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*Abstract:* Children of immigrants are found to have higher aspirations than their native peers, despite lower educational outcomes and poor labour market opportunities. Analysing the development of aspirations shows that students with a migration background not only aim high while still in compulsory education, but also stay optimistic. This persistent optimism indicates that the high aspirations are not the result of a naïve misconception of labour market opportunities, but that the children of immigrants are inherently more ambitious than their native peers.

*Keywords:* Vocational aspirations, development of aspirations, longitudinal data

### Naiver oder anhaltender Optimismus? – Wandelnde Berufsaspirationen von Jugendlichen mit Migrationshintergrund beim Übergang von der Schule in den Beruf

*Zusammenfassung:* Trotz geringer Bildungserfolge und schlechten Arbeitsmarktchancen haben Kinder von Migrant:innen höhere Aspirationen als deren einheimische Peers. Dieser Beitrag zeigt, dass Schüler:innen mit Migrationshintergrund nicht nur während der obligatorischen Schulzeit hohe Ziele haben, sondern langfristig optimistisch bleiben. Dieser anhaltende Optimismus deutet darauf hin, dass die hohen Aspirationen nicht als Resultat einer naiven Fehleinschätzung von Arbeitsmarktchancen abgetan werden können, sondern, dass Kinder von Migrant:innen grundsätzlich ambitionierter sind.

*Schlüsselwörter:* Berufsaspirationen, Entwicklung von Aspirationen, Längsschnittdatenanalyse

### Optimisme naïf ou persistant ? Evolution des aspirations professionnelles des enfants d'immigrés lors de la transition entre l'école et le travail

*Résumé:* En dépit d'un mauvais niveau d'éducation et de faibles opportunités sur le marché du travail, les enfants de migrantes et migrants ont des aspirations plus élevées que leurs pairs natifs. Cet article montre que les élèves issus de l'immigration ont non seulement des aspirations élevées pendant l'enseignement obligatoire, mais qu'ils restent optimistes sur le long terme. Cet optimisme durable montre que leur ambition n'est pas due à une conception naïve du monde du travail, mais que les enfants issus de l'immigration sont intrinsèquement plus ambitieux que leurs pairs natifs.

*Mots-clés:* Aspirations professionnelles, évolution des aspirations, données longitudinales

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## 1 Introduction<sup>1</sup>

Switzerland is a nation of immigrants: its current societal and economic structure has been profoundly shaped by the inflow of labour migration experienced in the recent past (Efionay-Mäder 2019). Nearly a quarter of the country's 8.6 million inhabitants are foreign nationals and 38 % have a migration background (Federal Statistical Office 2020). Labour migration, both in the low-wage and the highly qualified sectors, stems from the desire to find better working and living conditions for oneself and one's family in the country of arrival. Even though the desire for socio-economic improvement is the main driver of migration, such hopes are often disappointed. First-generation migrants often do not achieve the intended improvement and find themselves occupying precarious positions of employment, commonly in jobs below their skill level and at the bottom end of the status ladder (Weins 2010; Liebig et al. 2012; Ebner and Helbling 2015; Vidal-Coso 2019). Despite the generally lower educational performance attained by the second generation of migrants, and the restricted labour market opportunities they experience, they tend to show higher aspirations than their native peers: they aspire to attain higher educational degrees and to work in occupations with higher socio-economic status and prestige (e. g. Beck et al. 2010; Relikowski et al. 2012; Luthra 2013; Wicht and Ludwig-Mayerhofer 2014; Becker and Gresch 2016; Tjaden and Scharenberg 2016; Wicht 2016; Kalter and Granato 2018; Miyamoto and Wicht 2020).

Two competing mechanisms are commonly discussed as potential explanations for the ambitious vocational aspirations of migrants: the immigrant optimism thesis and the information deficit hypothesis. According to the first of these, people who leave their country of origin in pursuit of socio-economic improvement are a positively self-selected group, showing character traits such as ambition and motivation (Kao and Tienda 1998; Heath and Brinbaum 2007; Salikutluk 2016; Spörlein et al. 2020). Due to the high value of educational and vocational success in immigrant families, the children of immigrants tend to aim high and are more ambitious than their native peers.

The information deficit hypothesis, on the other hand, sees immigrants' ambitious aspirations as naïve (Kao and Tienda 1998). On this view, the children of immigrants are said to have overambitious aspirations because they are insufficiently informed about the opportunities and restrictions of the labour market. Due to their parents' lack of experience with the host country, they are unable to adequately evaluate the cost, benefit, and success probability of different career paths (Kao and Tienda 1998; Tjaden and Hunkler 2017). As the children of im-

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migrants progress through school and into employment, however, they gain relevant information, e. g. through career counselling in schools, and have their own, often negative (Hupka-Brunner et al. 2010; Imdorf 2014), experiences. This should result in them abandoning their overambitious aspirations for more realistic expectations.

Choosing a career is not a one-off decision. On the contrary, it is a lengthy process that begins in childhood and continues through adolescence and into adulthood. While theories of career development (Gottfredson 1981; Gottfredson 2002) highlight the developmental nature of occupational aspirations across the lifespan, empirical research on the phenomenon of immigrants' ambitious aspirations has so far looked at aspirations only as a static construct and has not made use of the potential of longitudinal data analyses for exploring the underlying mechanisms (Relikowski et al. 2012).

This article contributes to the understanding of the aspiration–performance paradox – the disparity of high aspiration and low educational performance among migrants – by asking how the vocational aspirations and expectations of Swiss adolescents with and without a migration background develop at the transition from school to work. To examine the persistence of and change in vocational aspirations, latent growth models (LGMs) are estimated, using longitudinal data from the DAB panel study (Determinants of educational choices and vocational training opportunities), which covers a large sample of the 2013 school-leaving cohort in German-speaking Switzerland. The analyses show that students with a migration background have higher aspirations than their native peers. On average, aspirations increase over time, and this growth is especially strong for students with a southern or an eastern European background. We conclude that the ambitious aspirations of migrants cannot be dismissed as naïve misconceptions: over the transition from lower secondary education to work, the children of immigrants are persistently more optimistic about their future prospects than their native peers.

The remainder of the article is organised as follows. In the second section, the theoretical framework is presented alongside a summary of the state of research. We then give a description of the data set, the variables, and the statistical procedure for latent growth modelling in the third section. The main findings are presented in the fourth section and are verified by means of sensitivity analyses, checking for bias caused by selective panel attrition in the fifth section. In the final section, we discuss the contribution and limitations of the research.

## 2 Theoretical Background and Mechanisms

### 2.1 The Development of Aspirations

The concept of aspirations as the “cognitive orientational aspect of goal directed behaviour” (Haller 1968, 484) originated in social psychology and has received

increasing attention in sociological stratification research due to the key role of aspirations in the process of status attainment (Sewell et al. 1969). Aspirations represent the goal of the educational and vocational trajectory and can be understood as preliminary decisions.

A career choice is not a one-off decision: the formation of occupational aspirations is a dynamic process that takes place continuously throughout childhood and adolescence. Aspirations are understood to be developmental in nature. As individuals form their self-concept, in terms of their interests and capabilities, and gain an understanding of the opportunities and external barriers present in the labour market, they continuously adjust their aspirations accordingly. Gottfredson (2002) describes this as a process of circumscription and compromise. First, occupations are evaluated in terms of their desirability: how well does the occupation fit in with one's own self-concept? This self-concept can thereby be understood broadly, both in terms of personality and personal interests, as well as in terms of the social valuation and the economic position one considers suitable. Status-inadequate occupations are ruled out, as they are not compatible with one's own self-image, on the one hand, and lead to negative feedback from the social environment, on the other (Boudon 1974; Eberhard et al. 2015). Secondly, the accessibility of occupations is taken into account, based on one's own abilities and institutional opportunities. In the process of compromise, unrealistic dream occupations are abandoned in favour of less compatible but more accessible options (Gottfredson 2002). These two processes – circumscription and compromise – correspond to the differentiation between idealistic and realistic aspirations that is drawn in status attainment research (Lewin 1939; Haller 1968). Idealistic aspirations express what a person desires to achieve, while realistic aspirations reflect what that person can realistically expect, given their own abilities and the relevant structural restrictions. At the age of 15, individuals have usually established a field of both desirable and achievable career options (Gottfredson 2002; Tomasik et al. 2009). Their occupational aspirations represent a joint assessment of job compatibility and accessibility. It is plausible to assume that this assessment process is continuous over the life course: as the perception of personal capabilities and external opportunities changes, aspirations are adjusted upwards or downwards correspondingly (Hegna 2014; Becker and Gresch 2016). Using the terms of rational choice theory, aspirations and their development are the result of an ongoing subjective rational evaluation of the expected cost, benefit, and success probability of occupational alternatives (Sewell et al. 1969; Breen and Goldthorpe 1997).

