



Working Paper



Immigrants' Aspiration Paradox

Theoretical Explanations and
Determinants of the Aspiration Gap
between Native and Immigrant Students

Zerrin Salikutluk

Zerrin Salikutluk

Immigrants' Aspiration Paradox

Theoretical Explanations and
Determinants of the Aspiration Gap
between Native and Immigrant Students

Arbeitspapiere – Working Papers
Nr. 150, 2013

Mannheimer Zentrum für Europäische Sozialforschung

Zerrin Salikutluk:

Immigrants' Aspiration Paradox: Theoretical Explanations and Determinants of the Aspiration Gap between Native and Immigrant Students / Zerrin Salikutluk. – Mannheim: 2013

(Arbeitspapiere - Mannheimer Zentrum für Europäische Sozialforschung; 150)
ISSN 1437-8574

Not available in book shops.

Token fee: € 3,00

Purchase: Mannheimer Zentrum für Europäische Sozialforschung (MZES)

D – 68131 Mannheim

www.mzes.uni-mannheim.de

Editorial Note:

Zerrin Salikutluk is a researcher at the Mannheim Centre for European Social Research (MZES) and lecturer for the professor of Sociology, Societal Comparison. She previously studied social science at the University of Mannheim. At the MZES she is currently working in the project "Children of Immigrants Longitudinal Survey in Four European Countries" (CILS4EU). Her main research interests are educational inequality, educational aspirations and decisions.

Abstract

Educational degrees are crucial predictors for the socio economic positioning of individuals. Educational aspirations can help to explain individual differences in educational decisions evoking long-term consequences for the academic future and chances on the labour market. Generally aspirations are based on past academic achievement and families' endowment with resources needed to reach targeted educational levels. But, albeit performing worse at school and holding lower social status, some immigrant groups tend to express higher educational ambitions than natives. Compared to the majority group, first generation immigrants – and their descendants as well – seem to be more resistant towards familial or institutional restrictions.

The aim of this paper is to discuss possible reasons drawn from different theoretical argumentations to disentangle this aspiration-achievement paradox. To test the explanatory power of these theoretical approaches data from the project "Young Immigrants in the German and Israeli Educational Systems" including families from Turkey and the former Soviet Union are used.

The results indicate that the paradox does not apply to students from the former Soviet Union and that various factors have to be considered to solve Turkish minorities' paradoxical relation between educational ambitions and performances. While native students' aspiration patterns can mainly be explained by their parents' education and their school achievement, an unexplained gap between native and Turkish students appears after controlling for indicators of social background and academic abilities. Thus, it is necessary to analyse differences in the factors determining the level of aspirations. The findings show that the long-term benefits of high educational degrees are valued higher by minority students than by natives. Attaining higher education to overcome structural barriers appears to be the main difference of Turks compared to the other groups. However, except for the assumption of missing information about the requirements of the educational system, all other theoretical explanations seem to contribute to the solution of the puzzle.

Contents

1. The Aspiration-Achievement Paradox of Immigrants	7
2. Educational Aspirations – Terms and Concepts	8
3. Germany's Educational System and the Situation of Turks and FSU immigrants	9
4. Theories Explaining the Paradox	10
4.1 Immigrant Optimism	11
4.2 Information Bias	11
4.3 Blocked Opportunities	12
4.4 Social Capital	13
4.5 Summary of the Explanations	14
5. Data and Variables	15
6. Empirical Results	17
6.1 Aspiration Patterns of Ethnic Groups	17
6.2 Test of Theories	20
6.3 Ethnic Differences in the Determinants of Aspiration	23
7. Summary of Results and Discussion	24
8. References	27
Appendix	32

1. The Aspiration-Achievement Paradox of Immigrants

Depending on the attained educational and occupational levels, the allocation possibilities on the labour market and with that the material compensation connected to these positions is restricted. As income mediates crucial aspects of life, the qualifications acquired in the educational system have extensive consequences on labour market chances, health and the quality of life. Due to constrained opportunities in their home countries, immigrants are willing to change their residence in pursuit of social and economic upward mobility. They are drawn by a promising labour market and educational prospects in the country of destination. However, the persistence of ethnic disparities in educational and labour market outcomes in European countries (cf. Granato and Kalter 2001, Heath and Brinbaum 2007, Kristen and Granato 2007) points out that only a small proportion of immigrants in Europe is able to realize the desired improvement.

Educational inequalities do not only emerge due to academic performance gaps between social or ethnic groups. Educational decisions also contribute to educational imbalances especially at crucial transition points in the educational system (Boudon 1974, Erikson and Jonsson 1996). In order to explain the underlying dual process of educational disparities, educational aspirations play an important role by shaping on the one hand choices that are relevant for the educational career and on the other hand school related behaviour which has an impact on school performances. Although plenty of studies illustrate that immigrant parents and their children have high educational aspirations and expectations (Brinbaum and Cebolla-Boada 2007, Heath and Brinbaum 2007, Becker 2010, Jonsson and Rudolphi 2010, Kristen and Dollmann 2010, Relikowski et al. 2012) they are not able to realize their ambitious goals. So far little is known about the mechanism(s) driving immigrants' high educational aims and why they are underachieving native students.¹ Theoretically, this so-called aspiration-achievement paradox may result from two reasons: First, immigrants' estimation of the probability of successfully completing higher education can be biased by a strong projection of wishes and unrealistic aspirations. The salience of hoping for socio economic improvement can induce a strong belief of education as key for upward mobility. Secondly, it may be possible that the aspired level of education by immigrants is not unrealistic per se. However, immigrants may not be able to realize their goals due to language or cultural barriers in the country of residence. Or minority students might verbalize high educational aims without suiting their school-related behaviour to their stated aspirations. Mickelson (1990) argues that minority students perceive their opportunity structure in a different way than do students from the majority population. While they hold highly positive attitudes towards education on the abstract dimension, they might believe that the access to higher education or the benefit gained of high academic qualifications is lower for them compared to their native counterparts.

The present work focuses on the educational aspirations of immigrants in Germany before the final educational degree is attained. More precisely, the first goal of this paper is to compare the educational aims of adolescents with migration background and natives close to a transition to the lower section of secondary school. This comparison is done with members of the two biggest minority groups in Germany, Turks and immigrants from countries of the former Soviet Union (FSU). Both groups are particularly interesting as they differ in certain characteristics possibly relevant for educational aspirations. The second aim is to systematically discuss and test theories on the aspiration paradox of immigrants. While literature offers a lot of theories providing reasonable explanations why immigrants and immigrants' children strive towards apparently unattainable high educational degrees the empirical evidence remains unclear.

The paper is structured as follows. First of all, definitions and concepts of the aspiration research framework are given in the following chapter. In the next chapter, some general information on Germany's edu-

¹ This paradox does not apply to all immigrant groups. For instance, Asian immigrants in the US do not only have higher educational goals, they are also overachieving natives (Kao and Tienda 1995, Hao and Bonstead-Bruns 1998).

cational system and the situation of the immigrant groups of interest are roughly outlined. In the fourth chapter theoretical considerations, which try to deliver possible explanations for immigrants' high aspirations, are presented. This chapter is divided into four sections, each including the assumptions of the single theories. After the description of the data set the results of the analyses are presented. For this purpose different models referring to the discussed approaches are compared with each other and as a second step separate models for each group are calculated. Finally, the last chapter is an overall discussion of the results and gives an outlook for future research.

2. Educational Aspirations – Terms and Concepts

The concept of aspirations was originally introduced by Tamara Dembo (1931) to capture changes of goals individuals try to achieve during experiments. Dembo describes aspirations as vectors of powers leading to goal-striving behaviour and attitudes once individuals have set their aims. This concept developed in experimental situations was transferred to real life situations in which individuals try to achieve an aim by behaving in certain ways. Educational aspirations are used as umbrella term to cover different meanings in different studies, e.g. academic wishes, educational plans, or chances to successfully attain higher educational degrees. There is no clear agreement between social scientists about what aspirations exactly are and how they should be measured (cf. Morgan 1998). Theoretically, idealistic and realistic aspirations can be distinguished (Haller 1968), whereby the latter are sometimes referred to as expectations. Essentially, idealistic aspirations reflect aims that are mainly based on wishes regardless of any constraints. For realistic aspirations, in contrast, restrictions are taken into account. For instance limited financial resources, insufficient academic abilities or low probabilities of success can be reasons why realistic educational aspirations are lower than idealistic ones. Both aspiration types are not static and can converge over time. Changes in the level of aspirations are caused by changes in the determinants that influence them. Similar to the varying concepts and interpretation of educational aspirations different theoretical approaches offer different determinants and causal relationships between them (Eccles et al. 1983; Farmer 1985; Sewell et al. 1969, 1970). In this working paper aspirations are defined as overall educational goals determining educational decisions at transition points. When the result of the aspiration formation process is seen as long-term psychological decision, rational choice theory can deliver a basic model for this process.²

According to rational choice theory the decision for an aspiration level underlies the result of benefit-cost-weighting. To calculate the expected utility U of each option subjective benefits (B), probabilities of success (p) and costs (C) are assigned to it. After multiplying the benefit and the success probability, the costs that are connected to the realization of an educational aim are subtracted (Erikson and Jonsson 1996, Esser 1999). Each of the three terms of the formula $U = B \cdot p - C$ can vary individually but the objective values are equal for everyone. In this regard parents' social class is crucial by influencing values, attitudes and beliefs. For example, relatively to the household income the costs of higher education will be weighted less in privileged groups than in families having a low socio economic status. Financial resources can help to increase the probability of success as well by delivering the possibility of affording extra tutorial hours. In addition to that simply the fact that parents have graduated from university can influence the perception of the reachability of higher education. But not only the perception of the opportunity structure differs; there are also reasons to believe that the expected utility of high education is higher for upper classes. By integrating assumptions of the status attainment theory into the rational choice theory, Breen and Goldthorpe (1997) as well as Esser (1999) argue that high classes try to avoid psychological costs in terms of status

2 A few years after the introduction of the aspiration concept Lewin et al. (1944) discussed the resultant valence theory to predict aspirations which comes very close to modern rational theories. The basic idea of the valence theory is to balance the positive valence of an option multiplied with the probability of success against the negative valence times the complementary probability. The alternative with the highest remaining positive value is chosen as level of aspiration.

loss, which would occur, if their children were not able to reproduce parents' social position.³ Beside the social background, past school achievements help parents and students to estimate their academic abilities and the appropriate level of education as a prerequisite for their school achievements.

