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Editors

# Wealth(s) and Subjective Well-Being

 Springer

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# Chapter 14

## Are Homeowners Happier than Tenants? Empirical Evidence for Switzerland



Yvonne Seiler Zimmermann and Gabrielle Wanzenried

### 14.1 Introduction

Homeownership is a dream of many people (e.g. Sanders 1990). In general, people associate homeownership with more control over their lives, less insecurity of tenure and better communities (e.g. Belsky 2013). In Switzerland, the strong preference for homeownership is present as well, but only 38.2% of the households live in their own house or apartment (BFS 2016), which is rather small share in comparison to the international context. In the European Union, for instance, the homeownership rate in amounts to 67.8%, on average Pittini et al. (2017).<sup>1</sup> The wish of Swiss people for more home ownership is well reflected in the political debate over the last 10 years, and it has been repeatedly discussed whether and how the state should promote homeownership. Several political initiatives were launched (e.g. Bausparinitiative, sicheres Wohnen im Alter), but they found no majority by the voting population. Also, the Swiss [Federal Constitution](#) foresees the facilitation of homeownership. According to its article 108, the Swiss State is legally obligated to promote homeownership.

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<sup>1</sup>[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_dhc010&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_dhc010&lang=en)

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Homeownership may have several implications. Existing work on benefits of homeownership suggest that homeowners are more active and involved citizens (e.g. DiPasquale and Glaeser 1999; Manturuk et al. 2009), and have better community interactions (Hoff and Sen 2005). Other studies claim that homeownership leads to better child outcomes (e.g. Green and White 1997; Boehm and Schlottmann 1999; Haurin et al. 2002a, b) and better physical health (e.g. Pollak et al. 2010). Homeownership may also lead to accumulate capital (e.g. Elsinga 1995; Boelhouwer 2002; Boehm and Schlottmann 2008). A series of studies also point out to negative impacts of homeownership. For instance, homeownership leads to a greater immobility in the labour market or more risky investments due to a lower portfolio diversification (e.g., Blanchflower and Oswald 2013; Dietz and Haurin 2003).

An increasing number of studies deal with the impacts of homeownership on life satisfaction, which, however, lead to at least partly conflicting results (e.g., Galster 1987; Rossi and Weber 1996; Rohe and Stegman 1994; Rohe and Basolo 1997; Rohe et al. 2002; Buchianieri 2011; Tumen and Zeydanli 2014; Zumbro 2014; Odermatt and Stutzer 2017). The most important studies are shortly discussed in the literature review of this article. According to Zumbro (2014), however, this topic is still under-researched, and additional evidence is necessary.

The main goal of this article is to empirically investigate whether homeowners in Switzerland have a higher life satisfaction than tenants. Given that subjective well-being or life satisfaction is affected by many aspects, we include a large set of explanatory person- and household-specific characteristics. This is even more important because homeowners are likely to be different from renters in a variety of ways, and these differences may account for the found differences, as Rohe et al. (2002) outline. For instance, homeowners are likely to have higher incomes, education levels and occupational statuses; similarly, they are more likely to be married and have children and also older, in comparison to tenants (Carliner 1973). Our main results show that homeownership has a positive and significant effect on the life satisfaction of households. This result holds even after having controlled for person- and cohabitation-specific aspects as well as other characteristics related to the living situation, factors that are all expected to affect subjective well-being. We also find that the positive effect of homeownership on life satisfaction is stable over time and for different model specification including different set of controls. Finally, we show that this effect is not driven by a reverse causality issue, i.e., it is homeownership that affects life satisfaction, and not life satisfaction that makes it more likely that someone is a homeowner.

The focus on Switzerland is motivated by the following facts. So far, no empirical evidence exists for Switzerland on this topic. The majority of studies focus on the Anglo-American regions. However, the Anglo-American context cannot be simply transferred to Switzerland because the housing market in Switzerland differs in certain aspects from other countries, and these differences might have an impact on the relationship between homeownership and subjective well-being. In particular, the homeownership rate in Switzerland is significantly lower than in most other countries considered. According to the Federal Office of Housing (2005), there exist several reasons for the relatively low homeownership rates compared to those in



other Western countries. Firstly, condominiums were not allowed in Switzerland before 1965, with the only exception being the canton Valais. Secondly, the relatively liberal market for rented flats is very attractive for investors like real estate companies, and this fact favors, therefore, the supply of rented apartments. Moreover, the existing competition between suppliers improves the average price-quality ratio of the rented apartments. Thirdly, it is postulated that the relatively high percentage of foreign residents has a negative effect on Swiss homeownership rates. These circumstances are also expected to have effects on the relationship between homeownership and subjective life satisfaction, even though it is hard to predict the direction of the potential effects in any case. An important aspect refers to the quality of the housing supply. As Rossi and Weber (1996) outline, owner-occupied dwellings are usually characterized by higher quality conditions than rental properties. In Switzerland, however, the quality of dwellings does not depend as much on the homeownership status like in other countries. Accordingly, we expect a weaker desire for and smaller effect of homeownership on subjective well-being from this point of view. Similarly, the relatively large population of foreign residents is expected to have a weakening impact on this relationship, given that foreigners might per se have a lower desire to become homeowners. Another aspect refers to fact that a significant part of the tenants in Switzerland would like to become home owners<sup>2</sup>, but at the same time it remains a dream for most of them. This fact is also expected to have an impact on the relationship between homeownership and subjective well-being, but its direction is à priori unclear. To summarize, it is important to empirically investigate the impact of homeownership on subjective well-being for Switzerland. The results do not only add to the existing literature from a geographical point of view, but they potentially provide to a better understanding of the underlying mechanisms.

