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Compromises between Occupational Aspirations and VET Occupations—a Contribution to the Reproduction of Social Inequalities?

Kompromisse zwischen realistischen Berufsaspirationen und Ausbildungsberuf – ein Beitrag zur Reproduktion sozialer Ungleichheit?

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Abstract: Many school leavers cannot fulfil their occupational aspirations when entering vocational education and training (VET), and have to make compromises. This study asks what form these compromises take by examining multiple extrinsic occupational dimensions, and investigates differences by social background. Data for VET entrants from lower and intermediate school tracks from the German National Educational Panel Study (NEPS-SC4) are combined with occupation-specific data. The cluster analysis reveals four distinct patterns of compromise: 1)

upward moves and 2) downward moves in multiple extrinsic attributes, 3) concessions in firm size and wage, and 4) concessions in regular working hours and status. Multinomial logistic regressions indicate that compromise formation is hardly socially stratified in terms of parental education and occupational position. Compared to natives, VET entrants from second-generation migrant families are more likely to move upward into relative better training occupations than occupations originally aspired to.

Keywords: School-to-work Transition; Germany; Occupational Realistic Aspirations; Occupational Expectations; Compromising; VET Entry; Social Background; Migration Background.

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Zusammenfassung: Viele Schulabgänger_innen können ihre Berufsaspiration beim Eintritt in Berufsausbildung nicht erfüllen und gehen Kompromisse ein. Die Studie untersucht, wie Kompromisse zwischen realistischer Berufsaspiration und Ausbildungsberuf aussehen und prüft soziale Herkunftsunterschiede. Um Kompromisse multidimensional in extrinsischen Berufsdimensionen zu erfassen, werden Daten des Nationalen Bildungspanels für ein Sample von Ausbildungsanfänger_innen mit aggregierten Berufsdaten angereichert. Eine Clusteranalyse zeigt vier Muster der Kompromissbildung: 1) Relative Aufstiege und 2) Abstiege in allen Berufsdimensionen, 3) Zugeständnisse bei Unternehmensgröße und Lohn und 4) bei regulären Arbeitszeiten und Status. Regressionsanalysen zeigen, dass sich die Kompromissbildung kaum nach elterlichen Bildungshintergrund und beruflicher Stellung unterscheidet. Im Vergleich zu Auszubildenden ohne Migrationshintergrund stellen sich Auszubildende aus Migrantenfamilien der zweiten Generation in ihrem Ausbildungsberuf sogar besser als in ihrem angestrebten Beruf.

Schlüsselwörter: Übergang Schule – Beruf; realistische Berufaspirationen; Kompromissbildung; Ausbildungseintritt; soziale Herkunft; Migrationshintergrund.

1 Introduction

Since the seminal work of Sewell, Haller, and Portes (1969), the central role of educational and occupational aspirations in the process of status attainment and status reproduction has been well recognized. Research, for Germany as well as for many other countries, has shown that educational aspirations differ by social background, and both background and aspirations shape educational pathways (e. g. Dupriez et al. 2012; Astleithner et al. 2021; Hossler & Stage 1992; Sewell et al. 1969; Spera et al. 2009; Stocké 2013). Less attention has been paid to *occupational* aspirations and their realization at the entry into vocational education and training (VET), despite the fact that in the highly occupational-specific education system of Germany (Müller & Shavit 1997), decisions regarding occupations that require specialized training have to be made early in life, and have long-lasting consequences for individuals' later social status.

Occupational decisions differ crucially from educational ones. Educational decisions refer to the choice between continuing or stopping educational investment, or deciding between different educational tracks with a clear hierarchical order. In contrast, occupational decisions are based on an opaque array of different extrinsic dimensions, such as income, employment security, prestige, and working conditions in different occupations, which jointly determine the individual's social status and social security in adult life.¹ While each dimension can be clearly ordered as better or worse, this is not the case for their combined occurrence, since they do not necessarily align with each other.

Similar to educational aspirations, occupational aspirations cannot always be realized—often young people have to make *compromises* to find a training position, i. e. they turn towards occupational alternatives which are accessible and acceptable to them. Both in educational systems and vocational training markets, structural barriers constrain adolescents' occupational choices (Kerckhoff 1976), for example formal entry requirements with

regard to school leaving certificates or bottlenecks due to imbalances in supply and demand (Kleinert & Jacob 2013). Occupational compromises also involve school leavers making active decisions about which occupations they apply for and which vocational training offers they accept. In this respect, how well school leavers anticipate their opportunities in the VET system is crucial for successful transitions.

Our definition of compromising is based on Gottfredson's (1996) dynamic concept of occupational choices, which describes how occupational aspirations change during adolescence and become increasingly realistic. The process of compromising comes to a (first) end with the entry in the VET system.² In educational research, the term aspiration-attainment gap is more commonly used to address the question of why some adolescents do not achieve what they intended. In our study, we argue that in this phase of compromising, social inequalities become apparent. This is due to individuals having different resources at their disposal to deal with both demand-side restrictions in the transition to VET (e. g. Hillmert & Weßling 2014; Imdorf 2017), and internal processes of anticipation and self-selection (e. g. Tomasik et al. 2009; Tomasik & Heckhausen 2006).

Previous research has shown that social background (in terms of education, class, and migration background) is one of the most important resources when it comes to making *educational* compromises (Hanson 1994; Homel & Ryan 2014; Messersmith & Schulenberg 2008; Kao & Thompson 2003; Tjaden & Hunkler 2017). In contrast, there is no clear evidence on how social background affects *occupational* compromises. Previous research has mainly focused on social differences in occupational aspirations (Basler & Kriesi 2019; Beicht & Walden 2019; Lee & Byun 2019; Schoon & Parsons 2002; Wicht & Ludwig-Mayerhofer 2014), and few studies have investigated retrospectively to what extent adolescents' trained for occupation corresponds to the occupation aspired to (Diehl et al. 2009; Friedrich 2009).

Our study aims to shed light on the multidimensional nature of occupational compromises during the school-to-work transition, focusing on extrinsic dimensions of occupations, which are related to status attainment and security in adult life. It aims to answer two research questions: (1) what do compromises between realistic occupational aspirations at school and the first VET position look like?

¹ Intrinsic dimensions matter as well, but are not in the focus of this paper.

² For some young people this process continues, when they reorient and for example preliminary terminate vocational training and change their training occupation.

And (2) how is the school leavers' social and migration background related to the likelihood of making specific types of compromises?

By answering these questions, we contribute to the literature in several ways. While previous research on occupational aspirations has been quite unidimensional, focusing mainly on occupational status or prestige, we are the first to apply a multidimensional concept of occupations, disentangling compromises with regard to six different extrinsic aspects: income, job security, social recognition, firm size, qualification level, and working hours. Compromising is understood as deviation between training occupation and realistic occupational aspiration in each of these dimensions. This means that adolescents can both enter a training occupation in which they make losses in extrinsic attributes compared to their occupational aspiration or wins. Moreover, by examining the relationship between realistic occupational aspirations at school and the first occupation trained for we pursue a longitudinal perspective on compromise formation that has been seldom implemented. Hence this study draws a more accurate picture of adolescents' occupational options in the transition to VET, shedding first light on how compromises in occupational choices look for young people from different social backgrounds.

