

SOCIAL-CULTURAL CAPITAL AND DOMAIN SATISFACTIONS

María Victoria Navarro Hernández Dr

Social-cultural capital and domain satisfaction

Navarro, M.^{1*}

Abstract

We analyze the relevance of social resources in different domain satisfactions (finances, job, health, housing, and leisure) as well as the possible sources of endogeneity in the relationship between the two concepts, the differential effect of factors across domains, and the correlation between the domains. The findings could be important to improve citizens' quality of life. First, we find that social contacts are less relevant in domain satisfactions after controlling for endogeneity problems, while trust and worries remain relevant. Thus, it is convenient to control for endogeneity problems when analyzing satisfaction. Secondly, there are small differences across the effects of most factors on the different domain satisfactions, which are correlated.

Keywords: domain satisfactions; social-cultural capital; endogeneity problems; public policies

JEL-Codes: C23, D60, I31, I38

¹ <https://orcid.org/0000-0002-0652-3078>. Universidad de Granada. Dpto. Economía Aplicada, C/Campus Cartuja s/n E-18011 Granada, Spain. E-mail: marianh@ugr.es

* The author gratefully acknowledges the financial support provided by the FPU2014/1123 fellowship from the Spanish Ministry of Education and the Fortalecimiento Program of the University of Granada (SEJ-393). I would like to thank Ana I. Moro-Egido and Ángeles Sánchez for their very useful comments and recommendations. I also thank the reviewers and editor of this journal who gave me helpful and relevant suggestions and recommendations to improve the original work.

1. Introduction

It is widely stated that subjective well-being, that is, individuals' satisfaction with life as a whole, can be viewed as an aggregate of satisfaction with different aspects of their lives, what is known as *domain satisfactions*. This includes satisfaction with one's financial situation, job, health status, housing, leisure, environment, marriage, friendships, safety, and social relationships, among others (Cummins, 2003; Rojas, 2006; Easterlin and Sawangfa, 2007; Wills-Herrera et al., 2011; Gandelman et al., 2012; Diener et al., 2013; Frey and Stutzer, 2017; Van der Zwan et al., 2018; D'Agostino et al., 2019). It has also been demonstrated that people are able to differentiate between these domains and evaluate them separately (Van Praag and Ferrer-i-Carbonell, 2008).

Given the relationship between domain satisfactions and subjective well-being, identifying the determinants of different domains could also be useful for policymaking for several reasons. First, knowing what produces satisfaction in different areas of individuals' lives provides new tools to empirically analyze individual utility and social welfare through information on non-material aspects of people's well-being. Thus, this subjective approach offers a complementary perspective to traditional measures of aggregate welfare such as GDP (Vera-Toscano and Ateca-Amestoy, 2008; Stutzer and Frey, 2010; Diener et al., 2013). Second, given that the subjective approach allows measuring the effect of economic policy on human behavior and well-being, it is also relevant for the design and assessment of more precise public policies by simulating new approaches and new theorizing about economic affairs (Kahneman and Sugden, 2005; Stutzer and Frey, 2010; Stiglitz, et al., 2011; Wills-Herrera et al., 2011; Frey and Stutzer, 2017; Odermatt and Stutzer, 2017). For instance, the analysis of other life domains, such

as work and health, would be relevant for public policies related to the labor market, health care, and medical expenditure, while research on housing satisfaction is relevant for the analysis of quality of life indicators (Healy, 2003; Gandelman et al., 2012). Finally, previous evidence has shown that different subjective indicators should be used as a predictor of economic outcomes, since achieving happier societies is not only desirable per se at the individual level (e.g., better productivity and health), but also at the macroeconomic level by promoting greater economic growth and social welfare (Wright and Cropanzano, 2000; Oswald et al., 2015; Piekalkiewicz, 2017; DiMaria et al., 2019).

The most extended related literature has shown that relationships with family and friends and attending social and cultural events (social capital) are among the main factors that improve subjective well-being, that is, more social contacts improve subjective well-being (Helliwell and Putnam, 2004; Sabatini, 2009; Bartolini et al., 2013; Bárcena-Martin et al., 2017; Bartolini et al., 2019; Calcagnini and Perugini, 2019; Navarro et al., 2020). Moreover, as pointed out by Bárcena-Martín et al. (2017), social capital exerts a moderating effect on subjective well-being because it can offset the negative effects of social comparisons between close people. Nonetheless, other definitions of social capital that include other kinds of associations could also present negative aspects such as organized crime, means of control, and power. In this line, Satyanath et al. (2017) defined social capital as dense networks of clubs and associations and concluded that the effects of social capital could depend on the political context. Specifically, they found that different types of associations considered as bonding and bridging associations were positively associated with Nazi Party entry. The opposite effects of social capital on subjective well-being could be explained by the different conceptual approaches to measure this concept. For example, the literature distinguishes between the Putnamian

and Olsonian forms of social capital (Olson et al., 1982 and Putnam et al., 1993). As Sarracino (2012) and Jiang and Wang (2022), among others, have explained, Putnam considers associations as a source of general trust and of social ties leading to governmental and economic efficiency, while for Olson social capital is related to the tendency of associations to act as lobbies to get policies that protect only the interests of exclusive groups at the expense of society as a whole.² Additionally, there is no consensus about how to define social or cultural capital. Although both types of capital refer to social resources, different definitions have been put forward, which prevents establishing a clear dividing line between the two concepts.

The research on social resources as a determinant of domain satisfactions is scarcer. Thus, as a novelty, we attempt to determine the relevance of social resources in different types of domain satisfactions, namely finance, work, health, housing, and leisure. Moreover, we hypothesize that there could be sources of endogeneity in the relationship between social resources and the different domains. Hence, another important novelty of this paper is that it relies on a control function method to account for sources of endogeneity surrounding the association between social resources and domain satisfactions. For instance, people who are more open-minded engage in more relationships with others. Thus, individual measures of social resources are often correlated with other personal characteristics, such as personality traits, thus making assessments of causality problematic. This method allows us to address this problem by recognizing that domain satisfactions and social resources may be simultaneously influenced by unobserved characteristics. Additionally, we also hypothesize that the

² In this work, we focus on the Putnamian form of social capital.

effect of several factors on a domain could be influenced by the effect of these factors on other domains. Hence, another notable feature of this paper is that we attempt to capture the existence of a possible correlation among domains using recursive mixed-process models. To test the hypotheses, we use the German Socio-Economic Panel (SOEP) for the period 1998–2014. Additionally, to better compare the results for the different domains analyzed in this work, the selected sample only considers working people.

In short, bearing the above in mind, we attempt to answer the following questions: (1) Are social resources relevant in different domain satisfactions? (2) Are there endogeneity problems in the relationship between social resources and domain satisfactions which lead to different results from exogenous models? (3) Is there a correlation between the different domains such that the effect of some factors on a specific domain could be influenced by the effect of these factors on other domains?

Firstly, our findings show the presence of endogeneity. Hence, it is convenient to control for this endogeneity when analyzing satisfaction, since the traditional relevance of social contacts in improving satisfaction disappears after controlling for this problem, while the relevance of having worries and trust remains. Secondly, most factors have similar effects across the different domain satisfactions, which are correlated through the unobserved factors that affect them.

The remainder of this paper is structured as follows. The literature on domain satisfactions and their determinants is reviewed in section 2. The empirical strategy is described in section 3. The dataset and variables are presented in section 4. The main

results of our analysis are provided and discussed in section 5. Finally, section 6 concludes the analysis.

2. Literature review

2.1. Domain satisfactions

Domain satisfactions are defined as individual satisfaction with different aspects of life such as one's financial situation, job, health, housing, leisure, environment, marriage, friendships, safety, education, standard of living, sex life, or social relationships (Cummins, 2003; Van Praag et al., 2003; Rojas, 2006; Easterlin and Sawangfa, 2007; Wills-Herrera et al., 2011; Gandelman et al., 2012; Diener et al., 2013; Seara et al., 2017; Gorry et al., 2018).³ The question included in the German SOEP to measure the different aspects of life is: "How satisfied are you today with the following areas of your life? How satisfied are you with your health, your sleep, your job (if employed), your work in the home (if you are a homemaker), your household income, your personal income, your dwelling, your leisure time, the childcare available (if you have small children), your family life, your education and vocational training?"

As pointed out by Easterlin and Sawangfa (2007), there is no consensus as to which domains are conceptually preferable. Nonetheless, related studies have shown that the most standard and relevant determinants of subjective well-being are financial status, family circumstances, work, and health (Van Praag et al., 2003; Vera-Toscano et al., 2006; Van Praag and Ferrer-i-Carbonell, 2008; Vera-Toscano and Ateca-Amestoy, 2008; Pinqart and Schindler, 2009; Plagnol, 2011; Gandelman et al., 2012; Wolbring, 2017;

³ In this paper, the terms *domains of life satisfaction* and *domain satisfactions* and the terms *subjective well-being*, *general satisfaction*, and *life satisfaction* are considered synonymous and used interchangeably.