Personality and identity have been recognised as the main influences behind the development of aspirations in young age (Gottfredson 1981; 2002). However, these character traits are found to be stable during the teenage years (Low et al. 2005; Hirschi 2010). In adolescence, the adaptation of aspirations is therefore assumed to depend primarily on the perceived accessibility of career options, thus suggesting a

general downward trend consistent with the concept of early high aspirations being abandoned in favour of lower, more attainable occupations (Clark 1960; Gottfredson 2002; Heckhausen and Tomasik 2002; Lee and Rojewski 2009). However, there is also reason to assume that the process of career adaptation progresses in the other, upward, direction. During secondary school, students are exposed to new experiences and encounter new career opportunities through professional and social networks, which can lead to a widening understanding of the field of career options. Engaging with the educational and career choices ahead can also lead to an awareness of the benefits of higher careers and to a greater understanding of the role of the labour market. Additionally, career counselling programmes help students recognise their own potential and identify possible career paths (Mau and Bikos 2000).

Despite the claims of both sociological and social-psychological theory, and substantive research into the formation of occupational aspirations and their lasting effects, relatively little is known about their long-term development after childhood. Only few studies have traced the persistence of and changes in adolescents' vocational aspirations over time using longitudinal methods, and the results are highly inconsistent. Most research so far has been conducted with data from North America. In this context, the vocational aspirations of adolescents seem to be rather stable (Rojewski and Yang 1997; Cooper 2006; Beal and Crockett 2010; Junk and Armstrong 2010; Gao and Eccles 2020). Other studies (Clark 1960; Shapka et al. 2006; Lee and Rojewski 2009) report decreasing aspirations during adolescence, consistent with the idea that over time overambitious aspirations cool and are abandoned for more realistic options. However, there is also research suggesting that adolescents gradually upgrade their aspirations (Mau and Bikos 2000).

Social systems and educational institutions provide the context in which individuals form and develop their vocational aspirations (Heckhausen and Shane 2015). Institutional regulations define the opportunities and restrictions on the labour market. In contrast to liberal market economies such as the USA, Switzerland is characterised by a tight link between educational credentials and the occupationally segmented labour market (Kriesi et al. 2010). Due to this institutionalised linkage, occupational opportunities are closely bound to early decisions in the educational and occupational trajectory (Buchmann and Sacci 1998). Furthermore, the Swiss educational system has early performance-based tracking at the lower secondary level and vocational education and training (VET) is the dominant type of Swiss upper secondary education. For the specific educational system of Switzerland, Basler and Kriesi (2019, 1) report "that the level and development of adolescents' occupational status aspirations differ by tracks of upper secondary education". Their results make it clear that a strong relationship between the development of aspirations and the institutional characteristics of the educational system exists. Their analysis of vocational aspirations after the transition to upper secondary education shows that students on the academic track have stable high aspirations that decrease slightly after

graduation from secondary school (Basler and Kriesi 2019). In contrast, apprentices in VET programmes start with lower aspirations, these increase over time (Basler and Kriesi 2019). The importance of the institutional setting and upcoming transitions in structuring the development of vocational aspirations is also highlighted in the research of Tomasik et al. (2009) on the stratified German system. They argue that aspirations are decreased before upcoming transition deadlines and increased after successful transitions – for example, the transition from lower secondary education into the VET system (Heckhausen and Tomasik 2002). However, a recent study by Miyamoto and Wicht (2020) reports increasing aspirations for German adolescents from grade 8 to grade 10, irrespective of school type and upcoming educational transitions.

While the previously reported studies find differing trends of overall development over time, significant variation between individuals is consistently reported, with social origin, gender, and school achievement identified as factors influencing both the overall level of aspiration and the pattern of change (e.g. Rojewski and Yang 1997; Shapka et al. 2006; Hegna 2014; Basler and Kriesi 2019; Miyamoto and Wicht 2020).

## 2.2 The Vocational Aspirations of Migrants

Over recent decades, the prosperity of its economy has prompted a large number of people to immigrate to Switzerland (Efionay-Mäder 2019); this increase has been driven mainly by two types of labour migration. On the one hand, Switzerland attracts many tertiary educated professionals from neighbouring countries (Germany, France, Austria, and Liechtenstein), as well as other high-income OECD countries (Liebig et al. 2012). On the other hand, low-skilled labour migrants shaped the country's economy markedly during the second half of the 20th century. During the guest worker period, following the Second World War, more than half of all foreign nationals were of Italian or Spanish descent (Wanner et al. 2009; Vidal-Coso and Ortega-Rivera 2017). Since the early 1990s, there has been an increase in immigration from Portugal, Turkey, and the Balkans (Wanner et al. 2009). These low-skilled migrants experience difficulties in the labour market upon arrival in the host country, due to the loss of their human capital when transferring the formal qualifications, work experience, and training obtained in another country (Weins 2010; Vidal-Coso and Ortega-Rivera 2017).

Both international and Swiss studies have reported that the children of immigrants have higher aspirations than their native peers, while showing lower educational outcomes and disadvantages in terms of labour market opportunities (Beck et al. 2010; Relikowski et al. 2012; Luthra 2013; Becker and Gresch 2016; Tjaden and Scharenberg 2016; Wicht 2016; Kalter and Granato 2018; Miyamoto et al. 2020). Among others, two opposing theoretical explanations for this aspiration–performance paradox have emerged. The immigrant optimism approach states

that immigrants and their descendants are a positively selected group; they are more optimistic, ambitious, and motivated than comparable natives (Kao and Tienda 1998; Heath and Brinbaum 2007; Tjaden and Hunkler 2017). The decision to leave one's country of origin and pursue a life elsewhere is a risky one and is accompanied by high social and economic costs (Spörlein et al. 2020). Even though socio-economic improvement is the main driver of migration, migrants often do not achieve the intended improvement due to educational mismatch and language barriers (Kogan 2007; Auer et al. 2017; Panichella 2018). First-generation migrants, especially from low-income countries, often find themselves occupying precarious positions of employment, in jobs below their skill level and at the bottom end of the status ladder (Wanner et al. 2009; Weins 2010; Liebig et al. 2012; Ebner and Helbling 2015; Vidal-Coso and Ortega-Rivera 2017; Vidal-Coso 2019). However, while the first-generation may not succeed in attaining socio-economic improvement, their goal is passed on to the second generation (Kao and Tienda 1998; Heath et al. 2008; Teney et al. 2013; Salikutluk 2016). The children of immigrants are expected to be successful in the host country and to realise the upward mobility that motivated their parents' migration. This aim of inter-generational social mobility motivates the children of immigrants to pursue high-status careers and place a higher value on educational and vocational success than their native peers.

An alternative explanation takes the so-called information deficit of immigrants into account. It is argued that immigrants are often not sufficiently informed about the demands and requirements of the host country's educational system and labour market (Kao and Tienda 1998; Tjaden and Hunkler 2017). The children of immigrants are therefore not able to assess adequately the expected costs, benefits, and probability of success of different career options. In countries with a strong vocational training and a less pronounced tertiary education system, such as Germany and Switzerland, immigrants tend to overestimate the probability of success of higher educational pathways and underestimate the benefit of a VET-based career (Tjaden and Hunkler 2017). From this perspective, their high aspirations are naïve, as these are caused by their lack of experience and knowledge of the Swiss context.