Our empirical analyses are based on longitudinal data of a large sample of students who attended grade 9 in regular schools in Germany in autumn 2010 (NEPS-SC4). For a group of VET entrants who left school after grade 10, realistic occupational aspirations in grade 9 and first VET entry occupations are compared. We use cluster analysis to explore compromise patterns with regard to the six different extrinsic dimensions, and multinomial logistic regression to examine how social background is associated with the likelihood of adopting specific patterns of compromise.

2 Opportunity structures in the German context

The German educational system has a large vocational training and education (VET) sector. Alongside general schooling which leads to a university entrance diploma after 12 to 13 years (*Fachhochschulabschluss* or *Abitur*), VET constitutes an important upper secondary education pathway. The German VET system offers 420 different training occupations provided in the so-called dual system (firm-based training plus school), or in full-time vocational schools (Bundesinstitut für Berufsbildung

2019). VET tracks offer highly specific occupational training, and in turn, they are strongly linked to later labor market positions, with limited mobility between occupational segments (Solga et al. 2014). There are several options to upgrade educational attainment after VET, for example obtaining a university entrance qualification in vocational upper secondary school, taking a master craftsman's diploma, or studying at university.

Social stratification research has characterized the German educational system as a 'sorting machine' (Müller & Shavit 1997), since access to post-school educational tracks strongly depends on the school qualifications obtained. The most prominent example is university access, which regularly requires (*Fach-*)*Hochschulreife*.³ But also access to VET in full-time vocational schools, which cater mainly for healthcare, caring and skilled office occupations, often requires an intermediate secondary school-leaving certificate (*Realschulabschluss*, *Mittlerer Schulabschluss*). In contrast, access to the much larger segment of firm-based training in the dual system is not linked to formal educational requirements. Instead, firms are the gatekeepers to apprenticeship positions. The dual system consists of several occupational segments which are stratified by school requirements, and which provide different training conditions and career prospects (Protsch & Solga 2016). Trainees with lower secondary school degrees are concentrated in relatively few occupations, mainly in domestic employment, retail and handicrafts, while trainees with intermediate school degrees have many opportunities in industry and trade (Bundesinstitut für Berufsbildung 2019; Protsch & Solga 2016; Troltsch & Walden 2012).

Due to early tracking, in Germany educational attainment is closely linked to social background (e.g. Schindler 2017; van de Werfhorst 2018). Thus, social background indirectly influences the opportunities adolescents have in their VET choice via school certificates. Social background differences in school attendance and school performance result in unequal decisions between engaging in VET or the academic track, as well as between different VET tracks (e.g. Becker & Glauser 2018; Hillmert & Weßling 2014; Schneider & Tieben 2011). Moreover, even in the case of equal school performance, VET is particularly attractive for adolescents from lower-status families, because for them, in contrast to longer academic careers, it provides

³ Entering university without (*Fach-*)*Hochschulreife* is possible nowadays, but requires VET credentials and several years of work experience in an area close to the field of study. In 2019, the share of university students without (*Fach-*)*Hochschulreife* was 2.2 percent (Centrum für Hochschulentwicklung 2021).

relatively secure access to skilled employment (e. g. Becker & Hecken 2008; Schindler & Lörz 2012).

Access to training positions in the dual system is channeled by selection procedures: employers assess and rank applicants for training positions based on their trainability signals, most importantly school performance (Kleinert & Jacob, 2013). In addition, employers also take the social fit of applicants into account, because this is important for keeping work processes running (Imdorf 2017; Hupka-Brunner et al. 2011). A disadvantaged social background and the presence of a migration background are negatively associated with longer transition times to enter VET and a higher likelihood of participating in public-funded transition schemes (e. g. Gaupp et al. 2011; Hunkler 2010; Hupka-Brunner et al. 2011).

In 2010, the starting year of our study, school leavers interested in vocational training faced a relatively balanced VET market in which supply and demand for in-firm training positions were overall in parity. Nevertheless, at the beginning of the 2010 training year, there were still around 90,000 young people without a training place and around 12,000 training places vacant (Bundesinstitut für Berufsbildung 2011: 12 ff). The matching problems on the market reflected in these figures have become more pronounced in subsequent years (Bundesministerium für Bildung und Forschung 2015).

3 Theoretical considerations and related evidence

Based on knowledge of the educational system in Germany and the opportunity structures it provides, we now discuss theoretical expectations and previous literature regarding our two research questions. With regard to our first research question, what do compromises look like, we explain in section 3.1 what occupational compromising means and derive ideas about the patterns of compromise between realistic occupational aspirations and the VET position. With regard to our second research question, we discuss in section 3.2, how social background affects the likelihood of making specific types of compromise.

3.1 A basic idea of occupational compromising

According to the overarching theoretical concept by Gottfredson (1996), in a first stage of *circumscription*, children and adolescents perceive and order occupations based on

three central dimensions: gender type, social status and field of work. By comparing different occupations with their self-concept and their social surroundings in terms of these dimensions, they form a zone of acceptable occupational alternatives, and reject occupations that appear unacceptable with regard to these comparisons. In the following stage of *compromising*, which is focused upon here, adolescents increasingly consider the given opportunity structures and gradually abandon those occupations they do not perceive as available and accessible to them. In this stage, young people develop increasingly realistic occupational aspirations (Gottfredson 1996: 187).

The process of compromising accelerates when a first occupational decision lies ahead. In this stage, the potential optimum for adolescents is to find an achievable training occupation that is closest to their occupational aspirations. Compromising is expected “to reflect not only avoidance of overaspiration but also of underaspiration” (Heckhausen & Tomasik 2002: 203). Empirically it was shown that in the last school year, most students adjust their realistic occupational aspirations to school performance, mainly—but not always—striving for lower status occupations. The adjustment is related to the chances of getting a training position at all in the competitive market system (Tomasik et al. 2009). Hence, the training occupation is the joint result of market selection and self-selection. Our study considers this as the preliminary endpoint of the compromise process, at which it turns out whether adolescents have *realized* their occupational aspirations or not.

Previous studies have focused on adolescents’ occupational adjustments in terms of socioeconomic status and prestige (Basler & Kriesi 2019; Schels & Abraham 2021; Tomasik et al. 2009), but do not focus multiple dimensions of occupational choice simultaneously. In contrast, studies on work values take on a multidimensional perspective, and consider that adolescents may strive for different job attributes (Johnson & Mortimer 2011). Most of the research distinguishes young people for whom extrinsic factors are more important from those who attach more importance to intrinsic factors (Johnson & Mortimer 2011, 2015). However, occupations consist of various extrinsic dimensions (e. g. Herzog 1982). These include income, job security, prestige, qualification levels, career opportunities, as well as working conditions (Gesthuizen et al. 2019). Some of these dimensions are important for status attainment, while others relate to employment security and stability (e. g. Johnson 2002).

It is common empirical knowledge that extrinsic occupational dimensions are positively correlated with each other: for example, occupations in the higher service class

share high qualification requirements, high wages, and high prestige, as well as prospects of acquiring management positions, good working conditions, and a low unemployment risk. However, within the broad field of VET occupations, these dimensions do not always align. In particular, high prestige and higher qualification demands do not always go hand in hand with job security or high income. Also, regular working hours are not systematically interrelated in this segment. Consider, for example, the low prestige, but relatively high pay of skilled blue-collar occupations in industrial production, which may or may not require shift work. Another example is the occupation of kindergarten teachers, which comes with relatively high prestige and qualification requirements, job security and regular working hours, but low pay.