The new aspects of the study are as follows: It is the first empirical study that investigates the impact of homeownership on life satisfaction in Switzerland, while controlling for other factors that are expected to affect subjective well-being. As mentioned above, existing studies refer to numerous other countries, e.g. the Netherlands (Elsinga 1995) the USA (Rossi and Weber 1996; Bucchanieri, 2011), Australia (Stillman and Liang 2010); China (Hu 2013) or Germany (Zumbro 2014; Odermatt and Stutzer 2017). In line with, Zumbro (2014) but in contrast to e.g., Bucchanieri (2011), we apply an ordered logit model, given that the subjective well-being, which is our dependent variable, is measured on an ordinal scale. We estimate the model with general least squares in order to eliminate the problem of heterogeneity in the residuals of the different categories of our dependent variable, which allows us to get unbiased and consistent estimates. Finally, our study seems to be the first one to explicitly address the problem of reversed causality. As Rossi and Weber (1996) outline “... the issue of causality in these cross-sectional data sets

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<sup>2</sup>According to a representative survey in 2016, two thirds of the tenants in Switzerland would like to become homeowners. <https://umzugstipps.com/schweizer-mieter-und-der-wunsch-nach-wohneigentum/>

again prohibits any claim that ownership leads to a greater sense of well-being.” We develop a new approach by considering only the households with a change in their homeownership status, i.e., homeowners who became tenants and tenants who became homeowners, but with no changes in the other variables except age and income. Within this restricted sample, we divide both groups in two categories, those who became happier and those who became less happy. We then calculate odds ratios for both categories and are able to show that reverse causality does not seem to be in issue in our context.

Our results are interesting from an academic point of view, given that the topic is generally still under-researched (Zumbro 2014). Also, the majority of the existing studies focus on the United States, and the existing evidence is controversial. Some studies tend to support a positive relationship between homeownership and life satisfaction in Anglo-American regions (e.g. Rohe and Stegman 1994; Rossi and Weber 1996), and Zumbro (2014) adds evidence for Germany. In contrast, Bucchanieri (2011), for instance, does not find any evidence that homeowners are happier than tenants. This relationship has never been investigated for Switzerland so far, and therefore, our study adds to the literature with evidence for Continental Europe. We also believe that our approach to address the reverse causality problem is a useful contribution to the literature. Besides the academic contributions, our study may provide some inputs to the discussion on housing policy in Switzerland, where several attempts to increase homeownership on a national level have failed over the last 10 years. In fact, the results providing evidence of the positive impact of homeownership on subjective well-being may serve as a guideline for the political decision makers to shape future housing policies to best match the preferences of the Swiss citizens and to increase welfare.

The chapter is structured as follows: Sect. 14.2 contains an overview of the literature. Section 14.3 outlines the empirical model and Sect. 14.4 describes the data. The results can be found in Sect. 14.5, and Sect. 14.6 concludes.

## 14.2 Overview of the Literature

As outlined above, there exists an increasing number of studies that investigate the impacts of homeownership on subjective well-being or causally called happiness. For the USA, for instance, Rohe and Stegman (1994) and Rohe and Basolo (1997) provide empirical evidence for an increasing happiness of tenants becoming homeowners in comparison to tenants remaining in the rental home. In contrast, e.g., Galster (1987) as well as other later studies outline that the relationship between homeownership and subjective well-being is driven, among other aspects, by a series of factors related to personal characteristics and as well as features of the environment which are all hard to measure. Rossi and Weber (1996) show that depending on which data set is used, homeowners are more or less satisfied in comparison to tenants. They find a positive relationship when using the National

Survey of Families and Households, but a negative relationship with the General Social Survey. In the same spirit, Rohe et al. (2002) and Buchianieri (2011), for instance, mention that the relationship between homeownership and life satisfaction might be related to model misspecifications and omitted variables, respectively.

Buchianieri (2011) focuses on the benefits of homeownership for women in the USA. She directly investigates the potential channels where homeownership might promote well-being: self-esteem, health, joy and pain from related domains of life (for example, neighborhood, family, home), time use patterns and moment-to-moment emotions of homeowners in relation to their leisure, family and social lives. After controlling for income, housing quality and health, female homeowners are not better off than renters by a variety of measures, both global and situational. Instead, they derive significantly more pain from their house and home, and this cannot be overcompensated by potential increases in home value. Also, female homeowners in the sample are more likely to be heavier on average, report a lower health status and less joy from health compared to tenants. Hence, differences in financial security, health, self-esteem, perceived control, stress level cannot account for the well-being results. One potential mechanism is time use differences: female homeowners tend to spend less time on enjoyable activities, such as active leisure. Accordingly, owning a house seems to be more time-consuming than renting one.

As to studies on Europe, Zumbro (2014), for instance, investigates the relationship between homeownership and life satisfaction in Germany, using German Socio-Economic Panel Study data over the years from 1992 to 2009. The authors not only allow to control for a wide range of variables, but they also address various measurement problems of previous studies. The author uses ordered logit models and finds support for a positive relationship between homeownership and life satisfaction.

