UNIVERSITÄT PADERBORN
Die Universität der Informationsgesellschaft

FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS

Working Paper Series

Working Paper No. 2022-01

Understanding the impact of gender and migration on high-ability students' behavior: Exploring behavioral differences in business, law, and engineering students throughout their academic careers

Lisa Beck-Werz, Bernd Frick, Thomas Fritz and Fabian Lensing

January 2022

wiwi

Understanding the impact of gender and migration on high-ability students' behavior: Exploring behavioral differences in business, law, and engineering students throughout their academic careers

Lisa Beck-Werz[1,2,*], Bernd Frick[1], Thomas Fritz[2], Fabian Lensing[1,2]

Abstract

Using a large sample with detailed information on 32,296 high-ability business, law, and engineering students, we explore gender- and migration-related differences in behaviour to better understand the persistent under-representation of women and migrants in the executive suites of German companies. Since in this homogenous group of 'high-achievers', students are quite similar in their intellectual abilities, observable differences in behaviour can be mainly attributed to differences in gender- and migration-related preference patterns. We find that irrespective of migration background, men are more likely to pursue activities that increase their human capital, such as completing a doctorate, while women tend to engage in lower-level temporary jobs and complete their studies faster. In contrast, in this selective sample of high-ability students, migration background has a marginal effect on students' behaviour only. Perhaps most surprising, we find that the behaviour of women with a migration background – who potentially face 'double discrimination' – is not different from that of their male peers.

Keywords: High-ability students; higher education, gender gap; migration; education; intersectionality

[1] *Paderborn University, Management Department, Warburger Str. 100, 33098 Paderborn, Germany*

[2] *Aachen University of Applied Sciences, Faculty of Business Studies, Bayernallee 11, 52066 Aachen, Germany*

[*] Corresponding author: E-mail address: lisabw@campus.uni-paderborn.de | Phone: +49 175 318 9430

Introduction

The under-representation of women and individuals with a migration background among the top managers of German companies is undisputed. In October 2020, the share of women on the boards of the top 30 major companies in Germany was only 13%. None of these companies had a female CEO. Moreover, in the same year, the share of executives with a migration background was 9%, compared to 26% in the total population (DeZIM-Institut, 2020). This is surprising insofar as an already large and still growing body of research has confirmed a close link between diversity in top management positions and firm performance, suggesting that the under-representation of women and individuals with a migration background is detrimental to firm growth and profitability (Dezsö & Ross, 2012).

Ethnic and gender disparities in the labour market are usually explained with differences in human and cultural capital (see Salikutluk, Giesecke, & Kroh, 2020 for an overview) as well as different preference and decision-making patterns of women (Croson & Gneezy, 2009) and people with a migration background (Salikutluk, 2016). Thus, the low permeability of the three-tier education system in Germany may lead to inferior educational decisions among young women and individuals with a migration background regardless of their intellectual abilities. This low permeability, in turn, is due to differences in access to socio-cultural resources as well as a lack of familiarity with the structure of the education system (Becker, 2011; Crul et al., 2012). At the same time, young women as well as individuals with a migration background seem to have a significantly higher level of aspiration and a particularly strong determination to climb the social ladder (Relikowski, Yilmaz, & Blossfeld, 2012; Salikutluk, 2016).

Moreover, women have shown to be less competitive, (Niederle & Vesterlund, 2007), to prefer less challenging tasks (Gneezy, Niederle, & Rustichini, 2003), to have lower self-confidence and

to be more risk-averse (Croson & Gneezy, 2009). These mental dispositions, in turn, are likely to translate into disadvantageous career decisions and eventually lead to the under-representation of women in top positions (Dickerson & Taylor, 2000).

In this paper, we contribute to previous research by examining gender and migration background-related differences in individual behaviour in a homogeneous sample of high-ability students. The 33,296 students in our sample are part of a nationwide scholarship program and have all completed their 'Abitur' (the qualification required in Germany to attend university) with similar excellent grades, have a similar level of academic aspirations, and have preferences for the same fields of study, i.e. business, engineering, and law.

An investigation combining information on the individuals' gender and migration background is warranted in this context as numerous studies have shown mutually reinforcing effects of these two individual characteristics, leading to a particularly inferior position in the (German) labour market of women with a migration background. So far, most studies examining differences in the preferences and decision-making patterns of students follow a qualitative approach (e.g. Mullen, 2009) or limit themselves to simply describing gender and ethnicity inequalities in the labour market (Fleischmann & Höhne, 2013). With our paper, we join a growing body of literature on the determinants of a successful integration of second-generation immigrants (see Crul, Keskiner, & Lelie, 2017 for an overview) and shift the focus of the debate from the notion of a 'failed integration' to a more constructive debate about the advantages of a more diverse workforce.

Literature Review

A large body of literature has repeatedly documented the inferior position of people with a migration background (Becker, 2011; Heath, 2013) and of women (Cipollone, Patacchini, & Vallanti, 2014) in the labour market, showing that people with a migration background earn less

(Büchel & Frick, 2004), are more likely to be unemployed, have lower re-employment rates (Hartmann, 2016), and are more likely to be found in low-level positions (Constant & Massey, 2003). While women in most industrialized countries outperform men with respect to educational achievements (Fuller & Schoenberger, 1991; van Houtte, 2004)Parro 2012) the gender gap in terms of career success persists: Women still earn significantly less, are promoted less often, and are under-represented in top management positions (Blau & Kahn, 2007; Cook & Glass, 2014; Evers & Sieverding, 2014).

Previous studies have dealt extensively with the underlying causes of the under-representation of women and migrants in the labour market in general and in top positions in particular. Apart from direct discrimination (Blau & Kahn, 1994), the main explanations emphasize differences in, first, human and socio-cultural capital and, second, in the preference patterns of women and of people with a migration background.

Effect of Differences in Human and Socio-Cultural Capital

Human capital, in the form of academic degrees and work experience (Becker, 1964) and access to cultural resources (Bourdieu & Passeron, 2005) is considered the most important determinant of individual success in the labour market. Lack of human capital explains the inferior labour market position especially of first-generation immigrants (see Salikutluk et al., 2020 for an overview). Due to the close link between origin and educational success, the experience of their parents often negatively affects human capital accumulation and labour force participation of second-generation immigrants (Breen & Goldthorpe, 1997; Kristen & Granato, 2007). According to Bourdieu (1977), parents typically transfer their social status to their children, who then align their aspirations and major career decisions accordingly. Other individuals such as teachers, also influence migrants' norms and expectations (Sewell, Haller, & Ohlendorf, 1970). This influences

may then lead young adults with a low social status to not attend university, regardless of their intellectual ability (Mullen, 2009). Thus, in Germany more than 40% of the observable performance gap between young people with and without a migration background can be explained with differences in their socio-economic status (OECD, 2012). In addition, socio-cultural resources such as language skills and access to social networks also play a significant role in shaping an individual's professional life (Salikutluk et al., 2020). Especially for first-generation immigrants, language skills are important in getting access to education and vocational training (Dustmann & Fabbri, 2003; OECD, 2012).

In terms of human capital accumulation, the situation of women is different, because during education, women outperform men and are more likely to acquire a tertiary degree (Parro, 2012). However, longitudinal studies have found that women after entering the labour market accumulate less work experience and less on-the-job training while taking longer career interruptions (Bertrand & Hallock, 2001; Blau & Kahn, 2017; Bütikofer, Jensen, & Salvanes, 2018; Risse, Farrell, & Fry, 2018).

Effect of Different Preference Patterns

Differences in preference and decision-making patterns can also contribute to gender and ethnic disparities in the labour market. Despite the unfavourable impact of a low socio-economic status on educational opportunities, a large body of literature suggests that people with a migration background have particularly high educational aspirations (see Salikutluk, 2016 for an overview). The main reason for this is immigrants' strong desire for social advancement – the goal of a 'better life' (Crul, Schneider, & van Praag, 2014; Vallet, 2007). While many first-generation immigrants worked in low-level jobs, the majority of them migrated with the intention to improve their living conditions and long-term prospects and, therefore, represent a self-selected group with above-

average motivation and commitment (Kristen, Reimer, & Kogan, 2008). This tendency is clearly reflected in the educational aspirations of migrant parents (Relikowski et al., 2012) who consider education the most appropriate vehicle for upward mobility (Kao & Thompson, 2003; Vallet, 2007). However, although some ethnic minorities outperform their native peers (e.g. Heath, Rothon, & Kilpi, 2008; Kao & Thompson, 2003), they are, on the one hand, still under-represented in the student population (Crul et al., 2012). On the other hand, there is evidence documenting successful second-generation immigrants who have obtained university degrees and are now employed in professional positions (see Crul, Keskiner et al., 2017 for an overview). Crul, Schneider, Keskiner, and Lelie (2017b) refer to this phenomenon as the 'multiplier effect': successful migrant children try harder and show greater effort and commitment than their peers without a migration background. Each successful leap over a social hurdle enables the 'climber' to accumulate additional cultural and social resources, 'thereby multiplying their chances of success' (Konyali & Crul, 2017, p. 57).

Differences in preference and decision-making patterns are typically considered one of the main reasons for the low number of women in leadership positions in business and politics (Croson & Gneezy, 2009). A large body of literature consistently reports that women tend to avoid competitive settings even if they are as qualified as men (Almås, Cappelen, Salvanes, Sørensen, & Tungodden, 2016; Balafoutas & Sutter, 2012; Dohmen & Falk, 2011; Gneezy & Rustichini, 2004; Niederle & Vesterlund, 2007). In addition, competitive incentives are more motivating for men and – in contrast to women – men increase their performance in competition (Gneezy et al., 2003; Gneezy & Rustichini, 2004). Moreover, a large number of empirical studies have indicated that women across different cultures are significantly less self-confident (Bleidorn et al., 2016; Carlin, Gelb, Belinne, & Ramchand, 2018) and more risk-averse (Croson & Gneezy, 2009; Eckel

& Grossman, 2002), have a stronger social orientation, and strive for collaboration and relationships rather than competition or negotiation (Kray & Thompson, 2004; Rubin & Brown, 1975). These differences in preferences have a direct impact on educational and career decisions such as the choice of the field of study, on career expectations and the behaviour in salary negotiations (Guillén, Mayo, & Karelaia, 2018; Hügelschäfer & Achtziger, 2014).

In addition to considering the separate effects of gender and migration background on individual performance, particular attention needs to be paid to the combined impact of these two characteristics. Prior research has shown that the combination of multiple (presumably) disadvantaged statuses can be mutually reinforcing, leading to a unique situation for the affected individuals (Fleischmann & Höhne, 2013). Indeed, several studies provide empirical evidence for a 'double jeopardy' effect among immigrant women (Barnum, Liden, & Ditomaso, 1995). In Germany, for example, labour force participation of women with a migration background is significantly lower than that of observationally similar native women and in Austria, second-generation female migrants are by far the least successful group in terms of educational achievements (Schneebaum, Rumplmaier, and Altzinger 2016). Other studies, however, find that gender discrimination is lower among migrants tan among natives. Stypińska and Gordo (2018) as well as Greenman and Xie (2008) find that there is no particular discrimination against migrant women compared to native women in terms of hourly wages.

In this paper, we explore the interplay of multiple presumably 'disadvantages' in a large sample of high-ability students. More specifically, we analyse the impact of the combination of gender and migration background on academic performance while controlling for intellectual ability. Thus, we can attribute observable differences in behaviour to differences in gender- and migration-related preference patterns.

Data and Methods

Data

Our dataset comes from a large German scholarship institution and consists of anonymous CV information. Scholarships are offered to pupils who rank among the Top 3 at their high school in the respective Abitur cohort (=German high school diploma providing access to university). The selection criteria include an outstanding performance at school and university as well as engagement in extracurricular activities. These rigid selection criteria ensure that all students in the sample have a comparable level of human capital in the form of educational qualifications and socio-cultural resources at the time of admission to the program.

Figure 1 illustrates the mean final high school grade (*Abitur grade*) of our sample compared to the overall student population in Germany in the respective year. The students in our sample rank consistently in the top quantile of the respective year's graduating cohort. Hence, we refer to the students in our dataset as 'high-ability' students.

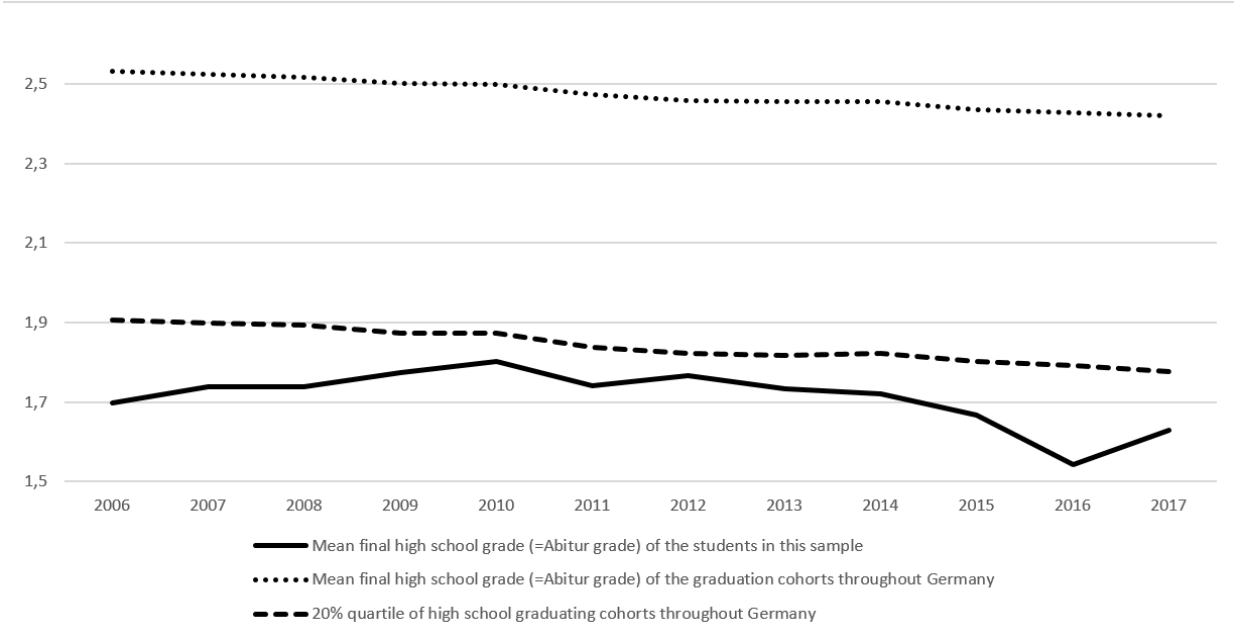

Figure 1.

Mean final high school grade (=Abitur grade) of respective graduation year[1]

(Kultusministerkonferenz, 2006-2017)

Previous studies have shown that students from different academic fields have different preference and behaviour patterns (Scala, Tomasi, Goncher, & Bursic, 2018). Moreover, Buser, Niederle, and Oosterbeek (2014) find that individual competitiveness affects students' choice of academic field, with competitive students opting for more prestigious academic tracks. Therefore, we include in our empirical analysis only students from three particular fields (business, engineering and law). Our final sample consists of 14,343 business students (including business administration, economics, and management), 10,847 law students and 8,106 engineering students. The share of women among business students is 37%, among law students 46% and among engineering students 18%. Thus, focusing on the three different fields helps to better

[1] Results of all nationwide graduating cohorts are only available since 2006.

understand the effects of migration background and gender in environments with different compositions of men and women.

Generally, there are two ways to identify the migration background of an individual. Either the migration background is directly surveyed, or it is derived with the help of further information. Language is one of the most important sources of cultural capital and serves as a tool to assess both, an individual's integration into and her attachment to a particular culture (Dustmann & Fabbri, 2003). We derive the information on an individual's migration background from her language profile. The procedure described below was discussed and agreed upon in interviews with experts in migration and gender studies.

All students who indicated that their mother language is not German and mostly speak a language that is typically not learned in school are classified as 'with a migration background.' An overview of these typical migration languages and their respective frequencies is provided in Table 1.

Table 1.

Languages classified as typical migration languages

Language	# Students	Language	# Students	Language	# Students	Language	# Students
Polish	299	Hindi	45	Bosnian	6	Tigrinya	2
Turkish	254	Hebrew	44	Armenian	5	Yoruba	2
Arabic	222	Afrikaans	35	Belarusian	5	Amharic	1
Norwegian	163	Serbo-Croatian	34	Georgian	4	Bahasa Indonesia	1
Korean	114	Thai	31	Lithuanian	4	Chinyanja	1
Vietnamese	112	Albanian	29	Farsi	3	Filipino	1
Finnish	108	Slovakian	28	Mongolian	3	Khmer	1
Indonesian	97	Swahili	28	Urdu	3	Kiswahili	1
Czech	96	Catalan	26	Uzbek	3	Créole Mauricien	1
Greek	86	Serbian	14	Aramaic	2	Lingala	1
Hungarian	78	Latvian	13	Azerbaijani	2	Paschto	1
Romanian	70	Slovenian	11	Kyrgyz	2	Tibetian	1
Croatian	69	Estonian	8	Luganda	2	Circassian	1
Bulgarian	65	Kurdish	8	Malayalam	3		
Persian	60	Tamil	7	Macedonian	2		
Ukrainian	53	Bengali	6	Sindhi	2		

Polish, Turkish, and Arabic are the dominant three languages, reflecting the current migration situation in Germany because these are the most frequently spoken languages (along with German and Russian) in German households (Statistisches Bundesamt, 2018). Russian as well as Chinese, Danish, Dutch, Italian, Japanese, Luxembourgish, Portuguese, and Swedish are languages which may have been learned due to a migration background but could also have been learned in the academic context or on holiday trips. Therefore, students who indicated one of these languages were excluded from our analyses. Finally, students who indicated languages that are typically offered at school in Germany (English, French, Spanish) were classified as ‘without a migration background’.

Applying these rules, 4,511 of the 33,296 (13.5 %) students in our sample are classified as persons 'with a migration background.' In Germany, the migrant share among the 25 to 35 year-olds holding a university degree is 22% (Statistisches Bundesamt, 2019). Thus, the low proportion of students with a migration background in our sample is most likely due to the strict way we identify individuals with a migration background. (In the appendix A1, we document the distribution of men and women and individuals with and without a migration background separately for the three academic fields).

Variables

To examine students' behaviour we use six variables that were already identified as typical career success factors in previous studies (e.g. Frick & Maihaus, 2016; Gault, Redington, & Schlager, 2000).

Number of internships: Internships during studies allow students to accumulate work experience and increase and individual's human capital (Becker, 1964). They are an important part of a CV and have been shown to have a positive effect on later career success (Gault et al., 2000). In our analyses, we use the number of completed internships, regardless of their duration.

Number of auxiliary jobs: This variable measures the extent to which students engage in paid activities during their studies in addition to internships. These include positions as working students or teaching assistants.

Duration of studies (excluding doctoral studies): Duration of studies is another predictor of university success. Students expect a higher graduation age to have a negative effect on their starting salary (Frick & Maihaus, 2016), and therefore generally aim to complete their studies as fast as possible.

Top internships during studies (binary): Studies have shown that graduates who completed an internship with a particularly prestigious company realize significantly higher starting salaries (Frick & Maihaus, 2016). In our study, we classify as 'prestigious' all DAX-30 companies as well as the top three strategy consultancies, investment banks, tech companies, and major law firms.

Self-employment alongside studies (binary): Self-employment indicates a particular form of dedication and commitment. Previous studies show that the proportion of men is higher among both student entrepreneurs and non-student entrepreneurs (Politis, Winborg, & Dahlstrand, 2012) and that the probability to start a business is higher among people with a migration background (Statistisches Bundesamt, 2017).

Doctoral studies (binary): A doctorate is the highest academic degree and results in higher starting salaries as well as higher career earnings (Becker, 1964). The socio-economic status and family background (professional status of the father) have been found to be of particular importance here (Hartmann, 2002).

In addition, we control for an individual's final high school grade and year of birth. Table 2 provides an overview of the descriptive statistics of the six variables as well as the distribution of the final high school grade in the four different groups. The table illustrates that in the sample of high-ability students, women outperform men in terms of final high school grade, just as in the general population (van Houtte, 2004).

Table 2.

Descriptive statistics

	Men, no migration background		**Women, no migration background**		**Men, migration background**		**Women, migration background**	
	n= 18,754		n= 10,031		n= 2,747		n= 1,764	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Number of internships	1.63	1.62	1.36	1.55	1.66	1.59	1.30	1.43
Number of auxiliary jobs	2.14	1.21	1.52	1.56	1.33	1.58	1.34	1.59
Duration of studies (in years)	6.15	2.12	6.01	2.01	6.27	2.15	6.24	2.11
Top internship (binary)	0.26	-	0.20	-	0.28	-	0.21	-
Self-employed (binary)	0.05	-	0.02	-	0.06	-	0.03	-
Doctoral studies (binary)	0.26	-	0.18	-	0.23	-	0.18	-
Abitur Final Grade	1.71	0.52	1.57	0.44	1.76	0.54	1.60	0.48

Regression Models

Effect of Gender and Migration Background on Behaviour During Studies

We estimate the impact of gender and migration background on student behaviour using a negative binomial count data model controlling for over-dispersion of the dependent variable (variables 1 and 2), an ordinary least squares model (variable 3) and probit regression models (variables 4 to 6). The four possible combinations of gender and migration background are expressed in dummy variables with the combination ‘male, no migration background’ as the reference group. In a second step, we use Wald tests as post-estimation checks to test for significant differences between the groups. In addition, we control for field of study, year of birth and final high school grade. A large body of research confirms that an individual’s final high school grade is a very good predictor of academic success (Robbins et al., 2004) as well as starting salaries and career earnings (French, Homer, Popovici, & Robins, 2015).

The results of the regression models are displayed in Tables 3 and 4. For the negative binomial regression models (Models 1 and 2) and probit regression models (models 3 to 6), marginal effects are displayed.

Table 3.