These considerations suggest that we might find different patterns of compromise in the group of VET entrants. First of all, the literature suggests that occupational aspirations have already undergone a lengthy sorting process before VET entry, at which point the perception of opportunity structures, as described in section 2, becomes increasingly influential. Once adolescents have determined a narrow field of acceptable occupational alternatives, there is good reason to expect that many do not have to make further compromises when entering VET, or if they do, that they switch to occupations with similar attributes. Hence, we expect to find a group of VET entrants without any compromises and another one with only minor compromises in all of the dimensions examined. Secondly, because the extrinsic characteristics of occupations are interrelated, we may find groups of adolescents who consistently lose or win in all extrinsic occupational dimensions when entering VET. Third, there are VET occupations that differ gradually in extrinsic aspects, such as with regard to security and status. Hence, we expect that some groups of adolescents do not make uniform wins or losses over all the different extrinsic dimensions, but enter training occupations where they lose in some dimensions while finding others unchanged or providing better conditions, compared to their occupational aspiration. As no studies exist that provide evidence on *how* patterns of gradual compromising look like empirically, we refrain from making hypotheses on their configurations.

3.2 The role of social background in occupational compromising

Gottfredson's theory suggests that occupational *aspirations* differ systematically by social background, as children restrict their aspirations by comparing the social

status of different occupations with that of their family. This explains social differences in occupational aspirations, but not per se different patterns of *compromising*. We need to draw on further approaches to explain how social background might affect patterns of compromise *net* of initial differences in aspirations.

We assume that social background contributes to compromising in several ways. Since social background is strongly associated with school performance, some of the anticipated effects may work via educational attainment. Beyond this, we argue that there are two channels of direct social background effects: first, families have different capacities to support their children through the process of occupational choice, mainly because they have a different amount of system knowledge and social networks. Second, school-leavers and their families have different motives for occupational choice that limit their field of occupational alternatives.

Information and networks. Empirical evidence suggests that parents are a key source of information regarding occupational orientation (Bryant et al. 2006). Parents of different social status are not equally able to support their children in realizing their occupational aspirations, because they do not possess the same information about the labor market and occupations in general, and the VET system in particular (Dombrowski 2015). The higher the parents' educational attainment, the more they know about how markets work, how to find information about occupations, and how to deal with this information (Jonsson et al. 2009). Social inequalities in support are significant for the formation of aspirations, and accordingly, how realistic occupational aspirations are when adolescents are still at school (Buchmann & Steinhoff 2017). Previous research has shown that, later on, parents with specific know-how can provide support in identifying vacant VET positions, in finding out about application procedures, and in writing high-quality applications (Neuenschwander 2008). If adolescents do not gain access to training in their desired occupation, this knowledge helps them to choose adequate alternatives, allowing them to both avoid downscaling and overambition (Heckhausen & Tomasik 2002). Higher-status parents are also more effective in influencing the decisions made by school officials or deciders in companies, because they have the skills and social networks to address these people (Dombrowski 2015: 84; Hoenig 2019).

Young people from immigrant families face additional disadvantages: on average they are less informed than natives about the diversified VET market and application procedures, in particular when there is no comparable VET system in their country of origin, which is the case for

most of the large immigration groups in Germany (Hunkler 2010). Moreover, immigrants in Germany are concentrated in lower-status jobs and in specific occupational segments, such as the production sector and catering (Statistisches Bundesamt 2019). Although it is argued that immigrants have particularly strong social networks (Zhou 1997), these networks might eventually serve to restrict adolescents to occupations that fall within their ethnic group's labor market barriers (Hao & Bonstead-Bruns 1998; Hunkler 2010).

In sum, these considerations suggest that the higher the social background of adolescents is, the more likely they are to make none or small compromises, i. e. to enter VET in the aspired to occupation (H1a), or to find a training position in occupations close to their aspirations (H1b). The same arguments apply to the disadvantages of children with a migration background, compared to children from native families.⁴

However, when we focus on occupations which are trained for in the VET sector, having a higher social background is not always better. Families with an academic background are not necessarily most familiar with VET occupations, nor do they have the largest occupational-specific networks in the VET sector. When parents have experienced VET first hand, they know how it works and what it requires, and they are able to give specific advice to their children. When they have social networks covering firms providing VET, they are able to directly recommend their children to employers (Neuenschwander 2008). Medium-educated parents in skilled working positions thus have some advantages that academically educated parents in high positions do not necessarily have. As described above, parents in unskilled positions are clearly disadvantaged in these respects, compared to the former two groups. Following this line of reasoning, we expect that social differences in compromising are larger between adolescents with low-status and intermediate-status parents than between adolescents of intermediate and high social background (H2).

Preferences. Adolescents choose occupations within social barriers, due to systematic social differences in motives, preferences and aspirations. These differences have been addressed by two different theoretical strands: the socio-cultural contextualization of occupational

choices (Bourdieu 1997) and rational choice approaches (Boudon 1974), both of which have strong implicit links to Gottfredson's work.

Socio-cultural contextualization refers to the idea that the zone of occupational alternatives is pre-structured in family socialization. The field of occupational choices is limited, because adolescents are habitually adapting to their family environment. The socially selective school system reinforces these barriers when children are confronted with selective information and expectations via school curricula, teachers, and peers (e. g. Hanson 1994). During the process of compromising, these social barriers might be further reinforced by feedback from gatekeepers, particularly from career counsellors or from employers, who select their apprentices also by social fit. In this context, equally talented adolescents from lower social backgrounds tend to abandon higher-status alternatives (Bourdieu 1997) which would allow them to grow beyond their familiar social environment.

Rational choice theory stresses adolescents' increasing focus on those occupational alternatives which they expect to be accessible, to avoid the risk of failure. When adolescents and their families decide about different VET options, lower-class families tend to perceive and evaluate costs to be higher, benefits to be lower, and the success probability of more demanding pathways to be lower than higher-class families. The latter have more resources to cushion their children against risk, and who need to make more investments to avoid intergenerational downward mobility (e. g. Breen & Goldthorpe 1997; Erikson & Jonsson 1996; Esser 1999). The more economic resources families have, the more able they are to cover the opportunity costs of longer educational tracks (Becker 1962). Hence, children from higher-status families have both the opportunity to select longer and more costly educational pathways beyond VET and to take the time to qualify and search for VET positions that match their occupational aspirations, which children from working class children do not have (Becker & Hecken 2009).

In sum, both strands of theory suggest that both the lower and the upper limit of possible occupational alternatives is lower for adolescents from lower social backgrounds, compared to adolescents from higher backgrounds. We thus assume that the lower the social background of adolescents is, the more likely they are to make compromises that entail losses in all extrinsic occupational attributes (H3a). Vice versa, they are less likely to make 'upward moves' between realistic occupational aspirations and training occupations (H3b).

Beyond sheer level effects, familial preferences may also influence how important specific extrinsic occupa-

⁴ In the following hypotheses, when referring to social background differences, we always imply differences between adolescents with a migration background compared to natives. For example, we assume that adolescents from native families are more likely to make none or small compromises (H1a), or to find a training position in occupations close to their aspirations (H1b), compared to adolescents with a migration background.

tional attributes are for adolescents. Adolescents from higher social backgrounds may be less concerned with job security and starting wages, as their families have the monetary resources to cushion these risks. In contrast, the allocation of prestige and career prospects in later life is less in the hands of the family of origin than social security, and at the same time these aspects are important sources of status maintenance for children from higher social backgrounds. Vice versa, losses in prestige may play a lesser role for adolescents from lower social backgrounds if they aim to find an occupation that will provide them with security. We thus assume that the lower the social background of adolescents is, the more likely they are to make compromises that entail losses in occupational status attributes (H4a), and the less likely they are to make compromises in security attributes (H4b).