Lepp, 2018). Thus, as domains of life satisfaction we focus on financial situation (satisfaction with household income), job (satisfaction with work), health status (satisfaction with health), housing (satisfaction with dwelling), and leisure time (satisfaction with leisure time). Each of the domains are described briefly below.

Financial satisfaction

Financial satisfaction refers to the current level of satisfaction with various aspects of an individual's or household's financial situation, such as financial stress, investment capability, and being able to pay bills or unexpected expenses. Several studies have examined financial satisfaction from different perspectives. Joo and Grable (2004) and Ali et al. (2019) maintained that financial satisfaction could change people's behavior regarding consumer choices, job productivity, and even social relationships, which could in turn lead to changes in satisfaction with other aspects of life. Diener and Biswas-Diener (2002) and Kiyamaza and Öztürkkal (2019) argued that financial satisfaction can be regarded as intermediary between income and subjective well-being. Additionally, financial satisfaction is not only relevant for people as it enables them to achieve their economic or material goals but also allows them to have a sense of satisfaction with their lives (Sahi, 2013).

Job satisfaction

Job satisfaction is related to the degree to which people are satisfied with their main activity. This domain takes into account different aspects of the workplace and the social context in which the worker is embedded such as wages, working hours, and relationships with co-workers and employers. Job satisfaction is also known to be a strong predictor of labor market behavior. Related studies have shown that higher levels

of job satisfaction are positively associated with worker performance and productivity. Since satisfied workers are more pragmatic, cooperative, and friendly, firms also benefit from higher customer satisfaction and market value (Oswald et al., 2015; DiMaria et al., 2019). Moreover, job satisfaction is negatively associated with absenteeism, turnover, theft, stress, anxiety, and depression, and can act as a predictor of future job abandonment (Mangione and Quinn, 1975; Clark, 2001; Judge et al., 2001; Edmans, 2012; Cullinan et al., 2019). Additionally, job satisfaction is an important determinant of labor market mobility and affects individuals' health, productivity, longevity, and social illnesses (Freeman, 1977; Oswald et al., 2015; Seara et al., 2017; DiMaria et al., 2019).

Health satisfaction

Health satisfaction concerns current health status, that is, how satisfied people are with their health at the time of the interview and how they feel in terms of their own health. Health satisfaction has been studied by many health economists to evaluate the possible effects of illnesses and medical treatments (see, for instance, Graham et al., 2011; Gorry et al., 2018), as well as in experiments to test, for example, whether sporty people are more satisfied with their health (see Wicker et al., 2015). Glanville and Story (2018) also analyzed the role of trust in self-reported health. Hence, the study of health satisfaction is relevant for the design and assessment of public policies related to health care and medical spending since such decisions are frequently assessed in terms of costs and benefits. Moreover, it can contribute to achieving happier societies, since having better health than others provides a positive conception of health and life satisfaction (Easterlin, 2003; Graham et al. 2011; Gorry et al., 2018).

Housing satisfaction

Housing satisfaction refers to how satisfied individuals are with their home, taking into account the characteristics and costs involved. Several studies have analyzed housing satisfaction in diverse ways. Varady and Carozza (2000) measured trends in public housing customer satisfaction and considered different determinants of satisfaction by combining qualitative and quantitative information. Healy (2003) studied housing conditions, energy-efficiency levels, affordability, and satisfaction with housing. Diaz-Serrano (2006) concluded that housing satisfaction is a meaningful factor to explain people's objective economic behaviors, since it is possible to anticipate movements in the households' demand for housing. Additionally, as pointed out in much of the research on quality of life indicators, the study of housing satisfaction is relevant because it is an important component of quality of life (Vera-Toscano and Ateca-Amestoy, 2008; Gandelman et al., 2012; Wolbring, 2017; Zebardast and Nooraie, 2018).

Leisure satisfaction

Leisure satisfaction is defined as the degree of satisfaction or pleasure with general leisure experiences and situations, such as free time activities and hobbies (Beard and Ragheb, 1980; Van Praag and Ferrer-i-Carbonell, 2008). As Pinquart and Shindler (2009) pointed out, free time increases after retirement and leisure satisfaction would be especially important for satisfaction among older adults. Although a positive relationship between leisure and life satisfaction has been found, it appears to be weaker than other domains (Van Praag et al., 2003; Gandelman et al., 2012; Binder and Coad, 2016; Lepp, 2018; Van der Zwan et al., 2018).

2.2. Determinants of domain satisfactions

Considering that subjective well-being is a function of self-reported satisfaction with different domains (Van Praag et al., 2003; Rojas, 2006; Van der Zwan et al., 2018; D'Agostino et al., 2019), we first review the factors used in subjective well-being studies that are common to all domains. In line with the existing literature, we classify these factors into three groups: (1) economic resources; (2) social-cultural capital; and (3) socio-demographic characteristics. Secondly, we examine the specific variables used in related studies for each domain.

2.2.1. Common variables

Economic resources

It is widely known that comparisons in terms of income with oneself in the past or with others (internal and social comparison, respectively) matter more than the own situation (absolute income) for subjective well-being. However, we are not aware of previous studies that consider these comparisons to analyze domain satisfactions. Thus, given the importance of economic resources for general satisfaction, we include absolute income (own income in the current period) and comparisons in terms of income, which include both internal and social comparisons (Ferrer-i-Carbonell, 2005; D'Ambrosio and Frick, 2012; Bárcena-Martín et al., 2017; Moro-Egido et al., 2021).

Although previous studies have included absolute income (household or working income) as a determinant of domain satisfactions, the association depends on the domain analyzed. For instance, having more income has been found to affect financial, job, or housing satisfaction but not health satisfaction (Van Praag et al., 2003).

Regarding internal comparisons, it has been demonstrated for subjective well-being that although past incomes could also affect current satisfaction, the effects are transitory because people either adapt to new situations or new ambitions emerge (Frey and Stutzer, 2002). Thus, people would feel the same initial level of satisfaction since they tend to adapt to the new circumstances, such as having more income (Clark et al., 2008; Conceicao and Bandura, 2008; Di Tella et al., 2010; Bartolini et al., 2013). This is known as *hedonic adaptation*.

Social comparisons refer to comparisons of own income to that of others belonging to a similar demographic group. Therefore, people's satisfaction is affected by the comparison with the economic situation of those around them, normally their reference group. As in most previous studies, to analyze this we work under the assumption of asymmetric comparisons, which emerge when people care differently about comparisons with people who are richer or poorer than they are (upward and downward comparisons). When comparing the income levels of others to levels of reported well-being, both a positive and negative relationship can be found, regardless of whether the comparisons are upward or downward. D'Ambrosio and Frick (2012) and Bárcena-Martín et al. (2017) stressed that an upward negative effect could be interpreted as *envy*, so good news for some people is bad news for others. In contrast, a possible upward positive effect could be interpreted as a *cue*, that is, other people's attainments contain information on how to improve one's own status. As regards downward comparisons, a negative relationship is interpreted as a *compassion* effect toward other people with lower incomes, whereas there is a *pride* effect when the effect is positive. The most common negative and positive effects are *envy* and *pride*, respectively.

Social-cultural capital

Given the relevance of social resources—including social and cultural capital—as determinants of subjective well-being (see, e.g., Helliwell and Putnam, 2004; Sabatini, 2009; Bárcena-Martín et al., 2017), we analyze the effects of both types of capital on the different domains. To the best of our knowledge, this is the first time this has been studied, as well as the true importance of social and cultural capital when controlling for endogeneity problems.

Social capital is understood as the capacity of people to build social networks and develop interpersonal relationships, which implies cross-cutting ties such as membership in associations and trade unions or attending social and cultural events (Woolcock and Narayan, 2003; Helliwell and Putnam, 2004; Muffels and Headey, 2013). Cultural capital, on the other hand, is defined as the values and goals in an individual's life, that is, cultural capital refers to the operational skills, life values, and behavioral norms that one accrues through education and lifelong socialization (Lareau and Weininger, 2003; Muffels and Headey, 2013; Bárcena-Martín et al., 2017). In this vein, as Schwartz (2017) and Schwartz and Sortheix (2018) pointed out, cultural factors are related with personal values and desirable goals in life, where personal values are understood as what people consider important and worth pursuing in life.

Following Putnamian form of social capital, previous evidence has shown that people with active social relationships experience higher levels of satisfaction because these relationships could serve as a cure for the possible negative effects of social comparisons (Helliwell and Putnam, 2004; Bartolini et al., 2013; Bárcena-Martín et al., 2017; Bartolini et al., 2019). In previous studies, people's trust and worries have also been included as

part of social resources (social and cultural capital) and are expected to have a positive and negative association with satisfaction, respectively (see, e.g., Bárcena-Martín et al., 2017; Moro-Egido et al., 2021).