Furthermore, following the work of (educational) psychologists personality traits and the academic self-concept, which are important for the attribution of past achievements and the estimation of success chances, should be considered in order to explain which goals students set for themselves (Wigfield and Eccles 2000, Farmer 1987).

Finally, another set of factors that influences which educational degree adolescents regard as adequate to strive for can be described as social environment including significant others' expectations and support (Sewell et al. 1969, 1970; Farmer 1985, 1987). Students are confronted with their teachers' feedback on their performances in different school subjects and their peers' attitudes about school and school related behaviour. Beyond the school context, parents also communicate their expectations and wishes in interactions with their children at home. Previous studies indicate that highly educated parents are more involved and have higher expectations for their children's academic career (e.g. Shumow and Miller 2001, Singh et al. 1995, Gill and Reynolds 1999).

While socio economic background factors should affect both the personality and the social capital, it is assumed that the relationship of the latter two is reciprocal (Farmer 1985). Thus, the socio economic background, personality traits and significant others determine the educational aspiration of students through influencing the perceived benefit of education, subjective assessment of success probabilities, attitudes towards education and the costs that have to be borne.

3. Germany's Educational System and the Situation of Turks and FSU immigrants

One of the most particular features of the German educational system is the high degree of stratification with limited access to higher academic tracks. After primary education (in most federal states after grade four) students are assigned to three different tracks according to their grades and abilities. The lowest track (Hauptschule) and the intermediate track (Realschule) qualify adolescents for an apprenticeship in the (dual) vocational training system. In addition to practical work in a company, the apprenticeship is often accompanied by further academic qualifications. The duration of the school careers is shorter in these tracks compared to upper secondary school (Gymnasium). The degree from Hauptschule is normally acquired at the end of grade nine and from Realschule after grade ten. In contrast, it is necessary to pass an extensive exam at the end of grade thirteen (in some federal states after grade twelve) to successfully finish the Gymnasium. This so-called Abitur opens up the possibility of university entrance and it is not possible to enrol at university with lower degrees. When students are assigned to one of the lower tracks after primary school, they can be promoted before or after finishing the lower tracks to upper secondary school, if they are able to improve their school performance. An alternative track in many federal states are comprehensive schools, which give the option to quit school at all three levels given the required conditions are met.⁴

International studies on academic performances like PISA or IGLU show for Germany that students with migration background differ significantly from native students regarding abilities demanded in school

3 The idea of combining rational choice theory and status attainment theory to predict aspirations and their mediating effect on educational outcomes has been developed since the prominent Wisconsin Model (cf. Morgan 1998).

4 For more detailed information on alternative pathways to university entrance see also Jacob and Weiss (2010).

(Müller and Stanat 2006, Stanat 2006, Schwippert et al. 2007). Furthermore in representative surveys such as the German Socio Economic Panel the disadvantage of minorities at the transition from primary to secondary education is detected repeatedly (Diefenbach 2010). Even though ethnic disparities decreased over the last decades, they are still observable for first and second generation migrants (Kristen and Granato 2007). In this paper the focus lays on the two biggest minority groups – families from Turkey and from the former Soviet Union – belonging to different migration flows and thus, differing on central dimensions of integration and migration motivation. While the educational aspirations of Turkish families were investigated in different studies (e.g. Kristen and Dollmann 2010, Relikowski et al. 2012), there is little research on FSU immigrants' educational aims as they are usually not identified as such in surveys.

Turks have been recruited as guest workers since the beginning of the 1960s to compensate a labour shortage, which was experienced in West Germany. The majority of this population can be described as negatively selected regarding their educational, social, and economic resources. The motivation to migrate from rural areas of Turkey was simply to improve the economic situation by earning more money as unskilled workers in factories. Originally expected to be temporary immigrants in Germany, institutional changes (e. g. right of family reunification) led to longer stay tendencies. Among all immigrant groups the proportion of those with Turkish origin is the highest (25 per cent) (Bundesamt für Migration und Flüchtlinge 2010). In the above-referenced studies, Turkish parents and students indicate higher educational ambitions than natives on average after controlling for resources in the household and school grades.

The second largest group are immigrants from eastern European states who have German ancestry and are called (Spät-)Aussiedler (14 per cent) (Bundesamt für Migration und Flüchtlinge 2010). Those who immigrated until the end of the 1980s were strongly attached to German culture and language and mainly came for family reunification reasons to Germany. Since the beginning of the 1990s discrimination, political and economic instabilities in countries of the former Soviet Union made younger people with less connection to German culture and worse language skills use the advantage of having a supportive network in Germany and leave their home countries. However, many of them possess a formal qualification: about half of them acquired post-secondary, lower tertiary or tertiary education (Konietzk and Kreyenfeld 2001; Kogan 2004, 2011). Additionally to their relatively high educational level, FSU immigrants are naturalized in Germany and are provided integration assistance by the state. Even though the German state tries to avoid housing segregation by regulating the place of residence via laws, the degree of residential segregation is as high as for other immigrant groups. Furthermore, FSU immigrants have to face similar problems in the educational system or at the labour market like other minorities. However, students from the FSU are an interesting case as they or their parents migrated to Germany and thus should have similar educational aims as other immigrant groups, but the institutionally encouraged assimilation on certain dimensions might also lead to adapting the aspiration patterns of natives.

4. Theories Explaining the Paradox

The literature offers different approaches claiming to explain the aspiration gap between minorities and the majority population. In the following sections these approaches will be presented separately. The chapter ends with a summary of the approaches and a discussion, in how far they apply to the aspirations of Turkish and FSU students.

4.1 Immigrant Optimism

Aspirations are dynamic constructs that are adjusted to short- and long term influences. With regard to the role significant others play for changes in the aspiration level over time it can be presumed that parents' impact on their children is twofold: Firstly, parents act with their own educational degree as models and secondly they formulate and communicate their expectations as definers. In general, the defining function of parents is stronger than the modelling function with no differences for mothers and fathers (Cohen 1987). The modelling function of immigrant parents can be diminished when they have acquired their education in the country of origin. But, regarding the defining function the immigrant optimism theory makes a specific assumption. Immigrants are seen as positively selected groups, because they were willing to leave their home countries and to settle in another country with the aim of socio economic improvement (Kao and Tienda 1995). Even if the first generation finds itself at society's lowest rank, their wish is maintained and passed to the following generations. The younger generation is expected to be successful in the host country and to realize their parents' pursuit. Contrary to following generations, transnational immigrants experience disadvantages at the allocation on the labour market due to (at least partly) devaluation of their human capital and cultural and language barriers. As their descendants attend school in the host country and have sufficient language skills immigrant parents' hope their children will enhance their social status, whereby educational degrees are perceived to play a key role for upward mobility. According to Ogbu (1987) the precondition for high ambitions is voluntary migration. Even after contrary experiences in the host country voluntary immigrant keep holding on their wish of socio economic improvement. On the other hand, involuntary immigrants do not develop such optimism by the loss of belief in the meritocratic principle. The categorization of voluntary and involuntary migration can be complicated and it is not clear if individual migration motives rather than motives of certain immigrant groups are decisive for this theoretical explanation. However, the immigrant optimism is often cited in the literature on immigrants' high aspirations but there is no clear evidence showing that immigrant optimism is the main cause for the aspiration paradox between migrants and natives (i. e. Kao and Tienda 1995, Heath and Brinbaum 2007, Roth et al. 2010). To deliver empirical evidence for the theoretical assumptions it must be shown that immigrant students emphasize the importance of intergenerational upward mobility stronger than natives. As Turkish parents' probably immigrated for economic reasons to Germany status improvement ambitions should be especially high for Turkish students.

4.2 Information Bias

Kao and Tienda (1998) have also postulated that missing information and knowledge about host country's educational system can bias the perception of expectations in schools and thus deliver an explanation why minorities have unrealistically optimistic aspirations. While they formulate this hypothesis specifically for Hispanic students, this line of assumptions is applied one decade later on immigrant parents in general (Becker 2010, Relikowski et al. 2009, Roth et al. 2010). Parents who passed through education in their home countries may not have concrete ideas about the standards and demands of the school system in the host country and hence, could formulate high expectations regarding the academic career of their children. The missing experiences in the host country have to be replaced by alternative information. Depending on the source (e. g. teachers, friends or relatives) these alternative information can compensate parents' lack of information or distort the perception of requirements in a wrong direction. The latter or the option that parents do not gather any information can result in a fatal overestimation of a child's chance of finishing high academic degrees or an underestimation of preconditions for the realisation of educational aims. Parents are likely to get information and advice from their social networks by their relatives and friends. If the network consists only of individuals with the same ethnic origin, the risk of exchanging wrong information is high. Hence, having regular contact with natives who can explain the rules and conditions that have to be fulfilled in schools can be beneficial for immigrants.

Like the immigrant optimism approach this theoretical explanation is not empirically proven yet. Besides lacking empirical evidence, there is also another weak point of this approach. It ignores that elder siblings can substitute immigrant parents' missing experiences. Elder brothers and sisters who attended or still are attending school in the host country can fulfil a special role. Even when parents could not rely on alternative information sources during the school career of the oldest child, they were able to collect experiences by observing the relation between school achievement and academic progress of their oldest child.

Beyond the chances of following different school paths, immigrants might also assess labour market chances with lower educational degrees than natives. Especially in Germany it is possible to enter certain professions via vocational training whereas in other countries university education is required. If immigrant families are not aware of this fact they may persist on striving towards university education although their overall aim of socio economic improvement could already be reached with a lower degree. For Germany it was observed that Turkish students choose to enter university instead of starting an apprenticeship after finishing upper secondary school more often than natives do (Kristen et al. 2008) – which could be interpreted as supportive of the assumed lack of information regarding alternative ways to occupations. Generally, at first sight there is no clear argument, why one of the minority groups should suffer more than the other from missing information. Moreover, it seems to be plausible that second generation immigrants should be able to cope better with the educational system. As FSU students are more likely to be first generation immigrants, this approach could be more applicable for them.