Finally, we come back to the question of the relationship between occupational compromises and aspirations. Besides the factors discussed so far, occupational aspirations affect the need to compromise: the more realistic they are at the end of schooling in terms of adaptation to the individuals' acquired skills and capabilities and to external opportunities, the less need there is for compromising when searching for a VET position (Tomasik et al. 2009). It can be concluded that realistic occupational aspirations are an important factor that can explain the association between social background on the one hand, and the extent and type of compromises made on the other hand. Therefore, we expect that the adolescents' level of aspirations reduces the effect of social background (H5). Adolescents with a migration background are a particularly interesting group in this respect, since their educational and occupational aspirations are particularly high despite their comparably low resources (e.g., Beicht & Walden 2019; Wicht & Ludwig-Mayerhofer 2014; Becker & Gresch 2016; Feliciano & Lanuza 2016; Salikutluk 2016; Kao & Thompson 2003; Tjaden & Hunkler 2017).

4 Data and methods

4.1 Data and analysis sample

We use data from the National Educational Panel Study (NEPS; Blossfeld & Rossbach 2019),⁵ Starting Cohort 4, which draws on a representative sample of 16,425 grade

9 students in schools in Germany in autumn 2010 (NEPS Network, 2019). Panel data from yearly follow-up interviews is available up to 2017. In order to enable analyses of complex school-to-work transitions, students from lower and intermediate secondary schools were oversampled. In addition to student interviews, interviews were also conducted with parents.

From this sample, we selected a sample of school leavers who entered VET within the period of observation, with similar starting conditions regarding the timing of the transition to VET and post-school educational options. We excluded students from school tracks directly leading to a university entrance degree⁶ as well as students in special needs schools and private schools. We also excluded students who finished school in grade 9. Occupational aspirations were measured for the first time at the end of grade 9, when most students in this group had already acquired a VET position. Hence, their answers reflect employer feedback on applications and final VET choices, and cannot be compared with students who left school after grade 10. Nevertheless, we performed a robustness analysis, including this group (see section 5.3). Furthermore, we excluded students who did not report an occupational aspiration, or who reported unclear aspirations that did not provide enough information to code them according to the German occupational classification (*Klassifikation der Berufe [KldB]*). We excluded students who did not start VET. Finally, students with implausible information on education or VET entry, as well as missing information on imputation variables were also excluded from the analysis data. The final analysis sample consists of 2,575 students, who will be referred to as *VET entrants* hereafter. Tab. A1 in the appendix gives an overview of the sample reduction.

4.2 Identifying patterns of compromise

The first step of our empirical analysis aimed at identifying different patterns of occupational compromising in our sample of VET entrants, using cluster analysis. We considered realistic occupational aspirations measured one year before leaving school as the starting point of the section in the process of compromising that is the focus of this study. Realistic occupational aspirations were measured in grade 9 with an open question: “*And considering everything you know now: what occupation will you actually pursue in the future?*” To measure the preliminary end-

⁵ The NEPS is carried out by the Leibniz Institute for Educational Trajectories (LIfBi, Germany) in cooperation with a nationwide network.

⁶ This encompasses students who were in upper secondary schools (*Gymnasium*) or in upper secondary tracks (*Gymnasialzweige*) in comprehensive schools (*Gesamtschulen*).

Tab. 1: Indicators of extrinsic occupational dimensions

Dimension of compromise	Indicator (per 3-digit occupational group)	Data source
Income	Employees' median gross daily wage (in € per day)	SIAB
Job security	Yearly unemployment rate (in %, reverse)	BA
Firm size	% employees in large firms (>200 employees)	SIAB
Social recognition	Magnitude Prestige Scale (MPS)	Frietsch & Wirth 2001
Qualification level	% employees under 30 with university entrance degree	Microcensus
Regular working hours	% working population not in shift/night/weekend work	Microcensus

Notes: SIAB = Sample of Integrated Labour Market Biographies, BA = Federal Employment Agency

point of compromising, we used the occupation of the first VET position started after leaving school. We considered all forms of school-based and dual training that lead to an acknowledged vocational certificate. In the NEPS, both occupational aspirations and training occupations were coded according to German occupational classifications as well as international occupational classifications.

We used third level of the German occupational classification from 1988 (KldB-88)⁷, which distinguishes 334 occupational groups, to merge aggregated information on occupational characteristics to the NEPS data. We chose indicators that reflect salient aspects of extrinsic occupational features and are measured reliably in official statistics. We used data from the years 2008 to 2010 from different official data sources to depict the occupational structure at the time the school leavers in our sample were starting to search for VET positions. Tab. 1 gives a summary of indicators and data sources.

Highly reliable median occupational *income* data was generated from the employers' social security notifications, which are mandatory for all regular employees in Germany. Since this data source does not contain detailed working hours, only gross daily wages for full-time workers could be obtained. These data are available for research in the Sample of Integrated Labor Market Biographies (SIAB)⁸. A measure that depicts ideas about future *job security* is occupational unemployment rates, which stem from official data from the German Federal Employment Agency (BA). This data source lists the share of registered unemployed persons who were employed in given occupations before they lost work, in relation to the employees in these occupations (IAB 2018). Security aspects are also related to *firm size*. We measured the share of

employees per occupation in large establishments, data which is also drawn from social security notifications. Large firms are characterized by a higher takeover rate of trainees, compared to smaller firms, and strongly rely on internal labor markets. Thus here, careers are promoted through internal career ladders. To measure *social recognition*, we used the Magnitude Prestige Scale, which was developed particularly for the German hierarchy of occupational prestige (Wegener 1985). The *qualification structure* of occupations represents the educational segmentation within occupations in the VET system (see Section 2). We use the share of young employees with university entrance qualifications, which is a frequently used stratification indicator (Protsch & Solga 2016). Moreover, it reflects the main dividing line of educational stratification in the German education system, as well as in the labor market today.⁹ Finally, adolescents also value working conditions and sufficient time for family and leisure (Busch-Heizmann 2015). One indicator that reflects this aspect is proportions of employees per occupation with *regular working hours*, i. e. not regularly working shifts, nights, or weekends. Reliable information on the latter two dimensions was computed from the German Microcensus.¹⁰ For all indicators, higher values indicate better occupational conditions.

For VET entrants who started training in other occupations than aspired to in grade 9, compromises were obtained for each of the six dimensions by calculating the difference between the indicators in the occupation trained for and individuals' realistic occupational aspirations (Tab. 2). For VET entrants who realized their aspirations, the values are 0 for all dimensions.

⁷ We rely on the KldB-88 because the latest classification KldB-2010 is not included in the official statistics data we use in our study.

⁸ Data access was provided via on-site use and remote data access at the Research Data Centre (FDZ) of the German Federal Employment Agency (BA) at the Institute for Employment Research (IAB). For data descriptions, cf. Antoni et al. (2019).

⁹ We also tested clustering with an alternative indicator, the share of young employees with lower secondary education, with similar results.