Socio-demographic characteristics

Previous studies have included a set of socio-demographic characteristics as control variables. Evidence has shown that men, people who live in the Eastern German Länder, those without a partner, or non-homeowners are generally less satisfied (see, e.g., Van Praag et al., 2003; Ferrer-i-Carbonell, 2005; Bartolini et al., 2013; Moro-Egido et al., 2021). The most extended result regarding age is that it has a quadratic U-shaped or inverted U-shaped relationship with satisfaction (Van Praag and Ferrer-i-Carbonell, 2008; Alessie et al., 2006; Bartolini et al., 2013). The effect of years of education is less clear. While some studies have shown a negative effect of education on satisfaction (Bárcena-Martín et al., 2017), others have found that more educated people are more satisfied (D'Ambrosio and Frick, 2007). The presence of children and adults in the household is also inconclusive and could have positive effects (Bartolini et al., 2013; Bárcena-Martín et al., 2017), negative effects (Ferrer-i-Carbonell and Frijters, 2004), or null effects (D'Ambrosio and Frick, 2012; Moro-Egido et al., 2021). Nonetheless, these effects may differ by domains (for more details, see Van Praag et al., 2003).

2.2.2. Specific variables

The specific variables most widely used in the literature for each domain are described in what follows. For financial satisfaction, the most common variables are savings and the presence of a second earner in the household (Van Praag et al., 2003). As Alessie et al. (2006) explained, when two single individuals move into cohabitation, their financial

resources change since their potential joint consumption is higher than the sum of what they could individually consume living separately. Joo and Grable (2004) also considered factors of stress and financial strain and Ali et al. (2019) examined financial knowledge and financial socialization, which exerted a positive effect on financial satisfaction. Variables such as working income, working hours, extra money, extra hours, or the rate between the household income and the working income have been used to study job satisfaction, where a larger working income, extra money, and proportion between household income and working income lead to higher job satisfaction (Van Praag et al., 2003). The effect of working hours is less clear. Van Praag and Ferrer-i-Carbonell (2008) found that working hours do not affect job satisfaction, whereas Gash et al. (2010) argued that a reduction in working hours could have either a positive effect, since it helps to achieve a work-life balance, or a negative effect through the association with lower working income. For health satisfaction, some factors that have been considered include doing sports and the frequency of doctor visits, with a positive effect found for the former but a negative effect for the latter (see, for instance, O'Donnell, 2002; Wicker et al., 2015). To analyze housing satisfaction, monthly maintenance costs and reforms have also been used, with the evidence showing positive effects for both (see, e.g., Gandelman et al., 2012). Lastly, for leisure satisfaction, leisure time has been considered a specific determinant and found to have a positive effect (Van Praag et al., 2003; Van der Zwan et al., 2018).

2.2.3. Psychological capital

To measure psychological capital, the most widely used variables in the life satisfaction literature are personality traits. These include the Big Five Indicators (BFI) of

neuroticism, extraversion, openness, agreeableness, and conscientiousness, as well as an index which considers the degree of control over one's life (the LOC index) and a reciprocity measure (positive and negative). Budría and Ferrer-i-Carbonell (2012) stressed that the BFI and LOC measures are two alternatives to evaluate the characteristics of an individual's personality. Specifically, the BFI is related to different dimensions of humans' personality, whereas LOC captures the degree to which people believe they can control those events that affect their life. Reciprocity is a measure of an individual's negative and positive responses to the actions of other individuals. In general, the existing results show that people who are more extraverted, open, agreeable, and conscientious and less neurotic are happier. Moreover, a negative relationship between satisfaction with life as whole and both LOC and negative reciprocity is expected (see, e.g., Budría and Ferrer-i-Carbonell, 2012; Bárcena-Martín et al., 2017).

Personality traits are also relevant because they provide a natural starting point to understand and analyze social resources. They may also influence financial decision-making, as well as aspects related with work and life (Anand and Poggi, 2018). In this vein, variables related to psychological capital could be used to control a possible endogeneity problem in the relationship between social resources and satisfaction. For instance, people who are more open are more likely to have more social contacts, which could influence how they evaluate the various domains.

3. Empirical approach

Following the previous literature, we initially propose a standard empirical model for all the domains, which can be specified as follows:

$$DS_{it} = \alpha_0 + \alpha_1 y_{it} + \alpha_2 y_{i,t-k} + \alpha_3 f(y_{it}, y_{jt}) + \alpha'_4 SCC_{it} + \alpha'_5 X_{it} + \alpha'_6 Q_{it} + \gamma' TD_t + \varepsilon_{it} \quad (1)$$

where $i=1, \dots, N$ denotes the individual and $t=1, \dots, T$ is the year. DS_{it} is an 11-point scale variable of satisfaction reported by individual i in year t for each domain;⁴ y_{it} refers to the absolute income; $y_{i,t-k}$ is the k -periods lagged income (i.e., hedonic adaptation); $f(y_{it}, y_{jt})$ represents the social comparisons between individual i 's income (y_{it}) and individual j 's income (y_{jt}); SCC_{it} is a set which includes information related to social-cultural capital; X_{it} is a set of socio-demographic characteristics; Q_{it} stands for a set of specific characteristics for each domain; TD_t includes time dummies which account for annual changes that are the same for all people to control for fixed effects and, to some extent, the year in which each individual was included in the sample; and ε_{it} is the error term.

As indicated in the introduction, there are some possible sources of endogeneity in the relationship between social-cultural capital (SCC_{it}) and the different domain satisfactions (DS_{it}). Specifically, three possible sources of endogeneity could arise that would lead to regressors correlated with the error term. Firstly, a reverse causality could occur between social-cultural capital and the domain satisfactions since the relationship between the concepts can go in both directions. More social-cultural capital could lead to more satisfaction or, conversely, more satisfaction could lead to more social-cultural capital. A second possible source of endogeneity is the existence of unobserved variables that could be related to the explanatory variables of the model. This could be the case of a certain skill that affects job satisfaction such as the ability to work with

⁴ DS are categorical variables that take values between 0 (completely dissatisfied) and 10 (completely satisfied). Following Van Praag and Ferrer-i-Carbonell (2008), we cardinalize our dependent variables and apply a Probit-adapted ordinary least squares (POLS) approach for this equation and, as we will see below, also for the outcome equation.

other people. And thirdly, social-cultural capital and domain satisfactions could be determined simultaneously.

These situations could lead to biased and inconsistent estimates (Hsiao, 2003; Wooldridge, 2010). To make consistent estimates that address problems of endogeneity, a natural extension would be an instrumental variables approach (see Becchetti et al., 2009). Unfortunately, given that our selected sample only includes working people, it is very difficult to find valid instruments. To address this issue, we employ a control function approach (CFA), which avoids problems of forbidden regression and recognizes that unobserved covariates may influence social-cultural capital and domains simultaneously (Wooldridge, 2010; Roodman, 2011). Thus, Equation (1) is divided into two equations: a first one for the individual categories of social-cultural capital (selection) and a second equation for the domains (outcome). Both the selection and outcome equations are assumed to be linked through observed and unobserved variables.

Specifically, for the selection equation, we define SCC_{it} for every year to be a vector of binary variables, b_j , $j=1\dots J$, which represents individual observed categories of social-cultural capital.⁵ We use a multinomial logit model that includes Chamberlain–Mundlak terms to deal with the individual heterogeneity, that is, we include the average of each explanatory variable for each individual over time. The probability of belonging to any category can be written as follows:

⁵ As we will see in the next section, to make social-cultural capital endogenous, we sort individuals into different categories of SCC. Thus, the observed choices of the selection process include a final set of eight categories of social and cultural capital information.

$$Pr(b_i|Z_i, M_i) = g\left(Z_i' \beta_1 + \sum_{k=1}^J \varphi_{1k} m_{ik}, Z_i' \beta_2 + \sum_{k=1}^J \varphi_{2k} m_{ik}, \dots, Z_i' \beta_J + \sum_{k=1}^J \varphi_{Jk} m_{ik}\right) \quad (2)$$

where b_i is a vector of categories of social-cultural capital; g is the standard multinomial function; Z_i is a vector of exogenous variables; and m_{ik} are the latent factors which incorporate unobserved covariates that are likely to simultaneously determine the different domains and individuals' social-cultural capital situation.⁶

Hence, the outcome equation for domain satisfactions is the standard equation (Equation 1) with the distinctive feature that we include the selection effects and the unobserved variables that simultaneously affect both the selection and outcome equation. Thus, Equation (1) can be rewritten as:

$$DS_{ith} = \alpha_0 + \alpha_1 y_{it} + \alpha_2 y_{i,t-k} + \alpha_3 f(y_{it}, y_{jt}) + \sum_{j=1}^J \alpha_{4j} b_{ij} + \sum_{j=1}^J \lambda_j m_{ij} + \alpha_5 X_{it} + \alpha_6 Q_{it} + \gamma' TD_t + \mu_{ith} \quad (3)$$

where h is financial, job, health, housing, and leisure satisfaction; α_{4j} denotes the selection effects, and λ_j are factor loadings. Note that the error term of Equation (1) has been decomposed into two terms: a pure random error μ_{ith} and the latent factors, m_{ij} , which are unobservable variables that are also included in the selection equation. Two features of the model require a set of normalization restrictions to identify the parameters in this estimation. First, given that the multinomial model consists of a system of J equations, it has $J(J+1)/2$ parameters in the empirical variance-covariance matrix. As specified, the model has J^2 parameters which are larger than $J(J+1)/2$ for any $J > 2$. Secondly, since the selection equation includes only individual-specific variables, identification requires more restrictions on the variance-covariance parameters

⁶ We assume only one latent factor for each category of social-cultural capital.

compared to other models in which there are alternative-specific covariates. The set of restrictions that makes the model suitable for estimations implies that $\phi_{jk} = 0 \quad \forall j \neq k$, that is, each choice is affected by only one latent factor.