4.3 Blocked Opportunities

According to the blocked opportunities approach structural and social barriers to educational and labour market success can evoke two different reactions: Minorities can compensate the restrictions their minority status brings by overachieving natives regarding academic achievements (Sue and Okazaki 1990) or perform below average since they do not see education as possibility for upward mobility (Fordham and Ogbu 1986, 1991, Gibson and Ogbu 1991). The conditions, which lead to one reaction or the other, are not specified by the theory. Ogbu's distinction between voluntary and involuntary migration is used here again as explanation (Kao and Tienda 1998). Immigrated parents, who anticipate discrimination of their children on the labour market, communicate them that they can overcome hurdles only by attaining high educational levels. In this context, Heath and Brinbaum (2007) assume that due to perceived discrimination at earlier transition points from school to labour market, opportunity costs of staying on in education are rated lower by minority adolescents, which is why they decide to continue with education. Hence, different cost and benefits estimation should be reasons for higher educational goals of minorities.

To integrate the explanation offered by this approach into the rational choice model it can be argued that the benefits assigned to higher education are higher for immigrants than for native students as education is seen as key for the aimed upward mobility. Thus, the data should indicate higher ratings for education by Turkish students as children of labour migrants hoping for social upward mobility than by Germans. Furthermore, considering the migration motive of FSU immigrants, there should not be a huge gap between them and their native peers.

4.4 Social Capital

Social Capital within the Family

Phalet and Schönplflug (2001) describe the intergenerational inheritance of attitudes and values in immigrant families as paradox of transmission. The paradox of transmission enhances on the one hand the vanishing meaning of immigrant parents' norms and values due to the different living context and on the other hand the increasing need for ethnic resources and solidarity to overcome difficulties associated with immigrants' situation in the host country (Phalet and Schönplflug 2001, Phalet and Hagendoorn 1996). Due to these countervailing effects it is unclear which relevance immigrant parents' educational aspirations have for their children's own educational aims. The mentioned arguments of the immigrant optimism or blocked opportunities approach can manifest themselves in an intergenerational aim for upward mobility leading to a complete consonance between parents and their children with regard to educational aims and unrestricted support by parents. However, it is conceivable that not only the importance of parents' culture is diminishing but also their educational wishes as children might be aware that their expectations arise from a context not applicable to their current situation.

In addition to the fact that parents completed their education in their home country immigrant parents may not be perceived by their children as role models in terms of education at all. Even though literature misses to consider the role older siblings play for the school career of their younger siblings it is plausible to assume that they can act as substitutes for certain functions usually fulfilled by parents. Older siblings can have first-hand experiences in host country's educational system and can assist their younger siblings in an advisory role. Furthermore, with their accumulated knowledge they can provide help with homework and exams. Even everyday interactions between siblings can constitute school success. For instance siblings regularly speaking in the host language with each other can improve their language skills that way even though they might communicate with their parents in their mother tongue. So far siblings' effect on school achievement was assumed to be a negative one as it is argued that the more siblings are in a household the less resources per person are available (Nauck et al. 1998, Schauenberg 2007). However, not only the discussed active support opportunities of older siblings are arguments against the assumed general disadvantage of siblings.⁵ If older siblings attained higher education, parents and younger siblings can perceive this as indication for the possibility to finish school at higher levels and thus increase their expectations.

Social Capital outside the Family

Students interact with further significant others – teachers and the peer group – in school. The peer group has two functions: First the peer group is a reference to assess the own academic abilities in relation to other students and hence to estimate the probability of successfully gaining educational aims. Second, the peer group acts as social group in which norms and values are shared and communicated capturing the exchange of information, support, definition of role models and attitudes towards school-related behaviour (Lising Antonio 2004). The composition of the peer group can affect the aspiration level of students, e.g. having friends with high socio economic background increases the aspiration of less advantaged students (Burgess and Umaña-Aponte 2011). Considering segmented assimilation theory peers with the same ethnic background should support each other more and have greater solidarity while at the same time the

5 Caplan et al.'s (1992) observation of refugees from South Eastern Asia in the US revealed that siblings support and profit from each other. By acting as tutors for the younger siblings, the older ones have the advantage of repeating what they have learned in earlier classes.

extent of social control is higher (cf. Becker 2010). A beneficial influence is expected for minority groups having high educational aspirations. However, the opposite could also occur: Researchers have detected for the US context that students belonging to groups known for being unsuccessful at school are negatively sanctioned by their peers of the same ethnic origin when they put effort into their school work (Matute-Bianchi 1986, Suarez-Orozco 1991).

Teachers' positive or negative expectations can help to improve or hamper students' academic development and achievement (Eccles and Jussim 1992). Beside ability, gender, social class and ethnicity other factors are influencing, i.e. how teachers assess their students' achievement. With respect to ethnicity, the expectations are lower for students belonging to minority groups than for natives (Cotton and Wiklund 1997, Kintrea 2009). Different effects like the Pygmalion Effect (Rosenthal and Jacobson 1968, 1992), the Sustaining Expectations Effect (Bamburg 1994) or the Halo Effect (Troilloud and Sarrazin 2002) can deliver reasons, why minority students cannot reach their targeted educational aims even though they persevere.

4.5 Summary of the Explanations

Before summarizing the specific assumption of the approaches, some general aspects should be emphasized. Common to all of them is the lacking empirical evidence as most of them are cited in the literature without being tested. It should also be noted that the approaches cannot be labelled as theories as they formulate vague reasons for the observed ambitions of minorities without pointing out clear conditions evoking the aspiration paradox. Furthermore, some of the theories refer to parents' aspiration and cannot necessarily be transferred adequately to adolescents' aspiration. Although the focus of each explanation differs, the approaches are not mutually exclusive and can be merged into another. Nevertheless, they can be divided into two categories depending on whether the reason for the aspiration paradox is embedded during the aspiration formation process or during the translation into educational degrees.⁶ The immigrant optimism and the blocked opportunities approach belong to the first type of explanation. By attaining high education a more global goal from an intergenerational perspective should be achieved. While this is according to immigrant optimism the improvement of parents' socio economic situation, the blocked opportunities approach argues that the main reason is to overcome discrimination hurdles. Surely, discrimination can be seen as hindering the targeted upward mobility. Shifting the emphasis to the students' perspective, currently perceived discrimination at school can provoke high aspirations as reaction to undervalued achievement. Also horizontal transmission of expectations by peers and (older) siblings can strengthen the ambitions to successfully finish higher levels of education.

The hypotheses drawn by the information bias approach can refer to the decision of the aspiration level but can also be relevant for the realization of the set aims. Having decided which educational degree to strive to, missing knowledge on the requirements that has to be met can lead to unrealized goals. It is not mentioned in the literature either that even well-informed minorities might fail to achieve their aspirations due to missing resources, particularly in terms of primary effects. The last explanation for unrealized aims is a lack of willingness to adapt the school-related behaviour, whereby peer influence might be decisive for the behaviour of adolescents.

⁶ There are also alternative approaches assuming that high aspirations of migrants are simply a statistical artefact which results from biased answers. Studies show that some minority groups tend to fill in questionnaires by using the extreme scale values more often than natives (Davis et al. 2011, Marín et al. 1992). Mickelson (1990) adds to this type of explanation with her findings indicating that minorities are not able to differentiate between abstract and concrete attitudes towards education. When asked about the general value of education, minorities respond highly positive but do not perceive education as influential for their own lives and careers.

Regarding differences among Turks and FSU immigrants, there are not for all possible explanations arguments speaking in favour of or against the applicability to the groups. According to the migration motive, Turks should reflect a higher importance of intergenerational upward mobility. As guest workers, the main reason of their parents to immigrate to Germany was to improve the economic facilities. The disadvantaged situation of their parents might lead to the inheritance of ambitious aims for future positions on the labour market. In addition, the worse positioning of the group on average can arise the suspicion of discrimination, thus upper secondary education might be seen as opening possibilities to labour market sections where no discrimination hurdles are set. Unlike the economically motivated migration of Turks, there is no direct reason to derive from the different migration motive that the same applies to FSU students. But, if parents from the FSU experience a devaluation of their educational degrees and work in poorer jobs compared to their occupations in the FSU, according to the blocked opportunities approach their children might be motivated to recover their parents' earlier position. As mentioned earlier, a lack of knowledge on Germany's educational system seems to be more plausible for FSU students as the majority of them are first generation immigrants.

5. Data and Variables

To analyse the educational aspiration of adolescents' German data of the first wave from the project "Young Immigrants in the German and Israeli Educational System" are used.⁷ In Germany, the data were obtained in three federal states – Hesse, Hamburg, and North Rhine-Westphalia – with comparable institutional settings. Three cohorts were chosen for the survey: Fourth graders close to their transition from primary to secondary school, ninth graders before their graduation from lower secondary school, and tenth graders before graduating at the intermediate level. For the purposes of the paper data on the elder cohorts attending Hauptschule, Realschule or comprehensive school at grade nine or ten are used. The target persons were identified via two sampling strategies in Germany. The data collection started by choosing families from lists of registration offices in eighteen cities. Personal interviews were conducted with the students and their mothers at their home by trained interviewers. Due to low willingness to participate the first sampling strategy was supplemented with school surveys in the same federal states. Each student filled out a self-administered questionnaire while mothers were asked to participate by telephone. Both strategies combined result in 2205 students in the German data, whereby only for 1564 cases a complete mother interview is available. Beside a native comparison group an equal number of Turkish families and families from the former Soviet Union (FSU) were surveyed in Germany. After excluding cases due to missing information from mother's interviews, other minority groups (N=143) or item non-response, 1052 cases are left for the empirical analyses.

Variables⁸

The dependent variable of the analyses is the realistic educational aspiration of students attending grade nine or ten. To measure educational ambitions students were asked about the highest degree they think they will reach. The answer categories were the possible school certificates in Germany: Hauptschulabschluss (lower secondary degree), Realschulabschluss (intermediate secondary degree), and Abitur (upper secondary degree).⁹ Only a low share of students (N=43) answers lower secondary

7 The German Federal Ministry of Education and Research (BMBF) funded the project. Similar to Germany, the Israeli sample includes natives and immigrants from the former Soviet Union. In both countries equivalent grades were selected and interviewed a second time in the following school year. For further information on the project see Jacob et al. 2012 (on request).

8 The distribution of all variables by ethnic groups can be found in appendix A1.

9 Originally "no degree" is another answer option besides the above-named degrees. But as the numbers of students thinking they will not reach any degree is very low, these cases are excluded from the analyses (N=10).

degree as their educational aim which is why the aspiration is recoded as binary variable indicating whether Abitur is ticked (1) or not (0).