Both quantitative (Jonsson and Rudolphi 2011; Salikutluk 2016; Tjaden and Hunkler 2017) and qualitative (Relikowski et al. 2012; Teney et al. 2013) research has found evidence for both theoretical explanations outlined here for the high educational and vocational aspirations of children of immigrant descent. Therefore, we assume that children of immigrants generally display aspirations toward occupations with higher social status than natives (Hypothesis 1).

This empirical research on the phenomenon of immigrants' ambitious aspirations has so far looked at aspirations only as a static construct, measured at one more or less random point in time, while disregarding their developmental nature. Thereby, the potential of the life course perspective and panel data for the exploration of underlying mechanisms have been overlooked. Derived from the competing

theoretical perspectives, two patterns of aspiration development seem plausible. On the one hand, the immigrant optimism approach implies that children of immigrants are inherently more optimistic, ambitious, and motivated than comparable natives. The strong valuation of educational and vocational success in immigrant communities is reflected in their high aspirations. When assessing the benefits and costs of career options, they assign higher value to high-status occupations and are more willing to invest resources, time, and energy into attaining demanding qualifications. Motivated by the aim of inter-generational status mobility, the children of immigrants maintain a high level of ambition, despite experiences of failure and setbacks, due to their greater willingness to take risks and work hard for success (Kao and Tienda 1998; Jonsson and Rudolphi 2011). If the aspiration gap between adolescents with and without a migration background is due to these distinct personality traits, then it is expected to persist over time (Hypothesis 2). Following the information deficit approach, on the other hand, the high aspirations of immigrants are caused by a skewed perception of the costs, benefits, and opportunities of the Swiss education system and the labour market. At the transition from school to work, the children of immigrants are more often confronted with difficulties obtaining an apprenticeship contract and are more likely to attend bridge year courses than Swiss natives (Beck et al. 2010; Hupka-Brunner et al. 2010; Imdorf 2011; 2014; Glauser 2015). The experience of such difficulties should make the children of immigrants realise their misconceptions and acknowledge that the barriers to a high-status career are greater than they naively assumed. It is therefore plausible that the process of compromise, whereby high idealistic aspirations are adapted towards lower, more achievable ones (Gottfredson 2002), is more pronounced among adolescents with a migrant background than among natives. If the aspiration gap between adolescents with and without a migration background is due to the lack of experience and knowledge in immigrant families, it is expected to narrow over time as migrants adjust their aspirations downwards (Hypothesis 3).

### 3 Data and Method

#### 3.1 DAB Panel Study

To test these hypotheses, data from the DAB panel study (Determinants of educational choices and vocational training opportunities) is used. The DAB study tracks the educational and occupational trajectories of a gross sample of nearly 4000 adolescents born around 1997 from the end of lower secondary education into their early twenties (Becker et al. 2020). The data is based on a stratified random sample of classes of eighth graders from the 2011/12 school year within German-speaking



Switzerland.<sup>2</sup> Since 2012, eight waves of the DAB study have been conducted (Figure 1). In the first sub-project (DAB-I), adolescents enrolled in lower secondary school were interviewed three times (Waves 1–3) during the eighth and ninth grades. In late autumn 2014 (DAB-II), the DAB sample was interviewed again (Wave 4) to gather information on the educational paths within the first 15 months after leaving compulsory education. The third phase (DAB-III) began in spring 2016. In three waves (5–7), the individuals were interviewed three, four, and five years after leaving compulsory education about their successive upper secondary educational qualifications, further training, and the start of their working careers. The most recent wave of the DAB panel study was conducted in spring 2020, as part of the fourth DAB project (DAB-IV). While in the first three waves, the students were surveyed within their classes using online questionnaires; the follow-up was conducted as an individual survey, using a combination of online questionnaires and computer-assisted telephone interviews (CATI).

### 3.2 Measures

Vocational aspirations and occupational expectations were measured repeatedly throughout the DAB panel study. In the first three waves, while still enrolled in lower secondary education, students were asked to state *what profession they would like to pursue later on*. In the fifth, seventh, and eighth waves, respondents were asked to specify the profession they think *they will be working in at the age of 30*. At these time points, respondents had graduated from compulsory schooling three, five, and seven years earlier.

Figure 1 Timeline DAB panel study: Survey waves with measurement of aspiration emphasised



Data: DAB panel study.

The named professions were coded using the Swiss Standard Classification of Occupations (Meier 2003) and transformed in line with the International Standard Classification of Occupations (ISCO 08), which is administered by the International

2 More information on the DAB panel study, as well as a detailed description of the sample selection and response rate, can be found on the website ([www.dab.edu.unibe.ch](http://www.dab.edu.unibe.ch)). Scientific use files of the data are available at SWISSUbase.

Labour Organization. The International Socio-Economic Index of Occupational Status (ISEI 08), by Ganzeboom et al. (1992), is used as an operationalisation of occupational status. It reflects the socio-economic position of an occupation, taking cultural and economic resources into account (Ganzeboom 2010), and ranges from 16 to 90. The analyses were replicated using the Magnitude Prestige Scale (MPS) (Wegener 1985), which indicates the social prestige and reputation associated with a profession and is generated from the popular evaluation of occupational status, as an alternative operationalisation of occupational status (Christoph 2005). Both operationalisations are continuous stratification measures and are based on the assumption that occupations can be ordered vertically along a continuous scale that indicates social hierarchy (Christoph et al. 2020). The analyses based on this prestige measure did not, however, reveal any substantial differences; they are included in the appendix.

Respondents were attributed a migration background if either they or their parents were not born in Switzerland or if either they or their parents had non-Swiss citizenship. Since the sampling was carried out in schools, all DAB respondents completed their compulsory education in Switzerland. For these reasons, all non-native students are classified as second-generation immigrants and are referred to as children of immigrants, as the decision to migrate was made by their parents.<sup>3</sup> The foreign labour force in Switzerland is characterised by a bipolarisation at the bottom and top of the occupational structure: while the so-called guest workers from southern Europe and the Balkans generally work in professions with low socio-economic status, immigrants from western and northern European countries occupy, on average, higher socio-economic positions than natives (Liebig et al. 2012; Vidal-Coso 2019). Research on the aspirations of immigrants has repeatedly shown distinct differences by region of origin (Meyer 2003; Salikutluk 2016; Tjaden and Scharenberg 2016; Glauser 2018). Therefore it is differentiated between three migrant groups by their country of origin: southern and eastern European, including the Balkans;<sup>4</sup> northern and western European;<sup>5</sup> and, thirdly, other regions of origin, including non-European countries, are grouped together. The country of origin not only indicates a certain language, ethnicity, or culture, but also very strongly implies a certain motive for migration to and social status in the country of destination.

The Swiss educational system is highly stratified. It is characterised by early performance-based tracking at lower secondary level and a strong vocational training system at upper secondary level. The children of immigrants are thereby more likely

3 Of these respondents, 10% were born outside Switzerland to two non-Swiss parents. These first-generation migrant students were, on average, 6.5 years old when moving to Switzerland and only a few were older than 10 at the time of migration. Additional analysis differentiating by generation status were conducted. Due to the small number of cases, no significant effects were found for first-generation students compared to the native population.

4 Country of origin: Albania, Bosnia and Herzegovina, Croatia, Italy, Kosovo, Macedonia, Montenegro, Portugal, Serbia, Spain, and Turkey.

5 Country of origin: EU-15/EFTA without Italy and Spain.

than natives to attend a school type with basic requirements and are underrepresented at schools with advanced requirements (Glauser 2018). At the transition into upper secondary education, however, students with an immigrant background are more likely to choose an academic track over VET, when their former school type and social origin are taken into account (Tjaden and Scharenberg 2016; Glauser 2018). To investigate the institutional effects of educational tracking, school type attended at lower secondary level (basic or advanced requirements; baccalaureate preparation schools) and type of upper secondary education (VET programme or continued general education, including specialised and baccalaureate schools) are included in the analyses.

Additionally, panel respondents were assigned the highest parental occupational status (ISEI) in order to control for the social origin effect,<sup>6</sup> which has been reported repeatedly in previous studies (e.g. Basler and Kriesi 2019). As migration is often accompanied by an economic and social downgrading, due to loss of human capital when transferring formal qualifications, work experience, and training obtained in another country, the ISEI of immigrant parents might not match their self-perceived social status and their cultural capital (Ichou 2014). It is therefore important to note that controlling for parental ISEI only takes into account their current position in the occupational structure of Switzerland, the destination country.