Additionally, to capture the existence of the different domains and the possible correlation among them, the outcome equation is first performed with conditional (recursive) mixed-process models (CMP) to jointly estimate the five domains (for more details, see Roodman, 2011).⁷ CMP allows for mutual interdependencies across domains and the possible correlation among them. Secondly, we use traditional exclusion restrictions by specifying exogenous variables in the selection equation that are excluded from the outcome equation. All variables are described in depth in the next section.

4. Data and variables

4.1. Data

We employ data from the German Socio-Economic Panel (SOEP) for the period 1998–2014. This period finishes in a tricky year (2014) because it coincides with the end of the economic crisis. Thus, the period includes years with economic growth (before the crisis) and the years during the crisis and the first years of recovery. The main reason for choosing the SOEP is its longitudinal structure and the inclusion of private household data to study the different domains of life satisfaction, such as hedonic adaptation, variables related to social-cultural capital, different socio-demographic characteristics, and specific aspects for each domain. Following D’Ambrosio and Frick (2012), to control

⁷ CMP module in STATA.

for potential panel effects and avoid the duplication of observations, we consider the head of household with three or more interviews as a proxy for the interviewing experience in the panel. Note that for people who are not working, there is no information on job satisfaction. Hence, for the sake of comparability of the results for the different domains, we only consider working people in the analysis. The final number of observations is 28,820.⁸

4.2. Variables

4.2.1. Domain satisfactions

The SOEP asks respondents about their satisfaction with different aspects of their individual life. Particularly, we analyze financial, job, health, housing, and leisure satisfaction. The questions on the degree of satisfaction with each domain are as follows: “*How satisfied are you with your (financial, job, health, housing, leisure) situation?*” All questions are measured on an 11-point scale ranging from 0 (*completely dissatisfied*) to 10 (*completely satisfied*). It is assumed that people assess their utility and classify it under one of the available categories. Domains are denoted by *Financial Satisfaction (FS)*, *Job Satisfaction (JS)*, *Health Satisfaction (HS)*, *Housing Satisfaction (HOS)*, and *Leisure Satisfaction (LS)*. In Table 1 we report the main descriptive statistics of the dependent variables (domains) for the last year of our analysis (2014). We observe that working people report the highest average satisfaction with their housing situation and the lowest with their leisure (7.942 and 6.617, respectively).

-----Insert Table 1 here-----

⁸The number of observations is low due to missing data in the specific variables of job satisfaction. In addition, we initially considered the variable *extra hours*. However, this variable led to many lost observations and was excluded from the analysis.

To check the relationship among the different domains, Table 2 shows Pearson's correlation across the five domain satisfactions considered here and subjective well-being for 2014. As in Rojas (2006), Gandelman et al. (2012), and Wolbring (2017), all correlations are positive, but they are not relatively high. Job and health satisfaction yield a coefficient of 0.420 (the highest), while financial and leisure satisfaction show a coefficient of 0.209 (the smallest). In line with previous studies, the correlation between subjective well-being and domain satisfactions is also positive, with the highest correlation found for job satisfaction (0.508) and the smallest for leisure satisfaction (0.292). The small coefficient for leisure satisfaction could be due to the fact that the selected sample comprised working people, since, as pointed out by Pinqart and Schindler (2009), leisure satisfaction is especially relevant for subjective well-being after retirement. These results suggest that the domains are interrelated; hence, the effect of a variable on one domain could be influenced by its effect on the others.

-----Insert Table 2 here-----

4.2.2. Determinants of domain satisfactions

In this section, we explain the definition of the common variables included as determinants of the different domains. The descriptive statistics of all these variables for the last year (2014) are presented in Table 3.

-----Insert Table 3 here-----

Economic resources

In line with D'Ambrosio and Frick (2012), we use household income to obtain absolute income (y_{it} in Equation 1), except for job satisfaction, for which we use working income, including gross wages, gross self-employment income, and gross income from a second

job. For the sake of comparability over time, all income measures are real and converted into euros for the year 2011 using the consumer price index provided in the German SOEP. Moreover, to control for household size and economies of scale, we calculate the equivalent income using the OECD-modified equivalence scale. This variable, which is considered in logarithmic form, is denoted as *Absolute income*.

Concerning the adaptation process, we include own past income ($y_{i,t-k}$ in Equation 1). Given that we do not have the same number of past observations for all individuals, the lags are considered as three incomes to avoid losing too many observations. Thus, the final period of analysis is 1998–2014, although we also have data from 1995. This variable is denoted as *Adaptation*.

Regarding social comparisons ($f(y_{it}, y_{jt})$ in Equation 1), following Ferrer-i-Carbonell (2005), we first define the reference group by grouping together all individuals with a similar education level and from the same region in the same age bracket.⁹ Secondly, considering asymmetric comparisons, we distinguish between upward and downward comparisons for the whole income distribution using the terms *Relative Deprivation* (D_{it}) and *Relative Affluence* (A_{it}), respectively. For deprivation, people's income is compared with all other individuals of their reference group with a higher income than own absolute income, while for the case of affluence, they are compared with individuals with a lower income than own absolute income (Yitzhaki, 1979; Hey and Lambert, 1980). Thirdly, following Chakravarty (1997), we consider the relative concept of deprivation and affluence, that is, the income gaps are normalized using the mean income.

⁹ For education we have used three categories according to years of formal education: less than 10 years, 10–12 years, and 12 or more years. Similarly, the age brackets are younger than 25, 25–34, 35–44, 45–65, and 66 or older. The regions are West Germany and East Germany.

Finally, in line with Moro-Egido et al. (2021), we consider that a person with a slightly lower (higher) y_{it} than y_{jt} cannot feel deprivation (affluence) using a margin m of 10% over the reference income in those groups with lower income variability. These variables are built as follows:

$$D_{it}(y_{it}, y_{jt}) = \begin{cases} \frac{\sum_j (y_{jt} - y_{it})}{n \bar{y}_t} & \text{if } y_{it} < y_{jt} \text{ and } y_{it} \notin [-m \bar{y}_t, m \bar{y}_t] \\ 0 & \text{if } y_{it} \geq y_{jt} \text{ or } y_{it} \in [-m \bar{y}_t, m \bar{y}_t] \end{cases}$$

and

$$A_{it}(y_{it}, y_{jt}) = \begin{cases} \frac{\sum_j (y_{it} - y_{jt})}{n \bar{y}_t} & \text{if } y_{it} > y_{jt} \text{ and } y_{it} \notin [-m \bar{y}_t, m \bar{y}_t] \\ 0 & \text{if } y_{it} \leq y_{jt} \text{ or } y_{it} \in [-m \bar{y}_t, m \bar{y}_t] \end{cases} \quad (4)$$

Social-cultural capital

In this paper, we consider as social-cultural capital (SCC_{it} in Equation 1) three indicators related with both concepts. Particularly, *bridging* social capital is measured by a linear index constructed with the individual's responses regarding attendance to social gatherings, cultural events, pop or jazz concerts, the cinema, church or more religious events; participating in sports or in local politics; and performing volunteer work (see Bárcena-Martín et al., 2017). The responses to these questions take values between 1 (*every day*) and 5 (*never*). We recode these variables so that "*every day*" corresponds to the highest value in the scale and the category "*never*" corresponds to the lowest one. We use a principal components analysis to obtain the variable *Bridging*, which is normalized between 0 and 1.¹⁰

¹⁰ To account for the maximum variance in the data, the *Bridging* variable is an index that, as pointed out by Peters and Butler (1970), synthesizes those principal components with an eigenvalue higher than 1 (Kaiser's approach).