The main independent variable is the ethnic origin of students defined on the basis of student's, parents' and grandparents' country of birth. If all mentioned persons are born in Germany the student is referred to as German. Measuring the ethnic background by birth countries has two advantages. First, it is possible to identify ethnic minorities as such even though they might be naturalized. As mentioned above, the naturalization of FSU immigrants makes it usually impossible to distinguish them from natives in empirical analyses. A second strength of the used data is the information on grandparents' country of birth, which helps to identify third generation immigrants. However, as shown in Appendix A1 only a small proportion of Turkish parents is born in Germany, thus the number of third generation immigrants is very low.¹⁰ Due to the design of the project three ethnic groups can be analysed: Germans, families from Turkey and families from the former Soviet Union.

As described in the theoretical section, it is necessary to include certain characteristics of students and their environment to explain their level of realistic educational aspirations. In the multivariate analyses gender, class level and school type, grades, academic abilities, self-esteem, mothers' and best friend's aspiration, socio economic and cultural resources are controlled.

Students' current position in Germany's highly stratified educational system is entailed by a combination of class level and school form. Respondents are divided into 9th graders at lower secondary school, 9th graders at comprehensive school, 10th graders at intermediate secondary school, or 10th graders at comprehensive school.

The academic abilities are measured by three variables. First, school achievement is controlled by an average of grades in Maths, German and English from the last school report. The grades are reversed, so the higher the average, the better the performance. In addition to school grades, results of non-verbal cognitive and language tests are used as separate sum scores. Twenty-five figure puzzles were presented to measure cognitive abilities.¹¹ The task was to complete a pair of figures, which fulfils certain logical conditions. A reading comprehension test was used to capture language abilities. Students were asked to read three texts and to answer twenty-one multiple-choice questions afterwards.¹²

Families' socio economic facilities are composed of the weighted monthly household income per capita and parents' education as modified Isced 97 categories (low: Isced 1 and 2, middle: Isced 3A, 3B, 4A, 5B, high: Isced 5A and 6, cf. UNESCO, 2000). As proxy for cultural capital the number of books at home divided into four categories (0 – 25, 26 – 100, 101 – 200, and more than 200 books) is controlled.

Self-esteem is constructed with two items of the Rosenberg's Self-Esteem Scale (1965) summed up in one variable. Adolescents told how strongly they agree or disagree with these statements on a four-point scale: "At times, I think I am not good at all" and "I certainly feel useless at times" (Cronbach's Alpha: 0.72).

The data set offers different indicators to test, whether the suggested theoretical approaches can explain the aspiration gap between natives and ethnic groups:

10 If parents were born in different countries, the county of birth of mother was given priority.

11 KFT 4-12+R by Heller and Perleth (2000).

12 Subtest for reading proficiency from Hamburger school achievement test (Behörde für Schule, Jugend und Berufsbildung, Amt für Schule, Hamburg 1998).

Immigrant optimism. It is possible to examine if intergenerational upward mobility is rated differently among ethnic groups. The questionnaire contains an item about how important it is for the students to work in an occupation that is better than the occupation of their parents measuring the need for intergenerational upward mobility. The agreement to the statement is measured on a five-point Likert-scale.

Information bias. Two variables can be used as indicator for the knowledge about the German educational (training) system. The first question is "Do you know what Fachhochschulreife means?" and the second one is "Do you know what the dual system in Germany is?" The students should choose which one of the given four answers is correct. They are categorized into three groups: those, who have answered both, one and none of the questions correctly.

Blocked opportunities. The data does not contain specific information whether minority students aspire to high educational degrees to overcome discrimination hurdles, but an indirect measure can be used. This indirect measure is composed by a comparison of the risk to get unemployed in the future with a degree from lower secondary school or upper secondary school respectively. Concretely the questions were "What do you think: How are the chances of being unemployed one day having the following educational degrees?" Answers were given on a five-point scale. The higher the value on the scale, the lower is the employment prospect. The evaluation for the lowest and the highest degree are contrasted and the constructed variable indicates the additional benefit Abitur has over lower secondary school.

Social capital. Beside the above-described indicators of families' characteristics mothers' educational wishes for their children are included in the models. Mothers were asked which educational degree they wish their child to attain, whereby the answers were coded in the same way as students' realistic aspirations. To suit the importance of significant others on educational goals, not only mothers' aspiration but the best friend's educational ambitions as reported by respondents are taken into account. In addition elder siblings' education or school type attended respectively are incorporated in the analyses by three categorical dummy variables: at least one elder sibling attends Gymnasium or finished secondary school with Abitur, elder siblings do not attend Gymnasium or have not reached Abitur, and finally respondent has no elder siblings.

6. Empirical Results

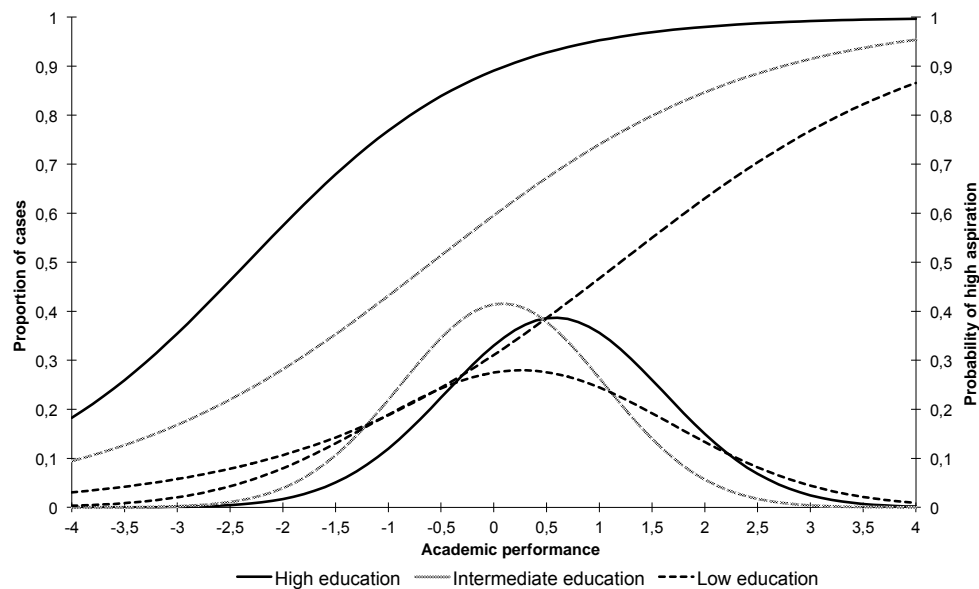
6.1 Aspiration Patterns of Ethnic Groups

From the theoretical point of view educational aspirations are referred to as anticipated educational decisions, in this case as transition to upper secondary school after finishing the lower or intermediate school track. To evaluate the feasibility of the verbalized aspiration of students the method used by Erikson et al. 2005 and Jackson et al. 2007 is applied for all ethnic groups separately. The groups are subdivided by the classification of parents' highest educational degree. Figure 1 to 3 present the results. Originally, this type of decomposition graphs was introduced to disentangle the relative importance of primary and secondary effects (Erikson et al. 2005). Here the estimated transition rate is substituted by the educational aspirations and, thus, the logistic curves indicate the proportion of students aspiring to finish upper secondary school at each point on the x-axis. On the x-axis the estimated normal distribution of academic performance by education class is illustrated. The academic performance of students whose parents attained university or upper secondary school is on average higher than the average performance of students with a lower educational background, except for Turkish students. While there are clear variances between different education classes in the group of German and FSU students, there is almost no difference regarding school

achievement of Turkish students. Another communality of German and FSU adolescents is the wide intra-group variance of the lowest education category which is probably due to low numbers of low educated German and FSU parents.

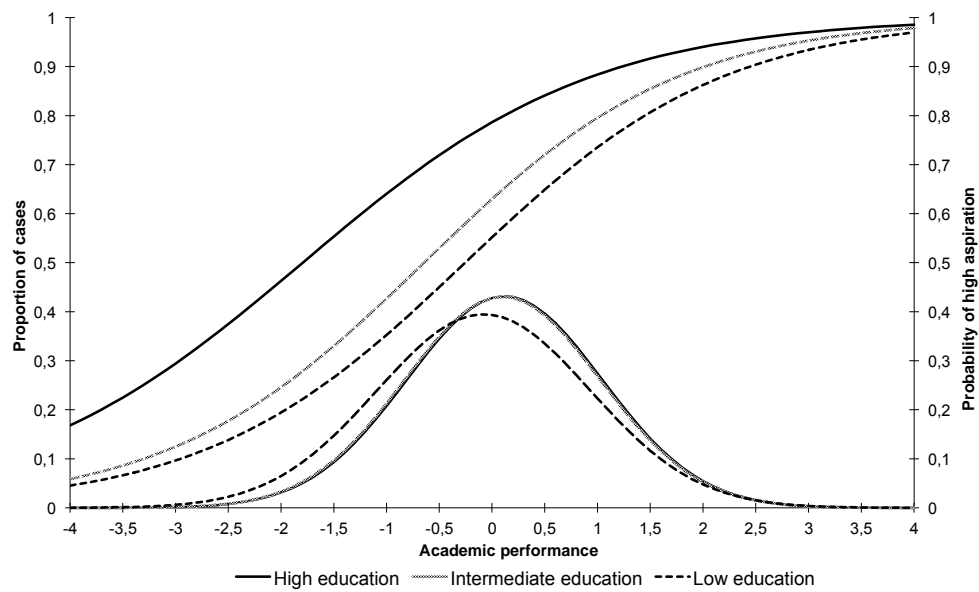
Apart from the distribution of academic performances the figures show that the aspiration pattern of none of the two ethnic groups is comparable to German students' aspiration. Most importantly, the distance between the aspiration curves of education classes is highly pronounced in the German group. A higher share of students with highly educated parents wants to finish upper secondary school at every performance level. Also in line with the theoretical assumptions is that German students from lower educated background have on average the lowest educational ambitions. The intermediate class lies constantly between the other two categories and are at the lower end of the performance scale closer to the low education class converging at the upper end of the scale with the highest education class. Although the general tendency of the curves indicating higher aspiration with increasing performance can also be found in figures 2 and 3 some distinctions have to be mentioned. The shape of the curves for the Turkish group is similar to the picture of German students. But the gap between Turkish adolescents from different education background is not as large as in the native group. A clear distance is visible for the highest education class at the lower end of the performance scale. Nevertheless, if students perform well in school, they keep their aspiration on a high level irrespective of their parents' education. In contrast, in the group of FSU students the highest education category has only higher aspirations when their school achievement is above average. Lower than average performances seem to have a depressing effect especially on students from families with highly educated parents. Furthermore, the aspiration curves of the other two education categories are close to them.

Figure 1: Graphical representation of performance and aspirations for Abitur of German students by parents' education



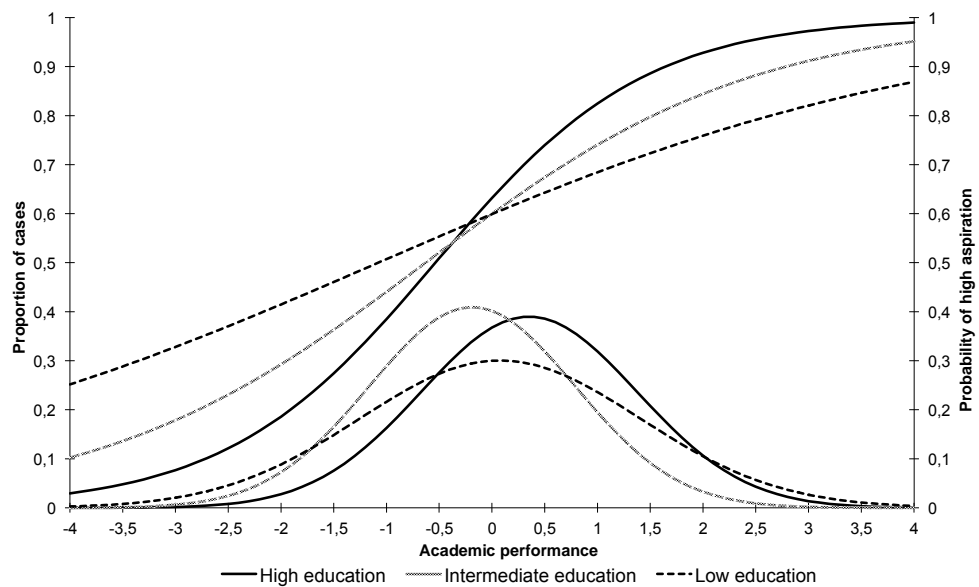
Source: *Young Immigrants in the German and Israeli Educational System*, own illustration.

Figure 2: Graphical representation of performance and aspirations for Abitur of Turkish students by parents' education



Source: *Young Immigrants in the German and Israeli Educational System*, own illustration.

Figure 3: Graphical representation of performance and aspirations for Abitur of FSU students by parents' education



Source: *Young Immigrants in the German and Israeli Educational System*, own illustration.

In sum, it can be noted that on one hand the effect parents' education has on school performance and aspirations and on the other hand the correlation of performance and high educational goals is varying by ethnic group. The results for native students clearly reflect primary and secondary effects. Both can also be recorded for adolescents of the FSU group, albeit in a weakened form. Finally, the academic achievement of Turkish students seems to be influenced by another factor than parents' education which seems to have also a minor impact on aspirations.

6.2 Test of Theories

In order to test to what extent the described approaches can help to explain possible differences in aspiration between ethnic groups a set of logistic regressions is estimated and the average marginal effects are presented (table 1).¹³ The first model is computed to entail differences without considering abilities and socio economic resources. The second model includes general factors determining the level of educational ambitions and is the basis for the following models. For each theoretical approach varying covariates are added separately to the base model. The last model combines all additional variables to evaluate the strength of the factors in the full model. In all models federal state and the survey mode are controlled.

As the average marginal effects of model 1 reveal, initially students with migration background have lower aspirations for finishing upper secondary school than German students, the negative effects being not significant. The aspiration pattern completely reverses with the introduction of academic abilities and family features in the second model while the effect for Turkish students is quite high and significant FSU students do not differ significantly from Germans. Generally, the average marginal effects of model 2 prove that relevant constraints matter for realistic aspirations. In particular the grade average, cognitive abilities and language skills, which provide students a basis to evaluate the success chances, increase the aspiration. Institutional restrictions and students' own positioning in the tracked school system also have a strong influence on how students estimate their chances to enter and finish upper secondary school. Beside these objective indicators, high self-esteem has a noteworthy positive effect on the settlement of aspirations. As the descriptive results already indicated, students' educational aim is correlated with parents' education. Students whose parents graduated from lower secondary school have the lowest ambitions to graduate from upper secondary school. The amount of books at home is positively correlated with the aspiration levels of adolescents. Even though the intended use of number of books at home is to measure family's endowment with cultural capital the indicator probably also partly measures economic resources. The weighted household income per capita, however, is the only insignificant coefficient.

Turning to ethnic differences in aspiration, the gap between German and Turkish students is stable in most of the models. At the same time the negative coefficient for FSU students becomes insignificant. Model 3 includes a measure for efforts to achieve intergenerational upward mobility. Except for the coefficients for Turkish and FSU students the effect of the coefficients does not change when students' motivation for gaining a better occupation is added. The status improvement coefficient itself is highly significant. Not surprisingly the aspiration for Abitur increases when adolescents plan to end up in an occupation better than their parents'. Furthermore, especially Turkish students strongly pronounce the importance of intergenerational upward mobility (s. appendix A1) speaking in favour of the immigrant optimism theory. The mean of the status improvement item for FSU immigrants – also being voluntary immigrants – is closer to Turkish students. Controlling for status improvement beside general determinants lowers the aspirations of Turkish and FSU adolescents. Even though the coefficient for Turks remains relatively high, the difference between them and their German peers is not significant.

13 Compared to log-odds and odds-ratios average marginal effects can be compared between nested models (cf. Best and Wolf 2012).

In the next model knowledge about Germany's educational system is added to detected hints on high ambitions due to missing information on peculiarities relevant for students close to the second transition. Students with sufficient knowledge about possibilities and demands at the secondary stage of the education system should be more realistic about their chances to successfully entering upper secondary school after graduating from their current school track. Thus, according to the information deficit approach well-informed students should have lower levels of aspirations compared to those with a lack of knowledge. But the output of model 4 is not in line with the presumed depressing effect as correctly informed students have a higher probability of aspiring for an ambitious education aim.¹⁴ All other variables do not change in their effect on aspirations, also the average marginal effect of ethnic background remains as in the base model. Interestingly, not all students have correct knowledge on the German educational system (s. appendix A1), but this lack also exists for native students and seems not to be responsible for the ethnic aspiration differences.

The ethnic gap partly diminishes in model 5 in which the future benefit of Abitur compared to lower secondary school is included. Generally, the result of this evaluation has a significant positive effect on students' educational aspiration. Additionally, the descriptive differences from appendix A1 unveils that non-native adolescents rate the benefit of Abitur much higher than do Germans. This difference in the perception of the opportunity structure possibly reflects, at least partly, difficulties on the labour market due to discrimination anticipated by minorities.

Model 6 contains in addition to the base model aspirations, expectations and achievements of significant others. High aspirations of mothers' for their children and of best friends enhance the probability of aspiring high and both effects are highly significant. Having older siblings attending lower secondary school or who already left school with a lower or intermediate degree affects their younger siblings' educational ambitions significantly negative. Older siblings' educational careers can help the younger ones to estimate which degrees are feasible for them. Contrary to earlier research, having siblings is not a disadvantage as such since they can deliver additional familial resources. It should be mentioned, however, that the negative effect of not having any older siblings is not significant. The ethnic differences in this model are slightly lower and less significant compared to the average marginal effects of model 2, but again a clear gap between Turkish and native youths can still be found.

Finally the last model simultaneously captures all measurements used as indicators for the different theoretical mechanisms. Most crucially, the differences between Turkish or FSU students and natives are not significant although the size of the coefficient for the FSU group is, although negative, almost as high as in the second model. The measure for knowledge about the educational system is the only one which loses its significant influence on upper secondary school aspiration. All other variables keep their significance level as well as their impact size with marginal changes. It should be noted that the final model seems to be especially suitable to explain the gap between Turkish and German youths' ambitions to attain Abitur, while including all the additional indicators does not minimize the difference to FSU students.

¹⁴ Further analyses (not shown here) with interaction effects indicate that students with low school achievement who have are not well informed have lower aspirations compared to students with low achievement but correct knowledge on the educational system.

Table 1: Educational aspiration of students: Determinants and explanations for the aspiration gap (Average Marginal Effects from binary logistic regression)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<i>Ethnic group (Ref: German)</i>							
Turkish	-0.040	0.089**	0.039	0.089**	0.067*	0.066*	0.010
FSU	-0.054*	0.018	-0.014	0.019	0.009	0.009	-0.020
Female		-0.012	-0.015	-0.013	-0.014	0.003	-0.004
<i>School type (Ref: 9th grade HS)</i>							
9 th grade GES		0.150***	0.152***	0.145***	0.144***	0.078*	0.075*
10 th grade RS		0.223***	0.232***	0.208***	0.222***	0.139***	0.138***
10 th grade GES		0.301***	0.303***	0.284***	0.305***	0.201***	0.199***
Grade average		0.104***	0.107***	0.102***	0.105***	0.084***	0.086***
Cognitive test		0.006***	0.007***	0.007***	0.006***	0.004*	0.004*
Language test		0.015***	0.015***	0.014***	0.015***	0.011***	0.011***
Self-esteem		0.029***	0.032***	0.028***	0.028***	0.030***	0.032***
<i>Parents' Education (Ref: high)</i>							
Low		-0.179***	-0.180***	-0.182***	-0.181***	-0.134***	-0.134***
Middle		-0.136***	-0.142***	-0.135***	-0.133***	-0.075*	-0.078**
Household income (in 1.000 Euros)		0.011	0.021	0.010	0.012	0.015	0.024
<i>Number of books (Ref: more than 200)</i>							
0 – 25		-0.098**	-0.102**	-0.098**	-0.093**	-0.051	-0.053
26 – 100		-0.095**	-0.101***	-0.095**	-0.093**	-0.065*	-0.070*
101 – 200		-0.072*	-0.079*	-0.077*	-0.071*	-0.058	-0.064*
Status improvement			0.045***				0.034***
Knowledge on educational system				0.044**			0.019
Benefit of Abitur					0.030***		0.024**
Best friend aspires for Abitur						0.173***	0.162***
Mother aspires for Abitur						0.186***	0.179***
<i>Elder siblings (Ref: elder sibling with Abitur)</i>							
Elder siblings without Abitur						-0.093***	-0.091***
No elder siblings						-0.021	-0.018
Pseudo R ²	0.019	0.211	0.222	0.215	0.217	0.289	0.302
N	1052	1052	1052	1052	1052	1052	1052

Note: HS: lower secondary school, RS: intermediate secondary school, GES: comprehensive school. Controlled for federal state and survey mode, robust standard errors;
 * p<0.1, ** p<0.05, *** p<0.01. If siblings still attend school, the variables indicate whether they are attending upper secondary school or a lower school track.

Source: *Young Immigrants in the German and Israeli Educational System*, own calculations.

6.3 Ethnic Differences in the Determinants of Aspiration

In the second step separate logistic models are estimated to identify dissimilarities in the effects factors determining the level of aspirations have for ethnic groups (table 2). Minorities might not only differ from the majority population regarding the endowment with relevant characteristics, but they can also benefit more or less from these characteristics. Even though the average marginal effects are not comparable across ethnic groups, the results throw light on the aspiration formation for each group. Starting with the adequacy of the formulated model to explain who is aiming high by comparing pseudo R-squared reveals that the chosen covariates are especially powerful predictors for Germans and are less predictive for FSU students. Looking at indicators of academic achievement confirms again the essential role grades and attended school form play for anticipated educational decisions. Further aspects covering abilities have also positive effects on aspirations, whereby Turkish students seem to be more sensitive about their position in the educational system and their language skills. But, compared to their German and FSU counterparts, the magnitude of self-esteem is not crucial for the question, whether graduating from upper secondary school is feasible for them or not. Interestingly, language abilities are not significantly influencing the aspirations of FSU students, while they are important for Turks. As the majority of FSU adolescents are first generation immigrants, they should involve their German skills stronger than Turks for their educational aspirations. However, this might be the result of the above-mentioned institutional support for language courses. The second block of measures capturing familial background is quite distinct for ethnic minorities. For Germans parents' education and income have significant positive effects, while the average marginal effects for Turks follow the same path but fail significance. As it was repeatedly assumed, for immigrant adolescents parents' education and their experience with school does not seem to be transferable to their current situation and are thus of no relevance for their anticipated educational decisions. Unexpectedly, the direction of the effects for FSU youth is not in line with the assumed correlation between social background and educational goals. Also a bit astonishing is the effect of number of books which is only found in the Turkish case.

In the lower part of the table the impact of the additional variables are presented. Adolescents of all groups are oriented towards the expectation of significant others serving as a reference for them. For example, all groups are characterized by the endeavour to a higher social status than their parents, although the average marginal effect is less strong for FSU students. Similarly high for all ethnic groups and the native reference group are best friends' aspirations. Another communality is that knowledge on the educational system has a positive, but not significant effect. In other aspects, divergences between the native population and minorities can be detected. Particularly for Turks the future benefit of an upper secondary degree in relation to a lower educational attainment is a considerable value, while the aspiration of mothers is of subordinated importance. The high weighting of Abitur can result from interaction with parents enhancing the importance of high education to overcome hurdles they were confronted with in the sense of immigrant optimism theory or the blocked opportunities approach as well. Parental expectation is more relevant for the other two groups. Furthermore, the siblings' education effect differs among the groups. In line with the above made assumptions, older siblings with experiences in Germany's school system seem to replace parents in their role model function in immigrant families. In other words, the social network of FSU students provides an essential basis for educational aspirations, whereas Turks especially differ with regard to rating labour market outcomes. Moreover, the results for Germans reflect mainly the hypotheses of the Wisconsin model and the status attainment theory. The result pattern for Turks and FSU students is suggestive of another relation between family's background and where students want to arrive at. Turkish students have on average higher ambitions to work in better occupations than their parents (s. Appendix A1), but contrary to the immigrant optimism approach this improvement motivation has a smaller effect for aspirations compared with the average marginal effect in the model for Germans. Finally, it should be pointed out that the low number of cases might lead to a missing significance of some effects, thus the

findings should be treated with caution. Still, some effects are significant for minorities although the samples giving hints on crucial ethnic distinctions in the decision-making process on the level of educational aspirations are small.

Table 2: Determinants of educational aspiration by ethnic groups (Average Marginal Effects from binary logistic regression)

	German	Turkish	FSU
Female	-0.008	-0.006	0.003
School type (Ref: 9th grade HS)			
9th grade GES	0.051	0.140*	-0.074
10th grade RS	0.030	0.305***	0.116
10th grade GES	0.218***	0.246***	0.058
Grade average	0.037*	0.137***	0.082***
Cognitive test	0.005*	0.002	0.005
Language test	0.004	0.020***	0.008
Self-esteem	0.032**	0.014	0.045***
Parents' Education (Ref: high)			
Low	-0.275***	-0.095	0.045
Middle	-0.138***	-0.048	0.020
Household income (in 1.000 Euros)	0.058*	0.028	-0.027
Number of books (Ref: more than 200)			
0 – 25	0.031	-0.292**	-0.027
26 – 100	-0.027	-0.287**	-0.075
101 – 200	-0.018	-0.355***	-0.114
Status improvement	0.040**	0.030*	0.025
Knowledge on educational system	0.010	0.012	0.033
Benefit of Abitur	0.006	0.048***	0.029*
Best friend aspires for Abitur	0.123***	0.163***	0.159***
Mother aspires for Abitur	0.254***	0.018	0.190***
Elder siblings (Ref: Elder sibling with Abitur)			
Elder siblings without Abitur	-0.041	-0.107*	-0.198***
No elder siblings	-0.015	-0.089	-0.061
Pseudo R2	0.420	0.277	0.352
N	430	308	314

Note: HS: lower secondary school, RS: intermediate secondary school, GES: comprehensive school. Controlled for federal state and survey mode, robust standard errors;
* p<0.1, ** p<0.05, *** p<0.01.

Source: *Young Immigrants in the German and Israeli Educational System*, own calculations.

7. Summary of Results and Discussion

Since Coleman et al. detected the mismatch between black students' educational aspirations and their academic outcomes in 1966 researchers try to find solutions for the aspiration-achievement paradox. In this context, the purpose of this paper is to examine empirical tests for the explanations offered in the literature and which are rarely tested. While Becker (2010) offers an overview of the most important theoretical explanations, this paper aims at systematizing these approaches and transferring them into empirical analyses. More detailed, this study focuses on ethnic gaps in the educational aims of adolescents before the second transition in the German educational system. Although the sample includes only students from school forms other than Gymnasium, more than half of the adolescents in all groups think that it is realistic for them to attain Abitur.

In the first step, the aspirations of all groups differentiated by parents' education and school achievement are presented in the form of decomposition graphs. These figures indicate hints on group differences that are proven by the multivariate analyses. The results include in particular that the aspiration of FSU students is more similar to the aspirations of Germans than to their Turkish peers'. Furthermore, the saliently different aspiration pattern of Turks is observable through the whole results.

As a second step, the analyses aim at closing the ethnic gap with different indicators driven from the theoretical mechanisms responsible for different evaluations of educational degrees. In general, the aspiration imbalance appears when academic abilities and families' facilities are included in the models, but only for Turkish students. The aspiration of FSU youths is throughout the models very close to their German peers' aspiration. This result is not surprising as the migration motive and the institutional prerequisites are conducive for the assimilation of FSU immigrants to the majority population. The emerging distance between the German and the Turkish group diminishes once status improvement motivation is added. All other indicators used for the theoretical approaches are not able to close the gap by themselves. Taken all measurements together marginalize the difference in the ambition to graduate from upper secondary school. Except for the information bias, all theoretical explanations are supported by the empirical results. Thus, to deliver a solution for the paradox withstanding empirical tests the approaches should be combined.

The final step is to disentangle differences in the relevance single factors have on educational aspirations by comparing analyses for each group. The results show that the decision for aspiring to Abitur or not deviates in nuances. German adolescents seem to be primarily concerned about reproducing or even improving the social class of their parents by having better occupations. The social surrounding is also for FSU students important but without a strong pronouncement of later labour market status relative to their parents. On the contrary, Turkish youth emphasize the later aspect and are conspicuously unconcerned about parents' education and mothers' expectations. In conclusion, this second part points out the necessity of looking into the intergenerational transmission process of aspiration in a more detailed way. Referring to earlier studies indicating high aspirations for Turkish parents, it appears as if high aspirations are inherited in Turkish families but not expressed by the direct influence of parents' aspiration for their child. Obviously, this is not the case for students from FSU although family members are taken as reference for educational aims. One possible explanation might be that the majority of them are first generation immigrants and are reliant on social support of their families as discussed by Phalet and Schönplüg (2001). It should be added that almost all Turkish students in this sample are second generation immigrant, which makes it difficult to investigate the development over generations with the given data. The results regarding the importance of elder siblings' education for the aspiration of their younger siblings highlight the need to expand the transmission process to horizontal influences on adolescents. Especially in the case of minorities, elder siblings seem to replace the role model function of parents.

While the current study makes a contribution to the existing research by providing empirical tests of commonly cited theoretical approaches to solve the aspiration paradox, some limitations and caveats should be discussed. First of all, some further explanations need to be mentioned that are not tested here. For instance, Mickelson's (1990) differentiation of abstract and concrete values of education could not be reviewed and included in the empirical part. Nevertheless, bearing in mind the high evaluation of Abitur compared to lower secondary degree, it seems quite plausible that minorities might believe that the benefit of educational degrees differ for them due to structural issues. As a further approach the extreme response behaviour is not tested as well. In order to do so, it has to be specified in which case the answers can be ascribed to cultural determinants as the distribution of answers given by immigrants varies and is not limited to the extremes of the scales. Finally, the missing evidence for the information bias approach does not exclude this argument as explanation for high aspirations of immigrant parents (cf. Relikowski et al. 2012). Contrary to their children, they are not in direct contact with school on a daily basis. However, even if

students themselves migrated and are not completely informed about the educational system this has a negative effect for their educational goals. This correlation implies that the assumed relationship is directed in the reversed direction. It is likely that highly ambitious minority students gather knowledge on the requirements they have to fulfil in school in order to attain the targeted educational degree.

Switching to methodological constraints the most important one is about the measurements. The theoretical explanations are translated into single variables involving the danger of not being sufficient or adequate to test empirical relations, above all for the information bias and the blocked opportunities approach. Regarding information on the educational system Germany is a difficult case as the federal states have the power of decision about the institutional settings leading to varying regulations within federal states. For instance, the requirements for continuing with the upper secondary track after graduating from a lower school type can be judged by the headmaster of a school. But both questions used in this study have the advantage of being independent from the context and allowing distinguishing between right and wrong answers. A second important issue of the data is the high loss of cases due to item non-response. However, as a part of the results are in line with previous studies, e.g. high aspiration of Turks after including controls (cf. Kristen and Dollmann 2010), the deleted cases do not seem to be heavily biasing the findings. Thirdly, for practical reasons, only mothers filled out the questionnaire, so only their opinions and views are captured. Alas, whether fathers' educational expectations differ from mothers' and if so, whether their opinion is more or less significant for adolescents cannot be answered with the used data and should be considered in future studies. Fourthly, aspirations of best friends are not measured directly, thus the answers given by the respondents might be biased by their own educational goals. However, this indirect measure is the best indicator for peer influence on aspirations in the given data. Fifthly, an additional data limitation concerns the assessment of teachers' influence on educational motivation. To complete the picture of social networks' impact on students' expectations about their educational career, the perception of teachers' judgement and support are necessary. It is conceivable that ambitious educational goals are a reaction to experienced discrimination by teaching staff. Unfortunately, there are no studies available which explore this mechanism systematically.

To recapitulate, the results show that the aspiration paradox of minorities does not appear by definition but arises when academic abilities, achievement and familial resources are controlled and thus are not completely detached from relevant factors influencing the success probability of attaining higher education. By the present results, the aspiration paradox of Turkish students especially develops due to a particular importance of Abitur for future chances on the labour market and the weak orientation to parents' education. To completely solve the paradox it is indispensable to step backwards and investigate the formation of attitudes towards education and educational degrees from an intergenerational perspective. Another important finding of this study is that not all immigrants have optimistic future forecasts. Due to data limitation only two minority groups can be compared to natives. Whether the above discussed differences in the migration motive is decisive for the indicated contrast between Turkish students and students from the former Soviet Union is not testable with the present data. Hence, additional analyses for different minority groups and cross-national comparisons are necessary to elucidate the findings of this paper.

8. References

- Bamburg, Jerry D. (1994): *Raising expectations to improve student learning*, NCREL Monograph. www.ncrel.org/sdrs/areas/issues/educatrs/leadrs/le0bam.htm.
- Becker, Birgit (2010): *Bildungsaspirationen von Migranten: Determinanten und Umsetzung in Bildungsergebnisse*, Mannheim: Mannheimer Zentrum für Europäische Sozialforschung Working Papers No. 137.
- Behörde für Schule, Jugend und Berufsbildung, Amt für Schule, Hamburg (1998): *Der Hamburger Schulleistungstest für achte und neunte Klassen – SL-HAM 8/9*, Hamburg.
- Best, Henning and Christof Wolf (2012): "Modellvergleich und Ergebnisinterpretation in Logit- und Probit-Regressionen", *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 64, 2: 377-395.
- Boudon, Raymond (1974): *Education, Opportunity, and Social Inequality*, New York: Wiley.
- Breen, Richard and John H. Goldthorpe (1997): "Explaining educational differentials. Towards a formal rational action theory", *Rationality and Society* 9, 3: 275-305.
- Brinbaum, Yaël and Hector Cebolla-Boado (2007): "The school careers of ethnic minority youth in France: success or disillusion?", *Ethnicities* 7, 3: 445-474.
- Bundesamt für Migration und Flüchtlinge (2010): *Migrationsbericht 2009*, Nürnberg.
- Burgess, Simon and Marcela Umaña-Aponte (2011): *Raising your sights: the impact of friendship networks on educational aspirations*, The Centre for Market and Public Organisation 11/271, Department of Economics, University of Bristol, UK.
- Caplan, Nathan, Marcella H. Choy and John K. Whitmore (1992): "Indochinese refugee families and academic achievement", *Scientific American* 266: 36-42.
- Cohen, Jere (1987): "Parents as educational models and definers", *Journal of Marriage and the Family* 49, 2: 339-351.
- Coleman, James S., Ernest Q. Campbell, Carol J. Hobson, James McPartland, Alexander M. Mood, Frederic D. Weinfeld and Robert L. York (1966): *Equality of Educational Opportunity*, Washington, D.C.: U.S. Government Printing Office.
- Cotton, Kathleen and Karen Reed Wikelund (1997): *Expectation and student outcomes*, School Improvement Research Series 6, North West Regional Educational Laboratory.
- Davis, Rachel E., Ken Resnicow and Mick P. Couper (2011): "Survey response styles, acculturation, and culture among a sample of Mexican American adults", *Journal of Cross-Cultural Psychology* 42: 1219-1236.
- Dembo, Tamara (1931): "Der Ärger als dynamisches Problem", *Psychologische Forschung* 15: 1-144.
- Diefenbach, Heike (2010): *Kinder und Jugendliche aus Migrantenfamilien im deutschen Bildungssystem. Erklärungen und empirische Befunde*, Wiesbaden: VS Verlag für Sozialwissenschaften (Habilitationsschrift, 3. Auflage.).
- Eccles, Jacquelynne S., Terry F. Adler, Robert Futterman, Susan B. Goff, Caroline M. Kaczala, Judith L. Meece, et al. (1983). "Expectancies, values, and academic behaviors", in: Spence, Janet T. (ed.), *Achievement and Achievement Motivation*, San Francisco, CA: W. H. Freeman, 75-146.
- Eccles, Jacquelynne S. and Lee Jussim (1992): "Teacher expectations II: Construction and reflection of student achievement", *Journal of Personality and Social Psychology* 63, 6: 947-961.

- Erikson, Robert and Jan O. Jonsson (1996): "Explaining class inequality in education: the Swedish test case", in: Erikson, Robert and Jan O. Jonsson (eds.), *Can Education Be Equalized? The Swedish Case in Comparative Perspective*, Colorado: Boulder, 1-63.
- Erikson, Robert, John H. Goldthorpe, Michelle Jackson, Meir Yaish and D. R. Cox (2005): "On class differentials in educational attainment", *Proceedings of the National Academy of Sciences* 102: 9730-9733.
- Esser, Hartmut (1999): *Soziologie. Spezielle Grundlagen*, Band 1: *Situationslogik und Handeln*, Frankfurt a. M.: Campus Verlag.
- Farmer, Helen S. (1985): "Model of career and achievement motivation for women and men", *Journal of Counseling Psychology* 32, 3: 363-390.
- Farmer, Helen S. (1987): "A multivariate model for explaining gender differences in career and achievement motivation", *Educational Researcher* 16, 2: 5-9.
- Fordham, Signithia and John U. Ogbu (1986): "Black students' school success: coping with the 'Burden of Acting White'", *The Urban Review* 18, 3: 176-206.
- Gibson, Margaret A. and John U. Ogbu (Eds.) (1991): *Minority Status and Schooling: A Comparative Study of Immigrant and Involuntary Minorities*, New York: Garland.
- Gill, Sukhdeep and Arthur J. Reynolds (1999): "Educational expectations and school achievement of urban African American children", *Journal of School Psychology* 37, 4: 403-424.
- Granato, Nadia and Frank Kalter (2001): "Die Persistenz ethnischer Ungleichheit auf dem deutschen Arbeitsmarkt: Diskriminierung oder Unterinvestition in Humankapital?", *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 53: 497-520.
- Haller, Archibald O. (1968): "On the concept of aspiration", *Rural Sociology* 33, 4: 484-487.
- Hao, Lingxin and Melissa Bonstead-Bruns (1998): "Parent-child differences in educational expectations and the academic achievement of immigrant and native students", *Sociology of Education* 71, 3: 175-198.
- Heath, Anthony and Yael Brinbaum (2007): "Explaining ethnic inequalities in educational attainment", *Ethnicities* 7, 3: 291-305.
- Heller, Kurt and Christoph Perleth (2000): *Kognitiver Fähigkeitstest für 4. bis 12. Klassen, Revision: KFT 4-12+R*, Göttingen: Betz Test.
- Jacob, Konstanze, Judith Jahn, Aline Hämmerling, Tobias Roth and Zerrin Salikutluk (2012): *Technical Report: Immigrants' Children in the German and Israeli Educational Systems*.
- Jakob, Marita and Felix Weiss (2010): „Soziale Selektivität beim Hochschulzugang – Veränderung der Zugangssequenz zur Hochschule im Kohortenvergleich“, in: Becker, Birgit and David Reimer (eds.), *Vom Kindergarten bis zur Hochschule. Die Generierung von ethnischen und sozialen Disparitäten in der Bildungsbiographie*, Wiesbaden: VS Verlag für Sozialwissenschaften, 285-312.
- Jackson, Michelle, Robert Erikson, John H. Goldthorpe and Meir Yaish (2007): "Primary and secondary effects in class differentials in educational attainment: the transition to A-level courses in England and Wales", *Acta Sociologica* 50, 3: 211-229.
- Jonsson, Jan O. and Frida Rudolphi (2010): "Weak performance – strong determination: school achievement and educational choice among children of immigrants in Sweden", *European Sociological Review*, Advance access published 2 July, doi: 10.1093/esr/jcq021.