At the time of the first measurement, the respondents were on average 14.4 years old and an equal amount of male and female respondents participated.

### 3.3 Statistical Procedure

In a first step, cross-sectional linear regression analyses are estimated, pooling all measurements of occupational aspirations, in Waves 1, 2, and 3, and of occupational expectations, in Waves 5, 7, and 8, respectively.

In a second step, two Latent Growth Models (LGM) estimate inter-individual variability in intra-individual patterns of change over time. The repeated measurements are understood as snapshots that constitute an underlying, not directly observable, *latent trajectory*, which is defined by latent parameters. The initial level of vocational aspiration is represented by the random intercept parameter ( $\alpha$ ), while the rate of outcome change is captured in the slope parameters ( $\beta$ ). Due to the temporal structure of the DAB data and the inconsistent measurement of the occupational aspiration, two LGMs are specified. The first LGM captures changing vocational aspirations during the last two years of compulsory school (Waves 1–3). The second LGM captures change of occupational expectations after graduation from lower secondary school (Waves 5, 7, and 8). The values of the factor loading parameters ( $\Lambda$ ) represent the passage of time in months between measurements, as

6 Estimates that additionally control parental level of educational attainment have consistent results. Due to missing values on parental education, the models including parental ISEI are presented below.

Table 1 Descriptive Statistics

|   | Sample 1  |       | Sample 2  |       |
|---|-----------|-------|-----------|-------|
|   | Mean      |       | SD        |       |
| Parental Occupation: ISEI                       | 50.4      | 2.06  | 50.61     | 2.04  |
|   | Frequency |       | Frequency |       |
| Native Swiss                                    | 1707      | 45.7  | 1144      | 51.07 |
| It, Es, Por, Balkan, Tur                        | 777       | 20.8  | 395       | 17.63 |
| EU15 w/o It, Es                                 | 258       | 6.91  | 168       | 7.5   |
| Other country of origin                         | 993       | 26.59 | 533       | 23.8  |
| Track Sec. I: Basic requirements                | 1182      | 31.65 | 539       | 24.06 |
| Track Sec. I: Advanced requirements             | 2042      | 54.67 | 1324      | 59.11 |
| Track Sec. I: Pre-baccalaureate                 | 340       | 9.1   | 284       | 12.68 |
| Track Sec. I: Other/No Information              | 171       | 4.58  | 93        | 4.15  |
| Track Sec. II: VET                              | 1928      | 51.62 | 1659      | 74.06 |
| Track Sec. II: General education                | 478       | 12.8  | 518       | 23.12 |
| Track Sec. II: Other/No information             | 1329      | 35.58 | 63        | 2.81  |
| Situation 2020: Work                            | 1049      | 28.08 | 1022      | 45.63 |
| Situation 2020: University and further training | 559       | 14.97 | 616       | 27.5  |
| Situation 2020: Sec. II and bridge              | 267       | 7.15  | 271       | 12.1  |
| Situation 2020: No Information                  | 1860      | 49.8  | 331       | 14.78 |
| Total   | 3735      | 100   | 2240      | 100   |

illustrated in the DAB timeline in Figure 1. The growth estimation is understood as an additive function of an intercept and growth factors (Bollen 2006, 30 f.), with  $y_{it}$  being the value of the trajectory variable  $y$ , i. e. the vocational aspiration, for the  $i$ th case at time  $t$ . Thereby, the LGM method enables the estimation of a mean trajectory, the average development of the characteristic of interest over time for the entire sample and individuals  $i$ . When the LGM measurement model is extended to include a regression model, it allows for analyses and explanation of the trajectory variation around the mean intercept and mean slope via the conditional LGM. The latent trajectory parameters ( $\alpha_1$ ,  $\beta_1$  and  $\alpha_2$ ,  $\beta_2$ ) are therefore treated as outcomes under the direct influence of covariates.

To assess the overall model fit, various indices are considered. For the LGM of aspiration development during the first time period ( $\alpha_1$  and  $\beta_1$  in Tables 2 and 3), the chi-square test of model fit indicates statistically significant deviation from the mean structure or covariance structure of observed data. The specified models do not exactly reproduce the observed trajectory. In LGM with a large sample size and excessive statistical power, however, the chi-square test can be considered an overly sensitive measure of model fit (Bollen 2006, 45). Therefore, further fit indices, which

are insensitive to sample size, are taken into account (RMSEA; SMRMR; CFI; TLI). Although the chi-square test statistic is significant, the overall fit indices indicate a good model fit (Bollen 2006, 45). Therefore, both trajectory models can be judged to be reasonable approximations of the data.

$$y_{1it} = \alpha_{1i} + \lambda_{1i}\beta_{1i} + \varepsilon_{it} \quad \text{with } \Lambda_1 = \begin{pmatrix} 1 & 0 \\ 1 & 8 \\ 1 & 16 \end{pmatrix} \quad \text{and} \quad \sum_{it} = 0$$

$$y_{2it} = \alpha_{2i} + \lambda_{2i}\beta_{2i} + \varepsilon_{it} \quad \text{with } \Lambda_2 = \begin{pmatrix} 1 & 0 \\ 1 & 24 \\ 1 & 48 \end{pmatrix} \quad \text{and} \quad \sum_{it} = 0$$

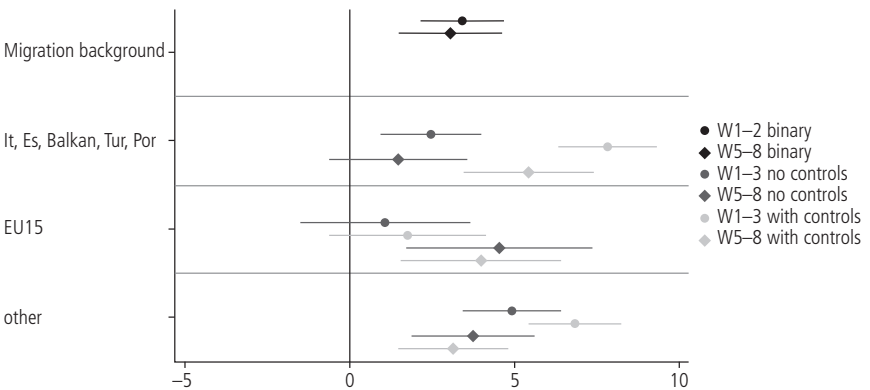
Due to a substantial number of item and unit non-responses, sensitivity analyses are performed in a third step. In order to assess whether the results are biased due to the data missing not at random, a selection model and a pattern mixture model (PMM) are calculated in Chapter 5.

## 4 Results

### 4.1 Cross-Sectional

A linear regression analysis with pooled observations, presented in Figure 2, confirms the positive correlation of migration background and vocational aspiration, as assumed in the first hypothesis. The plot shows six regression models with the ISEI of aspired occupation as dependent variables.

Figure 2 Clustered Cross-Sectional Regression Analyses



Data: DAB panel study.

On average, respondents with a migration background aspire to pursue occupations with higher socio-economic status than natives, as can be seen in the models with a binary indicator of migration background. Distinguishing by region of origin shows that this effect can be found across all groups. Furthermore, this optimistic migrant effect is more pronounced when the educational trajectory and the on average lower socio-economic status of immigrant families is taken into account. From a cross-sectional perspective, there is sufficient evidence to back Hypothesis 1 (that children of immigrants display higher vocational aspirations than comparable natives).

#### 4.2 Development of Aspirations

To examine the persistence and change of these vocational aspirations, and thereby assess the second and third hypotheses, LGMs are estimated. The average aspired occupation at the time of first measurement, in eighth grade, lies in the middle of the scales on socio-economic status, with an ISEI of 51 ( $\alpha_1$  in Table 2). A year after graduation from compulsory schooling, the occupational expectations are on average higher, with an ISEI of 54 ( $\alpha_2$  in Table 2).