A recent study by Odermatt and Stutzer (2017) investigate whether homeownership delivers the expected increase in happiness, which is a question which has not been investigated so far. Based on German Socio-Economic Panel (SOEP) over the years from 1991 to 2004, they explore whether homebuyers systematically overestimate the happiness associated with living in their privately owned property. To identify potential prediction errors, they compare people's forecasts of their life satisfaction in 5 years' time with their actual realisations. Their results provide evidence that while moving into a purchased dwelling is associated with higher life satisfaction, people systematically overestimate the long-term satisfaction gain.

### 14.3 Empirical Model and Estimation Method

We use a generalized ordered logit model to explain life satisfaction by a set of relevant factors which determine an individual's well-being. Subjective well-being measures are typically ordinal variables and, therefore, not so easy to interpret. However, they are increasingly accepted as a satisfactory empirical approximation to individual utility (Frey and Stutzer 2002).

Our dependent variable  $y_i^*$  is an ordinal variable and refers to satisfaction with life in general. It takes possible values between 0 and 10, with meanings 0 = not satisfied at all, and 10 = fully satisfied.

The independent variables consist of four sets of factors. The main variable of interest is whether the household is an owner or a tenant. We include the dummy variable  $owner_i$ , which takes to value 1 in case household  $i$  is a homeowner and the value 0 else. We then consider three sets of control variables, which are all expected to affect life satisfaction of individuals and which we include sequentially into the model. In model (1), we include a vector of person-specific factors  $P_i$ , which captures person-specific characteristics of the household head such as age, gender, nationality, household income, health status and work situation. In model (2), we additionally include a vector of integration-specific variables  $I_i$ , which reflect the cohabitation and family status of the household head, namely whether he is living with a spouse or partner and whether there are children living in the household. Finally, in model (3) we add the third set of control variables described by the vector  $H_i$  referring to aspects related to the housing situation, such as the housing costs relative to household income and the quality of housing.

The econometric model is given by Eqs. (14.1) to (14.3).

$$\Pr(y_i^*) = \alpha_0 + \alpha_1 Owner_i + \varepsilon_i \quad (14.1)$$

$$\Pr(y_i^*) = \alpha_0 + \alpha_1 Owner_i + \alpha_{2j} P_{ij} + \alpha_{3j} I_{ij} + \varepsilon_i \quad (14.2)$$

$$\Pr(y_i^*) = \alpha_0 + \alpha_1 Owner_i + \alpha_{2j} P_{ij} + \alpha_{3j} I_{ij} + \alpha_{4j} H_{ij} + \varepsilon_i \quad (14.3)$$

A detailed description of the regression variables can be found in Table 14.1.

Even though several papers use OLS models that treat life satisfaction as a continuous variable (e.g. Buchianieri (2011), we follow, e.g., Rossi and Weber (1996) and Zumbro (2014) and estimate our equations by an ordered logit model. In our particular case, we go one step further and use a generalized ordered logit model. As Williams (2016) outlines, when outcome variables are ordinal rather than continuous, the ordered logit model is a popular analytical method. However, generalized ordered logit models are often a superior alternative, and especially in case of existing heterogeneity. When a binary or ordinal regression model incorrectly assumes that error variances are the same for all cases, the standard errors are wrong and (unlike ordinary least squares regression) the parameter estimates are biased (Yatchew and Griliches 1985). We choose the generalized ordered logit model due to existing heterogeneity in the residuals of most of the different categories of our dependent variable. This model explicitly specifies the determinants of heteroscedasticity in an attempt to correct for it. Note that we re-estimated the model also with a regular ordered logit model, and the results remain robust. Also, the Stata software program used for our estimations automatically uses the regular ordered logit model in case there is no existing heteroscedasticity.

**Table 14.1** Definition of variables

Variables	Description
<b>Dependent</b>	
$y_i^*$	Satisfaction with life in general of individual $i$ ; ordinal variable with 10 possible values $\{0, 1, \dots, 10\}$ , where 0 = not satisfied at all, 10 = fully satisfied
<b>Independent</b>	
<i>Homeowner</i>	Dummy: One if household owns the home, zero else
<b>Control variables I: Person-specific factors (<math>P_i</math>)</b>	
<i>Male</i>	Gender. Dummy variable: Is one if household head is male, and zero else
<i>Age</i>	Age of household head in years
<i>Swiss</i>	Nationality. Dummy variable: Is one if household head is Swiss, and zero else
<i>Household income</i>	Yearly net household income
<i>Good health</i>	Health status. Dummy variable: Is one if household head has good self-reported health, and zero else
<i>Unemployed</i>	Employment status. Dummy variable: Is one if household head is unemployed, and zero else
<i>Not in work process</i>	Working status. Dummy variable: Dummy variable: Is one if household head is not in work process, and zero else
<b>Control variables II: Integration-specific factors (<math>I_i</math>)</b>	
<i>Living with partner</i>	Cohabitation status. Dummy variable: Is one if household head is living with partner, zero else
<i>Children in household</i>	Offspring. Dummy variable: Is one if there is at least one child living in household, and zero else.
<b>Control variables III: Living situation (<math>L_i</math>)</b>	
<i>Good housing quality</i>	Quality of current housing. Dummy variable: Is one if quality of housing is reported as good, and zero else.
<i>Relative housing costs</i>	Housing costs relative to the net household income in %

This table contains the definitions of the regression variables. The data source is the Swiss Household Panel provided by FORS.

## 14.4 Data Description

Our analysis is based the Swiss Household Panel (SHP) data. According to its website, the principal aim of the SHP is to observe social change, in particular the dynamics of changing living conditions and representations in the populations of Switzerland (see also <http://forscenter.ch/en/our-surveys/swiss-household-panel/>). The SHP is run by FORS, the Swiss Centre of Expertise in Social Sciences. Data are collected annually using computer-assisted telephone interviewing (CATI). The SHP data are available free of charge for the scientific community.

Our sample includes a total of 91,353 observations over the years 2000 to 2016. For our main regression results, we use the most recent data for the year 2016, which includes a total of 7350 households. In line with other studies on subjective well-

**Table 14.2** Descriptive statistics of the regression variables for the year 2016

Variable	Mean	p25	Median	p75	Std.Dev.	Min	Max
Satisfaction with life in general	8.039	8.000	8.000	9.000	1.347	0.000	10.000
Homeowner	0.560	0.000	1.000	1.000	0.496	0.000	1.000
Male	0.457	0.000	0.000	1.000	0.498	0.000	1.000
Age	55.067	44.000	55.000	67.000	15.496	20.000	96.000
Swiss	0.901	1.000	1.000	1.000	0.298	0.000	1.000
Household income	118,574	72,000	106,000	147,170	74,217	22,700	1,504,000
Good health	0.838	1.000	1.000	1.000	0.369	0.000	1.000
Unemployed	0.010	0.000	0.000	0.000	0.102	0.000	1.000
Not in work process	0.329	0.000	0.000	1.000	0.470	0.000	1.000
Living with partner	0.748	0.000	1.000	1.000	0.434	0.000	1.000
Children in household	0.789	0.000	1.000	1.000	0.408	0.000	1.000
Good housing quality	0.974	1.000	1.000	1.000	0.160	0.000	1.000
Relative housing costs	0.199	0.116	0.172	0.241	0.206	0.000	9.284

This table reports descriptive statistics of the regression variables for the year 2016. The number of observations is 7350. The data source is the Swiss Household Panel provided by FORS.

being (e.g. Bialowoski 2018), we keep for each household the household head, who is defined as the reference person in the data set. Being aware that this is a simplification, the household reference person is an adult who is assumed to be sufficiently knowledgeable of the household characteristics, including household finance and the subjective well-being of the household as a social unit (Lipps 2007). In addition, relevant characteristics of a potential partner are captured by specific control variables. Furthermore, we exclude from our sample households with students and all other persons following a full-time educational training as reference person. The definitions of all the variables used in our regression analysis at the household level can be found in Table 14.1.

Table 14.2 reports descriptive statistics of our regression variables for the newest available year 2016. As to our explained variable satisfaction with life, we observe a mean value of 8.04 and a median of 8, which means that 50% of households in our sample report a life satisfaction level in the top 20% of the possible values. The share of homeownership amounts to 50% in our sample for the most recent year. Note the Federal Office of Statistics reports a homeownership rate of 40% in Switzerland for the year 2016, and therefore, we have a slight overrepresentation of homeowners in our sample. The higher share of homeowners in our sample might have to do with the fact that homeowners are, compared to tenants, more likely to have a telephone line, and the data for this survey were collected by telephone interviews. In addition, non-response rates are generally higher for renter households. Moreover, contact rates tend to be lower for renter households because they tend to be younger, move more often and are less often at home in comparison to owner households. 45.7% of the household heads are men, and on average, the household head is 55 years old, and 90.1% of the household heads are Swiss. According to the Federal Office of



Statistics, the share of foreigners amounted to 25.0% in 2016. Hence, our sample includes another bias towards a higher share of Swiss, which is mainly due to the panel design and language problems, given that interviews are only offered in German, French and Italian. Also, foreigners seem to have higher non-response rates. The yearly net household income amounts to CHF 118,574 on average, and the median income is CHF 106,000. Given the unequal distribution, we include the natural logarithm of income in our regression model. 84% of the respondents report a good health status, and the unemployment rate in our sample amounts to 1%. Furthermore, 32.9% of the household heads are not in the work process. As to the integration-specific variables, almost 75% of the respondents live together with a partner, and 79% of the observations are households with children.<sup>3</sup> Finally, about 97% of the households report to live in a housing with good quality, and the average living costs<sup>4</sup> relative to the household income amount to 20% for the year 2016. Note that we include the share of housing costs relative to the household income in addition to income level because this ratio is a commonly used indicator to assess a household's economic viability of its housing situation, and this holds for different level of incomes.<sup>5</sup> A ratio above the recommended level is expected to cause financial stress, which has a direct effect on the subjective well-being of the household members.

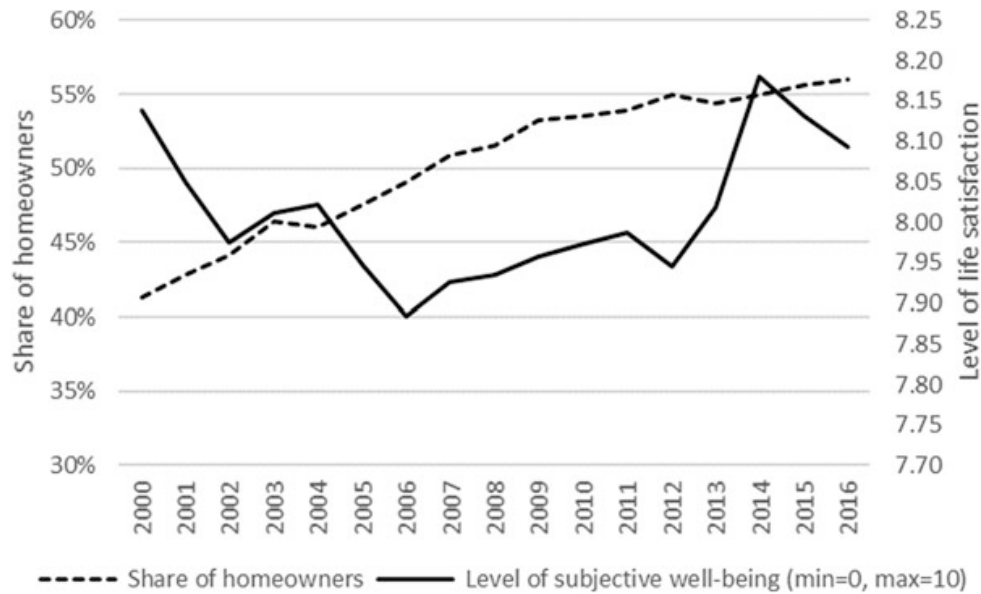
Figure 14.1 shows the development of the homeownership rate and the level of life satisfaction over the time period from 2000 to 2016. We observe an U-shaped curve for the life satisfaction variable, with decreasing values over the years 2000 to 2006, when the lowest value is reached, and a moderately increasing average value from then on, with temporary decreases, and a rather sharp increase from 2012 up to 2014, and a decrease thereafter. Even though a detailed explanation of specific period effects and its causes clearly lie outside the scope of this paper, it is interesting to notice that the average level of life satisfaction of the population changes over time. As to the homeownership share, it has steadily increased over the time period considered, from roughly 41% in 2000 to about 56% in 2016. This development may at least partly reflect the effects of policy measures as well as the favorable economic environment to increase homeownership in Switzerland. The development of these two series considered together reveals the importance of major other factors that affect the life satisfaction of the population, and some of them are reflected in our model.

The graph reports the development of the average life satisfaction level and the homeownership share over the time period from 2000 to 2016. The total number of

<sup>3</sup>There is no limit imposed on the age of children, who may be older than 16 years.

<sup>4</sup>Housing costs include for tenants the rent plus additional charges for water, electricity, heating, etc. paid to the landlord, and for owners mortgage interest rates, amortizations, charges for water, electricity, heating, etc., house-related insurance premia, regular housing related repair- and maintenance costs.

<sup>5</sup>According to common practice, total housing costs should not exceed one third of the household income. <https://www.ktipp.ch/artikel/d/umzugsplaene-wie-hoch-darf-die-miete-sein/>



**Fig. 14.1** Homeownership and life satisfaction over time

observations is 91,353. The data source is the Swiss Household Panel provided by FORS. The definition of the variables are given in Table 14.1.

## 14.5 Analysis and Results

Our analysis proceeds in two steps. First, we estimate our models with data of the year 2016. In a second step, we explicitly address the reverse causality problem, which exists when investigating the relationship between homeownership and subjective life satisfaction, as mentioned by, e.g., Rossi and Weber (1996) but with which former research has not adequately dealt with. We consider only the households with a change in their homeownership status, i.e., homeowners who became tenants and tenants who became homeowners, but with no changes in the other variables except age and income. Within this restricted sample, we divide both groups in two categories, those who became happier and those who became less happy. We then calculate odds ratios for both categories.

### 14.5.1 Estimation Results for the Year 2016

Table 14.3 reports the regression results. We sequentially include the three sets of control variables in order to see the effects of the different determinants. Most importantly, the coefficient of our main explanatory variable Homeowner is positive and statistically significant for all three model specifications. Accordingly, the satisfaction with life in general of household heads is significantly higher for



**Table 14.3** Determinants of satisfaction with life in general for the year 2016

Dependent variable: Satisfaction with life in general	Year = 2016		
	Model I	Model II	Model III
Homeowner	0.23*** (0.044)	0.16*** (0.040)	0.11*** (0.040)
Male	-0.14*** (0.038)	-0.17*** (0.0366)	-0.17*** (0.037)
Age	-0.06*** (0.010)	-0.06*** (0.009)	-0.05*** (0.010)
Age squared	0.00*** (0.000)	0.00*** (0.000)	0.00*** (0.000)
Swiss	0.25*** (0.067)	0.25*** (0.063)	0.24*** (0.063)
Log (Household income)	0.45*** (0.048)	0.30*** (0.044)	0.19*** (0.045)
Good health	1.28*** (0.098)	1.19*** (0.098)	1.15*** (0.118)
Unemployed	-1.29*** (0.201)	-1.26*** (0.214)	-1.13*** (0.205)
Not in work process	0.12** (0.058)	0.05 (0.054)	0.06 (0.053)
Living with partner		0.58*** (0.101)	0.56*** (0.102)
Children in household		-0.23** (0.101)	-0.21** (0.096)
Good housing quality			0.72*** (0.146)
Relative housing costs			-0.75*** (0.205)
LR Chi <sup>2</sup>	1179.04***	1272.95***	1344.37***
Observations	7350	7350	7350

This table reports results for the year 2016 from heteroskedastic ordinal logistic regressions of the effects of person- and integration- and housing-specific characteristics on satisfaction with life in general of the household head. The definition of the variables are given in Table 14.1. Standard errors in brackets. Coefficients that are significantly different from zero at the 1%, 5%, and 10% level are marked with \*\*\*, \*\*, and \* respectively.

households who own their house or apartment they are living in compared to households who are renting their accommodation. This effect becomes weaker with the inclusion of additional control variables, but it remains strong and statistically significant.

Looking at the other determinants of satisfaction with life, namely the person-specific factors, we observe that men in our sample report a lower level of happiness compared to women. Also, satisfaction with life seems to decrease with age, but the effect becomes weaker increasing age. Household heads with the

Swiss nationality are significantly happier than foreigners in our sample. Also, a higher household income contributes positively to the satisfaction with life of the household head, and so does a good health status. Furthermore, unemployed persons are less satisfied with their life in general. Whether the household head is in the work process or not, does only matter for the person-specific factors (Model I).

When considering our second set of control variables, which refer to the cohabitation status of the household head, we observe that persons who are living together with their partner are significantly more satisfied in life compared to singles. The fact of having children in the household reduces the life satisfaction. As other researchers have shown (e.g. Pollmann-Schult 2014), this finding might have to do with the additional work and costs children are causing, which overcompensates the joy of having children. Finally, the inclusion of the third set of factors referring to the living situation point out to the fact that the quality of the accommodation has a positive and significant effect on the individual well-being of the household head. Not surprisingly, higher housing costs relative to the household income have a significant negative effect on the households' individual level of well-being.

#### ***14.5.2 Reverse Causality Problem: Consideration of Households with Change in Homeownership Status***

Our results outlined above provide strong empirical evidence for the claim that homeowners are happier than tenants. Even though we control for a range of other factors that are expected to have an impact on an individual's well-being, we cannot exclude that this effect is driven by some other non-observable factors not included in our model, such as wealth, personal traits or specific characteristics of the accommodation. In our robustness tests, we additionally controlled for some accommodation specific characteristics, but no information is available for the other aspects.

Another potential problem, which we are able to resolve, refers to the commonly underlying assumption that homeownership causes happiness. However, one could argue that homeowners are per se happier than tenants, because they have, for instance, a more positive attitude towards life in general, and due to this state of mind they are more likely to buy a house or an apartment. This positive attitude would also help to explain why they have in general a higher income, or are more educated, and are therefore happier than tenants. As a consequence, the causality would run in the other direction, i.e., certain people are homeowners because they are characterized by certain specific characteristics including a higher life satisfaction, which makes it more likely that they become a home owner. This problem was mentioned already in 1996 by Rossi and Weber. As far as we are informed, no study on the effect of homeownership on subjective well-being that was subsequently published has addressed this issue.

**Table 14.4** Overview of the numbers of households in the sample from 2000 to 2016

Variable	Total	Owner	Tenant
Number of households	91,293	46,670	44,623
<i>Out of them</i>			
Number of household, who change the owner status	2098	778	1320
<i>Out of them</i>			
Number of household with no change in control variable	549	124	425
<i>Out of them</i>			
Number of household with change of satisfaction	289	71	218

We try to control for this potential reverse causality effect by analyzing only households with a change in ownership over the time period considered and no changes in the other control variables except changes in age (and age squared) and changes in income within a given narrow range. For the control variable “income” we specify a tolerance range of plus/minus 10% around last year’s income, and we treat income as constant within this range. Accordingly, we only keep the household heads in our sample who either moved from being a tenant to a homeowner, or from being a homeowner to a tenant over the time period from 2000 to 2014 and for whom the following control variables (as specified in model II) do not change: gender, nationality, household income (within the tolerance range), health status, occupation, partner, child in household.

Table 14.4 gives an overview of the sample. In total there are 91,293 heads of households where 46,670 are homeowners and 44,623 are tenants. 2098 households change the owner status: 778 homeowners become tenants and 1320 tenants become homeowners over the time period considered. Keeping only those observations with no changes in the control variables in our sample, we are left with 124 homeowners becoming tenants and 425 tenants becoming homeowners. Out of them, 71 of the homeowners, who become tenants and 218 tenants, who become homeowner also have a change in their satisfaction of life. For these 289 observations the descriptive statistics of the control variables are given in Table 14.5. Compared to the descriptive statistics of the total sample for the year 2016 in Table 14.2, the subsample is not very different according to the control variables.

To address the question whether our assumption that homeownership causes happiness is correct and whether the potential reverse causality is true, we divide each of the two groups, i.e. homeowners who become tenants and tenants become homeowners, in those who become happier and those, who become less happy. We then calculate the odds ratio to quantitatively describe the association between the happiness of the two groups according to the following formula for the odds ratio, i.e.,

$$\text{odds ratio} = \frac{a/c}{b/d} = \frac{a \times d}{b \times c} \quad (14.4)$$

**Table 14.5** Descriptive statistics of control variables for households with change in ownership status and satisfaction but no change in the control variable

Variable	Mean	p25	Median	p75	Std.Dev.	Min	Max
Satisfaction with life in general	8.184	8	8	9	1.226	1	10
Homeowner	0.226	0	0	0	0.419	0	1
Male	0.469	0	0	1	0.500	0	1
Age	47.926	35	42	60	16.357	23	95
Swiss	0.902	1	1	1	0.298	0	1
Household income	82'800	110'200	140'710	114'468	52'558	21'600	416'930
Good health	0.922	1	1	1	0.269	0	1
Unemployed	0.002	0	0	0	0.043	0	1
Not in work process	0.271	0	0	1	0.445	0	1
Living with partner	0.823	1	1	1	0.382	0	1
Children in household	0.852	1	1	1	0.355	0	1
Good housing quality	0.998	1	1	1	0.046	0	1

This table reports descriptive statistics of the regression variables for the subsample with households with a change in ownership over the years 2000 to 2016. The data source is the Swiss Household Panel provided by FORS. The definition of the variables are given in Table 14.1.

**Table 14.6** Households with change in ownership for the years 2000 to 2016: Odds Ratio

	Tenants becoming homeowners	Homeowners becoming tenants	Observations
More happy	121	34	155
Less happy	97	37	134
Observations	218	71	<b>289</b>
<b>Odds ratio</b>			<b>1.357</b>

whereas

*a*: tenants becoming homeowners and getting happier

*b*: homeowners becoming tenants and getting happier

*c*: tenants becoming homeowners and getting less happy

*d*: homeowners becoming tenants and getting less happy

An odds ratio of 1 indicates that there is no difference between the happiness of the two groups. An odds ratio greater than 1 indicates that the chance to be happy in the group of tenants who become homeowners is more likely to occur than in the group of homeowners who become tenants. Correspondingly, an odds ratio less than 1 indicates that the chance that tenants who become homeowners are happy is less likely to occur than of homeowners who become tenants. An odds ratio greater than 1 would therefore support our claim of assumption that homeownership causes happiness. If the reverse causality would be true, we expect an odds ratio of 1.

The results can be found in Table 14.6. Overall, from the 218 households in our sample that moved from being a tenant into homeownership, 121 become happier and 97 become less happy, while from the 56 households sold their home and became a tenant, become 34 happier and 37 less happy. The generated odds ratio

is roughly 1.4. The chance to be happier is in the group of tenants who become homeowners 1.5 times higher than in the group with homeowners who became tenants. This supports our assumption that homeownership makes people happier. If homeowners were per se happier than tenants, we would expect an odds ratio of 1 and therefore no difference between the two groups.

## 14.6 Conclusions

The goal of this chapter is to analyze the impact of homeownership in Switzerland on subjective life satisfaction. Based on a data set from the Swiss Household Panel for the years 2000 to 2016, we use a generalized ordered logit model to analyze whether homeownership has a significant impact on satisfaction with life. This estimation method leads to unbiased and consistent estimates due to existing heterogeneity in the residuals. Because subjective well-being is influenced by a large number of factors, our empirical model includes person-, household-, accommodation- and location-specific factors as well as characteristics referring to the cohabitation status.

Our main results show that homeownership has a statistical positive effect on subjective life satisfaction. To analyze the robustness of this result, we estimate three different models with different control variables and over different years. These robustness tests show that the results are not sensitive to these modifications and all support the effect of homeownership on satisfaction. However, it can be argued that people, who are homeowners, may have, in general, a positive attitude towards life and are, therefore, in general happier. In order to control for this potential reverse causality effect, we analyze only those households that had a change in the homeownership status, but no changes with respect to other characteristics except age and income. In concrete terms, we build two groups: tenants who become homeowners and homeowners who become tenants. To quantitatively describe the impact of homeownership on the satisfaction of live, we calculate the odds ratio of the two groups. An odds ratio of 1.5 supports the hypothesis that homeownership has an impact on satisfaction and not vice versa. Therefore, our results do not suffer from a reversed causality problem, which we consider a serious issue. However, the considered effects of a change in homeownership on the subjective well-being are measured in the short term only, which may wade out over time.

Considering the specific case of Switzerland adds to our knowledge on the topic in several ways. As mentioned earlier, Switzerland has, in comparison to most Western countries, a significantly lower homeownership rate, and this situation is not expected to change over the next decades. Our results show that even in such an environment where the dream of becoming a homeowner lies out of reach for the majority of the households, homeownership is expected to increase the subjective well-being on average. Another interesting fact in Switzerland is that the housing quality does not differ so much between owned and rented homes due to specific characteristics of the Swiss housing market. Given that the quality of housing has

a positive impact on individuals' well-being, one would expect that the impact of homeownership on well-being would not matter that much in Switzerland from this point of view. Our results, however, point out in the opposite direction. We interpret these findings as further evidence for an inherent wish of households to own their living space, independent of specific circumstances of the real estate markets.

Even though our analyses provide new insights regarding the impacts of homeownership and specific characteristics of the housing situation on the life satisfaction of households, additional work is necessary to better understand the underlying mechanisms. Similar to Bucchianieri (2011), it might be insightful to consider different measures of well-being, which take into account the different dimensions of a person's happiness, instead of focusing on a single life satisfaction indicator. Also, taking into account residential mobility decisions may add further insights. For instance, it will be necessary to further investigate the relative importance of factors that have led to an increase in homeownership rates in certain areas. Also, it might be useful to include certain macroeconomic characteristics and their impact on housing tenure decisions. Also, we consider short-term effects only, but evidence on long-term effects would be even more interesting and relevant to investigate. Finally, additional region-specific analyses might be helpful to derive some useful policy advice for an effective housing policy in Switzerland. Some of these issues will be addressed in future research.