Regarding individuals' concerns, a group of variables reflects whether people are concerned about finances, economic development, peace, and the environment. These variables take values between 1 (*very concerned*) and 3 (*not at all concerned*). Once more, rearranging this scale and using principal component analysis, we consider the index *Worried*, which is also normalized between 0 and 1. The third indicator is related to individuals' trust. As pointed out by Yann (2018), trust could be related to trust between individuals (interpersonal trust) and individuals' trust in institutions (institutional trust). Given the information available in the German SOEP, we consider interpersonal trust. This variable includes information related to trust in other people, if they cannot trust anyone, and if they are wary of foreigners. The answers are rated from 1 (*totally agree*) to 4 (*totally disagree*). Using the same procedure as before, we obtain the variable *Mistrust*. Thus, the concepts included in this variable are related to the personal values of safety and universalism. Following Schwartz and Sortheix (2018), within the concept of universalism, values such as supporting immigration could be considered. Table 4 includes a summary definition and the items used to measure the variables of social capital and cultural capital.

-----Insert here Table 4-----

It is important to note that the German SOEP does not collect information for all the variables included as social-cultural capital every year, which leads to a substantial loss of information. Thus, in line with Muffels and Headey (2013), we impute the values for the missing year with the immediately preceding year for which there is information and, when this is the first year, we replace it with the first data available.

Additionally, as described in section 3, Equation (2) includes a vector (SCC_{it}) to capture the relationship between the different domains and individuals' social-cultural capital. Therefore, to consider the joint effect of social and cultural capital on domain satisfactions, we use a categorical variable which combines the three variables that capture social and cultural capital (*Bridging*, *Worried*, and *Mistrust*). First, we define a dummy variable for each variable that takes the value of 1 if the individual has bridging, worries, or mistrust. Given that the variables have been normalized between 0 and 1, we use the threshold of 0.5 to define them. More specifically, the dummy variables take the value of 1 when the index takes values larger than 0.5. Thus, vector SCC_{it} comprises eight categories. As shown in Table 3, the most frequent categories are those which represent individuals who are mistrustful (15% for mistrustful and worried people and 4% for mistrustful and sociable people, with almost 30% being mistrustful people).

Socio-demographic characteristics

As control variables, we consider the socio-demographic characteristics commonly used in studies on subjective well-being (X_{it} in Equation 1). We define the dummy variable *Male* coded with 1 if the respondent is male. The variable *East* takes the value of 1 when the respondent lives in the Eastern German Länder. The age of the respondent is captured with the variable *Age*, which is measured in years. We also include age squared to test non-linearity in the relationship between age and domain satisfactions, which is denoted as *Age2*. The dummy variable *Living partner* takes the value of 1 if the respondent is currently living with his/her partner. As regards household composition, we consider the number of children (individuals under the age of 18 at the time of the interview) and adults in the household. These variables are denoted as *Children* and *Adults*, respectively. The variable *Years education* measures the number of years of

formal education. We also incorporate the dummy variable *Owner*, which takes the value of 1 if the respondent currently owns a dwelling.

4.2.3. Specific variables and exclusion restrictions

As specific variables of each domain of life satisfaction, we consider those widely used in previous studies (Q_{it} in Equation 1). To analyze financial satisfaction, we incorporate the dummy variable *Second earner*, which takes the value of 1 when there is more than one earner in the household. For job satisfaction, we include *Unemployment experience*, which measures the number of years of unemployment in the respondent's career up to the time of the interview. We also consider *Working hours* measured as the average number of weekly hours worked. The variable *Extra money* is the sum of extra working income, including Christmas bonuses, holiday bonuses, 13th and 14th month pays, and profit-sharing. This variable is real and converted into euros for the year 2011. Moreover, to control for household size and economies of scale, the variable is corrected using the OECD-modified equivalence scale and considered in logarithmic form. Although working income is clearly a dimension of job satisfaction and reflects how the worker is evaluated by the employer, information about household income should also be considered. This is because a larger household income gives each working member within the same household a higher margin to be more selective with his/her employment and to leave an unsatisfactory job (Van Praag et al., 2003). To capture this, we incorporate the ratio of household income over working income ($Household_inc/Working_inc$). For health satisfaction, we include the variable *Visits_doctor* which refers to the number of visits made to a doctor in the previous year, as well as a variable for frequency of participating in sports, which takes values between 1 (*daily*) and 5 (*never*). Recoding this scale, we obtain the variable *Sport*, which is

standardized to take mean zero and variance 1. For housing satisfaction, we consider the variable *Monthly_housing_costs*, which is the sum of housing costs such as maintenance costs and hot water costs. This variable, considered in logarithmic form, is deflated to 2011 prices and we use the OECD-modified equivalence scale to control for effect size. We also define the categorical variable *No_reforms*, which takes the value of 1 if the respondent or his/her landlord has not made any home renovations in the last year. Given that the variable *Bridging* is related to time spent on leisure and hobbies, we do not include any specific variable for leisure satisfaction. If we were to include the most frequently used variable in studies on leisure time, it could lead to collinearity problems. For this reason, *Bridging* could be considered a proxy of leisure time.

For the sake of more robust identification, apart from the above characteristics, we include a set of exogenous covariates in the selection equation (Equation 2). Specifically, we include variables related to psychological capital that capture personality traits. Following Budría and Ferrer-i-Carbonell (2012), we consider the Big Five Inventory (BFI) dimensions of personality (*Neuroticism*, *Extraversion*, *Openness*, *Agreeableness*, and *Conscientiousness*), the *LOC* index on external measures to measure the degree of control over life, and a positive (*Positive_Rep*) and negative (*Negative_Rep*) reciprocity measure. The BFI is obtained after aggregating a total of 15 items included in the German SOEP. Moreover, some items are recorded because a higher score negatively correlates with the specific dimension under evaluation. The external *LOC* is obtained after aggregating six items. The negative and positive reciprocity measures are modeled by aggregation across three items each. All these variables take values between 1 (*does not apply*) and 7 (*does apply*) depending on whether the individual considers that he/she has the specific personality trait. Moreover, to facilitate the interpretation of the results,

all the personal trait variables are standardized to take mean zero and variance 1. In line with Conceicao and Bandura (2008), we also consider the variable *Risk* as an exogenous variable to reflect the individual's risk attitude, that is, if the individual is a risky person or not. This variable, which takes values between 0 (*lowest risk inclination*) and 10 (*highest risk inclination*), is standardized to take mean zero and unit variance.

5. Results

The estimated results for the different domains of life satisfaction are presented in Table 5 under two different settings. The first column of each domain assumes the exogeneity of the different categories of social-cultural capital (Model 1 from Equation 1), whereas Model 2 presented in the second column of each domain allows for the endogeneity of these variables (Equation 3). As explained in section 3, the specification of Model 2 comprises a set of two different equations: an outcome equation with a structural-causal interpretation (presented in Table 5) and a selection equation which models the generating process of the treatment variables (individuals' social-cultural capital). In all cases, the reference category comprises the situation in which an individual has no characteristic related to social and cultural capital. For the sake of simplicity, the estimated parameters corresponding to time dummies have been omitted from the table.¹¹

-----Insert here Table 5-----

We observe different effects for many variables depending on if we control for self-selection into the different categories of social-cultural capital (Model 1 and Model 2 effects). Given that the results of Model 1 (i.e., considering exogeneity) are as expected,

¹¹ This information is available upon request.

we focus on the effects of Model 2 (controlling for endogeneity). Nonetheless, we also highlight the main differences between the more relevant variables in both models. Regarding the common variables, we observe that they exert a differential effect between domains, except *Bridging*, *Mistrust*, *Bridging_Mistrust*, and *Years education* in Model 2.; *Mistrust*, *Worried_Mistrust*, and *Male* in Model 1 and Model 2; and *Worried* in Model 1. Particularly, more worried and/or mistrustful working people and those who are more educated are less satisfied, regardless of the domain of life analyzed. Having more social contacts (bridging) is not relevant when we control for self-selection into different social-cultural capital categories (Model 2). This is a very interesting result because most of the evidence reported in previous studies indicates that people with more social contacts (more bridging) are more satisfied with their life. Although the evidence on the association between this variable and domains of life satisfaction is scarcer, subjective well-being can be seen as an aggregate of the different domains. Therefore, when controlling for endogeneity problems, we cannot support the relevance of social contacts in satisfaction for working people. Nonetheless, given our sample, this result should be interpreted with caution. It is known that during working age, people have less free time, which reduces the possibility of having a good or desirable social life. Thus, our results could differ from the related literature. For instance, Becchetti et al. (2009) analyzed the relationship between life satisfaction and relational goods by instrumenting social leisure with the probability of retirement and found that social leisure has a positive and significant effect on life satisfaction. Our findings show that bridging (a relational good) does not have strong effects on domain satisfactions for working people. Indeed, although mistrustful people are less satisfied regardless of the domain, when people combine this characteristic with bridging, it no

longer has an effect on domain satisfactions. As regards *Male*, we find no gender inequality in terms of domain satisfactions (Model 1 and Model 2).