For natives, the reference category, vocational aspirations remain stable during the last two years of lower secondary education ( $\beta_1$ ) and increase during the four years of the second time period ( $\beta_2$  in Table 2). In the bottom section of Table 2,

Table 2 Latent Growth Curve Model: International Socio-Economic Index

|                          | Occupational aspirations |                      | Occupational expectations |                       |
|--------------------------|--------------------------|----------------------|---------------------------|-----------------------|
|                          | $\alpha_1$               | $\beta_1$            | $\alpha_2$                | $\beta_2$             |
| Constant                 | 49.308***<br>(-0.509)    | 0.036<br>(-0.029)    | 55.617***                 | 0.076***<br>(-0.014)  |
| $\alpha$                 |                          | -0.012**<br>(-0.002) | -0.628                    | -0.004***<br>(-0.001) |
| It, Es, Balkan, Tur, Por | 2.014*<br>(-0.907)       | 0.023<br>(-0.054)    | 1.571<br>-1.261           | -0.006<br>(-0.025)    |
| EU15                     | 0.416<br>(-1.402)        | 0.074<br>(-0.083)    | 4.429*<br>-1.787          | 0.020<br>(-0.033)     |
| Other country of origin  | 3.944***<br>(-0.865)     | 0.122<br>(-0.052)    | 3.766***<br>-1.118        | 0.017<br>(-0.022)     |
| R <sup>2</sup>           | 0.009                    | 0.090                | 0.010                     | 0.111                 |
| Chi <sup>2</sup>         | 19.671***                |                      | 4.27                      |                       |
| RMSEA/SRMR               | 0.032/0.009              |                      | 0.005/0.006               |                       |
| CFI/TLI                  | 0.995/0.986              |                      | 1.000/1.000               |                       |
| N                        | 3736                     |                      | 2236                      |                       |

Data: DAB panel study. Standard errors in parentheses. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Table 3 Latent Growth Curve Model with Controls: International Socio-Economic Index

|                                  | Occupational aspirations |                       | Occupational expectations |                       |
|----------------------------------|--------------------------|-----------------------|---------------------------|-----------------------|
|                                  | $\alpha_1$               | $\beta_1$             | $\alpha_2$                | $\beta_2$             |
| Constant                         | 50.846***<br>(-0.572)    | 0.038<br>(-0.035)     | 53.544***<br>(-0.712)     | 0.072***<br>(-0.017)  |
| $\alpha$                         |                          | -0.015***<br>(-0.003) |                           | -0.004***<br>(-0.002) |
| It, Es, Balkan, Tur, Por         | 7.329***<br>(-0.948)     | 0.130*<br>(-0.061)    | 6.466***<br>(-1.197)      | -0.016<br>(-0.030)    |
| EU15                             | 0.838<br>(-1.342)        | 0.117<br>(-0.083)     | 3.264*<br>(-1.613)        | 0.033<br>(-0.035)     |
| Other country of origin          | 6.324***<br>(-0.85)      | 0.125*<br>(-0.056)    | 3.757***<br>(-1.032)      | 0.004<br>(-0.024)     |
| Parental Occupation: ISEI        | 1.125***<br>(-0.176)     | 0.018<br>(-0.011)     | 1.189***<br>(-0.216)      | -0.004<br>(-0.005)    |
| Track Sec. I: Basic              | -14.710***<br>(-0.777)   | -0.132*<br>(-0.063)   | -12.792***<br>(-1.045)    | -0.037<br>(-0.034)    |
| Track Sec. I (Ref. Advanced)     |                          |                       |                           |                       |
| Track Sec. I: Pre-Baccalaureate  | 11.818***<br>(-1.176)    | 0.244**<br>(-0.081)   | 3.050*<br>(-1.309)        | -0.026<br>(-0.028)    |
| Track Sec. II (Ref. VET)         |                          |                       |                           |                       |
| Track Sec. II: General education |                          |                       | 14.505***<br>(-1.086)     | 0.032<br>(-0.035)     |
| Track Sec. II: Other             |                          |                       | -1.332<br>(-2.054)        | 0.075<br>(-0.048)     |
| R2                               | 0.270                    | 0.112                 | 0.413                     | 0.097                 |
| Chi <sup>2</sup>                 | 14.565**                 |                       | 5.817                     |                       |
| RMSEA/SRMR                       | 0.019/0.006              |                       | 0.000/0.005               |                       |
| CFI/TLI                          | 0.998/0.994              |                       | 1.000/1.004               |                       |
| N                                | 3073                     |                       | 1988                      |                       |

Data: DAB panel study. Standard errors in parentheses. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

the regression coefficients of the conditional LGM are displayed. Coherent with the cross-sectional analyses, migration background has a positive effect on the initial level ( $\alpha$ ) of aspiration. Regarding the development of aspirations over time ( $\beta$ ), no significant differences between natives and children of immigrants are found.

This optimistic migrant effect becomes more pronounced when social origin and educational trajectory are taken into account. The conditional LGMs in Table 3 show that in both time periods the children of immigrants, with the exception of those whose parents are from northern and western Europe, have higher initial aspirations regarding the socio-economic status of future occupations than their native peers. On average, aspirations stay stable during lower secondary education. However, for students with a southern or eastern European background, increasing aspirations are reported during this time period.

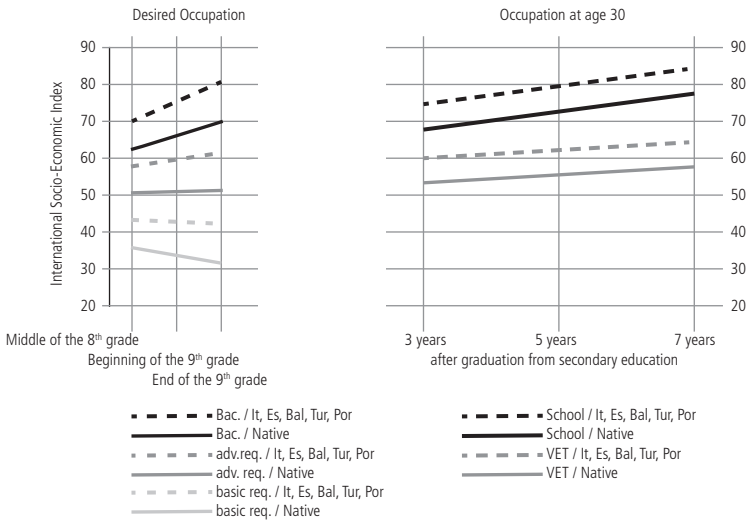
Furthermore, the analyses show that educational trajectories influence the development of occupational aspirations. Students attending pre-baccalaureate schools increase their aspirations during lower secondary education, while those in schools with basic requirements lower their aspirations in the run-up to graduation. On average, students from schools with basic requirements have lower aspirations than students from more demanding school types. Graduates from secondary schools with low cognitive requirements are found to be most likely to have problems at the transition into upper secondary education. On average, they have to write more applications for apprenticeship positions and more often attend bridge year courses (Hupka-Brunner et al. 2010; Glauser 2015; Glauser and Becker 2016). Students with an immigrant background are over-represented in these secondary schools (Tjaden and Scharenberg 2016). The analyses in Table 3 show significant differences between slope parameters by lower and upper secondary track. Students attending pre-baccalaureate schools adjust their aspirations upward during the last 15 months of their compulsory education. Additionally, those attending an academic upper secondary education at baccalaureate schools increase their aspirations more markedly than those in vocational training programmes.

These two effects, of migration background and educational tracking, are shown in Figure 3. No interaction effects between the two dimensions were found.

Overall, the children of immigrants display higher vocational aspirations than natives and this optimism persists over time. These results run counter to the expectations derived from the information deficit hypothesis. If the high aspirations of children of immigrants were indeed caused by a naïve perception of the Swiss education system and labour market, their expectations should decrease over time (Hypothesis 2). However, the LGM models presented above show growing aspirations over time precisely for those for whom the research reports the greatest problems at the transition from school to work – students with a migrant background from southern and eastern Europe attending schools with basic requirements. Therefore, these results can be interpreted as supporting the immigrant optimism hypothesis that the children of immigrants are more ambitious and motivated than comparable natives, character traits that seem to persist over time (Hypothesis 3).



