Social Origin and Mobility Effects of Further Education and Training in West Germany

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ABS Working Paper No. 8 (August 2017)

Abstract: Social Origin and Mobility Effects of Further Education and Training in West Germany

Based on the life course perspective, we pursue the research question as to whether intergenerational status decline might initiate employees' participation in further education and training (FET). Additionally, we investigate whether FET compensates for downward mobility across generations in the course of an occupational career. Results based on the German Life History Study for West German women and men from several birth cohorts, observed between 1949 and 1999, show, indirectly at least, that status maintenance in terms of the intergenerational reproduction of social origin might be an important motivation for FET participation due to previous intergenerational descent. By means of FET these people can compensate for previous intergenerational downward mobility. Hence, FET supports status maintenance in terms of class reproduction across generations.

Keywords: Social inequality; Further education and training; Intergenerational mobility; Status maintenance; Life course; Event history analysis

Highlights

Employees invest in further education and training to avoid intergenerational status demotion or to compensate previous status demotion compared to their social origin.

Status maintenance across generations seems to be a significant motive for status maintenance in the life course.

Investments into further education and training result in increasing social inequality because enrolment in further education and training is socially selective in regard to social origin and educational attainment.

1. Introduction

In considering whether to participate in further education and training (FET) at several stages of the professional career and the consequences it may have for one's career prospects, a few individual explanations emerge which determine why one pursues advanced training (Backes-Gellner et al., 2007; Müller & Jacob, 2008). In general, employees educate and train themselves further in order to preserve their professional skills, to refresh professional knowledge and understanding, to further develop existing qualifications, and to increase professional productivity as well as to adjust to new qualification requirements in the labour market and in organisational workflows (Schömann et al., 1997). With this, one essentially pursues the goal of at least preserving, or even improving, income and earnings potential—provided that there are no other possibilities for reaching these goals (Schömann & Becker, 1995). For West Germany, it is confirmed empirically that continued FET serves primarily as a way to optimise income (Becker & Schömann, 1996; Wolter & Schiener, 2009) and to maintain occupational status (Becker, 1991; Beicht & Walden, 2006).

Status maintenance in terms of *intragenerational* mobility—maintained by avoiding income loss, professional decline or unemployment in one's career—is a key reason for pursuing higher education. Other reasons empirically documented in labour market research include: striving for higher income, more job market flexibility or a promotion (Schömann & Becker, 1995). This corresponds with people's tendency to avoid status loss as explained in *prospect theory* by Kahneman & Tversky (1979). According to *social production function theory* (Ormel et al., 1999), people (continuously) invest in general education and vocational training because in modern societies, with market oriented economic systems and welfare state institutions, education is the multifunctional resource that determines class position as well as social status and that can already be determined by the social origin of an individual. However, with respect to status maintenance, the role played by professional further training is not empirically clear in terms of the *intergenerational reproduction of social class*. Whether employees invest in FET in order to reproduce the class position that their parents reached has not been studied in Germany neither through time-continuous examinations of professional careers nor by cohort studies over long periods in history.

This is astounding since current research in the sociology of education has lead the way in explaining the manner in which parents invest in their children's education (Boudon, 1974; Breen & Goldthorpe, 1997; Erikson & Jonsson, 1996). According to the research, parents track their children's progress in school and professional training until they reach, at least, the

same social class (economic resources) and status (life style), and with that the same recognition (prestige) as well as the same material prosperity (income) that the parents have acquired (Stocké, 2007). Further studies provide evidence that this status maintenance motive is taken over by children when they must choose between, for example, a professional or educational track at the end of their mandatory schooling (Glauser, 2015). Likewise, Becker (2003), Becker & Hecken (2009a, 2000b), as well as Schindler & Lörz (2012) provide examples that show that the motive for status maintenance in terms of intergenerational class reproduction provides the basis for higher education justifications and for choosing whether to pursue a university degree programme (Reimer & Pollak, 2010) as well as the field of study (Jackson et al., 2008; Van de Werfhorst & Hofstede, 2007). However, the extent to which the status maintenance motive, behind the intergenerational reproduction of class origin, plays a role in the inheritance of career and status position is still an empirically open question (Stocké, 2007).

The intergenerational reproduction of social class in terms of maintaining the parental status or class position in the life course—approximately measured by professional prestige (Blossfeld, 1986) or by destination class (Mayer & Carroll, 1987)—is, however, not always achieved by children at the start of their occupational career after their general education or later on in their career path despite all previous efforts in their first formal vocational training. Thus, the central hypothesis of our study is that FET could, among other modes, be an effective means of counteracting downward mobility and may serve to catch-up with intergenerational class reproduction if people—despite all previous education and career efforts—have not yet reached their parents' level of social class and—related to it—social status in terms of social approval and a life style appropriate to their economic conditions of social class.