## References

- Belsky, E. S. (2013). *The dream lives on: The future of homeownership in America* (Joint Center for Housing Studies Working Paper W13-1). Boston: Harvard University/University of Massachusetts.
- BFS (Bundesamt für Statistik). (2016). *Wohneigentumsquote* <http://www.bwo.admin.ch/dokumentation/00101/00105/index.html?lang=de>
- Białowolski, P. (2018). Hard times! How do households cope with financial difficulties? Evidence from the Swiss household panel. *Social Indicators Research*, 139(1), 147–161. <https://link.springer.com/journal/11205/139/1/page/1>.
- Blanchflower, D. G., & Oswald, A. J. (2013). *Does high home-ownership impair the labor market?* NBER working paper 19079. Cambridge (MA).
- Boehm, T. P., & Schlottmann, A. M. (1999). Does home ownership by parents have an economic impact on their children? *Journal of Housing Economics*, 8(3), 217–232.
- Boehm, T. P., & Schlottmann, A. M. (2008). Wealth accumulation and homeownership: Evidence for low-income households. *Cityscape*, 10(2., Homeownership Experience of Low-Income and Minority Households), 225–256.
- Boelhouwer, P. J. (2002). Capital accumulation via homeownership: The case of the Netherlands. *European Journal of Housing Policy*, 2(2), 167–181.
- Bucchianieri, G. W. (2011). *The American dream or the American delusion? The private and external benefits of homeownership for women (April 1, 2001)*. Available at SSRN: <http://ssrn.com/abstract=1877163> or <https://doi.org/10.2139/ssrn.1877163>.
- Carliner, G. (1973). *Determinants of home ownership*. Institute for Research on poverty. Madison, WI: University of Wisconsin.
- Dietz, R. D., & Haurin, D. R. (2003). The social and private micro-level consequences of homeownership. *Journal of Urban Economics*, 54(3), 401–450.



- Dipasquale, D., & Glaeser, E. (1999). Incentives and social capital: Are homeowners better citizens? *Journal of Urban Economics*, 45(2), 354–384.
- Elsinga, M. (1995). *Een eigen huis voor een smalle beurs: het ideaal voor bewoner enoverheid? [Homeownership on a low budget]*. Delft: Delft University of Technology.
- Federal Office of Housing. (2005). *Wie viele Haushalte haben in der Schweiz Wohneigentum und warum sin des nicht mehr?* Briefing, Bundesamt für Wohnungswesen.
- Frey, B. S., & Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic Literature, American Economic Association*, 40(2), 402–435.
- Galster, G. (1987). *Homeowners and neighborhood reinvestment*. Durham, NC: Duke University Press.
- Green, R. K., & White, M. J. (1997). Measuring the Bene\_ts of Homeowning: E\_ects on children. *Journal of Urban Economics*, 41(3), 441–461.
- Haurin, D. R., Parcel, T. L., & Haurin, R. J. (2002a). Impact of homeownership on child outcomes. In N. P. Retsinas & E. S. Belsky (Eds.), *Low income homeownership: Examining the unexamined goal* (pp. 427–446). Washington, DC: Brookings Institution Press.
- Haurin, D. R., Parcel, T. L., & Haurin, R. J. (2002b). Does home ownership affect child outcomes? *Real Estate Economics*, 30(4), 635–666.
- Hoff, K., & Sen, A. (2005). Homeownership, community interactions, and segregation. *American Economic Review*, 95(4), 1167–1189.
- Hu, F. (2013). Homeownership and subjective wellbeing in urban China: Does owning a house make you happier? *Social Indicators Research*, 110(3), 951–971.
- Lipps, O. (2007). Attrition in the Swiss household panel. *Methoden, Daten, Analysen*, 1(1), 45–68 <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-126444>.
- Manturuk, K., Lindblad, M., & Quercia, R. G. (2009). Homeownership and local voting in disadvantaged urban neighborhoods. *Cityscape: A Journal of Policy Development and Research*, 11(3), 213–230.
- Odermatt, R., & Stutzer, A. (2017, November). *Home sweet home: (Mis-)beliefs about the extent to which home ownership makes happy*, Working Paper.
- Pittini, A., Koessler, G., Dijol, J., Lakatos, E., & Ghekiere, L. (2017). *The state of housing in the EU 2017*. Housing Europe.
- Pollack, C. E., Griffin, B. A., & Lynch, J. (2010). Housing affordability and health among homeowners and renters. *American Journal of Preventive Medicine*, 39(6), 515–521.
- Pollmann-Schult, M. (2014). Parenthood and life satisfaction: Why don't children make people happy? *Journal of Marriage and Family*, 76(2), 319–336.
- Rohe, W. M., & Basolo, V. (1997). Long-term effects of homeownership on the self-perceptions and social interaction of low-income persons. *Environment and Behavior*, 29(6), 793–819.
- Rohe, W. M., & Stegman, M. A. (1994). The impacts of homeownership on the self-esteem, perceived control and life satisfaction of low-income people. *Journal of the American Planning Association*, 60(1), 173–184.
- Rohe, W., Van Zandt, S., & McCarthy, G. (2002). The social benefits and costs of homeownership. In N. P. Retsinas & E. S. Belsky (Eds.), *Low-income homeownership: Examining the unexamined goal* (pp. 381–406). Washington, DC: Brookings Institution Press.
- Rossi, P. H., & Weber, E. (1996). The social benefits of homeownership: Empirical evidence from National Surveys. *Housing Policy Debate*, 7(1), 1–35.
- Sanders, P. (1990). *A nation of home owners*. London: Unwin Hyman.
- Stillman, S., & Liang, Y. (2010). *Does homeownership improve personal wellbeing?* Wellington: Mimeo: Motu Economic and Public Policy Research.
- Tumen, S., & Zeydanli, T. (2014). Home ownership and job satisfaction. *Social Indicators Research*, 117(1), 165–177.
- Williams, R. (2016). Understanding and interpreting generalized ordered logit models. *The Journal of Mathematical Sociology*, 40(1), 7–20.
- Yatchew, A., & Griliches, Z. (1985). Specification error in probit models. *Review of Economics and Statistics*, 67, 134–139.
- Zumbro, T. (2014). The relationship between homeownership and life satisfaction in Germany. *Housing Studies*, 29(3), 319–338.