Figure 3 Development of Aspirations



### 5 Missing Not at Random – Sensitivity Analyses

The data set is characterised by a relatively high number of missing values on the variable of interest (Table 4). Two kinds of item non-response have a substantial impact on this intermittent missingness: not all students are able to answer the question of vocational aspirations as some have not yet progressed far enough in the process of occupational choice and do not feel confident enough in their decision to name a vocation. On the other hand, some students name occupations that do not fit in the international classification of occupations due to their general wording, such as *something with animals*. Additionally, due to the longitudinal character of the data, panel attrition results in a loss of cases over time.

In survey methodology, it is well established that panel dropout is socially selective by educational attainment and social origin (Voorpostel 2010), two factors that are also major determinants of aspirations (Sewell et al. 1969). The analyses presented in Chapter 4.2 are based on LGM with full information maximum likelihood estimation (Bollen 2006, 39 f). The estimation is thereby based on the assumption that the non-response mechanism is missing at random (MAR). However, it is plausible to assume that the data is missing not at random (MNAR) and there is a correlation between the propensity for missing data and the variable of interest (Enders 2010, 287 f.). Respondents with a less successful school-to-work transition are more likely to adjust their vocational aspirations downward, while

Table 4 Response Rate DAB Panel Study

|                           | Wave 1      | Wave 2      | Wave 3      | Wave 5      | Wave 7     | Wave 8      |
|---------------------------|-------------|-------------|-------------|-------------|------------|-------------|
| DAB-Sample                | 4083        | 4083        | 4083        | 4083        | 4083       | 4083        |
| Gross sample              | 3878        | 3997        | 3712        | 2864        | 2494       |             |
| Number of interviews      | 3680        | 3331        | 3281        | 2229        | 1939       | 1980        |
| Response rate in %        | 94.90 %     | 83.30 %     | 88.40 %     | 77.80 %     | 77.70 %    |             |
| Valid answers ISEI        | 3017        | 2802        | 2660        | 1776        | 1630       | 1624        |
| Item-Response ISEI        | 82.00 %     | 84.10 %     | 81.10 %     | 79.70 %     | 84.10 %    | 81.92 %     |
| Mean ISEI                 | 47.49       | 45.62       | 47.38       | 56.99       | 59.51      | 60.35       |
| No migration background   | 1436 (43 %) | 1460 (44 %) | 1365 (44 %) | 1019 (48 %) | 931 (50 %) | 950 (48 %)  |
| With migration background | 1939 (57 %) | 1822 (56 %) | 1757 (56 %) | 1090 (52 %) | 920 (50 %) | 1030 (52 %) |

also having a higher probability of dropping out of the panel study. Following the recommendation of Zinn and Gnamb (2018), we therefore estimate two classes of MNAR models – a selection model and a PMM – and compare the results to the MAR FIML model in order to evaluate the impact of systematic dropout processes on our conclusions. By jointly estimating the conditional LGM for the outcome and a logistic discrete time survival model for a dummy variable indicating missing information, the Diggle-Kenward Selection Model (DKSM) (Diggle and Kenward 1994) takes into account the fact that the probability of missingness at  $t$  is related to both past and current levels of vocational aspiration at  $t$  and  $t-1$ . The PMM forms subgroups of cases that share the same missing data pattern and estimates the substantive model within each pattern (Enders 2010, 306f.). Averaging these estimates across the missing data patterns<sup>7</sup> yields a single set of estimates that account for the MNAR mechanism. The sensitivity analyses, as displayed in Table 9, validates the conclusions deduced from the FIML estimation. In the first section of the table, the results of the MAR models with FIML estimates are displayed; these are identical to Table 3. The DKSM estimation, in the middle section of Table 9, also predicts an upward trajectory after graduation from compulsory education. Furthermore, the DKSM models show a stronger increase of aspirations for children of migrants from southern and eastern Europe. The PMM shows a positive overall growth parameter for socio-economic status during the second time period, while showing no effect of migration background on the development of aspirations over time. Even though the results of the varying options to deal with missing information are not completely similar, the overall conclusion stays the same: even when the MNAR panel dropout likelihood is taken into account, aspirations generally increase over time and no evidence is found that the optimistic immigrant native gap decreases over time.

7 As the second slope parameter is not identified for respondents who drop out after Wave 3, it is assumed that this follows the same growth pattern as that for those who drop out after Wave 5.

Table 5 Sensitivity Analysis – Latent Growth Curve Model with Controls: FIML, DKMS, PMM

|                          | Occupational aspirations |                       | Occupational expectations |                       |
|--------------------------|--------------------------|-----------------------|---------------------------|-----------------------|
|                          | $\alpha_1$               | $\beta_1$             | $\alpha_2$                | $\beta_2$             |
| <b>FIML</b>              |                          |                       |                           |                       |
| Constant                 | 50.846***<br>(-0.572)    | 0.038<br>(-0.035)     | 53.544***<br>(-0.712)     | 0.072***<br>(-0.017)  |
| $\alpha$                 |                          | -0.015***<br>(-0.003) |                           | -0.004***<br>(-0.002) |
| It, Es, Balkan, Tur, Por | 7.329***<br>(-0.948)     | 0.130*<br>(-0.061)    | 6.466***<br>(-1.197)      | -0.016<br>(-0.03)     |
| EU15                     | 0.838<br>(-1.342)        | 0.117<br>(-0.083)     | 3.264*<br>(-1.613)        | 0.033<br>(-0.035)     |
| Other country of origin  | 6.324***<br>(-0.850)     | 0.125*<br>(-0.056)    | 3.757***<br>(-1.032)      | 0.004<br>(-0.024)     |
| N                        | 3736                     |                       | 2236                      |                       |
| <b>DKMS</b>              |                          |                       |                           |                       |
| Constant                 | 50.820***<br>(-0.574)    | 0.027<br>(-0.036)     | 54.904***<br>(-0.797)     | 0.072***<br>(-0.018)  |
| $\alpha$                 |                          | -0.016***<br>(-0.003) |                           | -0.006**<br>(-0.002)  |
| It, Es, Balkan, Tur, Por | 7.361***<br>(-0.947)     | 0.126*<br>(-0.061)    | 7.360***<br>(-1.220)      | -0.011<br>(-0.030)    |
| EU15                     | 0.816<br>(-1.339)        | -0.104<br>(-0.083)    | 3.329*<br>(-1.636)        | -0.038<br>(-0.035)    |
| Other country of origin  | 6.315***<br>(-0.851)     | 0.114*<br>(-0.057)    | 4.344***<br>(-1.048)      | -0.013<br>(-0.024)    |
| N                        | 3160                     |                       |                           |                       |
| <b>PMM</b>               |                          |                       |                           |                       |
| Constant                 | 50.820***<br>(-0.635)    | 0.025<br>(-0.065)     | 53.102***<br>(-0.789)     | 0.112**<br>-0.040     |
| It, Es, Balkan, Tur, Por | 7.069***<br>(-0.947)     | 0.179<br>(-0.061)     | 7.060***<br>(-1.22)       | 0.019<br>(-0.03)      |
| EU15                     | 0.0816<br>(-1.339)       | 0.104<br>(-0.083)     | 3.329*<br>(-1.636)        | 0.038<br>(-0.035)     |
| Other country of origin  | 5.870***<br>(-0.892)     | 0.165<br>(-0.19)      | 4.196***<br>(-1.125)      | 0.021<br>(-0.037)     |
| N                        | 3073                     |                       | 1988                      |                       |

DKSM based on HISEI, Sektyp I and II, migration background; PMM with 3 patterns; Omitted controls: Parental occupation, educational trajectory on lower and upper secondary level; Reference categories: Native.  
Data: DAB panel study. Standard errors in parentheses. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## 6 Conclusion

In this study, the optimistic migrant phenomenon is investigated from a longitudinal perspective by analysing panel data on the educational and occupational trajectories of young people in German-speaking cantons of Switzerland. The development of vocational aspirations and occupational expectations are examined during the transition from school to work by means of growth modelling.