Concerning economic resources, *Absolute income* is relevant to explain financial, job, and health satisfaction, but the effects go in a different direction depending on the aspect of life that people are evaluating. Specifically, *Absolute income* has a positive effect on financial satisfaction and a negative effect on job and health satisfaction. This finding is not surprising because the relationship between income and satisfaction with domains other than the financial domain is not clear. In this regard, Graham et al. (2011) stated that the effect of higher income on health satisfaction depends on the degree of development of the area and is more relevant in poor countries than in wealthier ones with much better health systems. Easterlin (2003) pointed out that people spend most of their lives working to earn money and sacrifice their family, social life, and health since they have to work more hours to earn more money. Therefore, more income is not necessarily associated with higher levels of job satisfaction. Adaptation is complete when people evaluate their labor situation, health, and leisure time, while past incomes still exert a positive effect on financial and housing satisfaction. Moreover, we find that the effects of asymmetric comparisons are confirmed except in health satisfaction, where social comparisons in terms of income are not relevant. This is in line with Easterlin (2003), who stated that social comparisons are lower in domains such as health status than in domains related to material goods. Nonetheless, these effects differ across domains. Particularly, we observe that deprived people report lower levels of housing and leisure satisfaction (*envy*), whereas those who have a sense of affluence present higher levels of financial and job satisfaction (*pride*).

In terms of social-cultural capital, as highlighted previously, social contacts (bridging) are no longer relevant to explain the domains after controlling for self-selection. We also find that more worried people are less satisfied with their financial and job situation, whereas being mistrustful negatively affects all domains. Worried people who have social contacts are less satisfied with their health, but this is not relevant for the rest of the domains. When working people have the three different categories of social-cultural capital, we also observe different effects depending on the domain. More specifically, having social contacts but being worried and mistrustful is negative for financial and leisure satisfaction and positive for health satisfaction but not relevant for the other domains. For the case of the financial and leisure domains, this negative effect could be explained because being a mistrustful and worried individual affects people more negatively than having bridging. That is, although having social contacts should improve leisure satisfaction, when people go out with friends but they are mistrustful and have worries, their leisure satisfaction decreases as they are unable to enjoy these social events.

Regarding the influence of socio-economic characteristics, our evidence shows that people who live in the Eastern German Länder report higher levels of satisfaction with their job situation, but it is not relevant for the other domains. This is also contrary to the previous evidence for subjective well-being which confirms that people living in the Eastern German Länder have worse living conditions and report lower levels of satisfaction. Thus, we again observe the importance of controlling for endogeneity in this kind of studies, since the conclusions could be different. We also find that age is not relevant to explain the domain satisfactions, although a nonlinear effect is usually found. Living with a partner enhances job, housing, and leisure satisfaction but is not relevant

for the other domains. The presence of children and adults in the household makes people more satisfied with their financial situation, job, and health and less satisfied with their leisure, but has no effect on housing satisfaction. Years of education exerts a negative effect on the different domains, which supports that more educated people have higher aspirations and are therefore more discriminating in terms of what they want to achieve. Additionally, being a homeowner makes people more satisfied with their housing but has a negative effect on job and health satisfaction. This could be related to the effects of *Absolute income* found for these domains. People need to work more to earn more money in order to pay the mortgage and, as seen before, this could have negative consequences in different aspects of life such as worse health.

In terms of the influence of the specific variables, our results are similar to those of previous studies (see, e.g., Van Praag et al., 2003; Van Praag and Ferrer-i-Carbonell, 2008; Gash et al., 2010; O'Donnell, 2002; Wicker et al., 2015). Specifically, our evidence shows that the presence of another earner in the household leads to higher financial satisfaction. The specific variables for job satisfaction are not significant in our analysis. Concerning health, more visits to the doctor would imply that people have some health problems and, as expected, leads to lower health satisfaction. However, more participation in sports increases satisfaction with health. Our results also show that when people spend more money on household maintenance and do some renovations, housing satisfaction increases. As Gandelman et al. (2012) explained, higher housing costs could imply a nicer and better-situated house with access to public goods like running water.

It is important to note that, as shown in the coefficients of λ , there is endogeneity regarding the relationship between the domain satisfactions and social-cultural capital. Thus, if the endogeneity is not controlled, some of the determinants would be underestimated or overestimated and could lead to erroneous conclusions. Specifically, we find that they are mostly positive and significant. For example, $\lambda = 1.321$ in the case of *Bridging* in financial satisfaction. This indicates that the unobserved specific characteristics leading an individual to be included in this category of social-cultural capital are associated with higher financial satisfaction than the reference individual. A similar reasoning applies to the other domains for this category and to other categories in the different domains. This suggests the presence of significant selection effects in this specific category of social capital. Therefore, if we do not control for endogeneity, the effects of the social resources variables on the domain satisfactions will be underestimated. The reverse is true for negative factor loading coefficients. For instance, unobserved characteristics associated with bridging, worries, and mistrust are negatively associated with health satisfaction ($\lambda = -1.122$). Additionally, the Stata function (*Atrrho*), which expresses the correlation across errors, shows that these coefficients are consistent with the initial evidence displayed in Table 2: the positive correlation between the different domains is also due to unobserved factors that positively affect these domains (e.g., *Atrrho 12* = 0.421 in the case of the correlation between financial and job satisfaction).

To conclude this section, Table 6 summarizes the results of the selection equation (Equation 2). We observe that being in any category mainly depends on the individual's personality traits and socio-demographic characteristics. For instance, people who are more open, agreeable, and have higher positive reciprocity are more likely to have the

three categories of social-cultural capital. Risk aversion is the personal characteristic which exerts effects across the different categories of social-cultural capital. Particularly, being a risky person increases the probability of having more social contacts and less worries. This characteristic also increases the probability of having both *Bridging* and *Worried* and *Bridging* and *Mistrust*, but it decreases the probability of having *Worried* and *Mistrust*. Men are less likely to be worried, whereas the probability of having bridging and worried and bridging and mistrust is higher. People who are living with a partner are more likely to have more social contacts (bridging) but are less likely to have bridging and worries. More educated people are more likely to be worried. In line with the previous explanations, this could be due to their higher aspirations. We also found that people with a larger income are more likely to be more worried and mistrustful but less likely to have the three characteristics of social-cultural capital.

-----Insert here Table 6-----

To sum up, our findings show, first, the presence of endogeneity and hence the convenience of controlling for it to analyze satisfaction, since the effects of several variables differ depending on this control. Second, the traditional relevance of social contacts to improve satisfaction disappears after controlling for self-selection. We only find a small effect of bridging when it is combined with the other characteristics, such as *Worried* and *Mistrust*. And, finally, there are small differences across the domain satisfactions and they are correlated through unobserved factors that affect them.

7. Conclusions and discussion

Given that subjective well-being is important for public policy design and assessment and subjective well-being can be regarded as an aggregate of satisfaction with different

aspects of an individual's life (domains), knowing what produces satisfaction in these areas would also be relevant for policymakers with a view to achieving happier and better societies through more specific public policies. Indeed, as an alternative to objective quality of life indicators, for some decades now there has been growing interest in different aspects of life as mediating factors to measure individuals' happiness or quality of life (Vera-Toscano and Ateca-Amestoy, 2008). For instance, the assessment of citizens' job and health satisfaction is essential for the design of public labor and health policies. In fact, information on citizens' opinions regarding their subjective health could be useful for a more adequate distribution and utilization of medical spending, which would improve welfare (Gorry et al., 2018). Housing satisfaction is also relevant, since knowledge of how to improve housing can be used to design more helpful programs focused on specific housing public policies (Vera-Toscano and Ateca-Amestoy, 2008). Thus, in general, public policies should foster the conditions needed to lead satisfying lives because this would be beneficial both for people and for society as a whole (Oswald et al., 2015; Piekalkiewicz, 2017; DiMaria et al., 2019). Nonetheless, although domains and general satisfaction may be linked through some factors, each factor could be evaluated differently depending on the domain to be evaluated since the same factor can have positive, negative, or null effects depending on the domain satisfaction under study.

The main goals of this paper were twofold. First, we attempted to analyze the relevance of social and cultural capital to explain domain satisfactions, as well as the possible sources of endogeneity regarding the relationships between social-cultural capital and domains of life satisfaction. Secondly, we aimed to examine the possible differential effect of factors across domains and the possible correlations between

them. In what follows, we provide an overview of the main conclusions arising from the study and discuss some possible public policy implications.