¹⁰ Research Data Center of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.2008.00.00.3.1.0 to 10.21242/12211.2010.00.00.3.1.0

Tab. 2: Distribution of occupational compromise dimensions
(Δ training occupation – realistic occupational aspiration)

Dimension of compromise	Mean	SD	Min	Max
Income	-4.06	26.37	-145.30	110.68
Job security	-0.30	7.23	-31.60	34.70
Firm size	-5.08	21.58	-163.33	53.33
Social recognition	-1.73	18.72	-74.29	61.27
Qualification level	-5.61	23.50	-93.86	84.05
Regular working hours	-0.12	22.96	-74.07	73.97

Sources: NEPS SC4 SUF 10.0.0, Microcensus 2008–2010, SIAB, IAB, own calculations, N=2,575

To examine patterns of compromises in our sample, we performed a cluster analysis, based on the six compromising indicators. This explorative statistical method aims at discovering structures of similarity in large datasets by maximizing homogeneity within, and heterogeneity between groups, taking into account all included indicators. We started with a hierarchical-agglomerative cluster analysis, using Ward's method, and then used the centroids of the Ward clusters as initial partitions for partition-based K-Means clustering (Everitt et al. 2011; Mirkin 2005). We decided on a final solution of four compromise clusters, which jointly describe 44 percent of the variance of the six indicators (Ward solution). This cluster solution was regarded as satisfactory concerning the substantial coherence of the variable combinations and the range of values in the single clusters. Overall, these groups turned out to be very stable to differences in sample definition. The cluster dendrogram suggests either three or four clusters (cf. Fig. A1 in the appendix). Stopping rules, such as the Duda-Hart $Je(2)/Je(1)$ -index, indicate no clear preference for a particular cluster solution.

4.3 Estimating social background differences

We examine social differences in the likelihood of trainees belonging to a specific compromise group by applying multinomial logistic regressions with cluster affiliation as the dependent variable. The four groups of compromisers were supplemented by the group of VET students who started training in their aspired to occupation (cluster 0, no compromise). We estimate two nested models: Model 1 shows effects of social background on group affiliation net of occupational aspirations in grade 9, and Model 2 gross effects of social background not controlling for occupational aspirations (for measurement, cf. the previous section).

We use three different indicators for adolescents' *social background*. First, highest parental school attainment is an indicator for familial general knowledge and preferences. The information is taken from the first wave parent survey. When parental information is not available, we use information of the student survey. We distinguish between low (lower secondary degree, *Hauptschulabschluss* or no degree), medium (intermediate secondary degree, *Realschulabschluss*), and high education (university entrance diploma, *[Fach-]Hochschulreife*). Second, parental occupational status is an indicator for parents' proximity to the VET system and their occupational networks.¹¹ The parental occupational status is operationalized by the highest parental occupational requirement level, which stems from the parents' occupational titles, as indicated by the 5th digit of the 2010 German classification of occupations (KldB 2010) (Paulus & Matthes 2013). A low status indicates unskilled occupations, medium status reflects skilled occupations, which usually require VET, and high status indicates specialist or complex occupations, which often involve management tasks and usually require professional further education or academic education. Third, regarding migration background, we distinguish between adolescents who were born abroad (1st generation), those who were born in Germany but have at least one parent born abroad (2nd generation), and natives.¹²

In order to account for selective opportunities to enter VET by educational achievement, we control for the highest school degree that the adolescents achieved before entering VET (*Hauptschulabschluss* or no degree, *Realschulabschluss*, *[Fach-]Hochschulreife*). We also use information on the last math and German grade before leaving school. Grades range from 1 (best) to 6 (worst). We control for gender and region of residence (East or West Germany) as there may be systematic differences in occupational aspirations and opportunities. Finally, we control for whether the adolescents live with one or both parents.

To reduce potential bias caused by item nonresponse, we implemented multiple imputation. To generate information on missing data in the explanatory variables,

¹¹ In our analysis sample, parental education and occupational requirement level are weakly to moderately correlated (Spearman's $Rho = 0.30$). Models, in which indicators for parental education and occupational requirement level are included separately, show similar associations as the main model 1 (cf. Tab. A3 and Tab. A4 in the appendix compared to Tab. 4). Hence, modelling them jointly does not mask social background effects.

¹² Models, in which migration background is modelled without controlling for parental education and occupational requirement level, show similar results as the main model 1 (cf. Tab. A5 in the appendix compared to Tab. 4).

Tab. 3: Patterns of compromises between realistic occupational aspirations and first VET occupation (means of compromise indicators by K-mean clusters)

	Cluster 0	Cluster 1	Cluster 2	Cluster 3	Cluster 4	
Dimensions of compromise	No compromise	Downward moves	Hours & status concessions	Firm size & wage concessions	Upward moves	Total
Wage	0.00	-55.82	-4.49	-15.92	23.98	-4.06
Job security	0.00	-3.83	-0.31	-3.21	3.80	-0.30
Firm size	0.00	-17.17	2.56	-16.31	13.75	-1.73
Social recognition	0.00	-52.74	-9.88	-1.77	7.30	-5.08
Qualification level	0.00	-53.05	-20.35	1.30	10.83	-5.61
Regular working hours	0.00	-10.50	-26.63	7.33	19.39	-0.12
N	802	215	466	565	527	2575
%	31.15	8.35	18.10	21.94	20.47	100.00

Sources: NEPS SC4 SUF 10.0.0, Microcensus 2008–2010, SIAB, IAB, own calculations

we applied multiple imputation with chained equations (MICE), based on a wide set of predictors on parents and students. Besides all the variables used in the models, we included further information reported by the students on whether they have classical literature at home and whether they have a desk to study at. We generated 5 complete datasets (van Buuren 2019). Tab. A2 in the appendix shows the distribution of all the variables in the models before and after imputation.

5 Results

5.1 Patterns of compromising

A large proportion of German VET entrants who left lower and intermediate secondary schools after grade 10 make compromises. In our sample, 69 percent entered a training occupation that did not match their realistic occupational aspiration in grade 9.

The results from the explorative cluster analysis reveal four distinct patterns of compromise, which are shown in Tab. 3. The columns report for each cluster the average difference between realistic occupational aspiration and first VET occupation in the six occupational dimensions.¹³ Negative values stand for concessions, positive values for wins in the respective dimension. For example, VET entrants in Cluster 3 are trained in occupations where the gross daily wage is on average 16 Euros lower than in their aspired to

occupations; VET entrants in Cluster 4 are trained in occupations where the gross daily wage is on average 24 Euros higher.

In the first group of compromisers, to which about 8 percent of the VET entrants belong, VET entrants with strong losses in terms of all status attributes are found, in particular in wage, social recognition, and qualification level (Cluster 1: *downward moves*). Another group (18 %) made compromises regarding qualification level and regular working hours, and moderate compromises in social recognition, but none with regard to income, job security and firm size (Cluster 2: *Hours and status concessions*). A third group (22 %) contains adolescents in VET occupations which are quite similar to their occupational aspirations regarding social recognition, qualification level and job security. These adolescents are a bit better off in terms of regular working hours. Instead, their VET occupations offer moderately lower wages and fewer career opportunities in large firms (Cluster 3: *firm size and wage concessions*). The fourth compromise cluster (20 %) comprises adolescents in VET occupations that are advantageous in all extrinsic attributes compared to their realistic occupational aspirations (Cluster 4: *upward moves*).

As expected, there are VET entrants who had to make compromises, but found occupations with similar attributes and had to make concessions only in some extrinsic occupation attributes (Cluster 3, and to a lesser degree, Cluster 2). The two clusters of moderate concessions both differ according to extrinsic attributes in which trainees have gained or lost: finding a lesser degree of security in terms of wages and firm size on the one hand, versus finding lower status, i. e. in social recognition, qualification levels, and most prominently, less regular working hours. Moreover, the pattern of compromises identified in Clusters 1 and 4 also shows that extrinsic characteristics

¹³ Information on further distributional measures (minimum, maximum, standard deviation) of the cluster indicators are reported in Tab. A6 in the appendix.

of occupations are often interrelated. The adolescents are in VET occupations which strongly differ from their aspirations in terms of *all* dimensions under study. It is interesting to note that upward moves occur more frequently in our sample than downward moves, which is also overall the smallest group of compromisers. An explanation for this result could be the fact that we analyze compromises starting from realistic aspirations, not idealistic ones, and the NEPS asked for them relatively late in the process of occupational choice, when students had already started to develop accessible and achievable occupational goals.

5.2 Social differences in compromising

Next, we investigate the role that social background plays for being in a specific compromise pattern. Results from two nested multinomial logistic regression models are reported in Tab. 4 in the form of average marginal effects (AME). AME are partial derivatives of the regression equation with respect to each variable in the data for each person in the analysis sample. AME are less prone to bias due to unobserved heterogeneity in logistic regression models than odds ratios and allow comparability across models (e.g., Mood 2010). They can be interpreted as the average effect of a variable among all observations in the sample, when it changes by one unit (or from 0 to 1 in case of dummy variables), on the likelihood of being in a specific compromise cluster. For example, in Model 1 the likelihood of making an upward move from aspiration to VET occupation (Cluster 4) is on average 4 percentage points lower for VET entrants with highly educated parents than for the reference group – those with parents with medium level educations (-0.035). The calculation of AME implies that their values for all five clusters add up to 0 for each variable in the models.

We first examine whether and how social background is associated with particular patterns of compromises net of occupational aspirations (hypotheses 1–4). To do so, Model 1 reports the effects of parental education, occupational status and migration background, controlling for the VET entrants' aspirations in the six extrinsic occupational characteristics under examination, school performance, family structure and demographic characteristics. Hypothesis 1 stated that the higher the social background of adolescents is, the more likely they are to enter VET in their aspired to occupation (H1a), or to find a training position in occupations similar to their aspirations (H1b). Hypothesis 2 assumed that social differences in compromising are larger between adolescents with low-status and intermediate-status parents than between adolescents of

intermediate and high social background. Contrary to these expectations, in Model 1 we find no significant differences by parental education and occupational status in the likelihood of entering VET in the aspired to occupation (Cluster 0) or in a similar occupation, which implies only moderate firm size and wage concessions (Cluster 3). First- and second-generation migrants have a significantly lower likelihood of being in Cluster 0 than natives, but again they do not significantly differ in their likelihood of entering VET in Cluster 3. Hence, the results only partly confirm hypothesis 1a, i.e. for VET entrants from migrant families, and they contradict hypothesis 1b and hypothesis 2.

Hypothesis 3 assumed that the lower the social background of the VET entrants is, the higher is the likelihood of making downward moves in the transition to VET (H3a), and the lower is the likelihood of making upward moves (H3b). The results of Model 1 show that none of the social background indicators are significantly associated with downward moves (Cluster 1). Hence, hypothesis 3a is not supported by the data. With regard to upward moves (Cluster 4), we find some effects of social background, but not in the direction we expected: VET entrants with second-generation migration background are actually more likely to make upward moves than those from native families, and VET entrants with highly-educated parents are less likely to make upward moves as the reference group, VET entrants with parents in the medium-education category. VET entrants with a low-education background do not significantly differ from the reference group, and there are no differences by parental occupational requirement level. In sum, these results are not in line with hypothesis 3b.

In hypothesis 4, we expected that the lower the social background of the VET entrants is, the more likely they are to make compromises that entail losses in occupational status attributes, and the less likely they are to make compromises in security attributes. Therefore, we compare the effects on the likelihood of belonging to Cluster 2 (i.e., making working hours and status concessions) with the effects of belonging to Cluster 3 (making firm size and wage concessions). Model 1 shows that the likelihood of making both of these compromises upon entering VET does not vary according to parental education, parental occupational status or migration background. If we specify the multinomial logistic regression so that belonging to Cluster 2 is the base outcome, there are also no significant effects of the social background indicators on the relative probability of belonging to Cluster 3 compared to Cluster 2 (cf. Tab. A7 in the appendix). Hence, we do not find support for hypothesis 4 either.

Tab. 4: Social differences in belonging to different patterns of compromise

	Cluster 0		Cluster 1		Cluster 2		Cluster 3		Cluster 4	
	No compromise		Downward moves		Hours & status concessions		Firm size & wage concessions		Upward moves	
	M1	M2	M1	M2	M1	M2	M1	M2	M1	M2
Parents' educational level (ref. medium)										
low	0.010 (0.026)	0.018 (0.026)	0.003 (0.010)	-0.001 (0.016)	0.026 (0.022)	0.018 (0.022)	-0.012 (0.021)	-0.016 (0.022)	-0.026 (0.021)	-0.018 (0.024)
high	-0.023 (0.023)	-0.034 (0.023)	0.015 (0.009)	0.038** (0.014)	0.010 (0.020)	0.020 (0.020)	0.034 (0.022)	0.031 (0.024)	-0.035* (0.018)	-0.056** (0.020)
Parents' occupational position (ref. medium)										
low	-0.083 (0.043)	-0.075 (0.046)	0.012 (0.023)	-0.012 (0.026)	0.022 (0.039)	0.004 (0.040)	0.088 (0.045)	0.105* (0.051)	-0.039 (0.031)	-0.021 (0.038)
high	0.003 (0.021)	-0.012 (0.021)	-0.009 (0.007)	0.013 (0.012)	-0.014 (0.017)	-0.021 (0.019)	-0.001 (0.017)	0.018 (0.019)	0.021 (0.018)	0.002 (0.019)
Migration background (ref. none)										
1st generation	-0.088* (0.041)	-0.114** (0.039)	-0.013 (0.012)	0.048 (0.029)	0.049 (0.035)	0.059 (0.039)	0.028 (0.035)	0.012 (0.037)	0.025 (0.035)	-0.004 (0.037)
2nd generation	-0.092*** (0.027)	-0.106*** (0.026)	-0.002 (0.011)	0.036 (0.019)	0.010 (0.023)	0.024 (0.025)	0.014 (0.025)	0.023 (0.027)	0.070** (0.025)	0.023 (0.026)
Highest school degree (ref. Realschulabschluss)										
Hauptschulabschluss/none	-0.100*** (0.025)	-0.076** (0.027)	0.039* (0.016)	-0.008 (0.015)	-0.001 (0.022)	-0.019 (0.022)	0.106*** (0.026)	0.076** (0.027)	-0.043* (0.018)	0.027 (0.025)
(Fach-)Hochschulreife	-0.115*** (0.025)	-0.147*** (0.024)	-0.010 (0.007)	0.079*** (0.019)	0.001 (0.021)	0.012 (0.023)	-0.005 (0.021)	-0.018 (0.023)	0.129*** (0.025)	0.074** (0.026)
Last school grade: German	-0.018 (0.013)	-0.005 (0.013)	-0.003 (0.005)	-0.024** (0.008)	0.032** (0.011)	0.028* (0.012)	-0.008 (0.011)	-0.007 (0.012)	-0.004 (0.010)	0.008 (0.011)
Last school grade: math	-0.030** (0.010)	-0.035*** (0.010)	0.011** (0.004)	0.010 (0.006)	-0.007 (0.009)	-0.011 (0.009)	0.036*** (0.009)	0.025** (0.009)	-0.009 (0.008)	0.011 (0.009)
East Germany (ref. West Germany)	-0.049 (0.026)	-0.046 (0.026)	-0.008 (0.009)	-0.034* (0.014)	-0.000 (0.023)	-0.008 (0.023)	0.072** (0.026)	0.068* (0.028)	-0.015 (0.021)	0.019 (0.026)
Female (ref. male)	0.022 (0.022)	-0.010 (0.019)	0.014 (0.007)	0.004 (0.011)	-0.058*** (0.017)	0.006 (0.016)	0.043* (0.018)	-0.032 (0.017)	-0.021 (0.018)	0.032 (0.017)
Single parent (ref. no single parent)	-0.028 (0.026)	-0.029 (0.026)	0.002 (0.010)	-0.001 (0.016)	0.030 (0.021)	0.048* (0.023)	-0.024 (0.021)	-0.033 (0.022)	0.020 (0.020)	0.015 (0.024)
Level of occupational aspiration										
Wage	0.001 (0.001)		0.001*** (0.000)		-0.002** (0.001)		0.003*** (0.001)		-0.004*** (0.001)	
Job security	0.005** (0.002)		-0.001 (0.001)		-0.006*** (0.001)		0.002 (0.002)		0.000 (0.001)	
Firm size	-0.001		0.000		0.000		0.005***		-0.004***	