Overall, adolescents' aspirations are stable during the last two years of lower secondary education. However, students attending pre-baccalaureate schools are found to increase their aspirations as they approach graduation, while students attending schools with basic requirements adjust their aspirations downwards. After the completion of compulsory schooling, three to seven years later, occupational expectations increase over time; this increase is especially pronounced for those attending general education. Consistent with previous findings from cross-sectional analyses, our data shows that the children of immigrants aim high – they aspire to pursue occupations with higher socio-economic status and higher prestige than their native peers. The level and development of vocational aspirations vary considerably between regions of origin. The optimism of children of migrants from southern Europe and the Balkans becomes apparent when controlling for their educational and social status. On the other hand, those with a migration background from western and northern European countries seem to have similar aspirations as natives. Ideally, further analyses on this topic should differentiate in more detail between countries of origin and migration motive as well as the duration since migration to reflect the diverse experiences encompassed by the characteristic of migration background.

Contrary to expectations deduced from the information deficit hypothesis, the children of immigrants not only aim high when still enrolled in compulsory education, but also stay persistently more optimistic. Even though prior research has consistently shown that the children of immigrants experience more problems at the transition into upper secondary education and the labour market (Hupka-Brunner et al. 2010; Imdorf 2014; Glauser 2015; Glauser and Becker 2016), they maintain and even increase their ambitions for high status and prestige careers. We therefore conclude that the high aspirations of immigrants do not result from a naïve misconception of the Swiss educational system and labour market. Rather, the longitudinal development of vocational aspirations over time seems to confirm the immigrant optimism hypothesis, that the high aspirations are due to distinct and stable personality traits: the children of immigrants are more motivated and place a greater emphasis on educational and vocational success.

While the results seem to contradict the perceived information deficit hypothesis and support the optimistic immigrant explanation for the high aspirations of the children of immigrants, we do not test and can therefore not rule out competing or interrelated mechanisms, such as the anticipated discrimination or blocked

opportunities hypothesis, which states that people with a migration background pursue occupations where they expect to experience less discrimination (Teney et al. 2013; Fernández-Reino 2016; Salikutluk 2016; Tjaden and Hunkler 2017).

Additionally, it is unclear to what extent the results are affected by the social and economic downgrading following migration. The reported findings are observed when controlling for parental occupational status, measured as highest ISEI. However, due to the devaluation of human capital, first-generation migrants are often employed in positions below their skill level. This creates an inconsistency between their subjective social status, based on their high relative position in their country of origin, and the objective social position in the economic system of the destination country (Engzell and Ichou 2020). Following this perspective, the high aspirations of the second generation might be high only compared to their current social position in the country of arrival, but appropriate if their situation in the country of origin were chosen as the reference point (Ichou 2014; Engzell 2019). Unfortunately, the data on social status pre-migration is rarely available. If such data becomes available in the future, this hypothesis should be included in the research on the phenomenon of optimistic immigrants.

Furthermore, this study has limitations concerning the operationalisation of vocational aspirations over time, which have to be acknowledged. Even 50 years after Haller's 1968 seminal text on the concept of aspiration, there seems to be no single and universally accepted definition or common agreement on what the term means or how to measure it. Explicitly distinguishing between idealistic wishes and realistic expectations, using two or more survey items when measuring aspiration, is the most well-established strategy to deal with this lack of conceptual specificity (Haller et al. 1974). This distinction would have allowed a more specific testing of the information deficit hypothesis. Only realistic aspirations should be reduced as a result of gained information, while idealistic aspirations, which are unaffected by the probability of success, could remain high (Becker and Gresch 2016). This should be reviewed as soon as such data becomes available. In this empirical contribution, occupational aspirations were measured as desired occupation during the first time period under analysis and occupational expectation at age 30 in the second. The LGMs based on both operationalisations show that respondents with a migration background have higher aspirations than natives.

Finally, this study analyses only the development of aspirations during the last two years of lower secondary education and a time frame of four years after leaving compulsory education. At the time of last measurement, a significant proportion of respondents had not yet entered the labour market but were still in upper secondary or in tertiary education. From a life course perspective, an even longer-term approach would be preferable to assess the impact of entering the labour market on vocational aspirations.

In conclusion, the findings of this study contribute to a deeper understanding of the mechanisms involved in immigrants' optimistic aspirations. By analysing the longitudinal development of aspirations during the transition from school to work, we see that the high aspirations of the children of immigrants persist over time.

## 7 Funding and Data Availability

The DAB panel study is financed substantially by the State Secretariat for Education, Research and Innovation (SERI) in Switzerland. The interpretations and conclusions are those of the authors and do not necessarily represent the views of SERI. We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome. The data of the DAB panel study are available at SWISSUbase: DAB Panel Study (DAB): W1–W8 [Dataset]. Universität Bern. Distributed by SWISSUbase, Lausanne, 2022. DOI: <https://doi.org/10.48573/cf4p-6s72>.

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9 Appendix

Table A6 Clustered Regression Analyses: ISEI

|  | Occupational aspirations |                      |                        | Occupational expectations |                        |                      |
|--|--------------------------|----------------------|------------------------|---------------------------|------------------------|----------------------|
|  | W1-3                     | W1-3                 | W1-3                   | W5-8                      | W5-8                   | W5-8                 |
| Migration background (vs. native)                        | 3.423***<br>(-0.659)     |                      |                        | 3.067***<br>(-0.800)      |                        |                      |
| Region of origin (Ref: native Swiss)                     |                          |                      |                        |                           |                        |                      |
| It, Es, Balkan, Tur, Por                                 |                          | 2.470**<br>(-0.781)  | 7.839***<br>(-0.766)   | 1.471<br>(-1.071)         | 5.434***<br>(-1.010)   |                      |
| EU15   |                          | 1.072<br>(-1.317)    | 1.787<br>(-1.205)      | 4.540**<br>(-1.445)       | 3.978**<br>(-1.233)    |                      |
| Other country of origin                                  |                          | 4.904***<br>(-0.768) | 6.821***<br>(-0.725)   | 3.730***<br>(-0.958)      | 3.143***<br>(-0.849)   |                      |
| Highest parental ISEI                                    |                          |                      | 1.094***<br>(-0.151)   |                           | 0.922***<br>(-0.189)   |                      |
| School type lower secondary (Ref: Advanced requirements) |                          |                      |                        |                           |                        |                      |
| Basic requirements                                       |                          |                      | -13.989***<br>(-0.624) |                           | -12.911***<br>(-0.940) |                      |
| Baccalaureate school                                     |                          |                      | 12.659***<br>(-1.040)  |                           | 2.196*<br>(-0.955)     |                      |
| Type of upper secondary education (Ref: VET)             |                          |                      |                        |                           |                        |                      |
| Baccalaureate or middle school                           |                          |                      |                        |                           | 14.555***<br>(-0.774)  |                      |
| Missing information                                      |                          |                      |                        |                           | 4.272<br>(-2.360)      |                      |
| Wave (Ref: wave 1)                                       |                          |                      |                        |                           |                        |                      |
| Wave 2   | -0.726*<br>(-0.365)      | -1.085**<br>(-0.367) | -0.567<br>(-0.364)     |                           |                        |                      |
| Wave 3   | 0.981*<br>(-0.406)       | 0.500<br>(-0.400)    | 0.986*<br>(-0.396)     |                           |                        |                      |
| Wave (Ref: wave 5)                                       |                          |                      |                        |                           |                        |                      |
| Wave 7   |                          |                      |                        | 2.661***<br>(-0.523)      | 2.715***<br>(-0.511)   | 1.698***<br>(-0.505) |
| Wave 8   |                          |                      |                        | 3.196***<br>(-0.521)      | 3.377***<br>(-0.509)   | 2.081***<br>(-0.510) |
| Constant   | -0.969<br>(-0.564)       | -0.707<br>(-0.519)   | 0.549<br>(-0.560)      | 5.626***<br>(-0.666)      | 5.525***<br>(-0.645)   | 3.933***<br>(-0.703) |
| r <sup>2</sup>   | 0.008                    | 0.011                | 0.204                  | 0.011                     | 0.013                  | 0.274                |
| N  | 8056                     | 8465                 | 7394                   | 4731                      | 4951                   | 4437                 |
| N  | 3431                     | 3736                 | 3073                   | 2129                      | 2236                   | 1988                 |