If *intergenerationally* declining people educate and train themselves, then an intergenerational status loss can be compensated for, a point which should be clarified in present empirical studies. Likewise, whether status consistent people, who have already at least reached the same class status as their parents, could use investments in higher education in order to minimise the possible risks of a future decline in their career path will be examined.

The reminder of this article is structured in the following way: the next section will provide a brief overview of the current state of research along with the theoretical background for the connection between social origin, status maintenance, and FET. From there, empirically testable hypotheses are derived. In the third section, the data sets, variables, and statistical

methods will be described. In the fourth section the empirical results are documented. The fifth section provides a summary and the conclusions drawn from these results.

2. Theoretical Background

2.1. Social Reproduction and Further Education—the Current State of Research

In the current state of research, the findings regarding the role of status maintenance in educational decisions is rather disparate (Jacob & Weiss, 2011; Van de Werfhorst & Hofstede, 2007). For example, Stocké (2007) reasons that studies that demonstrate status maintenance in the attainment of parents' education levels do not lead to clear results because the attainment of the parents' occupational status could also be expressed by status maintenance motives. This view—that the course of educational expansion is no longer sufficient for the intergenerational reproduction of the parents' occupational status—is plausible and accounted for in the background of intergenerational class production (for the case of West Germany: Becker, 2003). Similarly to Breen & Yaish (2006), Van de Werfhorst & Hofstede (2007) have not been able to provide clear evidence of the status maintenance motive in avoiding intergenerational demotion due to a lack of adequate measuring of the subjective suitability of educational programmes. On the other hand, in the case of Germany, Stocké (2007) has—among social classes—been able to directly provide evidence of the varying roles of status maintenance motives for educational decisions at the end of primary school. Glauser (2015) succeeded in explaining the decision for vocational training or continued general education after mandatory schooling in Switzerland. In turn, Becker & Hecken (2009a) have established indirect evidence for the choice between academic studies or vocational training in East Germany. In contrast, in the USA, Jacob & Weiss (2011) researched re-enrolment in formal higher education after previous employment and the influence of social background, particularly for status maintenance, on this process. With an indirect test of status maintenance motives and ambitions to catch up to status reproduction, they found no clear connection between status maintenance motivation and continued educational efforts.

However, in methodological and theoretical terms, these disparate findings provide insufficient evidence to show that the status maintenance motive in intergenerational demotion in the class structure (or the threat of intergenerational decline while employed) is not a substantial factor for investing in one's own FET following access to the labour market. If children are shaped and socialised in their parents' home through their parents' status maintenance motive, and their education and career path is structured through educational

decisions guided by the parents' aspirations (Becker, 2003; Erikson & Jonsson, 1996; Stocké, 2007), then it is not impossible that—along with friends and colleagues (Schindler et al., 2011)—the family home is still *the* reference category for their own mobility and social class. These assumptions are supported by the Wisconsin Model of Status Attainment (Sewell et al., 1969). This assumes that intergenerational education and occupational reproduction is mediated, for the most part, by influences from the reference groups (Haller & Portes, 1973:71) and the educational and occupational aspirations of parents and their children. With the help of a status scale, a measured effect of social origin as well as of educational and professional aspirations is usually always positive and statistically significant for the status of entry-level professions as well as for the state of later career stages. This can definitely be interpreted as a consequence of the status maintenance motive.

Following *status position theory* (Keller & Zavalloni, 1964) and *prospect theory* (Kahneman & Tversky, 1979), it can be assumed that status maintenance motives appear to be enduring and that children try to avoid social decline. In the case of intergenerational demotion in children's career path in spite of successful formal education and training, additional professional FET could be seen as another successful or promising way of promoting social mobility and the reproduction of social class.

2.2. Bridging Hypotheses for the Social Selectivity of FET

However, why do working people not educate themselves more in order to ensure or, in the case of a previous intergenerational status loss, reproduce that status? Although, social status is a scarce and desirable commodity, like a privileged class position, not every individual insists it is imperative to invest in professional education in order to ensure already achieved class position or status (Backes-Gellner et al., 2007). In many cases, initial formal education, as well as continuous on-the-job learning, might be sufficient to guarantee long-term status maintenance in subsequent generations (Mayer & Carroll, 1987). Only when this is not achieved (e.g. because of suboptimal training or career outcomes) or when it appears to be at risk (because of imminent unemployment), will individuals invest in FET (Schömann et al., 1997).

This situation is not equal for all employment groups. Up to this point, if the achieved class position from the parental home represents the reference point in social stratification, from which status losses are evaluated as a consequence of suboptimal education and occupational decisions or career path and mobility processes (Jaeger & Holm, 2012), then the incentives for FET for the purpose of class reproduction vary between social classes. For instance,

unqualified workers and less qualified employees (i.e. social classes at the bottom of the social strata) have little or no risk of social demotion (aside from unemployment and poverty) and, therefore, also have no special interest in FET for the purpose of intergenerational class reproduction. Therefore, they are often lacking the appropriate means and opportunities that are mostly employed in secondary labour markets with unfavourable FET opportunities. On the other hand, for individuals in the middle classes and the service classes, maintaining class and status in subsequent generations can be a central motive for deciding between more or less continuous FET in case there is a risk of intergenerational downward mobility and status decline. Thus, from the perspective of these individuals, FET might be a strategic and significant means of maintaining class and status or of restoring a previous social decline.

According to current research, a gainfully employed person is not always in control of the opportunities for FET. *Human capital theory*, *signalling theory*, and the *theory of labour market segmentation* refer to external selection in entering FET as disadvantageous to low qualified workers and employees (Blossfeld & Mayer, 1988). There is evidence from a multitude of studies that suggest that employees in internal labour markets—for instance those employed in large firms in the private sector, public service, those in upper-middle-class professional positions (senior staff), those in employment positions with institutionalised training prospects (civil servants), or those in positions with high qualification requirements (academics)—have particularly favourable opportunities for being able to educate themselves further in their profession. The opportunity for FET is also less important to those who are gainfully employed by employers or further education providers who accept that successful participation and, thereby, accompanying productivity, is uncertain (Schömann & Becker, 1995). Within the sufficiently documented relationship between social origins, achievement potential and subjective expectations, potential FET participants from lower social classes again find themselves at a disadvantage when attempting to complete vocational training. Because of this they are underrepresented in FET activities.

In addition to selective opportunities in the labour market, employment relationships, the qualification requirements of professional activities (Schindler et al., 2011), and individual restrictions (such as subjective, expected costs and benefits of continued education) can also deter people from FET. For people in the lower social classes, due to lower earnings and chances of occupational success, additional investments in FET appear much more costly and risky than they do for professionally successful people in the upper social classes (Schömann & Becker, 1995). Even if socially and professionally privileged individuals had to accept an intergenerational decline during the course of their career, they would presumably show—at

the same subjective levels of educational returns (e.g. income, job security, and advancement possibilities)—greater motivation for FET than workers originating in lower social classes due to class reproduction. As previously mentioned, their subjective prospects of successfully investing in FET and using it in a profitable way for catching-up to upward mobility or sustained class reproduction are comparatively higher. Along with social networks (Granovetter, 1974), this includes advantageous opportunity structures for class reproduction in their employment fields (Schömann & Becker, 1995).

2.3. Hypotheses

Based on these theoretical considerations, the following hypotheses are derived and tested: (H1) For the purpose of status reproduction, gainfully employed people with intergenerational status decline are more likely to educate and train themselves further in their profession than people without intergenerational downward mobility (the status maintenance motive hypothesis). (H2) With a previous intergenerational decline, participants in FET are more likely to compensate for downward mobility than non-participants (hypothesis of compensation for intergenerational downward mobility). (H3) Participants from higher social classes are generally advantaged both in terms of access to FET and in the utilisation of continued education for intergenerational status reproduction (hypothesis of persistent inequality from social origin).

3. Data, variables, and statistical procedure

3.1. Data

In order to be able to test these hypotheses, there needs to be not only a structurally individualistic life-course perspective but also event-oriented longitudinal data on education and further training trends for men and women in different birth cohorts (Blossfeld, 1998). Only with lengthy, uninterrupted data on work-life time spans can a causal relationship between continued education and social mobility be adequately demonstrated (Blossfeld & Rohwer, 1997; Pötter & Blossfeld, 2001). Cross-sectional surveys (e.g. micro census), prospective panel data (e.g. German Socio-economic panel) or retrospective data for short time periods (e.g. PIAAC) are methodologically unsuitable for the questions pursued here.

Event-oriented historical data from the *German Life History Study* (GLHS) satisfy these requirements for West Germany during the time period from 1949 to 1999 (Mayer, 2015). Men and women from different birth cohorts were surveyed using the GLHS. The following analysis is limited to the birth cohorts 1929–31, 1939–41, 1949–1951, 1964 and 1971 in West

Germany. A total of 2,171 respondents born in 1930, 1940, and 1950 were interviewed between 1981 and 1983 (http://dx.doi.org/10.4232/1.2645). Furthermore, between 1998 and 1999, in cooperation with the Institute for Employment Research, life course data was compiled from 2,909 men and women born in 1964 or in 1971 (http://dx.doi.org/10.4232/1.3927). For social researchers, the data sets are available at GESIS (https://dbk.gesis.org/dbksearch/gdesc2.asp?no=0033&db=e).

These data from West German cohorts have already proven valuable in earlier analyses of further education (Schömann and Becker, 1995) and its effect on career course and earnings (Becker, 1991; Becker & Schömann, 1996). Hereafter, only people over the age of 15 during the historical periods following the founding of the Federal Republic of Germany in 1949 will be examined.

The respondents' data is *retrospective* data (Mayer, 2008). They were asked to reconstruct their life course through various stages such as social origin, school, vocational training, career, and further education. Unsurprisingly, institutionalised events and situations—such as a wedding and marriage—are usually reliably remembered. However, less institutionalised events and situations—such as the time period and length of further education—are more likely to have systematic mistakes in recollection the farther into the past they date back (Reimer, 2005). Such mistakes are likely because further education is assumed to be a short and less important event in one's life course. This may have hindered their exact retrospection as well as other transfers to further education and training. Notably, this produced a problem for older cohorts during data preparation. In retrospect, these respondents may not have been able to remember the exact, individual sequences of their professional further education nor have been able to distinguish between these events. Nevertheless, careful preparation and investigation of the data (Mayer, 2008) as well as intensive follow-up interviews and systematic inquiries of data editions guarantees exceedingly high quality data (Brückner & Mayer, 1998).

3.2. Dependent and Independent Variables

The units of analysis are *job episodes* in the individuals' occupational career (Blossfeld et al., 2007). The first dependent variable is *participation in further training* in a job episode. We used this mainly to refer to respondents' non-formal FET. FET capacity is considered less often than the manner of further education due to there being a considerable amount of missing data and information. In this respect, there is an unobserved heterogeneity problem because the effectiveness of professional training may clearly differ among individual types

of training. For this purpose, further research would be just as important as detailed data about previous FET participation.

A further problem arises in the data analysis and interpretation of findings, and this is that due to missing information one cannot judge whether participants' motivation to educate and train themselves is due to intergenerational class reproduction. As a result of this, the subjective meaning of continued educational behaviour—the motivation for status maintenance in terms of intergenerational class reproduction—must be determined through indirect theory guidance from further educational behaviours under the output's control (here referred to as intergenerational decline in the class structure). Such indirect conclusions on the basis of lacking direct measures of action goals and social mechanisms occur frequently in empirical social research. However, they have the disadvantage—as in the present case, which takes this motivation as a given—that empirically applicable phenomena can be predicted from inapplicable theories. In this respect, our analysis and findings—like other preliminary research results—would have to be replicated with data that contains information valid to the respondents' sense of intergenerational class reproduction.

The second dependent variable is the *intergenerational mobility* between two job episodes. It distinguishes between *intergenerational upward and downward mobility*. In the analysis of FET participation a decline exists when a person in their n^{th} job episode is located in a lower class position than their parents. Status consistent people are used as a reference category. These are people who in their n^{th} job episode have at least reached the same class position as their parents.

Among the effects of FET on intergenerational mobility a (*compensatory*) intergenerational promotion is available if a person—under the premise that they took on a lower class position than their parents at the time of their n^{th} job episode (that is, they have experienced an intergenerational decline)—goes through a job change (i.e. they have moved from the n^{th} to the n^{th+1} job episode) and in the next job episode they at least reach the class position of their parents. This mobility process is analysed solely for employed people who in the n^{th} job episode occupy a lower class position than their parents—in other words, prior to further education they experienced an intergenerational downward mobility.

Furthermore, *intragenerational mobility* via occupational change and class mobility in the career is included as another independent variable. This is measured here by class decline due to a job change from the previous to the recent job episode. In the following analysis this variable is combined with an intergenerational decline during career entry.

The parents' class position and their children's class position in their career are operationalised using the *German Employment Class Schema* (GEC) suggested by Mayer & Aisenbrey (2007:132). To determine the parents' class, the highest occupational position achieved by either parent at the time that the respondent was 15 years old is used. Missing information about the father's (or step-father's) occupation is substituted by using information about the mother (or step-mother). For the children's class position, that is, the respondents, the occupational position in a job episode is included. In the present case it is used to show that continued educational opportunities are distributed according to professional position. GEC is suitable because it incorporates the special features of employment relationships and the state as an employer in Germany. Thus, following the suggestions from Mayer & Aisenbrey (2007), a hierarchical order is distinguished between these social classes—working class, lower middle class, middle class, and the upper service class.

Along with cohort membership (dummy variables with the 1929–31 cohort as a reference category), people's work experience (in months) and the historical period are included to provide a further time dimension. The period is identified—due to confounding of the time dimensions with the same scale—as a proxy variable for economic conditions by means of previous years' unemployment rates at the start of a job episode. The shift in the economic context should represent further incentives for FET (Mayer & Huinink, 1990).

For each job episode, the respondents' gender (reference category: female) as well as their school and professional training (compulsory school with a maximum 9th grade completion and no job training used as the reference category) indicate the mechanisms of self and external selection for further education. As labour market indicators, firm size (log of number of employees in the firm) along with working times (in hours per week) and public service (reference category: private sector) were set as organisational and institutional opportunity structures for FET. Finally, features of the previous career were included—such as company or occupation change—in order to take career path uncertainty into account (Blossfeld, 1986).

3.3. Statistical Procedures and Selectivity Problems

With respect to the effects of further education, *sample selection bias* must be considered (Heckman, 1979). It occurs here because retrospective survey data was used instead of data analysed in an experimental design. This did not allow for a random and controlled assignment of FET as treatment to test and control groups. Due to self and external selection in both groups of participants and non-participants in FET, it is not readily possible in a quasi-experimental design to reveal the causal effects of further education on career. Thus, the FET

effect cannot be investigated through a comparison of treated and non-treated groups, for example in multivariate analysis, in which the participants or non-participants are identified by a dummy variable. Thus, because of selection bias, the expected average mobility effect of further education is not identical to the difference in the dependent variables for participation and non-participation (Morgan & Winship, 2007). Indication via a dummy variable is, therefore, not a useful solution to this evaluation problem because it leads to distorted estimated results (Winship & Sobel, 2004).

Inspired by Heckman (1979), an already proven means of reducing this methodological problem to a smaller scale will be utilised. As a first step, the social selectivity of further education is estimated by utilising the semi-parametric Cox regression. A person's inclination for FET is considered according to the hazard rate stored in a new variable. This incorporates the time sequence from causal effects (e.g. the risk of class demotion as a motive prior to FET rather than a consequence of FET), as well as causality as stochastic rather than as a deterministic process (e.g. the probability that further education is the result of social decline). According to Blossfeld & Rohwer (1997), the hazard rate is understood as the chance (in Weberian sense) that an individual will act probably. This is weighted with actual FET participation. In the second stage (the actual analysis of mobility processes), this previously stored hazard rate is integrated, by means of a Cox regression, as the *probability indicator P (participation)* for previous further education participation in the estimate of FET effects. However, our method faces a dilemma, one that Heckman (1979) has already pointed to. If the process of social selectivity at the beginning of FET is to be modelled after theory, and if the FET effect on intergenerational mobility is assumed to have the same mechanism, then the multi-collinearity problem arises when the same variables are used in the models. Therefore, in the following analysis, social selectivity of further education is modelled using the fewest possible variables, excluding those that are not mandatory for the mobility analysis.

Table 1: Cohort specific entrances into further education – only employees from West Germany (1949–1999)

Model	(1) Total		(2) Women		(3) Men	
	β	S.E.	β	S.E.	β	S.E.
Cohort 1929–31	Reference		Reference		Reference	
Cohort 1939–41	0.426***	0.100	0.943***	0.211	0.264*	0.115
Cohort 1949–51	1.080***	0.101	1.762***	0.204	0.798***	0.123
Cohort 1964	1.625***	0.088	2.136***	0.192	1.477***	0.100
Cohort 1971	2.113***	0.091	2.790***	0.194	1.833***	0.107
Pseudo-R^2 (McFadden)	0.02		0.04		0.03	
N of job Episodes / events	13,231 / 2,496		5,749 / 1,028		7,482 / 1,468	

* p ≤ 0.05; *** p ≤ 0.001; estimate with Cox-Regression (β coefficient and standard error)
Source: GLHS – own calculations

One such significant variable is *birth cohort membership*. On the one hand, a striking difference between birth cohorts in terms of social mobility has been empirically documented

in West Germany (Müller & Pollak, 2004). On the other hand, cohort differences in FET have also been demonstrated on several occasions for employed people in West Germany (Becker, 1991:358; Schömann & Becker, 1995). The participation in FET is characterised by cohort differentiation in that participation increases across the cohorts (*Table 1*). For all employed people, as well as for men and women separately, it is obvious that the inclination to further educate gradually rose with the succession of cohorts. If the individuals' labour force experience is taken into account, these systematic differences among the cohorts remain constant over their entire career.

The *first model* in *Table 1* is used to check the social selectivity of further education and cohort membership. This approach is justifiable in this case for the following reason. The differentiation of cohorts, both in intergenerational mobility as well as in FET, comes along with educational expansion, gradually increasing mobility throughout one's occupational career, the state's expansion as an employer, gradual increases in female employment and, finally, with economic modernisation and the continually growing importance of ongoing education (Blossfeld, 1986). Cohort membership includes these processes of social change and their correlates.

Thus, in the regression analysis of the FET effects, an endogenous relationship between independent variables is eliminated when the birth cohort is replaced with the cohort specific inclination to FET themselves. In fact, this parameter is closely related to the independent variables for the inclination for FET. However, in this case, it does not illustrate a linear combination of other independent variables. Therefore, the problem of confounding variables and multi-collinearity is at least alleviated.

4. Results

4.1. Intergenerational Mobility and Participation in Further Education

First, the structure of participation in further education for all employed people will be modelled on social structure and job market theory perspectives (*model 1 in Table 2*). Within individual's inclination for FET there is—along with the already discussed cohort differentiation—a connection to work experience. This finding will not be followed up here because the career paths of individual cohorts were observed for different amounts of time. There is apparently no statistically significant connection between period specific aggregated unemployment in the workforce and entrance into FET. Men are more likely to educate and train themselves than are women. Well-educated employees have more advantageous

opportunities for FET. Along with this '*Matthew's Effect'*, there are the effects of the internal labour market in which employed people with regular working hours (such as employees in public service or in large firms) have favourable continued educational opportunities. People with previous changes in their occupation train themselves more often, whereas people with a previous change of employer have less of a chance or less of a predisposition towards FET.

Table 2: Entrance to further education – only employees in West Germany (1949–1999)

Model	1[1]		2[2]		3[2]		4[3]		5[4]	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Time Dimension										
Cohort 1929–31	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Cohort 1939–41	0.602***	0.112	0.521***	0.128	0.542***	0.128	0.559***	0.146	0.490***	0.129
Cohort 1949–51	1.226***	0.121	1.111***	0.136	1.148***	0.137	1.139***	0.161	1.103***	0.137
Cohort 1964	1.430***	0.123	1.212***	0.140	1.264***	0.140	1.364***	0.175	1.188***	0.141
Cohort 1971	1.976***	0.141	1.738***	0.161	1.789***	0.160	1.976***	0.199	1.730***	0.162
Labour force experience	0.002***	0.001	0.001	0.001	0.001*	0.001	0.001	0.001	0.001	0.001
Unemployment rate	0.016	0.014	0.025	0.016	0.022	0.016	0.004	0.019	0.022	0.016
Gender										
Women	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Men	0.110*	0.055	0.164*	0.068	0.147*	0.066	0.070	0.072	0.177**	0.069
School Education										
Compulsory education	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Middle-level high school	0.460***	0.060	0.277***	0.076	0.404***	0.073	0.193*	0.076	0.279***	0.076
Advanced levels	0.904***	0.073	0.591***	0.096	0.755***	0.093	0.596***	0.098	0.634***	0.097
Vocational Training										
Not completed	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Completed	0.528***	0.109	0.160	0.136	0.306*	0.133	0.221	0.247	0.085	0.138
Intergenerational decline										
No decline			*Reference*		*Reference*					
Downward mobility			0.224**	0.079	–0.034	0.069				
Social Origin										
Lower-middle class					*Reference*					
Middle class					0.090	0.061				
Upper-middle class					0.188*	0.084				
Intragenerational Mobility										
No decline							*Reference*			
Class demotion							0.289	0.195		
Inter- & intragenerational										
No decline									*Reference*	
Downward mobility/decline									0.397***	0.119
Current class										
Working class			–0.857***	0.143			–0.866***	0.244	–0.800***	0.131
Lower-middle class			–0.453***	0.112			–0.422***	0.104	–0.370***	0.106
Middle class			–0.151†	0.085			–0.102	0.081	–0.106	0.082
Upper-middle class			*Reference*				*Reference*		*Reference*	
Labour market indicators										
Working time	0.004*	0.002	0.002	0.003	0.002	0.002	0.003	0.003	0.001	0.003
Firm size	0.027**	0.010	0.025*	0.012	0.021†	0.012	0.037***	0.013	0.025*	0.012
Private sector	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Public service	0.159**	0.061	0.083	0.073	0.119†	0.072	0.039	0.077	0.087	0.074
Previous Career Path										
No firm change	*Reference*		*Reference*		*Reference*		*Reference*		*Reference*	
Firm change	–0.134*	0.062	–0.143*	0.073	–0.159*	0.073	–0.113	0.071	–0.131†	0.074
No occupational change	*Reference*		*Reference*		*Reference*				*Reference*	
Occupational change	0.211†	0.113	0.233†	0.129	0.263*	0.129			0.389**	0.138
Pseudo-R^2 (McFadden)	0.036		0.036		0.034		0.028		0.037	
N of Job Episodes / Events	9,410 / 1,654		6,227 / 1,200		6,227 / 1,200		4,851 / 1,200		6,071 / 1,171	

† p ≤ 0.1; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; Cox-Regression: β co-efficient and standard error (S.E.)

[1] only persons over 15 years old after 1949

[2] only persons over 15 years old after 1949 from a middle class origin

[3] only persons over 15 years old after 1949 from the middle classes (their own class status) with at least one job change

[4] only persons over 15 years old after 1949 in the middle classes with control of intergenerational mobility at the start of their career

Database: GLHS – own calculations

Based on this reference model, relationships between intergenerational mobility and entrance into FET are investigated exclusively for middle-class men and women only. People from the working classes are not included because, in contrast with the risk assessments of the middle class, they cannot, by definition, experience downward mobility. First, individuals based in middle class jobs are more likely to participate in further education after they have experienced an intergenerational decline than are those who have not experienced downward

mobility (*model 2*). Intergenerational class demotion is apparently an incentive for further education and training in the occupational career. A descent from the working class or the lower middle class, however, brings with it fewer chances to be able to participate in further education, and with this, workers and less skilled employees are allowed fewer further education opportunities.

When social origin is controlled for instead of the attained class destination, there is no separate, significant effect of intergenerational downward mobility on the likelihood for FET (*model 3*). Workers from the upper class are statistically significantly more likely to participate in further education and training than those from the other middle classes. This finding can also count as evidence that upper class workers, possibly due to class reproduction and status maintenance, continually invest in FET. When only employed middle class people with a minimum of two job episodes—those who could succumb to the risk of an intergenerational downward mobility—are considered, it is found that previous professional declines in the career do not lead to additional further education efforts if, at the same time, they represent a decline in the class structure of a society (*model 4* without reference to social origin). Thus, *inter*generational, rather than *intra*generational mobility has an effect on participation in FET throughout employees' careers. These assumptions can be confirmed if, on the other hand, only employed people—who at the beginning of their careers have experienced an intergenerational descent—in the middle classes are used as a risk set (*model 5*). Earlier analyses have shown that at the moment of entry into the job market, people with intergenerational declines put special effort into their education and career for the purpose of improving mobility. If they have expected an intergenerational descent at the start of their occupational career, then they are more likely to invest in FET than are status-consistent people when their current class status in their professional career and intergenerational mobility in their later career track has been taken into account.

Previous findings suggest that intergenerational downward mobility is more likely to lead to investments and efforts in FET (likely for the purpose of catching up with class reproduction) than does intragenerational class mobility in employees' professional careers. This is valid for employees who are already socially privileged due to their social origin. With regard to FET, the *hypothesis of persistent inequality from social origin* has been confirmed. Furthermore, the *hypothesis of intergenerational class reproduction* (status maintenance) is at least indirectly supported. Thus, the analysis of FET effects is limited to the processes of *intergenerational class reproduction* in terms of compensation for previous intergenerational descent.

4.2. Compensation for Downward Mobility by Participation in Further Education

The mobility effects of FET are examined exclusively for employed people who have experienced intergenerational downward mobility. Employed individuals originating from the working classes have been excluded from the analysis. As a matter of fact, professional further education appears to be an effective medium for those who have gone through an intergenerational decline to compensate for that demotion (*model 1 in Table 3*).