Unlike other studies on subjective well-being (Helliwell and Putnam, 2004; Sarracino, 2010; Bartolini and Sarracino, 2014; Moro-Egido et al., 2021), our evidence shows that social contacts are not so relevant to improve satisfaction, which is a common result for all the different domains analyzed in this study, after controlling for endogeneity. Thus, we cannot support the traditional finding which implies that more social contacts lead to more satisfaction. This is a novel result that, although it should be taken with caution, leads us to conclude that to achieve happier citizens, public policies should not focus on promoting personal interactions, such as offering more cultural and social events, as previous studies using similar definitions of bridging have concluded (see, for instance, Odermatt and Stutzer, 2017; Bárcena-Martín et al., 2017; Bartolini et al., 2019). Public policies to improve satisfaction should focus on other aspects, which, as we will explain below, will depend mainly on the domain of life in which they aim to increase satisfaction. Moreover, it is necessary to control for endogeneity in this kind of studies since several results are contradictory and lead to erroneous conclusions. For example, having more absolute income is not associated with job and health satisfaction when considering exogeneity, whereas there is a negative correlation when controlling for endogeneity. A possible explanation for this negative relationship is that when people want to increase their income, they must work longer hours or get a better position or another job, thus decreasing their job satisfaction. Additionally, they would have less time to do sports, thus increasing their stress and worsening their health satisfaction. In this vein, health and public labor policies should not focus on economic growth if they

aim to improve job or health satisfaction, since economic growth would only imply improvements in financial satisfaction.

Our findings also highlight that although there are small differences across domains of life satisfaction and they are correlated through unobserved factors that affect them, some factors are evaluated differently depending on the aspect of life analyzed. For instance, apart from absolute income, the effect of adaptation and social comparisons depends on the domain. Specifically, people who are poorer than others are less satisfied with housing and leisure, whereas being richer leads to more satisfaction with the financial and job situation. Hence, policies related to income redistribution would help to improve satisfaction with any aspect of life, except health satisfaction, since the social comparisons do not explain it. Therefore, the comparison of the effect of common variables between different domains could also help to design more specific public policies. For instance, when the goal is to improve housing satisfaction, again, public policies should not focus on macroeconomic indicators such as economic growth, since increases in income do not enhance satisfaction. Instead, they could focus on the promotion of subsidies for home improvement through some reforms or better access to public services such as water and electricity, among others.

Considering the above, knowing which determinants influence the domain satisfactions provides useful information for policymakers to improve citizens' satisfaction with different aspects of life and their welfare as a whole. In sum, it is necessary to understand what really improves satisfaction to achieve more satisfied citizens and better societies.

References

- Alessie, R., Crossley, T. and Hildebrand, V. (2006), "Estimating a collective household model with survey data on financial satisfaction", *Discussion Paper Series/Tjalling C. Koopmans Research Institute*, 6(07).
- Ali, W., Javaid, R., Ali, S., Akram, Y., and Haq, A. U. (2019), "Influence of life events on the financial satisfaction of individuals", *IBT Journal of Business Studies*, 15(1): 123-137.
- Anand, P. and Poggi, A. (2018), "Do social resources matter? Social capital, personality traits, and the ability to plan ahead", *Kyklos*, 71(3): 343-373.
- Bárcena-Martín, E., Cortés-Aguilar, A. and Moro-Egido, A. (2017), "Social Comparisons on Subjective Well-Being: The Role of Social and Cultural Capital", *Journal of Happiness Studies*, 18(4): 1121-1145.
- Bartolini, S. and Sarracino, F. (2014), "Happy for how long? How social capital and economic growth relate to happiness over time?", *Ecological Economics*, 108: 242-256.
- Bartolini, S., Bilancini, E. and Sarracino, F. (2013), "Predicting the trend of Well-Being in Germany: How much do comparisons, adaptation and sociability matter?", *Social Indicators Research*, 114: 169-191.
- Bartolini, S., Piekalkiewicz, M., and Sarracino, F. (2019), "A Social Cure for Social Comparisons", *Quaderni del dipartimento di economía política e statistica*, N. 797.
- Beard, J. and Ragheb, M. (1980), "Measuring leisure satisfaction", *Journal of Leisure Research*, 12(1): 20.
- Becchetti, L., Giachin-Ricca, E., and Pelloni, A. (2009), "The 60s turnaround as a test on the causal relationship between sociability and happiness", SOEPpaper No. 209. <http://dx.doi.org/10.2139/ssrn.1441901>
- Binder, M. and Coad, A. (2016), "How satisfied are the self-employed? A life domain view", *Journal of Happiness Studies*, 17(4), 1409–1433.
- Budria, S. and Ferrer-i-Carbonell, A. (2012), "Income Comparisons and Non-Cognitive Skills", *SOEPaper*, 441.

- Calcagnini, G., and Perugini, F. (2019), "Social capital and well-being in the Italian provinces", *Socio-Economic Planning Sciences*, 68: 100668.
- Chakravarty, S. (1997), "Relative deprivation and satisfaction orderings", *Keio Economic Studies*, 34(2): 17-31.
- Clark, A. (2001), "What really matters in a job? Hedonic measurement using quit data", *Labour economics*, 8(2): 223-242.
- Clark, A., Frijters, P. and Shields, M. (2008), "Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles", *Journal of Economic Literature*, 46(1): 95-144.
- Conceicao, P. and Bandura, R. (2008), "Measuring Subjective Wellbeing: A Summary Review of the Literature", *Office of Development Studies, United Nations Development Programme (UNDP) Research Paper*, New York.
- Cullinan, J., Hodgins, M., Hogan, V., McDermott, M., and Walsh, S. (2019), "Bullying and Work-Related Stress in the Irish Workplace", *Societies*, 9(1): 15.
- Cummins, R. (2003), "A Model for the Measurement of Subjective Well-being through Domains, draft", *Melbourne: School of Psychology, Deakin University*.
- D'Agostino A., Grilli G. and Regoli A. (2019), "The Determinants of Subjective Well-Being of Young Adults in Europe", *Applied Research in Quality of Life*, 14(1): 85-112.
- D'Ambrosio, C. and Frick, J.R. (2007), "Income satisfaction and relative deprivation: An empirical link", *Social Indicators Research*, 81(3): 497-519.
- D'Ambrosio, C. and Frick, J.R. (2012), "Individual well-being in a dynamic perspective", *Economica*, 79: 284-302.
- Di Tella, R., Haisken-De New, J. and MacCulloch, R. (2010), "Happiness adaptation to income and to status in an individual panel", *Journal of Economic Behavior & Organization*, 76(3): 834-852.
- Diaz-Serrano, L. (2006), "Housing satisfaction, homeownership and housing mobility: A panel data analysis for twelve EU countries", *IZA Working Paper*, 2318.
- Diener, E. and Biswas-Diener, R. (2002), "Will money increase subjective well-being?", *Social Indicators Research*, 57(2): 119-169.
- Diener, E., Inglehart, R. and Tay, L. (2013), "Theory and Validity of Life Satisfaction Scales", *Social Indicators Research*, 112: 494-527.

- DiMaria, C., Peroni, C., and Sarracino, F. (2019), "Happiness Matters: Productivity Gains from Subjective Well-Being", *Journal of Happiness Studies*, forthcoming.
- Easterlin, R. (2003), "Explaining happiness", *Proceedings of the National Academy of Sciences*, 100(19): 11176-11183.
- Easterlin, R and Sawangfa, O. (2007), "Happiness and Domain Satisfaction: Theory and Evidence", *IZA working paper*, 2584.
- Edmans, A. (2012), "The link between employee satisfaction and firm value, with implications for corporate social responsibility", *The Academy of Management Perspectives*, 26(4): 1-19.
- Ferrer-i-Carbonell, A. (2005), "Income and well-being: an empirical analysis of the comparison income effect", *Journal of Public Economics*, 89: 997-1019.
- Ferrer-i-Carbonell, A. and Frijters, P. (2004), "How important is methodology for the estimates of the determinants of happiness?", *The Economic Journal*, 114: 641-659.
- Freeman, R. (1977), "Job satisfaction as an economic variable", *NBER Working Paper*, 225.
- Frey, B. and Stutzer, A. (2002), "What Can Economists Learn from Happiness Research?", *Journal of Economic Literature*, 40(2): 402-435.
- Frey, B. and Stutzer, A. (2017), "Public Choice and Happiness", *Center for Research in Economics, Management and the Arts (CREMA)*, 2017-03.
- Glanville, J.L., and Story, W.T. (2018), "Social capital and self-rated health: Clarifying the role of trust", *Social Science Research*, 71: 98-108.
- Gandelman, N., Piani, G. and Ferre, Z. (2012), "Neighborhood Determinants of Quality of Life", *Journal of Happiness Studies*, 13: 547-563.
- Gash, V., Mertens, A. and Romeu-Gordo.L. (2010), "Women between part-time and full-time work: The influence of changing hours of work on happiness and life-satisfaction", *SOEP Papers*, 268.
- Gorry, A., Gorry, D. and Slavov, S. N. (2018), "Does retirement improve health and life satisfaction?", *Health economics*, 27(12): 2067-2086.
- Graham, C., Higuera, L. and Lora, E. (2011), "Which health conditions cause the most unhappiness?", *Health Economics*, 20: 1431-1447.