Data: DAB panel study; Standard errors in parentheses. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Table A7 Clustered Regression Analyses: Magnitude Prestige Scale

|  | Occupational aspirations |                      |                        | Occupational expectations |                        |                      |
|--|--------------------------|----------------------|------------------------|---------------------------|------------------------|----------------------|
|  | W1-3                     | W1-3                 | W1-3                   | W5-8                      | W5-8                   | W5-8                 |
| Migration background (vs. native)                        | 5.591***<br>(-1.056)     |                      |                        | 4.740***<br>(-1.319)      |                        |                      |
| Region of origin (Ref: native Swiss)                     |                          |                      |                        |                           |                        |                      |
| It, Es, Balkan, Tur, Por                                 |                          | 4.718***<br>(-1.271) | 11.988***<br>(-1.273)  | 4.591*<br>(-1.785)        | 10.091***<br>(-1.746)  |                      |
| EU15   |                          | 2.660<br>(-2.059)    | 3.407<br>(-2.027)      | 5.016*<br>(-2.438)        | 3.661<br>(-2.319)      |                      |
| Other country of origin                                  |                          | 7.088***<br>(-1.240) | 9.257***<br>(-1.215)   | 4.732**<br>(-1.570)       | 3.995**<br>(-1.492)    |                      |
| Highest parental ISEI                                    |                          |                      | 1.630***<br>-0.255     |                           | 1.109***<br>(-0.332)   |                      |
| School type lower secondary (Ref: Advanced requirements) |                          |                      |                        |                           |                        |                      |
| Basic requirements                                       |                          |                      | -18.425***<br>(-0.965) |                           | -16.781***<br>(-1.508) |                      |
| Baccalaureate school                                     |                          |                      | 19.083***<br>(-2.269)  |                           | 2.884<br>(-1.903)      |                      |
| Type of upper secondary education (Ref: VET)             |                          |                      |                        |                           |                        |                      |
| Baccalaureate or middle school                           |                          |                      |                        |                           | 20.985***<br>(-1.590)  |                      |
| Missing information                                      |                          |                      |                        |                           | 2.292<br>(-3.793)      |                      |
| Wave (Ref: wave 1)                                       |                          |                      |                        |                           |                        |                      |
| Wave 2   | -1.370*<br>(-0.613)      | -1.810**<br>(-0.615) | -1.059<br>-0.618       |                           |                        |                      |
| Wave 3   | 1.511*<br>(-0.695)       | 1.026<br>(-0.684)    | 1.807**<br>-0.682      |                           |                        |                      |
| Wave (Ref: wave 5)                                       |                          |                      |                        |                           |                        |                      |
| Wave 7   |                          |                      |                        | 4.057***<br>(-0.907)      | 4.040***<br>(-0.890)   | 2.750**<br>(-0.904)  |
| Wave 8   |                          |                      |                        | 5.981***<br>(-0.946)      | 6.186***<br>(-0.924)   | 4.629***<br>(-0.944) |
| Constant   | -1.424<br>(-0.897)       | -1.096<br>(-0.826)   | 0.016<br>(-0.911)      | 12.419***<br>(-1.095)     | 12.366***<br>(-1.056)  | 9.805***<br>(-1.187) |
| r <sup>2</sup>   | 0.008                    | 0.009                | 0.148                  | 0.010                     | 0.011                  | 0.181                |
| N  | 8054                     | 8462                 | 7391                   | 4751                      | 4971                   | 4456                 |
| N_clust  | 3431                     | 3735                 | 3072                   | 2133                      | 2240                   | 1992                 |

Data: DAB panel study; Standard errors in parentheses, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Table A8 Latent Growth Curve Model: Magnitude Prestige Scala

|                          | Occupational aspirations |                       | Occupational expectations |                       |
|--------------------------|--------------------------|-----------------------|---------------------------|-----------------------|
|                          | $\alpha_1$               | $\beta_1$             | $\alpha_2$                | $\beta_2$             |
| Constant                 | 78.770***<br>(-0.826)    | 0.081<br>(-0.051)     | 91.884***<br>(-1.058)     | 0.200***<br>(-0.027)  |
| $\alpha$                 |                          | -0.012***<br>(-0.003) |                           | -0.006***<br>(-0.001) |
| It, Es, Balkan, Tur, Por | 4.042**<br>(-1.472)      | 0.098<br>(-0.094)     | 4.834*<br>(-2.131)        | -0.006<br>(-0.048)    |
| EU15                     | 1.729<br>(-2.276)        | 0.105<br>(-0.144)     | 7.163*<br>(-3.022)        | -0.036<br>(-0.062)    |
| Other country of origin  | 6.170***<br>(-1.408)     | 0.154<br>(-0.090)     | 6.077**<br>(-1.886)       | -0.019<br>(-0.041)    |
| R <sup>2</sup>           | 0.009                    | 0.073                 | 0.011                     | 0.145                 |
| Chi <sup>2</sup>         | 23.852***                |                       | 3.233                     |                       |
| RMSEA/ SRMR              | 0.036/0.010              |                       | 0.000/0.006               |                       |
| CFI/TLI                  | 0.993/0.979              |                       | 1.000/1.002               |                       |
| N                        | 3735                     |                       | 2229                      |                       |

Data: DAB panel study; Standard errors in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table A9 Latent Growth Curve Model with Controls: Magnitude Prestige Scala

|                                     | Occupational aspirations |                       | Occupational expectations |                       |
|-------------------------------------|--------------------------|-----------------------|---------------------------|-----------------------|
|                                     | $\alpha_1$               | $\beta_1$             | $\alpha_2$                | $\beta_2$             |
| Constant                            | 80.204***<br>(-0.953)    | 0.070<br>(-0.061)     | 88.374***<br>(-1.271)     | 0.189***<br>(-0.033)  |
| $\alpha$                            |                          | -0.013***<br>(-0.003) |                           | -0.006***<br>(-0.002) |
| It, Es, Balkan, Tur, Por            | 11.179***<br>(-1.580)    | 0.239*<br>(-0.106)    | 12.090***<br>(-2.135)     | -0.003<br>(-0.055)    |
| EU15                                | 1.885<br>(-2.235)        | 0.162<br>(-0.145)     | 5.324<br>(-2.883)         | -0.039<br>(-0.064)    |
| Other country of origin             | 8.963***<br>(-1.416)     | 0.135<br>(-0.096)     | 6.174***<br>(-1.839)      | -0.031<br>(-0.044)    |
| Parental Occupation:<br>ISEI        | 1.719***<br>(-0.293)     | 0.022<br>(-0.020)     | 1.675***<br>-0.385        | -0.009<br>(-0.009)    |
| Track Sec. I: Basic                 | -19.582***<br>(-1.294)   | -0.126<br>(-0.102)    | -17.198***<br>(-1.863)    | -0.065<br>(-0.054)    |
| Track Sec. I (Ref: Ad-<br>vanced)   |                          |                       |                           |                       |
| Track Sec. I: Pre-<br>Baccalaureate | 18.153***<br>(-1.959)    | 0.330*<br>(-0.140)    | 4.967*<br>(-2.331)        | -0.052<br>(-0.052)    |
| Track Sec. II (Ref: VET)            |                          |                       |                           |                       |
| Track Sec. II: General<br>education |                          |                       | 19.362***<br>(-1.936)     | 0.134*<br>(-0.054)    |
| Track Sec. II: Other                |                          |                       | -1.220<br>(-3.682)        | -0.005<br>(-0.087)    |

Continuation of table A9 on the next page.

Continuation of table A9.

|                  | Occupational aspirations |             | Occupational expectations |             |
|------------------|--------------------------|-------------|---------------------------|-------------|
|                  | $\alpha_1$               | $\beta_1$   | $\alpha_2$                | $\beta_2$   |
| R <sup>2</sup>   | 0.216                    | 0.077       | 0.293                     | 0.144       |
| Chi <sup>2</sup> |                          | 18.314*     |                           | 8.005       |
| RMSEA/SRMR       |                          | 0.032/0.007 |                           | 0.000/0.006 |
| CFI/TLI          |                          | 0.997/0.990 |                           | 1.000/1.002 |
| N                |                          | 3072        |                           | 1983        |

Data: DAB panel study; Standard errors in parentheses, \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .