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ORIGINAL RESEARCH

Education as a Positional Good? Evidence from the German Socio-Economic Panel

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Abstract
People care about their relative standing in society and therefore compare themselves to relevant others. Empirical findings suggest that there are concerns for relative standing for different goods and life domains such as income, cars, attractiveness, and supervisor's praise. Even education has been mentioned as having a (partially) positional character. However, there has been only small consideration of education as a positional good in the empirical literature so far. Based on the literature on positional concerns and the role of education on relative position, I use German panel data to investigate the relationship between education and life satisfaction beyond the effect education might have through other variables such as income, health, or occupational prestige. Additionally, I consider the possibility that the consumption of education is subject to positional concerns. I discover a positive relationship between education and life satisfaction, indicating that education has a consumption component. Moreover, the relationship depends on the distribution of particular levels of education, suggesting that education has a positional character.

Keywords Education · Positional good · Subjective well-being · Germany

JEL Classification I21 · I31 · Z13

1 Introduction

> *"If everyone stands on tiptoe, no one sees better."* Fred Hirsch (1977), Social Limits to Growth, p. 5

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As indicated by the psychology and sociology of identity, people care about how they are evaluated by themselves and others. As a consequence, they compare themselves to relevant others and even adjust their consumption behavior so that they—hopefully—end up with a high relative position in society.[1] Thus, consumption has both an individual and a social aspect, and the satisfaction people derive from consumption of goods and services depends not only on their own consumption, but also on the consumption by others (Hirsch 1977). By conspicuous consumption, for example, people demonstrate their own wealth and power (Veblen 1899). Duesenberry (1952) wrote that people emulate the consumption behavior of those above themselves in the income hierarchy for demonstration purposes. Following Leibenstein (1950), demand for particular goods may be driven by what he calls the bandwagon and snob effect. The bandwagon effect describes an increased demand for a good which can be attributed to the fact that many other people possess this "fashionable" good (also mentioned as conformism, see e.g. Bernheim 1994). The snob effect describes consumption behavior which is driven by the desire to dissociate oneself from others and signals a sort of exclusiveness (Leibenstein 1950). Even Karl Marx stated the idea of relative position over a century ago: "*A house may be large or small; as long as the surrounding houses are equally small it satisfies all social demands for a dwelling. But if a palace arises beside the little house, the little house shrinks into a hut*" (Marx and Engels 1849, p. 411; translation cited by Lipset 1973, p. 63). Hence, a person whose level of consumption is unchanged may feel inferior, even though there has been no objective change in his or her consumption level. People, thus, do not only care about their absolute levels of consumption, but about having more—or at least not having less—than (relevant) others.

One of the most famous studies on the importance of relative standing is the work of Easterlin (1974, 1995). He found that, on average, people with higher income reported themselves to be happier than their poorer fellows, but economic growth (and thereby an increase in objective well-being) does not increase the happiness level of a country over time. As an explanation for this paradoxon, he refers to the work of Duesenberry (1952) and argues that relative income serves as a better explanation for higher levels of happiness than absolute income. Evidence that income has a positional aspect has been further identified and discussed by Carlsson et al. (2007), Clark et al. (2008) and Luttmer (2005), for instance. In addition to income, there seem to be concerns for relative standing for other goods and life domains as well, such as cars (Carlsson et al. 2007), or attractiveness and supervisor's praise (Solnick and Hemenway 1998). Furthermore, goods are more positional than bads (Solnick and Hemenway 1998, 2005). Long et al. (1982) discovered that people's blood pressure increases when speaking to persons of higher perceived status and thus show even biological reactions to social distance.

Although relative consumption has been considered in the literature before it was Fred Hirsch who first described the term *positional good* (Hirsch 1977). By this, he refers to goods, services and even work positions whose value depends on how many other people own them. His idea was adopted by Frank (1985a, b), who uses a familiar metaphor to describe the characteristics of a positional good: "*(...) all spectators in a sports arena leap to their feet to get a better view of an exciting play, but in the end everyone's view is no better than if all had remained seated*" (Frank 1985a, p. 10). Thus, the value attributed to the good decreases with the number of other people who also consume it.

[1] As Maslow mentions, "*we want money so that we may have an automobile. In turn we want an automobile because the neighbors have one and we do not wish to feel inferior to them, so that we can retain our own self-respect and so that we can be loved and respected by others*" (Maslow 1970, p. 21).

Both Hirsch and Frank also mention the partially positional character of education. People may seek for higher education to gain social status, provided that their level of education is higher than the education level of others. As many countries in the world, Germany has been facing an increasing number of people entering the tertiary education system and this increase gives rise to the question whether the concern for a high relative standing is one reason for this phenomenon.

Even though education has been considered as a status signal and positional good in the literature, the empirical findings are not clear cut. There is empirical literature on conspicuous consumption indicating that spending on education is not positional (e.g. Khamis et al. 2012; Charles et al. 2009). Evidence from the well-being literature, in contrast, suggests that demand for education is subject to positional concerns (Salinas-Jiménez et al. 2011; Botha 2014).

Based on the literature on positional concerns and the role of education on relative position, this paper investigates the following questions. First, I examine whether there is a relationship between education and life satisfaction beyond the effect education might have through other variables such as income, health, or occupational prestige in Germany. Thus, I consider both the indirect and direct effect of education on life satisfaction. Second, I investigate the possibility that the consumption of education is subject to positional concerns. In doing so, I follow Frank's (1985b) definition of a positional good who defines positional goods as those things whose value depends greatly on how they compare with things owned by others.

Using representative data from 2003 to 2015 of the German population, I find a positive relationship between education and life satisfaction even if I control for variables which are known to be affected by education as well, such as absolute and relative income, health, joblessness and occupational prestige. This indicates that education has a consumption component in Germany. Additionally, the results suggest that the relationship between education and life satisfaction depends on the distribution of education degrees among the society and particular groups. Thus, education seems to be positional for Germany.

The paper is organized as follows. Section 2 gives a short review of the existing literature on the relationship between education and well-being and the positional character of education. Section 3 introduces the data and some descriptive statistics. In Sect. 4, I present and discuss the results. Section 5 concludes.

2 Related Literature

The positive impact of education on an individual's productivity and, hence, on future earnings has been considered by the Human Capital Approach (e.g. Becker 1964; Schultz 1961; Mincer 1974) and indicates education as an investment. Following the investment component of education, people demand education as long as the difference between the marginal benefit and the marginal cost of education is positive. Also its positive impact on employment status and on the access to better paying jobs has been examined.

Following signaling theory, education functions as a signal of ability (Spence 1973). Employers cannot observe an applicant's marginal productivity and thus use the applicant's level of education as an information source in the hiring process. In the screening process, it is not only the applicant's own level of education which is important for a successful application, but also the education level of the other applicants, indicating that labor market outcomes are also based on relative levels of education.

However, it might not only be the investment component of education that motivates people to acquire education, but also non-monetary benefits (Schaafsma 1976). Following Hirsch (1977), people derive satisfaction from their relative position. The satisfaction from the consumption of the good is influenced by the extensiveness of use by others, i.e., the more people possess the good, the lower the perceived "quality" of the good—and thus the lower the perceived utility achieved from consumption of the good (p. 29). Jobs at the upper end of the job hierarchy are one example for what he calls such a positional good. Limited in availability, since job hierarchies are usually pyramid shaped, they produce high status and are valued in themselves. To get one of these higher jobs, people need to succeed in the screening process, and therefore invest in the necessary resources of which one is their level of education. However, access to the high status jobs depends not only on one's own education level, but on how much education the other applicants have. With an increasing number of people fulfilling the educational requirements for these jobs, employers will intensify the screening process, so that an individual's education will impose a negative externality on the rest of society (Hirsch 1977). In contrast to the signaling approach, people are assumed to seek for positional jobs not only because they offer relatively high pays, but also high status. This status might be linked to relatively high wages, but also to the nature of the job. Hirsch (1977) refers to the high status of university professors compared with businessmen as an example: "*As long as the nonfinancial attractions of positional jobs are strong, the salaries attached to them can be regarded as incidental benefits. Money can be earned elsewhere; the attractions of the job can be gained only from doing it*", (p. 183). Actually, sociologists established two occupational characteristics determining the social status of an occupation: average schooling and average wages (e.g. Duncan 1961). However, education has been examined as the more important determinant (Stevens and Featherman 1981; Fershtman et al. 1996).

Besides the investment component of education, Schultz (1963) refers to the consumption component of education, i.e., the returns that consist of satisfaction. People may also consider education as a way to gain social status (Collins 1979; Checchi 2006). Piketty (1998), for instance, notes that people care about being viewed as smart and defines social status as the public beliefs of one's smartness, a characteristic that is often associated with (higher) education. However, the empirical findings on the relationship between education and status or positional concerns are not clear cut. Khamis et al. (2012), for example, find that disadvantaged caste groups in India spend more on visible consumption than high caste groups and that spending on visible consumption is diverted from education spending.[2] These findings indicate that education does not have a positional character in India. Charles et al. (2009) discover that Blacks and Hispanics spend less money on education than comparable Whites in the United States. Instead, they spend more money on conspicuous goods such as cars or clothing, also indicating education to be non-positional for these groups. However, Charles et al. (2009) also mention, that expenditures on children's education might function as a status signal among intimate groups which are more likely to observe the expenditures, such as friends and family. Using a Life Satisfaction Approach and data for eleven OECD countries[3], Salinas-Jiménez et al. (2011) identify the demand for education to be subject to positional concerns. Also Botha (2014) discovers that having

[2] There is empirical evidence that groups of lower income or status tend to spend more money on conspicuous goods than comparably high status or income groups (see e.g. Charles et al. 2009).

[3] Australia, Britain, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland and United States.

a higher education level than the average has a positive impact on subjective well-being in South Africa.

The positional character of particular things, such as relative income, has often been considered by investigating its relationship to subjective well-being (see e.g. Clark et al. 2008; Luttmer 2005; Easterlin 1974, 1995). Regarding education, however, the empirical findings indicate that there is no clear relationship between education and life satisfaction or happiness. Empirical studies have discovered significant positive and negative relationships as well as no significant relationships (see e.g. Salinas-Jiménez et al. 2011 and Cuñado and de Gracia 2012 for a brief review of the corresponding literature). For Germany, this relationship is not clear cut as well. Ferrer-i-Carbonell (2005) finds an important role of education in determining subjective well-being only for East Germany. However, Dittmann and Goebel (2010) find that life satisfaction increases with the level of education and Frey and Stutzer (2000) discover that people with higher education are happier than their lower educated fellows in Germany and Switzerland.

3 Data and Descriptive Statistics

3.1 Data

I use data from the German Socio-Economic Panel (SOEP) for the years 2003 to 2015.[4] The SOEP is a representative annual panel survey of private households in Germany and provides information on the household as a whole as well as every individual living in the household (Goebel et al. 2019).

The dependent variable, satisfaction with life in general, is measured by the question *"How satisfied are you with your life, all things considered?"*. Respondents can choose on an 11-point scale of 0 (*completely dissatisfied*) to 10 (*completely satisfied*). Education is considered by three variables. The first variable groups all respondents without a vocational degree. The second variable considers those respondents who have a vocational degree and the third variable contains all persons who have obtained a university degree. I do not consider respondents who mentioned to be in school or in training. This is also true for those persons who have already obtained a first vocational degree, but are seeking for another degree such as retraining or a higher education degree. Additionally, I consider only those respondents aged between 25 and 64. Thereby, I ensure that I consider only those respondents who have most likely completed their education and have entered the labor market. In this regard I follow the OECD's definition of individuals aged 15 to 24 as those *"entering the labour market following education"* and only consider those who are in their *"prime working lives"* (aged 25 to 54) and those who are *"passing the peak of their career and approaching retirement"* (aged 55 to 64) (OECD 2020).

The education variables will be used to investigate whether there is a consumption component of education. Moreover, I am interested in the possibility that the consumption of education is subject to positional concerns. Therefore, I generate variables indicating whether a respondent has a higher or lower education level than the majority of his or her reference group. Additionally, I run regressions by sub-groups whose members

[4] Socio-Economic Panel (SOEP), data for years 1984-2017, version 34, SOEP, 2019, doi: 10.5684/soep.v34.