Separate regressions for continuous variables 1, 2 and 3

	Model 1	**Model 2**	**Model 3**
	Negative binomial regression	*Negative binomial regression*	*Linear Regression*
Dependent Variable	Number of internships	Number of auxiliary jobs	Duration of studies (in years)
Independent Variables			
Gender & Migration background			
[Dummy; Male & no migration background]			
Dummy; Female & no migration background	**.0825** (.0184)***	**.1027** (.0169)***	**-.1887** (.0238)***
Dummy; Male & migration background	**.0041** (.0268)	**.0433** (.0257)	**.1814** (.0378)***
Dummy; Female & migration background	**-.0260** (.0359)	**.1696** (.0347)***	**.0669** (.0466)
Abitur grade			
[1st Quartile (1.0-1.39)]			
2nd Quartile (1.4-1.69)	**-.0716** (.0207)**	**.0438** (.0186)*	**.0227** (.0276)
3rd Quartile (1.7-2.09)	**-.1116** (.0207)***	**.1093** (.0189)***	**.1148** (.0276)***
4th Quartile (>2.1)	**-.2476** (.0209)***	**.1498** (.0199)***	**.3125** (.0360)***
Year of Birth	**-.0563** (.0014)***	**-.0315** (.0013)***	**-.0934** (.0019)***
Field of Study			
[Economics]			
Engineering	**.1281** (.0231)***	**-1.3648** (.0182)***	**.1984** (.0262)***
Law	**-1.6447** (.0146)***	**-1.9249** (.0152)***	**1.8264** (.0237)***
Constant	-	-	**191.1043** (3.7985)***
Observations	33,296	33,296	33,255
Pseudo R2 / Adj. R2	0.1272	0.1508	0.2185

Legend: ***p ≤ .001; **p ≤ .01; *p ≤ .05. Robust standard errors are in parentheses.

Table 4.

Separate probit regressions for binary variables 4 to 6

Dependent Variable	**Model 4** *Probit Regression* Top internship (binary)	**Model 5** *Probit Regression* Self-employed (binary)	**Model 6** *Probit Regression* Doctoral studies (binary)
Independent Variables			
Gender & Migration background			
[Dummy; Male & no migration background]			
Dummy; Female & no migration background	**-.0072** (.0052)	**-.0249** (.0023)***	**-.0774** (.0044)***
Dummy; Male & migration background	**.0048** (.0078)	**.0048** (.0040)	**-.0086** (.0071)
Dummy; Female & migration background	**-.0075** (.0102)	**-.0153** (.0041)***	**-.0739** (.0078)***
Abitur grade			
[1st Quartile (1.0-1.39)]			
2nd Quartile (1.4-1.69)	**-.0147** (.0059)*	**.0024** (.0029)	**-.0280** (.0055)***
3rd Quartile (1.7-2.09)	**-.0040** (.0060)	**.0112** (.0031)***	**-.0381** (.0055)***
4th Quartile (>2.1)	**-.0260** (.0062)***	**.0133** (.0032)***	**-.0300** (.0056)***
Year of Birth	**-.0082** (.0004)***	**-.0029** (.0002)***	**-.0243** (.0003)***
Field of Study			
[Economics]			
Engineering	**-.0560** (.0066)***	**-.0316** (.0028)***	**.0164** (.0044)***
Law	**-.3349** (.0043)***	**-.0339** (.0026)***	**.2993** (.0050)***
Constant	-	-	-
Observations	33,294	33,296	33,296
Pseudo R2 / Adj. R2	0.1508	0.0522	0.2292

*Legend: ***p ≤ .001; **p ≤ .01; *p ≤ .05. Robust standard errors are in parentheses.*

First, we find statistically significant and economically relevant gender effects: Native women complete significantly more internships (Model 1) and are significantly more likely to work in auxiliary jobs as teaching or research assistants (Model 2). Moreover, native women complete their studies about 2.3 months earlier than native men. On the other hand, male students

are significantly more likely to pursue a doctoral degree. Native women are nearly 8 percentage points less likely to go for a doctorate than the male reference group (Model 6). In addition, the gender gap in entrepreneurial activities in the overall population is reflected in the sample of high-ability students as the probability of native women to be self-employed during their studies is 2.5 percentage points lower than among native men (Model 5).

Overall, men seem to be more likely to invest in activities that increase their general human capital (e.g. in the form of a doctorate) and foster their business acumen (being self-employed during studies), while women are more likely to work in lower-level, temporary, auxiliary jobs. This is particularly apparent when looking at the number and the quality of internships. Although women complete a significantly larger number of internships, no gender-specific effect exists with respect to internships in prestigious companies, which has been found to be of particular importance for an individual's future career (Frick & Maihaus, 2016).

Second, migration background has only a marginal effect on the behavioural patterns of high-ability students. There are only few exceptions: Migrant men need about 2.2 months more to complete their studies, which is statistically significant, yet quite small when compared to the average duration of 6.1 years. Overall, we do not find any differences in the behaviour of migrant and native individuals in our sample of high-ability students that eventually translate into a relevant signal for employers.

Third, we fail to find evidence of a 'double discrimination' of migrant women. In our homogenous sample of high-ability scholars, the combination of the two potentially disadvantageous individual characteristics 'gender' and 'migration background' seems to be irrelevant in terms of academic performance.

Previous research has emphasized the important role of an individual's final high school grade as an indicator of determination, intelligence, perseverance, and – ultimately – success (Galla et al., 2019). Our results confirm these previous findings in the sense that even in a homogenous sample of high-ability students with universally excellent intellectual abilities, behavioural differences between the top and the bottom quartiles of the grade distribution can be observed. Students with lower final high school grades complete fewer (and less prestigious) internships, are less likely to pursue a doctorates and need more time to complete their studies (perhaps because they are more likely to work in temporary jobs).

Moreover, we find significant differences between the three fields of study: Law students need on average 1.8 years more to complete their studies and complete significantly fewer internships than business students which can be attributed to the mandatory practical experience to be gained during the legal clerkship after graduation. Furthermore, law as well as engineering students are more likely to pursue a doctorate than business students, which is mainly due to differences in the opportunity costs and the signal of a doctoral degree in the respective labour market.

Given the large differences between the three academic tracks, we now separately analyse the impact of gender and migration background on academic performance for each field of study.

Differences Regarding Field of Studies

Table 5-7 display the results of the regression models. As before, we report marginal effects for the negative binomial regression models and the probit models.

Table 5.

Business students

	Model 7	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
	Negative binomial regression	*Negative binomial regression*	*Linear Regression*	*Probit Regression*	*Probit Regression*	*Probit Regression*
Dependent Variable	Number of internships	Number of auxiliary jobs	Duration of studies (in years)	Top internship (binary)	Self-employed (binary)	Doctoral studies (binary)
Independent Variables						
Gender & Migration background						
[Male & no migration background]						
Female & no migration background	**.1560** (.0287)***	**.2318** (.0309)***	**.0513** (.0290)	**.0008** (.0091)	**-.0357** (.0051)***	**-.0563** (.0063)***
Male & migration background	**-.0432** (.0467)	**.0869** (.0498)	**.1854** (.0462)***	**.0002** (.0145)	**.0075** (.0067)	**-.0083** (.0090)
Female & migration background	**-.0277** (.0562)	**.3079** (.0574)***	**.3486** (.0550)***	**-.0055** (.0468)	**-.0224** (.0094)*	**-.0478** (.0123)***
Year of Birth	**-.0625** (.0023)***	**-.0627** (.0024)***	**-.0270** (.0023)***	**-.0125** (.0007)***	**-.0042** (.0004)***	**-.0175** (.0004)***
Abitur grade						
[1st Quartile (1.0-1.39)]						
2nd Quartile (1.4-1.69)	**-.0681** (.0364)	**.0689** (.0374)	**.1280** (.0356)***	**-.0158** (.0112)	**.0065** (.0054)	**-.0243** (.0075)***
3rd Quartile (1.7-2.09)	**-.1405** (.0354)***	**.1354** (.0371)***	**.2214** (.0436)***	**-.0057** (.0110)	**.0169** (.0055)**	**-.0346** (.0073)***
4th Quartile (>2.1)	**-.2889** (.0356)***	**.1682** (.0384)***	**.4384** (.0360)***	**-.0316** (.0112)**	**.0200** (.0057)***	**-.0319** (.0074)***
Constant	-	-	**58.8394** (4.5804)***	-	-	-
Observations	14,343	14,343	14,343	14,343	14,343	14,343
Pseudo R2 / Adj. R2	0.0166	0.0131	0.0223	0.0171	0.0378	0.1539

*Legend: ***p ≤ .001; **p ≤ .01; *p ≤ .05. Robust standard errors are in parentheses.*

Table 6.

Law students

	Model 7	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
	Negative binomial regression	*Negative binomial regression*	*Linear Regression*	*Probit Regression*	*Probit Regression*	*Probit Regression*
Dependent Variable	Number of internships	Number of auxiliary jobs	Duration of studies (in years)	Top internship (binary)	Self-employed (binary)	Doctoral studies (binary)
Independent Variables						
Gender & Migration background						
[Male & no migration background]						
Female & no migration background	**.0227** (.0149)	**.0056** (.0132)	**-.1088** (.0341)***	**-.0093** (.0036)*	**-.0171** (.0038)***	**-.1340** (.0090)***
Male & migration background	**.0288** (.0281)	**.0369** (.0243)	**.2374** (.0659)***	**-.0051** (.0069)	**.0079** (.0056)	**-.0344** (.0177)
Female & migration background	**.0305** (.0283)	**.0133** (.0248)	**.1013** (.0651)	**-.0077** (.0071)	**-.0096** (.0070)	**-.1545** (.0181)***
Year of Birth	**-.0319** (.0012)***	**-.0039** (.0011)***	**-.0847** (.0030)***	**-.0022** (.0003)***	**-.0020** (.0003)***	**-.0363** (.0007)***
Abitur grade						
[1st Quartile (1.0-1.39)]						
2nd Quartile (1.4-1.69)	**-.0571** (.0202)**	**-.0000** (.0160)	**-.0756** (.0422)	**-.0130** (.0048)**	**.0028** (.0042)	**-.0170** (.0117)
3rd Quartile (1.7-2.09)	**-.0706** (.0198)***	**.0096** (.0162)	**.0558** (.0421)	**-.0084** (.0049)	**.0095** (.0044)*	**-.0362** (.0115)**
4th Quartile (>2.1)	**-.2009** (.0174)***	**.0167** (.0168)	**.1204** (.0435)**	**-.0287** (.0041)***	**.0044** (.0042)	**-.0362** (.01152)**
Constant	-	-	**174.2116** (6.0013)***	-	-	-
Observations	10,847	10,847	10,847	10,847	10,847	10,847
Pseudo R2 / Adj. R2	0.0453	0.0013	0.0783	0.0386	0.0351	0.1628

*Legend: ***p ≤ .001; **p ≤ .01; *p ≤ .05. Robust standard errors are in parentheses.*

Table 7.

Engineering students

	Model 7	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
	Negative binomial regression	*Negative binomial regression*	*Linear Regression*	*Probit Regression*	*Probit Regression*	*Probit Regression*
Dependent Variable	Number of internships	Number of auxiliary jobs	Duration of studies (in years)	Top internship (binary)	Self-employed (binary)	Doctoral studies (binary)
Independent Variables						
Gender & Migration background						
[Male & no migration background]						
Female & no migration background	**-.0020** (.0480)	**-.0304** (.0341)	**-.1197** (.0448)**	**-.0209** (.0147)	**-.0380** (.0084)***	**-.0362** (.0116)**
Male & migration background	**.0500** (.0554)	**-.0175** (.0393)	**.3266** (.0532)***	**.0213** (.0170)	**-.0039** (.0065)	**.0126** (.0118)
Female & migration background	**-.1407** (.1126)	**.1002** (.0729)	**.2344** (.1016)*	**-.0114** (.0332)	**-.0256** (.0166)	**-.0081** (.0254)
Year of Birth	**-.0571** (.0031)***	**-.0115** (.0022)***	**-.0374** (.0031)***	**-.0079** (.0010)***	**-.0017** (.0004)***	**-.0208** (.0036)***
Abitur grade						
[1st Quartile (1.0-1.39)]						
2nd Quartile (1.4-1.69)	**-.0493** (.0433)	**.0507** (.0287)	**.0348** (.0409)	**-.0095** (.0132)	**-.0039** (.0048)	**-.0443** (.0096)***
3rd Quartile (1.7-2.09)	**-.0482** (.0459)	**.1782** (.0327)***	**.1468** (.0436)***	**.0110** (.0141)	**.0045** (.0054)	**-.0456** (.0100)***
4th Quartile (>2.1)	**-.1125** (.0485)*	**.2919** (.0374)***	**.3058** (.0466)***	**.0066** (.0151)	**.0167** (.0064)**	**-.0284** (.0108)**
Constant	-	-	**79.8083** (6.0643)***	-	-	-
Observations	8,106	8,106	8,106	8,106	8,106	8,106
Pseudo R2 / Adj. R2	0.0118	0.0059	0.0336	0.0079	0.0311	0.1489

*Legend: ***p ≤ .001; **p ≤ .01; *p ≤ .05. Robust standard errors are in parentheses.*

For each field of study, we find significant gender differences and marginal migration background effects in individual behaviour. In each of the academic tracks, men seem to focus more on activities that increase their general human capital (completing a doctorate) or foster their business acumen (self-employment during their studies). Furthermore, with the exception of the time required to finish one's studies, there we find no behavioural differences between

migrant and native men. Male law students with a migration background study 2.8 months longer, while engineering students study 3.9 months longer than their native male peers.

Furthermore, in the male-dominated fields of law and engineering we find no significant differences between migrant women - who face a potential double disadvantage – and men (with or without a migration background). Compared to their male peers, native female law students complete their studies significantly faster (Model 9), complete fewer prestigious internships (Model 10), and are less likely to be self-employed during their studies (Model 11). In contrast, women with a migration background do not differ from men in any of these categories. Thus, in our sample of high-ability students, the combination of multiple disadvantageous characteristics is not mutually reinforcing. Table 7 confirms these findings for female engineering students: while native women seem to differ significantly in their behaviour from their male fellow students, this is not the case for migrant women.

In our sample of high-ability students, we find that the behaviour of women with a migration background is very similar to that of native and migrant men. These women have successfully mastered even more barriers than their male peers, especially when they originate from male-dominated cultures. Thus, in the case of these women, a 'multiplier effect' seems to be important: with each obstacle mastered successfully, they accumulate additional skills and expertise, opening up further opportunities for career advancement (see Crul, Schneider et al., 2017). Nevertheless, both law and engineering remain male-dominated fields. While this is clearly visible in the low percentage of female students in engineering (18%) it is less obvious in law. Here the percentage of women is high among students, but decreases rapidly in the top positions, suggesting the persistence of a 'glass ceiling'. A recent survey of 200 large law firms in Germany reveals that while the proportion of women associates is currently at 43%, less than 11% of all

equity partners were female (Parzinger, 2018). In 2019, the share of new equity partners at Germany's 10 major law firms was 12%. In this persistently male-dominated environment, adapting male behavioural patterns makes it easier for women to climb the career ladder.

Conclusion

The main objective of this study was to explore possible differences in preference and decision-making patterns of high-ability male and female students with and without a migration background to better understand the lack of diversity in the executive suites of German companies. Since these students do not differ in their intellectual abilities or academic achievements, the observable differences in behaviour can be attributed primarily to gender- and migration-related preference patterns.

First, we find statistically significant and economically relevant gender differences in the individuals' behaviour. Although the students in our sample are similar in terms of intellectual ability, academic aspirations and their preferences for the same field of study (business studies, law, engineering), men and women behave quite differently. Men tend to choose activities that increase their general human capital (completing a doctorate) or foster their business acumen at an early stage (self-employment during their studies). Women, on the other hand, rather choose to work in lower-level auxiliary jobs during their studies, i.e. in areas that are less likely to lead to an increase in general human capital and thus have less of a positive impact on their future careers.

Among law students, a field with a large share of women (42% of high-ability students), the gender gap is particularly large. Male law students prepare their future careers by completing more prestigious internships, by pursuing a doctorate as well as by starting their own business. Female law students devote additional effort to completing their studies in less time and have,

therefore, accumulated less human capital by the time they enter the labour market. Fast completion of a degree program has been shown to be overestimated in terms of its positive effect on starting salaries (Frick & Maihaus, 2016). In our dataset consisting of high-ability students only, this misperception is particularly prevalent among female students.

Second, among high-ability students, migration background does not affect behavioural patterns. Men with a migration background behave largely like native men. The only observable difference is the longer time it takes students with a migration background to complete their studies. In the behavioural patterns that are essential for a future career, such as pursuing a doctorate or completing a prestigious internship, we find no difference between men with and without a migration background. Further studies should try to identify the factors driving the absence of any migration effect among high-ability students found in previous studies, such as parental support or mentoring at high school.

Third, women with a migration background are quite different from native women in terms of their behaviour. Particularly in the sub-samples of law and engineering students we find that women with a migration background are similar to men in many decision-making and preference patterns. This is most likely due to the fact that these women had to overcome a particularly large number of 'social barriers'. Therefore, women who have made it thus far, represent a highly selected group of individuals with particularly high aspirations and commitment.

Our findings have several direct implications. First, high-ability women should be encouraged to devote their efforts to activities that increase their general human capital, such as pursuing a doctorate or completing a prestigious internship, rather than graduating in a shorter period of time. Furthermore, when recruiting future employees, human resources departments in

prestigious companies seeking high-ability students should acknowledge the different preferences of men and women during their studies and possibly adjust their hiring criteria.

In our sample, we measure an individual's migration background using a binary variable and do distinguish between different cultures. Further research should take a more detailed look at respective country of origin to analyse the interplay between gender and migration background among high-ability students. Moreover, a distinction between first-, second-, and third-generation immigrants would help to analyse how behavioural differences develop over time. Furthermore, previous research has shown that the behaviour and preference patterns of migrants from different countries vary considerably (Jonsson & Rudolphi, 2011). In future studies, it is, therefore, important to focus on particular ethnic groups or cultures to either document the robustness of our findings reported above or to come up with different results for different ethnic minorities. In addition to culture-related behavioural differences, the majority groups' perception of certain ethnic groups plays an important role. While migrants from some cultural groups are seen as being particularly diligent (e.g. Asian immigrants), migrants from other countries of origin tend to be subject to negative prejudices. In a recent study, Weichselbaumer (2020) finds that women wearing a headscarf on job applications received significantly fewer invitations to a job interview than women without a headscarf. Therefore, future studies should focus on ethnic groups separately, as this allows considering not only the perceived integration of individuals, but also the 'response' of the general society on a specific ethnic group. Furthermore, future studies should investigate the impact of the behavioural differences found among high-ability students when they enter the labour market. In this context, it is important to analyse whether students with a migration background, whose performance and behaviour is the same as that of the native student population are exposed to discrimination when entering the labour market. Moreover,

future research should explore how the distinct gender differences in behaviour unfold at career entry to develop and implement appropriate measures to further promote diversity.

References

Almås, I., Cappelen, A. W., Salvanes, K. G., Sørensen, E. Ø., & Tungodden, B. (2016). What Explains the Gender Gap in College Track Dropout? Experimental and Administrative Evidence. *American Economic Review*, *106*(5), 296–302. https://doi.org/10.1257/aer.p20161075

Balafoutas, L., & Sutter, M. (2012). Affirmative action policies promote women and do not harm efficiency in the laboratory. *Science*, *335*(6068), 579–582. https://doi.org/10.1126/science.1211180

Barnum, P., Liden, R. C., & Ditomaso, N. (1995). Double Jeopardy for Women and Minorities: Pay Differences with Age. *Academy of Management Journal*, *38*(3), 863–880. https://doi.org/10.2307/256749

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education. General series / National Bureau of Economic Research: no. 80*. New York: National Bureau of Economic Research: National Bureau of Economic Research.

Becker, R. (2011). Integration von Migranten durch Bildung und Ausbildung – theoretische Erklärungen und empirische Befunde. In R. Becker (Ed.), *Integration durch Bildung: Bildungserwerb von jungen Migranten in Deutschland* (pp. 11–36). Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-93232-3_1

Bertrand, M., & Hallock, K. F. (2001). The Gender Gap in Top Corporate Jobs. *Industrial & Labor Relations Review*, *55*(1), 3–21. https://doi.org/10.1177/001979390105500101

Blau, F. D., & Kahn, L. M. (1994). Rising Wage Inequality and the U.S. Gender Gap. *The American Economic Review*, *84*(2), 23–28.

Blau, F. D., & Kahn, L. M. (2007). The Gender Pay Gap: Have Women Gone as Far as They Can? *Academy of Management Perspectives*, *21*(1), 7–23.

Blau, F. D., & Kahn, L. M. (2017). The Gender Wage Gap: Extent, Trends, and Explanations. *Journal of Economic Literature*, *55*(3), 789–865. https://doi.org/10.1257/jel.20160995

Bleidorn, W., Arslan, R. C., Denissen, J. J. A., Rentfrow, P. J., Gebauer, J. E., Potter, J., & Gosling, S. D. (2016). Age and gender differences in self-esteem. A cross-cultural window. *Journal of Personality and Social Psychology*, 396–410. https://doi.org/10.1037/pspp0000078

Bourdieu, P., & Passeron, J.-C. (2005). *La reproduction: Éléments pour une théorie du système d'enseignement*. *Collection "Le sens commun"*. Paris: Éd. de Minuit: Éd. de Minuit.

Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differences: towards a formal rational action theory. *Rationality and Society*, *9*(3), 275–305. https://doi.org/10.1177/104346397009003002

Büchel, F., & Frick, J. R. (2004). Immigrants in the UK and in West Germany? Relative income position, income portfolio, and redistribution effects. *Journal of Population Economics*, *17*(3). https://doi.org/10.1007/s00148-004-0183-4

Buser, T., Niederle, M., & Oosterbeek, H. (2014). Gender, Competitiveness, and Career Choices *The Quarterly Journal of Economics*, *129*(3), 1409–1447. https://doi.org/10.1093/qje/qju009

Bütikofer, A., Jensen, S., & Salvanes, K. G. (2018). The role of parenthood on the gender gap among top earners. *European Economic Review*, *109*(2), 103–123. https://doi.org/10.1016/j.euroecorev.2018.05.008

Carlin, B. A., Gelb, B. D., Belinne, J. K., & Ramchand, L. (2018). Bridging the gender gap in confidence. *Business Horizons*, *61*(5), 765–774. https://doi.org/10.1016/j.bushor.2018.05.006

Cipollone, A., Patacchini, E., & Vallanti, G. (2014). Female labour market participation in Europe: novel evidence on trends and shaping factors. *IZA Journal of European Labor Studies*, *3*(1), 18. https://doi.org/10.1186/2193-9012-3-18

Constant, A., & Massey, D. S. (2003). Self-selection, earnings, and out-migration: A longitudinal study of immigrants to Germany. *Journal of Population Economics*, *16*(4), 631–653. https://doi.org/10.1007/s00148-003-0168-8

Cook, A., & Glass, C. (2014). Women and Top Leadership Positions: Towards an Institutional Analysis. *Gender, Work & Organization*, *21*(1), 91–103. https://doi.org/10.1111/gwao.12018

Croson, R., & Gneezy, U. (2009). Gender Differences in Preferences. *Journal of Economic Literature*, *47*(2), 448–474. https://doi.org/10.1257/jel.47.2.448

Crul, M.R.J., Schneider, J., & van Praag, L. (2014). Upward mobility and questions of belonging in migrant families. *New Diversities*, *16*(1), 1–7.

Crul, M., Keskiner, E., & Lelie, F. (2017). The upcoming new elite among children of immigrants: a cross-country and cross-sector comparison. *Ethnic and Racial Studies*, *40*(2), 209–229. https://doi.org/10.1080/01419870.2017.1245432

Crul, M., Schneider, J., Keskiner, E., & Lelie, F. (2017). The multiplier effect: how the accumulation of cultural and social capital explains steep upward social mobility of children of low-educated immigrants. *Ethnic and Racial Studies*, *40*(2), 321–338. https://doi.org/10.1080/01419870.2017.1245431

Crul, M., Schnell, P., Herzog-Punzenberger, B., Wilmes, M., Slootmann, M., & Aparicio Gómez, R. (2012). 5 School careers of second-generation youth in Europe. Which education systems provide the best chances for success? In M. Crul, J. Schneider, & F. Lelie (Eds.), *The European*

Second Generation Compared (pp. 101–164). Amsterdam University Press. https://doi.org/10.1515/9789048516926-006

DeZIM-Institut (2020). *Teilhabe ohne Teilnahme? Wie Ostdeutsche und Menschen mit Migrationshintergrund in der bundesdeutschen Elite vertreten sind* (DRN No. 4). Berlin. Retrieved from Deutsches Zentrum für Integrations- und Migrationsforschung website: https://www.dezim-institut.de/fileadmin/user_upload/Projekte/Eliten/ResearchNotes_04_201030_ansicht.pdf

Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, *33*(9), 1072–1089. https://doi.org/10.1002/smj.1955

Dickerson, A., & Taylor, M. A. (2000). Self-Limiting Behavior in Women. *Group & Organization Management*, *25*(2), 191–210. https://doi.org/10.1177/1059601100252006

Dohmen, T., & Falk, A. (2011). Performance Pay and Multidimensional Sorting: Productivity, Preferences, and Gender. *American Economic Review*, *101*(2), 556–590. https://doi.org/10.1257/aer.101.2.556

Dustmann, C., & Fabbri, F. (2003). Language Proficiency and Labour Market Performance of Immigrants in the UK. *The Economic Journal*, *113*(489), 695–717. Retrieved from http://www.jstor.org/stable/3590195

Eckel, C. C., & Grossman, P. J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, *23*(4), 281–295. https://doi.org/10.1016/S1090-5138(02)00097-1

Evers, A., & Sieverding, M. (2014). Why do Highly Qualified Women (Still) Earn Less? Gender Differences in Long-Term Predictors of Career Success. *Psychology of Women Quarterly*, *38*(1), 93–106. https://doi.org/10.1177/0361684313498071

Fleischmann, F., & Höhne, J. (2013). Gender and migration on the labour market: Additive or interacting disadvantages in Germany? *Social Science Research*, 1325–1345. https://doi.org/10.1016/j.ssresearch.2013.05.006

French, M. T., Homer, J. F., Popovici, I., & Robins, P. K. (2015). What You Do in High School Matters: High School GPA, Educational Attainment, and Labor Market Earnings as a Young Adult. *Eastern Economic Journal*, *41*(3), 370–386. https://doi.org/10.1057/eej.2014.22

Frick, B., & Maihaus, M. (2016). The structure and determinants of expected and actual starting salaries of higher education students in Germany: identical or different? *Education Economics*, *24*(4), 374–392. https://doi.org/10.1080/09645292.2015.1110115

Fuller, R., & Schoenberger, R. (1991). The Gender Salary Gap: Do Academic Achievement, Internship Experience, and College Major Make a Difference? *Social Science Quarterly*, *72*(4), 715–726.

Galla, B. M., Shulman, E. P., Plummer, B. D., Gardner, M., Hutt, S. J., Goyer, J. P., . . . Duckworth, A. L. (2019). Why High School Grades Are Better Predictors of On-Time College Graduation Than Are Admissions Test Scores: The Roles of Self-Regulation and Cognitive Ability. *American Educational Research Journal*, *56*(6), 2077–2115. https://doi.org/10.3102/0002831219843292

Gault, J., Redington, J., & Schlager, T. (2000). Undergraduate Business Internships and Career Success: Are They Related? *Journal of Marketing Education*, *22*(1), 45–53. https://doi.org/10.1177/0273475300221006

Gneezy, U., Niederle, M., & Rustichini, A. (2003). Performance in Competitive Environments: Gender Differences. *The Quarterly Journal of Economics*, *118*(3), 1049–1074. https://doi.org/10.1162/00335530360698496

Gneezy, U., & Rustichini, A. (2004). Gender and Competition at a Young Age. *American Economic Review*, *94*(2), 377–381. https://doi.org/10.1257/0002828041301821

Guillén, L., Mayo, M., & Karelaia, N. (2018). Appearing self-confident and getting credit for it: Why it may be easier for men than women to gain influence at work. *Human Resource Management*, *57*(4), 839–854. https://doi.org/10.1002/hrm.21857

Hartmann, J. (2016). Assimilation over the Life Course? The Career Mobility of Second-Generation Turkish Men in Germany. *Zeitschrift Für Soziologie*, *45*(4), 281–297. https://doi.org/10.1515/zfsoz-2015-1016

Hartmann, M. (2002). *Der Mythos von den Leistungseliten: Spitzenkarrieren und soziale Herkunft in Wirtschaft, Politik, Justiz und Wissenschaft*. Frankfurt: Campus-Verlag: Campus-Verlag.

Heath, A. F. (2013). *Unequal chances: Ethnic minorities in western labour markets*. *Proceedings of the British Academy: Vol. 137*. Oxford: Oxford Univ. Press: Oxford Univ. Press.

Heath, A. F., Rothon, C., & Kilpi, E. (2008). The Second Generation in Western Europe: Education, Unemployment, and Occupational Attainment. *Annual Review of Sociology*, *34*(1), 211–235. https://doi.org/10.1146/annurev.soc.34.040507.134728

Hügelschäfer, S., & Achtziger, A. (2014). On confident men and rational women: It's all on your mind(set). *Journal of Economic Psychology*, *41*, 31–44. https://doi.org/10.1016/j.joep.2013.04.001

Jonsson, J. O., & Rudolphi, F. (2011). Weak Performance--Strong Determination: School Achievement and Educational Choice among Children of Immigrants in Sweden. *European Sociological Review*, *27*(4), 487–508. https://doi.org/10.1093/esr/jcq021

Kao, G., & Thompson, J. S. (2003). Racial and Ethnic Stratification in Educational Achievement and Attainment. *Annual Review of Sociology*, *29*(1), 417–442. https://doi.org/10.1146/annurev.soc.29.010202.100019

Konyali, A., & Crul, M. (2017). Professionals Made in Germany: Employing a Turkish Migration Background in High-Status Positions. *Social Inclusion*, *5*(1), 55–65. https://doi.org/10.17645/si.v5i1.780

Kray, L. J., & Thompson, L. (2004). Gender Stereotypes and negotiation performance: an Examination of theory and research. *Research in Organizational Behavior*, *26*, 103–182. https://doi.org/10.1016/S0191-3085(04)26004-X

Kristen, C., & Granato, N. (2007). The educational attainment of the second generation in Germany. *Ethnicities*, *7*(3), 343–366. https://doi.org/10.1177/1468796807080233

Kristen, C., Reimer, D., & Kogan, I. (2008). Higher Education Entry of Turkish Immigrant Youth in Germany. *International Journal of Comparative Sociology*, *49*(2-3), 127–151. https://doi.org/10.1177/0020715208088909

Kultusministerkonferenz (2006-2017). Abiturnoten im Ländervergleich. Retrieved from https://www.kmk.org/de/dokumentation-statistik/statistik/schulstatistik/abiturnoten.html

Mullen, A. L. (2009). Elite destinations: pathways to attending an Ivy League university. *British Journal of Sociology of Education*, *30*(1), 15–27. https://doi.org/10.1080/01425690802514292

Niederle, M., & Vesterlund, L. (2007). Do Women Shy Away From Competition? Do Men Compete Too Much? *The Quarterly Journal of Economics*, *122*(3), 1067–1101. https://doi.org/10.1162/qjec.122.3.1067

OECD (2012). *Untapped Skills: Realising the Potential of Immigrant Students*. OECD Publishing: OECD Publishing. https://doi.org/10.1787/9789264172470-en

Parro, F. (2012). International Evidence on the Gender Gap in Education over the Past Six Decades: A Puzzle and an Answer to It. *Journal of Human Capital*, *6*(2), 150–185. https://doi.org/10.1086/666849

Parzinger, N. (2018). Azur Associate Erhebung 2017. Retrieved from https://www.azur-online.de/artikel/glaeserne-decke-in-kanzleien-nur-jeder-zehnte-vollpartner-ist-eine-frau/#

Politis, D., Winborg, J., & Dahlstrand, Å. L. (2012). Exploring the resource logic of student entrepreneurs. *International Small Business Journal: Researching Entrepreneurship*, *30*(6), 659–683. https://doi.org/10.1177/0266242610383445

Relikowski, I., Yilmaz, E., & Blossfeld, H.-P. (2012). Wie lassen sich die hohen Bildungsaspirationen von Migranten erklären? Eine Mixed-Methods-Studie zur Rolle von strukturellen Aufstiegschancen und individueller. In R. Becker & H. Solga (Eds.), *Kölner Zeitschrift für Soziologie und Sozialpsychologie. Soziologische Bildungsforschung* (Vol. 52, pp. 111–136). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-00120-9_5

Risse, L., Farrell, L., & Fry, T. R. L. (2018). Personality and pay: do gender gaps in confidence explain gender gaps in wages? *Oxford Economic Papers*, *70*(4), 919–949. https://doi.org/10.1093/oep/gpy021

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, *130*(2), 261–288. https://doi.org/10.1037/0033-2909.130.2.261

Rubin, J. Z., & Brown, B. R. (1975). *The Social Psychology of Bargaining and Negotiation*. Saint Louis, New York: Elsevier Science; Academic Press: Elsevier Science; Academic Press.

Salikutluk, Z. (2016). Why Do Immigrant Students Aim High? Explaining the Aspiration–Achievement Paradox of Immigrants in Germany. *European Sociological Review*, *32*(5), 581–592. https://doi.org/10.1093/esr/jcw004

Salikutluk, Z., Giesecke, J., & Kroh, M. (2020). *The Situation of Female Immigrants on the German Labour Market: A Multi-Perspective Approach: SOEPpapers on Multidisciplinary Panel Data Research* (No. 1072).

Scala, N. M., Tomasi, S., Goncher, A., & Bursic, K. M. (2018). Motivation and Analytics: Comparing Business and Engineering Students. *INFORMS Transactions on Education*, *19*(1). https://doi.org/10.1287/ited.2017.0187

Schneebaum, A., Rumplmaier, B., & Altzinger, W. (2016). Gender and migration background in intergenerational educational mobility. *Education Economics*, *24*(3), 239–260. https://doi.org/10.1080/09645292.2015.1006181

Sewell, W. H., Haller, A. O., & Ohlendorf, G. W. (1970). The Educational and Early Occupational Status Attainment Process: Replication and Revision. *American Sociological Review*, *35*(6), 1014. https://doi.org/10.2307/2093379

Statistisches Bundesamt (2017). *Fachserie 1 Reihe 1.2 - Bevölkerung und Erwerbstätigkeit. Wanderungen (Wanderungsstatistik)*. Wiesbaden.

Statistisches Bundesamt (2018). *Bevölkerung und Erwerbstätigkeit: Bevölkerung mit Migrationshintergrund - Ergebnisse des Mikrozensus 2017*.

Statistisches Bundesamt (2019). *Statistische Jahrbuch 2019: 3-Bildung*. Retrieved from https://www.destatis.de/DE/Themen/Querschnitt/Jahrbuch/statistisches-jahrbuch-2019-dl.pdf?__blob=publicationFile

Stypińska, J., & Gordo, L. R. (2018). Gender, age and migration: An intersectional approach to inequalities in the labour market. *European Journal of Ageing*, *15*(1), 23–33. https://doi.org/10.1007/s10433-017-0419-2

Vallet, L.-A. (2007). What Can We Do to Improve the Education of Children From Disadvantaged Backgrounds? In M. S. Sorondo, E. Malinvaud, & P. Léna (Eds.), *Globalization and Education*. Berlin • New York: Walter de Gruyter. https://doi.org/10.1515/9783110191134.127

Van Houtte, M. (2004). Why boys achieve less at school than girls: the difference between boys' and girls' academic culture. *Educational Studies*, *30*(2), 159–173. https://doi.org/10.1080/0305569032000159804

Weichselbaumer, D. (2020). Multiple Discrimination against Female Immigrants Wearing Headscarves. *Industrial & Labor Relations Review*, *73*(3), 600–627. https://doi.org/10.1177/0019793919875707

Appendix

Table A1.

Distribution of the different sub-samples

Business students

	Male	**Female**	**Total**
no migration background	7,738	4,500	**12,238** (84.8%)
migration background	1,254	851	**2,105** (14.6%)
	8,992 (62.3%)	**5,351** (37.1%)	**14,343**

Engineering students

	Male	**Female**	**Total**
no migration background	5,820	1,264	**7,084** (87,4%)
migration background	818	204	**1,022** (12,6%)
	6,638 (81,9%)	**1,468** (18,1%)	**8,106**

Law students

	Male	**Female**	**Total**
no migration background	5,196	4,267	**9,463** (87,2%)
migration background	675	709	**1,384** (12,8%)
	5,871 (54,1%)	**4,976** (45,9%)	**10,847**