Tab. 4 (continued)

	Cluster 0		Cluster 1		Cluster 2		Cluster 3		Cluster 4	
	No compromise		Downward moves		Hours & status concessions		Firm size & wage concessions		Upward moves	
	M1	M2	M1	M2	M1	M2	M1	M2	M1	M2
Social recognition	(0.001)		(0.000)		(0.001)		(0.001)		(0.001)	
	–0.002*		0.002***		0.002**		0.001		–0.003***	
	(0.001)		(0.000)		(0.001)		(0.001)		(0.001)	
Qualification level	–0.001		0.001***		0.002**		–0.003***		0.001*	
	(0.001)		(0.000)		(0.001)		(0.001)		(0.001)	
Regular working hours	–0.000		–0.001*		0.005***		–0.002***		–0.003***	
	(0.001)		(0.000)		(0.000)		(0.000)		(0.000)	
Pseudo R ² /AIC/BIC	.255/6057.567/6479.026 (M1) .026/7818.551/8099.524 (M2)									
Observations	2575									

Notes: Multinomial logistic regressions, average marginal effects, robust standard errors in brackets; significance levels: * p<.05, ** p<.01, *** p<.001; N=2575

Sources: NEPS SC4 SUF 10.0.0, Microcensus 2008–2010, SIAB, IAB, own calculations

Finally, we turn to hypothesis 5 that the effects of social background are larger in models not controlling for the level of occupational aspirations at the end of schooling, because adolescents have developed different aspirations by social background up to this point. To test this expectation, we compare Model 1, Tab. 4, with the more parsimonious Model 2, which does not control for realistic occupational aspirations in grade 9. Model 2 hence estimates gross effects of social background.

Differences in the effects of social background on cluster membership between Model 1 and Model 2 are found in three clusters, for upward moves (Cluster 4), downward moves (Cluster 1), as well as firm size and wage concessions (Cluster 3). The gross effects of social background, however, are not consistently larger than the net effects, so hypothesis 5 is only supported partially.

When the estimates are not adjusted for aspirations in grade 9 (Model 2), we indeed find a higher likelihood for VET entrants with parents in low-status occupations to make firm size and wage concessions (Cluster 3), compared to VET entrants with parents in medium-status occupations. In Model 1, controlling for aspirations, this effect loses significance. We conclude that VET entrants with a low-status background had relatively high aspirations that required moderate concessions in terms of firm size and wage in the transition to VET.

Moreover, VET entrants with highly educated parents are less likely to make an upward move than VET entrants with medium-educated parents, and vice versa, more likely to make a downward move. These effects are more pronounced in model 2, in which we do not control for aspirations, than in model 1, where they are only partially significant. In line with the previous interpretation, these results suggest that the observed social differences can be partly explained by the high occupational aspiration levels of VET entrants with highly-educated parents, which require them to make compromises and accept occupations with overall lower extrinsic values than they strived for.

Contrary to our hypothesis 5, we observe weak and non-significant overall effects of second-generation migrants to make upward moves (Cluster 4) in Model 2, whereas effects net of aspirations are significantly positive (Model 1). Migrants have on average higher occupational aspirations than peers from native families do. When controlling for these differences, our results reveal that second-generation immigrants actually appear to enter VET in occupations with overall better conditions than those aspired to in grade 9.

5.3 Robustness of the results

We underpin our findings with a series of robustness tests. We tested whether social differences by parental education, parental occupational status and migration background are mediated by some of the control variables. The results of regression models without control variables (Tab. A8, appendix) as well as models without indicators for school performance and occupational aspirations (Tab. A9, appendix) show that the estimated social differences are comparable in size to those estimated in Model 2. We conclude that social differences in compromising are not conveyed through school performance or further control variables.

We further tested whether social differences depend on regional VET market conditions. To do so, we restrict the analysis to VET entrants in West Germany (Tab. A10, appendix). The effects of parental educational level, occupational position, and migration background are identical in size compared to our main results (Tab. 4, Model 1). Hence, social differences in the likelihood to make specific compromises in the transition to VET are not more pronounced in West than in East Germany.

We also restricted our models to adolescents from native families (Tab. A11, appendix). Results show that in this group, VET entrants with parents in low-status occupations are significantly more likely to make concessions in terms of wages and firm size than VET entrants from medium-status families (Cluster 3) and less likely to enter VET in their aspired to occupations (Cluster 0). These two associations are slightly weaker in effect size and not significant in the overall model (Tab. 4, Model 1), suggesting that they are masked by weaker effects in the group of VET entrants from migrant families. With regard to our hypotheses, this means that selected expected disadvantages of VET entrants from low-status families are specifically evident in the group of native adolescents.

Regarding gender differences, findings from separate models for men (Tab. A12, appendix) and women (Tab. A13, appendix) suggest that the lower likelihood of second-generation migrants to make no compromise (Cluster 0) and their higher likelihood to make upward moves (Cluster 4) are evident in the group of young men in VET only. The lower likelihood of VET entrants with highly educated parents to make an upward move is also driven solely by the male group. We conclude that for the question of how compromises are made in the transition from school to VET, the social background is, if anything, more important for young men. In contrast, a singular specific pattern emerges in the group of female VET entrants. Female VET entrants with parents in high-status occupations are less

likely to make concessions in working hours, qualification levels and social recognition than the reference group, female VET entrants with parents in medium-status occupations (Cluster 2).