Table 3: Further education effects on intergenerational mobility in West Germany (1949-1999): Probability of compensating for class demotion after previous intergenerational downward mobility[1]

Model	1		2		3	
	β	S.E.	β	S.E.	β	S.E.
Gender						
Women	Reference		Reference		Reference	
Men	0.734***	0.099	0.623***	0.100	0.674***	0.104
Time Dimension						
Labour force experience	–0.005***	0.001	–0.004***	0.001	–0.004***	0.001
Unemployment rate	0.014	0.013	0.000	0.013	0.000	0.014
Current class position						
Working class	0.102	0.126	0.743***	0.142	0.742***	0.146
Lower-middle class	–0.314*	0.157	0.154	0.168	0.158	0.173
Middle class	Reference		Reference		Reference	
Further Education						
P (Participation)	1.665***	0.422	1.631***	0.441	1.753***	0.463
School Education						
Compulsory education			Reference		Reference	
Middle-level high school			0.466***	0.110	0.515***	0.113
Advanced levels			1.248***	0.158	1.398***	0.164
Vocational Training						
Not completed			Reference		Reference	
completed			1.043***	0.169	1.001***	0.172
Labour Market Characteristic						
Firm size					–0.018	0.016
Private sector					Reference	
Public service					–0.029	0.131
Pseudo-R^2 (McFadden)	0.017		0.033		0.036	
N of job episodes / events	3,274 / 504		3,274 / 504		3,091 / 480	

[1] Cox-Regression – only persons over 15 years old after 1949, excluding persons in the upper class
* p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001
Database: GLHS – own calculations

Whilst controlling for gender, work experience, labour market characteristics, and attained class position (and the related social status) throughout one's career track, employed people can ascend via FET and catch-up to the class position that corresponds to their social origin, thus, reproducing their parents' class position (*model 1*). Obviously, women are at a disadvantage compared to men when it comes to compensating for intergenerational status declines, which are increasingly unlikely with more work experience.

Moreover, it is taken into consideration that individuals can compensate for status declines via investments in their first formal job training, irrespective of FET (*model 2*). Higher degrees and successful professional training can be utilised in order to produce status maintenance—via professional mobility—in a generational context. Embeddedness in diverse labour

markets, however, does not contribute significantly to explaining the status declines of people who have experienced a decline (*model 3*).

On the one hand, the findings confirm the *hypothesis of compensation for intergenerational downward mobility*. On the other, the results, again, are in line with the *persistent inequality according to social origin hypothesis*.

5. Summary and Conclusion

From the dynamic perspective of life course research, the long-term mobility effects of professional further education were investigated with the following question regarding social stratification and mobility: do participants in further education and training (FET) succeed in compensating for possible intergenerational decline—measured in reference to their parents' class position—during their education and career paths? If yes, is FET an appropriate way to compensate for intergenerational downward mobility? From the structural-individualist perspective of rational action theory, this question is particularly hard to test empirically as is emphasised by sociology of education research. This is also true of the role of the motive for class reproduction (status maintenance motive) in education and career decisions because, over a longer period of time in the children's lives, an enduring impact of targeted class reproduction (possibly coming from the parents) is observed. However, there is empirical evidence that a given intra- and intergenerational status maintenance motive in class mobility opposes qualification and structural restrictions in the labour market in later career phases.

This question was investigated using event-history data of the life courses of West German men and women in different birth cohorts during the historical periods from 1949 to 1999 as collected in the German Life History Study (Mayer, 2015). The hypotheses of participation in FET, and impacts of FET were—to a large extent—empirically supported. Employed people with intergenerational downward mobility are more likely to invest in their further education and training than are status consistent people. Usually, by means of further education, those who have experienced an intergenerational downward mobility can compensate for their class demotion.

The findings presented here suggest that FET certainly serves a class reproducing function. First, intergenerational declines accompany efforts in FET participation. Although the motivation for status maintenance in terms of intergenerational class reproduction was not directly measured, it is observed that employees descending in respect of their social origin are more likely to invest in FET than are status-consistent people. Second, intergenerational

downward mobility can be compensated for via FET. FET participants, more often than non-participants, succeed in at least reaching the class status that their parents had captured. This is achieved through promotions and job mobility as a result of FET.

In conclusion, attention should once again be brought to the limitations of this analysis. First, the individual motive for class reproduction has not been directly measured; rather its reconstruction has been guided by theory as well as by the observed patterns of further education in the life course. Therefore, it cannot be concluded that entirely different motives were determining factors for pursuing FET, including their consequences for the individual's occupational career. It also cannot be ruled out that entirely different intentions for FET accidentally lead to class reproduction. Therefore, the significance of FET should not be overestimated for intergenerational class reproduction in comparison to successful entry into status maintaining careers and status conserving professional careers. On the other hand, the structural heterogeneity of FET courses could not be checked for the length and frequency of participation. This was the result of missing questions in the data collection as well as missing data and rather inexact data from the respondents from older cohorts. In this sense, our findings should stimulate further investigation and replication.

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