- Kao, Grace and Marta Tienda (1995): "Optimism and achievement: the educational performance of immigrant youth", *Social Science Quarterly* 76, 1: 1-19.
- Kao, Grace and Marta Tienda (1998): "Educational aspirations of minority youth", *American Journal of Education* 106, 3: 349-384.
- Kintrea, Keith (2009): *Aspirations, Attainment and social mobility in disadvantages areas*, European network for housing research.
- Kogan, Irena (2004): "Last hired, first fired? The unemployment dynamics of male immigrants in Germany", *European Sociological Review* 20, 5: 445-461.
- Kogan, Irena (2011): "New immigrants – old disadvantage patterns? Labour market integration of recent immigrants into Germany", *International Migration* 49, 1: 91-117.
- Konietzka, Dirk and Michaela Kreyenfeld (2001): „Die Verwertbarkeit ausländischer Ausbildungsabschlüsse. Das Beispiel der Aussiedler auf dem deutschen Arbeitsmarkt“, *Zeitschrift für Soziologie* 30, 4: 267-282.
- Kristen, Cornelia and Nadia Granato (2007): "The educational attainment of the second generation in Germany. Social origins and ethnic inequality", *Ethnicities* 7, 3: 343-366.
- Kristen, Cornelia and Jörg Dollmann (2010): "Sekundäre Effekte der ethnischen Herkunft: Kinder aus türkischen Familien am ersten Bildungsübergang", in: Becker, Birgit and David Reimer (eds.), *Vom Kindergarten bis zur Hochschule. Die Generierung von ethnischen und sozialen Disparitäten in der Bildungsbiographie*, Wiesbaden: VS Verlag für Sozialwissenschaften, 117-144.
- Kristen, Cornelia, David Reimer and Irena Kogan (2008): "Higher education entry of Turkish immigrant youth in Germany", *International Journal of Comparative Sociology* 49: 127-151.
- Lewin, Kurt, Tamara Dembo, Leon Festinger and P. S. Sears (1944): "Level of aspiration", in: Mc Vicker Hunt, Joseph (ed.), *Personality and the behavior disorders* (volume 1), New York: Ronald Press, 333-378.
- Lising Antonio, Anthony (2004): "The influence of friendship groups on intellectual self-confidence and educational aspirations in college", *Journal of Higher Education* 75, 4: 446-471.
- Marín, Gerardo, Raymond J. Gamba and Barbara V. Marín (1992): "Extreme response style and acquiescence among Hispanics: the role of acculturation and education", *Journal of Cross-Cultural Psychology* 23, 4: 498-509.
- Matute-Bianchi, Maria E. (1986): "Ethnic identities and patterns of school success and failure among Mexican-descent and Japanese-American students in a California high school: an ethnographic analysis", *American Journal of Education* 95, 1: 233-255.
- Mickelson, Rosalyn A. (1990): "The attitude-achievement paradox among black adolescents", *Sociology of Education* 63, 1: 44-61.
- Morgan, Stephen L. (1998): "Adolescent educational expectations: rationalized, fantasized, or both?", *Rationality and Society* 10: 131-62.
- Müller, Andrea G. and Petra Stanat (2006): „Schulischer Erfolg von Schülerinnen und Schülern mit Migrationshintergrund: Analysen zur Situation von Zuwanderern aus der ehemaligen Sowjetunion und aus der Türkei“, in: Baumert, Jürgen, Petra Stanat and Rainer Watermann (eds.), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit*, Wiesbaden: VS Verlag für Sozialwissenschaften, 223-255.

- Nauck, Bernhard, Heike Diefenbach and Kornelia Petri (1998): "Intergenerationale Transmission von kulturellem Kapital unter Migrationsbedingungen: Zum Bildungserfolg von Kindern und Jugendlichen aus Migrantenfamilien in Deutschland", *Zeitschrift für Pädagogik* 44, 5: 701-722.
- Ogbu, John U. (1987): "Variability in minority school performance: a problem in search of an explanation", *Anthropology and Education Quarterly* 18, 4: 312-334.
- Ogbu, John U. (1991): "Minority coping responses and school experience", *The Journal of Psychohistory* 18, 4: 433-456.
- Phalet, Karen and Louk Hagendoorn (1996): "Personal adjustment to acculturative transitions: the Turkish experience", *International Journal of Psychology* 31: 131-144.
- Phalet, Karen and Ute Schönplflug (2001): "Intergenerational transmission in Turkish immigrant families: Parental collectivism, achievement values and gender differences", *Journal for Comparative Family Studies* 32: 489-504.
- Relikowski, Ilona, Thorsten Schneider and Hans-Peter Blossfeld (2009): "Primary and secondary effects of social origin in migrant and native families at the transition to the tracked German school system", in: Cherkaoui, Mohamed and Peter Hamilton (eds.), *Raymond Boudon – a Life in Sociology* (volume 3), Oxford: The Bardwell Press, 149-170.
- Relikowski, Ilona, Erbil Yilmaz and Hans-Peter Blossfeld (2012): "Wie lassen sich die hohen Bildungsaspirationen von Migranten erklären? Eine Mixed-Methods Studie zur Rolle von strukturellen Aufstiegschancen und individueller Bildungserfahrung", *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, Sonderheft 52: 111-136.
- Rosenberg, Morris (1965): "Measurement of self-esteem", in: Rosenberg, Morris (ed.), *Society and the Adolescent Self Image*, New York: Princeton University Press, 297-307.
- Rosenthal, Robert and Lenore Jacobson (1968): *Pygmalion in the Classroom*, New York: Holt, Rinehart & Winston.
- Rosenthal, Robert and Lenore Jacobson (1992): *Pygmalion in the Classroom* (expanded ed.), New York: Irvington.
- Roth, Tobias, Zerrin Salikutluk und Irena Kogan (2010): "Auf die „richtigen“ Kontakte kommt es an! Soziale Ressourcen und die Bildungsaspirationen der Mütter von Haupt-, Real- und Gesamtschülern in Deutschland", in: Becker, Birgit and David Reimer (eds.), *Vom Kindergarten bis zur Hochschule. Die Generierung von ethnischen und sozialen Disparitäten in der Bildungsbiographie*, Wiesbaden: VS Verlag für Sozialwissenschaften, 179-212.
- Schauenberg, Magdalena (2007): "Familienstruktur, Armut und Erziehung", in: Ditton, Hartmut (ed.), *Kompetenzaufbau und Laufbahnen im Schulsystem. Ergebnisse einer Längsschnittuntersuchung an Grundschulen*, Münster: Waxmann, 145-169.
- Schwippert, Knut, Wilfried Bos and Tobias C. Stubbe (2007): "Die Kopplung von sozialer Herkunft und Schülerleistung im internationalen Vergleich", in: Bos, Wilfried et al. (eds.), *IGLU 2006. Lesekompetenzen von Grundschulkindern in Deutschland*, Münster: Waxmann, 249-265.
- Sewell, William H., Archibald O. Haller and Alejandro Portes (1969): "The educational and early occupational attainment process", *American Sociological Review* 34, 1: 82-92.
- Sewell, William H., Archibald O. Haller and George W. Ohlendorf (1970): "The educational and early occupational attainment process: replication and revision", *American Sociological Review* 35, 6: 1014-1027.

- Shumow, Lee and Jon D. Miller (2001): "Father's and mother's school involvement during early adolescence", *The Journal of Early Adolescence* 21: 69-92.
- Singh, Kusum, Patricia G. Bickley, Paul Trivette, Timothy Z. Keith, Patricia B. Keith and Eileen Anderson (1995): "The effects of four components of parental involvement on eighth grade student achievement: Structural analysis of NELS-88 data", *School Psychology Review* 24, 2: 299-317.
- Stanat, Petra (2006): "Schulleistungen von Jugendlichen mit Migrationshintergrund: Die Rolle der Zusammensetzung der Schülerschaft", in: Baumert, Jürgen, Petra Stanat and Rainer Watermann (eds.), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit*, Wiesbaden: VS Verlag für Sozialwissenschaften, 189-219.
- Suarez-Orozco, Marcelo M. (1991): "Immigrant adaptation to schooling: a Hispanic case", in: Gibson, Margaret A. and John U. Ogbu (eds.), *Minority Status and Schooling: A Comparative Study of Immigrant and Involuntary Minorities*, New York: Garland, 37-61.
- Sue, Stanley and Sumie Okazaki (1990): "Asian-American educational achievements: a phenomenon in search of an explanation", *American Psychologist* 45, 8: 913-920.
- Trouilloud, David O. and Philippe G. Sarrazin (2002): "The influence of teacher expectations on student's achievement in physical education class: Pygmalion revisited", *European Journal of Social Psychology* 32, 5: 591-660.
- UNESCO (2000): *International Standard Classification of Education: ISCED 1997 (Re-edition)*, Montreal: UNESCO Institute for Statistics. <http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx> (last access December 2012).
- Wigfield, Allan L. and Jacquelynne S. Eccles (2000): "Expectancy-value theory of achievement motivation", *Contemporary Educational Psychology* 25, 1: 68-81.

Appendix

A1: Descriptive statistics by ethnic group

	German % / Mean (Std. dev.)	Turkish % / Mean (Std. dev.)	FSU % / Mean (Std. dev.)
Female	54.88%	50%	52.27%
<i>Aspiration</i>			
Hauptschulabschluss	1.86%	5.10%	6.17%
Realschulabschluss	30.93%	33.44%	35.39%
Abitur	67.21%	61.46%	58.44%
<i>School type</i>			
9 th grade HS	15.81%	15.92%	19.16%
9 th grade GES	31.63%	34.39%	26.62%
10 th grade RS	29.07%	21.02%	29.22%
10 th grade GES	23.49%	28.66%	25.00%
Grade average (standardized)	0.22 (1.02)	0.02 (0.96)	-0.09 (1.02)
Cognitive test (0-25)	15.20 (5.91)	12.51 (5.79)	14.55 (5.87)
Language test (0-25)	17.09 (3.06)	14.53 (3.80)	16.13 (3.46)
Self-esteem (0-6)	4.19 (1.26)	4.40 (1.31)	4.03 (1.33)
<i>Parents' Education</i>			
Low	3.72%	40.45%	6.49%
Middle	70.47%	49.36%	78.57%
High	25.81%	10.19%	14.94%
Weighted household income per capita (in 1.000 Euros)	1.53 (0.77)	1.04 (0.51)	1.13 (0.69)
<i>Number of books</i>			
0 – 25	6.74%	36.62%	22.08%
26 – 100	30.00%	37.58%	51.62%
101 – 200	24.42%	16.88%	14.29%
More than 200	38.84%	8.92%	12.01%
Status improvement (0-5)	2.52 (1.07)	3.73 (1.20)	3.34 (1.20)
Knowledge on educational system (0-2)	0.92 (0.68)	0.83 (0.70)	0.81 (0.73)
Benefit of Abitur (0-4)	1.84 (1.17)	2.52 (1.17)	2.12 (1.27)
Best friend aspires for Abitur	52.56%	40.76%	41.23%
Mother aspires for Abitur	70.93%	78.66%	74.03%
<i>Elder siblings</i>			
Elder siblings with Abitur*	24.88%	14.33%	13.31%
Elder siblings without Abitur*	66.51%	78.03%	78.25%
No elder siblings	8.60%	7.64%	8.44%
<i>Generational Status</i>			
First generation		6.05%	71.10%
Second generation		89.81%	28.90%
Third generation		4.14%	
N	430	314	308

* If siblings still attend school, the variables indicate whether they are attending upper secondary school or a lower school track.

Note: HS: lower secondary school, RS: intermediate secondary school, GES: comprehensive school.

Source: *Young Immigrants in the German and Israeli Educational System*, own calculations.