Finally, our main analysis excluded school leavers who entered VET directly after grade 9. Additional results show that more VET entrants who left school after grade 9 were trained in their aspired to occupations (45 %), compared to the VET entrants in our analysis sample, who stayed in school at least until grade 10 (31 %). These findings suggest that occupational aspirations depend on the surveyed stage in the occupational choice process. Apparently, due to their late measurement in the NEPS, the realistic occupational aspirations of early leavers were based more on the VET application process and its results. If we replicate the cluster analysis for the 960 grade-9 leavers (Tab. A14, appendix), the compromise patterns do not show any obvious deviations from the presented cluster solution. The estimation of social background effects on cluster affiliation generated similar but weaker results in the extended sample, compared to our main analysis sample (Tab. A15, appendix). The effects of high parental background on the likelihood to make upward moves were not visible in the extended sample.

6 Discussion

This study explored patterns of compromising in the school-to-work transition of German entrants into VET, and investigated how these patterns are affected by social background. We assessed six extrinsic dimensions of compromise formation: wage, job security, social recognition, qualification level, firm size and working time. Applying a multidimensional perspective on compromising, the study extends previous studies that investigated mainly single dimensions of occupational status, either in terms of aspiration level or change in aspirations, and illustrates that compromising has manifold faces.

The findings for VET entrants from lower and intermediate secondary school tracks show that, starting from adolescents' realistic occupational aspirations in grade 9 at school, a large share enter vocational training in other occupations than initially aspired to. Still, compromise formation does not always imply concessions. Most VET entrants are trained in occupations that are similar to their occupational aspirations. They make compromises with moderate losses in only some dimensions, either in status dimensions regarding working hours, qualification levels, and social recognition, or in security dimensions

regarding wages and firm size. These compromises do not necessarily lead VET entrants to clearly better or worse occupational alternatives compared to their realistic occupational aspirations. A further group of VET entrants even makes upward moves, i.e. wins in terms of all extrinsic occupational attributes, and only a small group makes downward moves, i.e. overall losses, or in other words, large compromises.

Contrary to our theoretical expectations, compromise formation is hardly socially stratified, and the few social background effects we found are unexpected in direction. None of our hypotheses on social background effects were supported by the empirical data. In particular, our findings do not indicate that VET entrants from low-educated, low-status families face additional disadvantages in compromising. Vice versa, we found that VET entrants from high parental background are more (and not less) likely to make downward moves than those from medium parental background. VET entrants from migrant families do show a lower likelihood than natives of finding a training position in the aspired to occupation. However, for second-generation VET entrants, at least, this is counterbalanced by a higher likelihood of making upward moves.

Previous research has shown that occupational aspirations differ by social and migration background (e.g. Basler & Kriesi 2019; Lee & Byun 2019; Schoon & Parsons 2002; Wicht & Ludwig-Mayerhofer 2014). Based on this knowledge, we expected social differences in compromising to be smaller when controlling for earlier occupational aspirations than the overall, gross effects of social background. In sum, we found only a few instances of such differences between gross and net effects, in particular for the group of adolescents with high-educated parents, who have particularly high aspirations, which partly explain a higher tendency of downward moves and a lower tendency of upward moves.

Overall, these results suggest that the process of compromise formation between realistic occupational aspirations and VET occupations does *not* contribute to the reproduction of social inequality. Thus, this phase stands in strong contrast to other transitions in the German education system for which strong social disparities in outcomes have been demonstrated, such as the choice of post-school education pathway, or university enrollment (e.g. Becker & Hecken 2009; Becker & Glauser 2018; Hillmert & Weßling 2014; Schneider & Tieben 2011; Tjaden & Hunkler 2017). The few effects of social origin that we observed in our analyses point to systemic limits to the realization of aspirations within the VET system, especially for children from high social backgrounds. In particular, when young people have high occupational aspirations with regard to

social recognition, wages or career paths in large companies, they are exposed to ceiling effects in the VET system in Germany because there are few occupations with which such high aspirations can be realized.

Consequently, our theoretical expectations regarding compromise formation must be reconsidered: higher educated, higher status, and native parents do not seem to have substantive advantages in terms of information and networks that they can pass on to their children. Nor is there any evidence that the social background of adolescents is systematically associated with different preferences regarding the level and type of occupational aspirations, which then lead to different needs for compromising. Familial information and networks, as well as preferences, may determine *whether* adolescents enter VET, but have no further impact on *how* adolescents navigate between occupational alternatives within the VET system.

How can these missing effects of social disparities be explained? We assume that this has to do with the pronounced stratification of the German education system, which runs primarily along the line of differentiation between *Abitur* and university studies on the one hand and lower school diplomas and vocational training on the other. Towards the end of schooling, the already socially selective group of adolescents in lower and intermediate school tracks that our study focused on first makes a fundamental decision about whether they want to continue school and achieve the *Abitur* or start vocational training. This decision appears to be the central sorting process at which social inequality is reproduced (e.g. Becker & Hecken 2009). In the further aspect of entering particular VET occupations, however, social origin then no longer plays a systematic role. Additionally, social background might be more important at an earlier stage in the career formation process, namely during the formation of realistic aspirations (*circumscription*). This would mean that socially structured preferences and parental influences come into play mainly when the idealistic career aspirations of adolescents are gradually adapted to reality.

Against this background, the present study considered one phase of the complex process of occupational choice for a restricted group of school leavers. We refrained from examining adolescents in the highest school track. On the one hand, this group has more career opportunities after school, on the other hand, this school degree has become increasingly popular in recent years and accordingly socially more heterogeneous. Hence, social background effects might be more visible here. We also refrained from comparing the compromise processes of adolescents who left school after grade 9 and are subject to very limited VET options. Another important question for future research

concerns the crucial time point for compromise formation. Our study looked at the critical threshold of the school-to-VET transition, but as said before, earlier compromises might be more socially selective.

In the phase of transition to VET and the group of VET entrants under view here, other factors than social background might be decisive for driving occupational compromises, for example the occupational interests of young people, their intrinsic career aspirations, the fit of adolescents' skills with the requirements of training providers, and the regional supply and occupational structure of training places. Accordingly, characteristics that we controlled for in our analyses, but did not theoretically consider, show differential and theoretically plausible effects on the nature of compromise formation. This is true for occupational aspirations, for school-leaving qualifications and grades, and for the gendered and regionally segmented structure of the training market.

Further research thus might consider other aspects of social stratification and related facets of occupational choice. We were interested in those occupational dimensions which matter for social status attainment, but compromise formation is also related to the gender type of occupations (e.g., Kleinert & Schels 2020) or to occupational interests (Gottfredson & Holland 1996). As these aspects require different theoretical considerations and measures, they are beyond the scope of this study. Theory is also lacking regarding the question of which occupational status attributes are relevant for school leavers in general, as well as for particular subgroups, and how compromises between different occupational status attributes can be characterized.

Beyond these limitations, in our study on VET entrants from lower secondary school tracks we examined a group of adolescents at the end of their schooling who are the focus of career guidance and orientation—especially in view of the current qualitative mismatches on the German VET market. This study shows that adolescents make a wide range of qualitatively different occupational compromises in the transition to VET, sometimes wider than often portrayed in political debates and media coverage, which are systematically related to occupational aspirations, school certificates, and the segmented VET market structure. These results suggest that there is added value in operationalizing compromise formation at the end of schooling multidimensionally, distinguishing different characteristics of occupations, even though our paper showed that no differential influences of social origin on the groups were discernible.

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