Table 1 ISCED-97 Categories Compared to Baseline Education Variable. Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

	No Vocational Degree	Vocational Degree	University Degree	Total
Lower than Secondary (Level 1,2)	15,839	0	0	15,839
Secondary (Level 3,4)	5,066	101,229	0	106,295
Higher (Level 5,6)	44	15,458	49,602	65,104
Missing	724	0	0	724
Total	21,673	116,687	49,602	187,962
Lower than Secondary (Level 1,2)	15,839	0	0	15,839
Secondary and Vocational (Level 3,4,5)	5,110	116,687	0	121,797
Higher (University) (Level 6)	0	0	49,602	49,602
Missing	724	0	0	724
Total	21,673	116,687	49,602	187,962

have different levels of education, but comparable socio-economic status. The reference and sub-groups and the relative education variables will be explained in more detail in Sect. 3.2.

To make sure that the results do not depend on the choice of the education variables, I run regressions with other education variables as well, i.e., education in years and the International Standard Classification of Education (ISCED-97) defined by the OECD (OECD 1999). I use education in years to consider the consumption component of education and the ISCED classification for both, the consumption component and positionality. The ISCED variable is grouped as follows: Respondents without an education degree and general elementary education form the reference category. This corresponds with the ISCED-97 Levels 1 and 2. Further categories are secondary education (Level 3 and 4) and higher education (Level 5 and 6). Due to a lack of more detailed information on tertiary degrees in earlier SOEP waves, all persons with a university degree are summarized in Level 6 so that Level 5 and 6 differ from the original categorization by the OECD. Level 5 in the SOEP data, thus, contains only those persons with higher vocational degrees. Even though this is categorized as the first stage of tertiary education by the OECD, I run a regression for another categorization as well and summarize Level 3, 4 and 5 for the secondary and vocational education group and Level 6 for the higher education group. This categorization is more similar to my baseline education variable (no vocational degree, vocational degree, university degree). As can often be observed for education variables, the categorization of participants by their level of education slightly differs due to deviating definitions. Table 1 shows the ISCED categories compared to the baseline education variables (no vocational degree, vocational degree, university degree).

Control variables are age, gender, marital status, subjective health status, a dummy variable indicating whether there are children under 18 living in the household, a dummy variable indicating whether a respondent works, a dummy variable for living in East and West Germany, the logarithm of a household's monthly equivalent disposable income (using the modified OECD equivalent scale), the mean of the income of the reference group, and occupational prestige. Occupational prestige is measured by the Magnitude Prestige Scale

Table 2 Summary Statistics. Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

Variable	Obs.	Mean	SD	Min	Max
Life Satisfaction	187,962	7.111	1.728	0	10
Age	187,962	44.667	10.213	25	64
Children in Household	187,962	0.470	0.499	0	1
Marital Status					
Married	187,962	0.667	0.471	0	1
Single	187,962	0.186	0.389	0	1
Widowed	187,962	0.018	0.131	0	1
Divorced	187,962	0.100	0.300	0	1
Separated	187,962	0.029	0.167	0	1
Gender (Male)	187,962	0.489	0.500	0	1
Region (East Germany)	187,962	0.224	0.417	0	1
Health Status					
Very good	187,962	0.098	0.297	0	1
Good	187,962	0.452	0.498	0	1
Satisfactory	187,962	0.315	0.464	0	1
Poor	187,962	0.113	0.316	0	1
Bad	187,962	0.023	0.149	0	1
Non-Working	187,962	0.144	0.351	0	1
Household's Monthly Equivalent Disposable Income	187,962	7.316	0.501	3.689	11.107
Mean of Reference Group's Income	187,962	7.405	0.126	7.133	7.607
Education					
No Vocational Degree	187,962	0.115	0.319	0	1
Vocational Degree	187,962	0.621	0.485	0	1
University Degree	187,962	0.264	0.441	0	1
Education in Years	185,530	12.700	2.774	7	18
Lower than Secondary (ISCED Level 1,2)	187,238	0.085	0.278	0	1
Secondary (ISCED Level 3,4)	187,238	0.568	0.495	0	1
Secondary and Vocational (ISCED Level 3,4,5)	187,238	0.650	0.477	0	1
Higher (ISCED Level 5,6)	187,238	0.348	0.476	0	1
Higher (University) (ISCED Level 6)	187,238	0.265	0.441	0	1
Occupational Prestige	187,962	64.708	30.286	30	216

which was developed by Wegener for use in the Federal Republic of Germany (see Frietsch and Wirth 2001 for the procedure).

The summary statistics for the variables used in the analyses are shown in Table 2.

3.2 Reference Groups

Both for the mean of reference income and reference education I need to define the respondent's reference group. This raises the question to whom people compare themselves when judging their relative position.

Table 3 Reference Groups based on Region and Age Group. Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

Group	Region	Age Group	N†
1	West Germany	25–34	27,190
2	East Germany	25–34	8,399
3	West Germany	35–44	46,585
4	East Germany	35–44	11,453
5	West Germany	45–54	43,803
6	East Germany	45–54	12,717
7	West Germany	55–64	28,265
8	East Germany	55–64	9,550

† Education variables: no vocational degree, vocational degree and university degree

For her analysis on income comparisons in Germany, Ferrer-i-Carbonell (2005) uses reference groups that contain those individuals with similar level of education, who are in the same age bracket, and who live in the same region, i.e., West and East Germany. Caporale et al. (2009) and McBride (2001) consider people in the same age range (+/- five years of own age) as reference groups. Salinas-Jiménez et al. (2011), who investigate education as a positional good, follow the assumption that individuals interact mainly with individuals of similar socio-economic status. However, one's socio-economic status usually is defined by level of education, income, and occupational prestige. Due to the fact that education and occupational prestige are used to examine whether there is a positional character of education, they define the reference groups by income only. Botha (2014) follows this approach and additionally considers different ethnic groups (Black, Coloured, Asian, White) and gender. The choice of hypothetical reference groups, as it has been done in the above mentioned selection of studies, is rather common in empirical work due to missing data on the true reference groups of individuals (Ferrer-i-Carbonell 2005).

However, some data contain more explicit information on a respondent's "true" reference group. For example, Goerke and Pannenberg (2013) use data from three pretest modules of the SOEP for the years 2008 to 2010, which include information on participants' perceived relative income position and the comparison intensity for nine reference groups (neighbors, friends, colleagues at the workplace, other people in the respondent's occupation, people in the same age, parents when they were in respondent's age, partner, other women, other men). A theoretical approach in which the reference group is endogenous is given by Falk and Knell (2000).

Since my data do not contain information on the individuals' true reference groups I will follow the standard in the empirical literature and define hypothetical reference groups. Following several studies (e.g. Caporale et al. 2009; Ferrer-i-Carbonell 2005; McBride 2001), I assume that people compare themselves with people in the same age group and allow for regional variation reflecting economic differences between East and West Germany. These specifications generate eight different reference groups, which are presented in Table 3.

In all reference groups the majority of people holds a vocational degree. Thus, having a vocational degree forms the mode for all groups. I use this mode to generate two dummy variables, which are used in the regressions to examine the possibility of education having a positional character. One variable indicates if a person has a higher education level than the mode of the reference group. For all groups, this means that the variable takes a value

Table 4 Education by Income Groups (in Total). Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

	Low-Income	Middle-Income	High-Income	Total
No Vocational Degree	8361	11,591	1721	21,673
Vocational Degree	23,661	74,942	18,084	116,687
University Degree	3880	23,606	22,116	49,602
Total	35,902	110,139	41,921	187,962
Lower than Secondary (Level 1,2)	6507	8433	899	15,839
Secondary and Vocational (Level 3,4)	23,019	67,797	15,479	106,295
Higher (Level 5,6)	6097	33,539	25,468	65,104
Total	35,623	109,769	41,846	187,238

of one if the person has a university degree and zero otherwise. The other variable takes a value of one if a person has a lower education level than the majority of the reference group, i.e., no vocational degree.

The choice of reference group used by Ferrer-i-Carbonell (2005) or Salinas-Jiménez et al. (2011), for instance, is a reasonable approach as well. They assume that people compare themselves mainly with people of similar socio-economic status which usually consists of level of education, income and occupational prestige. Due to the fact that education and occupational prestige are used to examine whether there is a positional character of education, Salinas-Jiménez et al. (2011) define the reference groups by income and Ferrer-i-Carbonell (2005) considers education in addition to age and region for examining the importance of income comparisons on life satisfaction. To compare my results to the work of Salinas-Jiménez et al. (2011), I test their approach and run the regressions by income groups as well.

I categorize participants into three income groups, defined by the share of the median of the equivalized disposable net income. According to the German Institute for Economic Research, the low-income group is defined by having less than 70% of the median of the households' monthly equivalent disposable income, the middle-income group is characterized by having between 70% and 150% of the median and the high-income group by having more than 150% of the median (Vaughan-Whitehead 2016). To calculate the equivalent disposable income I use the modified OECD equivalence scale. Table 4 shows how many people in the income groups possess a vocational or university degree or none of both. While most people have a vocational degree in the low and middle-income group, having a university degree forms the mode in the high-income group. Regarding the ISCED variables, the distribution is comparable (Table 4).

4 Results and Discussion

4.1 Vocational Versus University Education

To estimate the relationship between education and life satisfaction, I use ordered probit models with individual random effects and year dummies. I start with a baseline regression containing the controls and income only. Table 5 presents the results. The coefficients of the control variables show the expected signs. Life satisfaction has a U-shaped relationship

Table 5 Results for Whole Sample (Vocational vs. University Education). Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

Variable	(1)	(2)	(3)	(4)
Age	− 0.0656***	− 0.0671***	− 0.0670***	− 0.0670***
	(0.0044)	(0.0044)	(0.0044)	(0.0044)
Age^2	0.0007***	0.0007***	0.0007***	0.0007***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Children Living in Household	0.1539***	0.1504***	0.1486***	0.1486***
	(0.0112)	(0.0112)	(0.0112)	(0.0112)
Marital Status (ref.: Married)				
Single	− 0.2911***	− 0.2968***	− 0.2985***	− 0.2985***
	(0.0157)	(0.0157)	(0.0157)	(0.0157)
Widowed	− 0.3255***	− 0.3188***	− 0.3175***	− 0.3175***
	(0.0503)	(0.0503)	(0.0503)	(0.0503)
Divorced	− 0.2128***	− 0.2107***	− 0.2108***	− 0.2108***
	(0.0185)	(0.0185)	(0.0185)	(0.0185)
Separated	− 0.4277***	− 0.4284***	− 0.4293***	− 0.4293***
	(0.0267)	(0.0267)	(0.0267)	(0.0267)
Male	− 0.0977***	− 0.1001***	− 0.0971***	− 0.0971***
	(0.0121)	(0.0121)	(0.0121)	(0.0121)
East-Germany	− 0.3511***	− 0.3595***	− 0.3576***	− 0.3576***
	(0.0269)	(0.0269)	(0.0269)	(0.0269)
Health				
Good	− 0.4978***	− 0.4944***	− 0.4940***	− 0.4940***
	(0.0127)	(0.0127)	(0.0127)	(0.0127)
Satisfactory	− 0.9997***	− 0.9941***	− 0.9930***	− 0.9930***
	(0.0144)	(0.0144)	(0.0144)	(0.0144)
Poor	− 1.5079***	− 1.5011***	− 1.4998***	− 1.4998***
	(0.0174)	(0.0174)	(0.0174)	(0.0174)
Bad	− 2.1913***	− 2.1841***	− 2.1827***	− 2.1827***
	(0.0303)	(0.0303)	(0.0303)	(0.0303)
Non-Working	− 0.2164***	− 0.2156***	− 0.2158***	− 0.2158***
	(0.0122)	(0.0122)	(0.0122)	(0.0122)
Income	0.3951***	0.3725***	0.3639***	0.3639***
	(0.0104)	(0.0108)	(0.0110)	(0.0110)
Mean of Reference Income	− 0.2544**	− 0.2374**	− 0.2403**	− 0.2403**
	(0.1058)	(0.1059)	(0.1059)	(0.1059)
Education, Ref.: No Voc. Degree				
Vocational		0.0661***	0.0576***	
		(0.0196)	(0.0196)	
University		0.1748***	0.1271***	
		(0.0220)	(0.0237)	
Positionality of Education				
Higher				0.0695***
				(0.0156)
Lower				− 0.0576***
				(0.0196)

Table 5 (continued)

Variable	(1)	(2)	(3)	(4)
Occupational Prestige			0.0011***	0.0011***
			(0.0002)	(0.0002)
Year Dummies	Yes	Yes	Yes	Yes
N	187,962	187,962	187,962	187,962

*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Clustered standard errors in parentheses

to age, men are less satisfied with their life in general than women and respondents living in East Germany indicate lower satisfaction levels than their counterparts living in West Germany. Being single, widowed, divorced or separated decreases life satisfaction compared to being married, while the presence of children under 18 in the household increases life satisfaction. A subjective health status lower than *very good* comes along with lower life satisfaction. Non-working persons are less satisfied, an increase in the household's monthly equivalent disposable income is associated with higher life satisfaction and the mean of the income of the reference group decreases life satisfaction. Including the education variables, I find a positive and significant relationship for both having a vocational and university degree compared to having no vocational degree. These results suggest that education has an effect on life satisfaction beyond its indirect effect through income or health. In a further estimation I control for occupational prestige as well since a person's education level might be associated with higher occupational prestige and thus increases life satisfaction. Even when including occupational prestige as a control, the education variables remain significant, suggesting a consumption component of education.

Besides the direct and indirect effect of education on life satisfaction I am interested in the question on whether education has a positional character. I follow Frank's (1985b) definition of a positional good and consider positional goods as those things whose value depends greatly on how they compare with things owned by others. Additionally, I consider that comparisons might be upwards and downwards. Table 5 shows that having a higher education level than the majority increases life satisfaction significantly. Having a lower education level decreases life satisfaction. Thus, in contrast to income comparisons (Ferrer-i-Carbonell 2005), education comparisons seem to be symmetric in Germany.[5]

In their study on education as a positional good for several countries, Salinas-Jiménez et al. (2011) divided their sample into three groups according to having a low, middle, or high income to consider that people mainly compare themselves to others with a similar socio-economic status. For comparison matters, I run the regressions by income groups as well. Table 6 shows the results.

The coefficients of the control variables still show the expected signs and are significant for all income groups. Only the coefficients of the education variables differ by income group as well as the coefficients of the non-working and occupational prestige variable, which turn out to be insignificant for the high-income group. In the low-income group, 23% of the respondents do not have a vocational degree so that a vocational degree may

[5] I receive the same results if I define the relative education variables for the whole sample. Thus, in contrast to relative income, education comparisons seem to be independent of reference groups defined by age and region of living in my analysis.

Table 6 Results for Income Groups (Vocational vs. University Education). Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

Variable	Low-Income Group			Middle-Income Group			High-Income Group		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Age	− 0.0774***	− 0.0788***	− 0.0786***	− 0.0750***	− 0.0762***	− 0.0761***	− 0.0672***	− 0.0667***	− 0.0665***
	(0.0080)	(0.0080)	(0.0080)	(0.0054)	(0.0054)	(0.0054)	(0.0097)	(0.0097)	(0.0097)
Age^2	0.0009***	0.0009***	0.0009***	0.0008***	0.0008***	0.0008***	0.0007***	0.0007***	0.0007***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Children Living in Household	0.1737***	0.1752***	0.1757***	0.1731***	0.1686***	0.1661***	0.2237***	0.2125***	0.2104***
	(0.0217)	(0.0217)	(0.0217)	(0.0143)	(0.0143)	(0.0143)	(0.0252)	(0.0254)	(0.0255)
Marital Status (ref.: Married)									
Single	− 0.2667***	− 0.2731***	− 0.2763***	− 0.3298***	− 0.3351***	− 0.3372***	− 0.2771***	− 0.2816***	− 0.2820***
	(0.0304)	(0.0305)	(0.0305)	(0.0197)	(0.0197)	(0.0197)	(0.0319)	(0.0320)	(0.0320)
Widowed	− 0.2036***	− 0.1997**	− 0.1982**	− 0.3706***	− 0.3654***	− 0.3643***	− 0.4441***	− 0.4375***	− 0.4372***
	(0.0701)	(0.0700)	(0.0700)	(0.0618)	(0.0618)	(0.0618)	(0.1206)	(0.1204)	(0.1204)
Divorced	− 0.2873***	− 0.2879***	− 0.2888***	− 0.2221***	− 0.2201***	− 0.2205***	− 0.1410***	− 0.1371***	− 0.1371***
	(0.0292)	(0.0293)	(0.0293)	(0.0232)	(0.0232)	(0.0232)	(0.0415)	(0.0415)	(0.0415)
Separated	− 0.4256***	− 0.4268***	− 0.4283***	− 0.4393***	− 0.4404***	− 0.4413***	− 0.5626***	− 0.5617***	0.5620***
	(0.0437)	(0.0437)	(0.0437)	(0.0361)	(0.0361)	(0.0361)	(0.0664)	(0.0663)	(0.0663)
Male	− 0.1075***	− 0.1072***	− 0.1009***	− 0.1083***	− 0.1094***	− 0.1053***	− 0.0987***	− 0.1045***	− 0.1043***
	(0.0211)	(0.0211)	(0.0212)	(0.0144)	(0.0144)	(0.0145)	(0.0241)	(0.0242)	(0.0241)
East-Germany	− 0.2967***	− 0.3085***	− 0.3067***	− 0.2872***	− 0.2985***	− 0.2964***	− 0.2043***	− 0.2164***	− 0.2159***
	(0.0223)	(0.0227)	(0.0227)	(0.0171)	(0.0173)	(0.0173)	(0.0338)	(0.0340)	(0.0340)
Health									
Good	− 0.4819***	− 0.4793***	− 0.4782***	− 0.5487***	− 0.5453***	− 0.5446***	− 0.5836***	− 0.5798***	− 0.5797***
	(0.0311)	(0.0311)	(0.0311)	(0.0165)	(0.0165)	(0.0165)	(0.0254)	(0.0254)	(0.0254)
Satisfactory	− 0.9884***	− 0.9846***	− 0.9824***	− 1.0836***	− 1.0782***	− 1.0770***	− 1.1728***	− 1.1663***	− 1.1659***
	(0.0337)	(0.0337)	(0.0337)	(0.0185)	(0.0185)	(0.0185)	(0.0296)	(0.0297)	(0.0297)

Table 6 (continued)

Variable	Low-Income Group			Middle-Income Group			High-Income Group		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Poor	− 1.4500***	− 1.4449***	− 1.4423***	− 1.6349***	− 1.6285***	− 1.6268***	− 1.7460***	− 1.7390***	− 1.7387***
	(0.0377)	(0.0378)	(0.0378)	(0.0226)	(0.0227)	(0.0227)	(0.0378)	(0.0378)	(0.0378)
Bad	− 2.0465***	− 2.0404***	− 2.0375***	− 2.3984***	− 2.3917***	− 2.3901***	− 2.5945***	− 2.5892***	− 2.5888***
	(0.0527)	(0.0527)	(0.0527)	(0.0414)	(0.0415)	(0.0415)	(0.0846)	(0.0846)	(0.0846)
Non-Working	− 0.3289***	− 0.3267***	− 0.3262***	− 0.1563***	− 0.1560***	− 0.1566***	− 0.0137	− 0.0097	− 0.0090
	(0.0189)	(0.0189)	(0.0189)	(0.0170)	(0.0170)	(0.0170)	(0.0369)	(0.0369)	(0.0370)
Income	0.2703***	0.2665***	0.2662***	0.4165***	0.3946***	0.3828***	0.3152***	0.2991***	0.2967***
	(0.0291)	(0.0292)	(0.0292)	(0.0242)	(0.0245)	(0.0247)	(0.0335)	(0.0339)	(0.0339)
Education (ref.: No Voc. Degree)									
Vocational		0.0595**	0.0492*		0.0331	0.0234		− 0.0317	− 0.0327
		(0.0259)	(0.0261)		(0.0243)	(0.0244)		(0.0635)	(0.0635)
University		0.1317***	0.0828**		0.1327***	0.0842***		0.0667	0.0524
		(0.0368)	(0.0400)		(0.0272)	(0.0294)		(0.0640)	(0.0657)
Occupational Prestige			0.0015***			0.0012***			0.0003
			(0.0005)			(0.0003)			(0.0004)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	35,902	35,902	35,902	110,139	110,139	110,139	41,921	41,921	41,921

*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Clustered standard errors in parentheses

differentiate one from this group, even though it is the mode in this group. A university degree which only 11% of the participants possess, increases life satisfaction significantly. One could have expected this coefficient to be negative or insignificant as well due to two contradicting effects. With a university degree people may form aspirations, e.g., on their income or employment status. For highly educated people in the low-income group, such aspirations may be unfulfilled, leading to dissatisfaction (see e.g. Ferrante 2009). However, the results indicate that even if there may be contradicting effects, the positive relationship attributable to status seeking predominates. For the middle-income group, only having a university degree is positively and significantly correlated with life satisfaction. Since almost 70% of the respondents possess a vocational degree in this group, a university degree which has been obtained by 21% seems to be the only possibility to differentiate oneself from the mass. For the high-income group, both coefficients are insignificant. Compared to the whole group with high income of which more than 50% of the participants went to university, having a university degree does not longer serve as a differentiation, which might explain why I do not find a relationship between life satisfaction and university education for this group. The results suggest that the relationship between education and life satisfaction depends on the distribution of education degrees among groups.

4.2 Robustness

To have a deeper look at the relationship between life satisfaction and education, and to investigate the possibility of education having a positional character, I consider further education variables. I use education in years to consider the consumption component of education and the International Standard Classification of Education (ISCED-97) defined by the OECD (OECD 1999) for both, the consumption component and positionality.

I first run the ordered probit regression for the whole sample (see Table 7 for the results). For education in years, I receive the same qualitative results as before, i.e., the coefficients of the controls remain significant and show the expected signs. The education (in years) variable is positively and significantly correlated with life satisfaction even if I control for occupational prestige. The same is true for the ISCED variables. Also the coefficients of the dummy variables for having a higher or lower education level affirm the former results, i.e., having a higher education level increases life satisfaction and *vice versa*. The mode is having secondary education (and having secondary and vocational education, respectively) for all eight reference groups.[6]

Running the regressions by income groups (Table 8), education in years is positively correlated with life satisfaction for the low-income group and the middle-income group when I also control for occupational prestige. As before, the coefficients for the education and occupational prestige variables are not significant for the high-income group.

Using the ISCED variables, only the higher education variable (Level 5, 6) is positively and significantly related to life satisfaction for the low-income group. The coefficient of the secondary education variable (Level 3, 4) is statistically not significant. One possible explanation could be that the proportion of those having secondary education is too large compared to the reference category (Level 1, 2) (see Table 4). In this case, having

[6] Again, this is also true for the whole sample, i.e., having secondary education (and having secondary and vocational education, respectively) builds the mode for the whole sample. Thus, defining the relative education variables for the whole sample yields the same results.

Table 7 Results for the Whole Sample (Education in Years and ISCED). Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

Variable	(1)	(2)	(3)
Age	− 0.0679***	− 0.0682***	− 0.0682***
	(0.0044)	(0.0044)	(0.0044)
Age^2	0.0007***	0.0007***	0.0007***
	(0.0000)	(0.0000)	(0.0000)
Children Living in Household	0.1454***	0.1488***	0.1488***
	(0.0113)	(0.0112)	(0.0112)
Marital Status (ref.: Married)			
Single	− 0.3016***	− 0.2978***	− 0.2978***
	(0.0159)	(0.0158)	(0.0158)
Widowed	− 0.3178***	− 0.3183***	− 0.3183***
	(0.0505)	(0.0505)	(0.0505)
Divorced	− 0.2100***	− 0.2092***	− 0.2092***
	(0.0186)	(0.0185)	(0.0185)
Separated	− 0.4297***	− 0.4279***	− 0.4279***
	(0.0269)	(0.0267)	(0.0267)
Male	− 0.0942***	− 0.0975***	− 0.0975***
	(0.0122)	(0.0121)	(0.0121)
East-Germany	− 0.3619***	− 0.3560***	− 0.3560***
	(0.0271)	(0.0270)	(0.0270)
Health			
Good	− 0.4918***	− 0.4929***	− 0.4929***
	(0.0128)	(0.0127)	(0.0127)
Satisfactory	− 0.9887***	− 0.9920***	− 0.9920***
	(0.0145)	(0.0144)	(0.0144)
Poor	—1.4963***	− 1.4984***	− 1.4984***
	(0.0176)	(0.0175)	(0.0175)
Bad	− 2.1804***	− 2.1825***	− 2.1825***
	(0.0306)	(0.0304)	0.0304)
Non-Working	− 0.2156***	− 0.2157***	− 0.2157***
	(0.0123)	(0.0122)	(0.0122)
Income	0.3611***	0.3647***	0.3647***
	(0.0112)	(0.0110)	(0.0110)
Mean of Reference Income	− 0.2413**	− 0.2263**	− 0.2263**
	(0.1064)	(0.1061)	(0.1061)
Education			
Education in Years	0.0152***		
	(0.0027)		
Education (ISCED Classification) †			
Secondary (ISCED Level 3,4)		0.0633**	
		(0.0231)	
Higher (ISCED Level 5,6)		0.1178***	
		(0.0256)	
Positionality of Education (ISCED)			

Table 7 (continued)

Variable	(1)	(2)	(3)
Higher			0.0545***
			(0.0141)
Lower			− 0.0633***
			(0.0231)
Occupational Prestige	0.0010***	0.0012***	0.0012***
	(0.0002)	(0.0002)	(0.0002)
Year Dummies	Yes	Yes	Yes
N	185,530	187,238	187,238

† Reference category: Lower than Secondary (ISCED Level 1,2)

*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Clustered standard errors in parentheses

the education level which also forms the mode for this group is not sufficient for a positive differentiation. Only higher education, i.e., higher vocational and university education increases life satisfaction when also controlling for occupational prestige. The same is true for the middle-income group in which 30% possess a higher education degree and 62% a secondary education degree. Thus, for this group only higher education seems to be a way to positively differentiate from the rest of the group. The coefficients of the education variables and the occupational prestige variable are not significant for the high-income group. Since 61% have obtained higher education in this group, there is no possibility to differentiate positively from the group by education. When using the second specification of ISCED variables, in which higher education is defined by Level 6 only, I receive the same qualitative results.

As before, the results indicate that education has a positional character for the German population and may be consumed due to status reasons. The relationship between education and life satisfaction depends on how education degrees are distributed among the groups.

4.3 Discussion

People compare themselves to (relevant) others due to their inner desire to be evaluated positively by their surrounding environment and themselves. In case of favorable comparisons with others or positive evaluations, a person's self-esteem will be enhanced—or damaged otherwise (Hewitt 2009). I investigate the role of education in such comparison strategies and examine whether education has a consumption component and a positional character for the German population. Using data from the SOEP, I use satisfaction with life in general as a measure for subjective well-being which is also associated with self-esteem (Diener et al. 2009).[7] First, I can identify a positive relationship between education and life satisfaction. This relationship also remains if I consider other variables through which education might affect life satisfaction such as income, health, or occupational prestige. Second, the results indicate that education is subject to positional concerns as has

[7] A prominent example of the so-called need and goal satisfaction theories is Maslow's model of hierarchical needs (Diener et al. 2009).

Table 8 Results for Income Groups (Education in Years and ISCED)

Variable	Low-Income Group		Middle-Income Group		High-Income Group	
	(1)	(2)	(1)	(2)	(1)	(2)
Age	− 0.0795***	− 0.0799***	− 0.0774***	− 0.0771***	− 0.0672***	− 0.0679***
	(0.0081)	(0.0080)	(0.0055)	(0.0054)	(0.0099)	(0.0098)
Age^2	0.0009***	0.0009***	0.0008***	0.0008***	0.0007***	0.0007***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Children Living in Household	0.1736***	0.1772***	0.1613***	0.1645***	0.2115***	0.2134***
	(0.0219)	(0.0218)	(0.0144)	(0.0143)	(0.0257)	(0.0255)
Marital Status (ref.: Married)						
Single	− 0.2795***	− 0.2756***	− 0.3419***	− 0.3375***	− 0.2723***	− 0.2784***
	(0.0309)	(0.0306)	(0.0200)	(0.0197)	(0.0322)	(0.0320)
Widowed	− 0.1999***	− 0.1970***	− 0.3654***	− 0.3668***	− 0.4383***	− 0.4403***
	(0.0707)	(0.0706)	(0.0620)	(0.0620)	(0.1206)	(0.1206)
Divorced	− 0.2887***	− 0.2881***	− 0.2208***	− 0.2186***	− 0.1379***	− 0.1373***
	(0.0295)	(0.0294)	(0.0233)	(0.0232)	(0.0417)	(0.0416)
Separated	− 0.4349***	− 0.4276***	− 0.4414***	− 0.4403***	− 0.5544***	− 0.5574***
	(0.0442)	(0.0439)	(0.0363)	(0.0361)	(0.0668)	(0.0665)
Male	− 0.0996***	− 0.1004***	− 0.1031***	− 0.1055***	− 0.0993***	− 0.1030***
	(0.0215)	(0.0213)	(0.0146)	(0.0145)	(0.0244)	(0.0243)
East-Germany	− 0.3114***	− 0.3078***	− 0.3008***	− 0.2965***	− 0.2200***	− 0.2132***
	(0.0228)	(0.0229)	(0.0173)	(0.0173)	(0.0342)	(0.0341)
Health						
Good	− 0.4740***	− 0.4726***	− 0.5443***	− 0.5447***	− 0.5749***	− 0.5789***
	(0.0315)	(0.0312)	(0.0167)	(0.0165)	(0.0256)	(0.0254)
Satisfactory	− 0.9781***	− 0.9789***	− 1.0748***	− 1.0768***	− 1.1588***	− 1.1654***
	(0.0342)	(0.0339)	(0.0187)	(0.0186)	(0.0298)	(0.0297)

Table 8 (continued)

Variable	Low-Income Group		Middle-Income Group		High-Income Group	
	(1)	(2)	(1)	(2)	(1)	(2)
Poor	− 1.4374***	− 1.4362***	− 1.6257***	− 1.6274***	− 1.7326***	− 1.7356***
	(0.0383)	(0.0380)	(0.0228)	(0.0227)	(0.0380)	(0.0379)
Bad	− 2.0348***	− 2.0359***	− 2.3893***	− 2.3907***	− 2.5753***	− 2.5821***
	(0.0533)	(0.0530)	(0.0418)	(0.0416)	(0.0846)	(0.0845)
Non-Working	− 0.3243***	− 0.3239***	− 0.1591***	− 0.1597***	− 0.0025	− 0.0036
	(0.0191)	(0.0190)	(0.0171)	(0.0170)	(0.0371)	(0.0369)
Income	0.2698***	0.2682***	0.3854***	0.3833***	0.2917***	0.3003***
	(0.0295)	(0.0294)	(0.0249)	(0.0247)	(0.0342)	(0.0339)
Education						
Education in Years	0.0118**		0.0100***		0.0077	
	(0.0053)		(0.0034)		(0.0051)	
Education (ISCED Classification) †						
Secondary (ISCED Level 3,4)		0.0416		0.0161		− 0.0139
		(0.0296)		(0.0287)		(0.0855)
Higher (ISCED Level 5,6)		0.0732*		0.0555*		0.0361
		(0.0378)		(0.0316)		(0.0871)
Occupational Prestige	0.0013***	0.0015***	0.0012***	0.0013***	0.0005	0.0006
	(0.0005)	(0.0005)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	35,276	35,623	108,739	109,769	41,515	41,846

† Reference category: Lower than Secondary (ISCED Level 1,2). *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Clustered standard errors in parentheses. Data source: Socio-Economic Panel (SOEP), version 34, years 2003 to 2015. Own calculations

also been discovered by Salinas-Jiménez et al. (2011) and Botha (2014), for instance. To measure the positionality of education, I use dummy variables indicating a higher or lower education level than the majority of the reference group has attained and use hypothetical reference groups defined by region of living (East and West Germany) and age groups for the comparison of the relative education level (see Table 3). The findings suggest that having more education than (relevant) others increases life satisfaction and *vice versa* so that education comparisons seem to be symmetric. However, since holding a vocational degree is the mode for all reference groups, the results are the same as when considering the whole sample. The definition of reference groups for the relative education variables by age and region, thus, does not make a difference in this estimation. However, when I follow the approach used by Salinas-Jiménez et al. (2011) and run the regression by income groups to consider that people compare themselves to others with a similar socio-economic status, it indeed matters how many people in the reference group have a particular level of education.

At first, the findings that education comparisons are symmetric seem to conflict with the concept of self-improvement. Social psychologists argue that people seek for positive evaluations, i.e., they engage in downward comparisons for *self-enhancement*. The *self-improvement* approach argues that people make upward comparisons, i.e., they compare themselves to people who perform better. In doing so, they motivate themselves to improve and to adapt to higher standards (Falk and Knell 2000). The negative relationship between life satisfaction and having less education than the majority does not fit with this argumentation at first glance. Instead, the first thought may be that less satisfied people are less motivated. However, the increase in demand for higher education levels in Germany in the past decades may be a consequence of the motivation for self-improvement. For a long time, vocational education was a sort of standard education level in Germany. Even though this education degree is still the most obtained one, there has been a shift in the demand for education towards the next higher education degrees at school level and above. Taking a look at the secondary education level, the number of people who have obtained the lowest secondary education level (*Hauptschule*) has decreased and the number of school leavers with a Higher Education Entrance Qualification (*Abitur*) has increased. Similarly, the amount of university graduates has increased and the number of people doing a vocational training has decreased (Autorengruppe Bildungsberichterstattung 2020).

Given this phenomenon, the question arises whether the German labor market will have the capacity to absorb the increasing number of higher educated people in traditional graduate occupations. If not, a consequence might be that employers intensify their screening process and recruit employees who are actually over-educated for the job, leading to a change in the structure of jobs. An increasing demand for higher education may also involve the risk of a devaluation of higher education degrees since the characteristic of a positional good is that its value depends on how many other people own the good, or as the introductory quote by Fred Hirsch states: "*If everyone stands on tiptoe, no one sees better*" (Hirsch 1977, p. 5). In the long run, it might also be possible that education leads to dissatisfaction due to unfulfilled aspirations with regard to income, employment, or professional success.

The results suggest that the human need for positive evaluations and self-esteem affects the demand for education and that demand for education is not only driven by the positive indirect effects education entails, such as higher income, better job opportunities, or occupational prestige. The positive relationship between education and subjective well-being which has been found for Germany by, e.g., Frey and Stutzer (2000), Dittmann and Goebel (2010) and (partially) Ferrer-i-Carbonell (2005) is rather subject to positional concerns.

Thus, the results support the findings on the positional character of education by Salinas-Jiménez et al. (2011) and Botha (2014).

An open point remains, namely whether the relationship between education and status concerns is desirable for the labor market and the population as a whole. A low appreciation for particular educational paths such as vocational training may keep people from pursuing their own goals and desires relating to education and occupation. For the labor market, an increase in highly educated people might lead to a negative externality imposed on those holding higher education degrees. Additionally, the demand for vocational education might decrease, eventually leading to gaps in vocational professions. Furthermore, a low evaluation of less educated people may affect their self-esteem negatively, even resulting in mental issues. In several experimental studies, Kuppens et al. (2018) show that highly educated people hold more negative attitudes toward their less educated counterparts than to their own education group and evaluate less educated people more negatively compared to groups of low socio-economic status such as the poor or the working class. Their results emphasize that people use education levels for comparison strategies and that education plays an important role in judging one's social position. Their results also bring to mind that social status associated with education degrees and occupations is conferred by the society. Since people care about how they are evaluated by themselves and others, such comparison and judging strategies reinforce people to adjust their behavior and consumption to enhance or maintain their self-esteem and social standing. This raises the questions whether there should be a political endeavour to retain or increase the societal appreciation of particular educational paths so that people do not strive for education degrees due to status concerns, but to pursue the education and occupation fitting their interests. This would also reduce the risk that people experience unfavorable evaluations due to their level of education, which may affect their personal well-being negatively.

5 Conclusion

The results suggest that education is positively related to life satisfaction beyond its effect through other variables such as income, health, or occupational prestige. This consumption component of education seems to be subject to positional concerns. I examine that having more education than the majority (of an individual's reference group) increases life satisfaction significantly and *vice versa*. Additionally, I run regressions by income groups to consider that individuals compare themselves to people of similar socio-economic status but have different levels of education. For the low-income group, which is the group with the largest proportion of people without a vocational degree, both vocational and university education are positively correlated with life satisfaction. However, using an education variable whose definition results in a lower proportion of those having no vocational degree, only university education remains positively related to life satisfaction. This can also be observed for the middle-income group. The group of those persons with a vocational degree is the largest, and the proportion of those without a degree is comparably low. Only a university degree seems to function as a distinction from the mass in this income group. For the high-income group I find that education does not contribute to life satisfaction. Since a university degree is the most represented education degree in this group, it does no longer work to dissociate one from the rest of the group.

It remains an open issue whether the positionality of education is socially desirable since it might have consequences for the labor market and individual well-being. In the

long-term, policy implications should be considered which motivate people to seek for an education degree fitting their educational and occupational interests, e.g., by strategies equalizing the societal appreciation for all education levels and occupations.

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