- Healy, J.D. (2003), "Policy review", *Housing Studies*, 18(3): 409-424.
- Helliwell, J. and Putnam, R. (2004), "The social context of well-being", *Philosophical Transactions of the Royal Society*, 359(1449): 1435-1446.
- Hey, J.D. and Lambert, P. (1980), "Relative Deprivation and Gini Coefficient: Comment", *The Quarterly Journal of Economics*, 95(3): 567-573.
- Hsiao, C. (2003), *Analysis of Panel Data*, Cambridge: Cambridge University Press.
- Jiang, J., and Wang, P. (2022), "Which Generation is More Likely to Participate in Society? A Longitudinal Analysis", *Social Indicators Research*, 162(1): 209-229.
- Joo, S. and Grable, J. (2004), "An exploratory framework of the determinants of financial satisfaction", *Journal of Family and Economic Issues*, 25(1): 25-50.
- Judge, T., Thoreson, C., Bono, J. and Patton, G. (2001), "The job satisfaction-job performance relationship: A qualitative and quantitative review", *Psychological Bulletin*, 127: 376-407.
- Kahneman, D. and Sugden, R. (2005), "Experienced utility as a standard of policy evaluation", *Environmental and Resource Economics*, 32(1): 161-181.
- Kiyamaza, H., & Öztürkkal, B. (2019), "Perceived Financial Needs, Income Sources, and Subjective Financial Well-Being in an Emerging Market", *Journal of Financial Counseling and Planning*, 30(2): 191-201.
- Lareau A., and Weininger, E.B. (2003), "Cultural capital in educational research: a critical assessment", *Theory and Society*, 32: 567-606.
- Lepp, A. (2018), "Correlating leisure and happiness: the relationship between the leisure experience battery and the Satisfaction with Life Scale", *Annals of Leisure Research*, 21(2): 246-252.
- Mangione, T. and Quinn, R. (1975), "Job satisfaction, counterproductive behavior, and drug use at work", *Journal of Applied Psychology*, 60(1): 114.
- Moro-Egido, A., Navarro, M. and Sánchez, A. (2021), "Changes in subjective well-being over time: Economic and social resources do matter", *Journal of Happiness Studies*. <https://doi.org/10.1007/s10902-021-00473-3>
- Muffels, R. and Headey, B. (2013), "Capabilities and choices: Do they make Sen's for understanding objective and Subjective Well-Being? An Empirical Test of Sen's Capability Framework on German and British Panel Data", *Social Indicators Research*, 110: 1159-1185.

- Navarro, M., D'Agostino, A. and Neri, L. (2020), "The effect of urbanization on subjective well-being: Explaining cross-regional differences", *Socio-Economic Planning Sciences*, 100824.
- Odermatt, R. and Stutzer, A. (2017), "Subjective Well-Being and Public Policy", *IZA Working Paper*, 11102.
- O'Donnell, O. (2002), *Econometric analysis of health data*. A. M. Jones, & O. O'Donnell (Eds.). Chichester: Wiley.
- Olson, M. (1982), *The rise and decline of nations: Economic growth, stagflation and social rigidities*. New Haven: Yale University Press.
- Oswald, A. J., Proto, E., and Sgroi, D. (2015), "Happiness and productivity", *Journal of Labor Economics*, 33(4): 789-822.
- Peters, W. S., and Butler, J. Q. (1970), "The construction of regional economic indicators by principal components", *Annals of Regional Science*, 4: 1-4.
- Piekalkiewicz, M. (2017), "Why do economists study happiness?", *The Economic and Labour Relations Review*, 28(3): 361-377.
- Pinquart, M. and Schindler, I. (2009), "Change of leisure satisfaction in the transition to retirement: A latent-class analysis", *Leisure Sciences*, 31(4): 311-329.
- Plagnol, A. (2011), "Financial satisfaction over the life course: The influence of assets and liabilities", *Journal of Economic Psychology*, 32(1): 45-64.
- Putnam, R., Leonardi, L., and Nanetti, R. (1993), *Making democracy work: Civic traditions in modern Italy*. Princeton, New Jersey: Princeton University Press.
- Rojas, M. (2006), "Life satisfaction and satisfaction in domains of life: is it a simple relationship?", *Journal of Happiness Studies*, 7(4): 467-497.
- Roodman, D. (2011), "Fitting fully observed recursive mixed-process models with cmp", *The Stata Journal*, 11(2): 159-206.
- Sabatini, F. (2009), "Social capital as social networks: A new framework for measurement and an empirical analysis of its determinants and consequences", *The Journal of Socio-Economics*, 38: 429-442.
- Sahi, S. (2013), "Demographic and socio-economic determinants of financial satisfaction: A study of SEC-A segment of individual investors in India", *International Journal of Social Economics*, 40(2): 127-150.

- Sarracino, F. (2012), "Money, sociability and happiness: are developed countries doomed to social erosion and unhappiness?", *Social Indicators Research*, 109(2): 135-188.
- Sarracino, F. (2010), "Social capital and subjective well-being trends: Comparing 11 western European countries", *The Journal of Socio-Economics*, 39: 482–517.
- Satyanath, S., Voigtländer, N. and Voth, H.J. (2017), "Bowling for fascism: Social capital and the rise of the Nazi Party", *Journal of Political Economy*, 125(2): 478-526.
- Schwartz, S. H. (2017), The refined theory of basic values. In S. Roccas & L. Sagiv (Eds.), *Values and behavior: Taking a cross-cultural perspective*. Cham, Switzerland: Springer International Publishing, 51-72.
- Schwartz, S. H., and Sortheix, F. M. (2018), Values and subjective well-being. In E. Diener, S. Oishi, & L. Tay (Eds.). *Handbook of well-being*. Salt Lake City, UT: DEF Publishers. DOI:nobascholar.com
- Seara, T., Pollnac, R. and Poggie, J. (2017), "Changes in job satisfaction through time in two major New England fishing ports", *Journal of Happiness Studies*, 18(6): 1625-1640.
- Stiglitz, J., Sen, A. and Fitoussi, J. (2011), *Mismeasuring Our Lives: Why GDP doesn't Add Up*. New York: The New Press.
- Stutzer, A. and Frey, S. (2010), "Recent Advances in the Economics of individual Subjective Well-Being", *Social Research*, 77(2): 679-714.
- Van der Zwan, P., Hessels, J., and Rietveld, C. A. (2018), "Self-employment and satisfaction with life, work, and leisure", *Journal of Economic Psychology*, 64: 73-88.
- Van Praag, B.M.S. and Ferrer-i-Carbonell, A. (2008), *Happiness Quantified: A satisfaction calculus approach*. Oxford University Press. Revised edition.
- Van Praag, B.M.S., Frijters, P. and Ferrer-i-Carbonell, A. (2003), "The anatomy of subjective well-being" *Journal of Economic Behavior & Organization*, 51(1): 29-49.
- Varady, D.P. and Carozza, M.A. (2000), "Towards a better way to measure customer satisfaction levels in public housing. A report from Cincinnati", *Housing Studies* 15: 797–825.

- Vera-Toscano, E., Ateca-Amestoy, V. and Serrano-Del-Rosal, R. (2006), "Building financial satisfaction", *Social Indicators Research*, 77(2): 211-243.
- Vera-Toscano, E. and Ateca-Amestoy, V. (2008), "The relevance of social interactions on housing satisfaction", *Social Indicators Research*, 86(2): 257-274.
- Wicker, P., Coates, D. and Breuer, C. (2015), "The effect of a four-week fitness program on satisfaction with health and life", *International Journal of Public Health*, 60(1): 41-47.
- Wills-Herrera, E., Orozco, L., Forero-Pineda, C., Pardo, O. and Andonova, V. (2011), "The relationship between perceptions of insecurity, social capital and subjective well-being: Empirical evidences from areas of rural conflict in Colombia", *The Journal of Socio-Economics*, 40: 88-96.
- Wolbring, T. (2017), "Home sweet home! Does moving have (lasting) effects on housing satisfaction?", *Journal of Happiness Studies*, 18(5): 1359-1375.
- Wooldridge, J. M. (2010), *Econometric analysis of cross section and panel data*. MIT press.
- Woolcock, M., and Narayan, D. (2000), "Social Capital: Implications for Development Theory, Research, and Policy", *The World Bank Research Observer*, 15 (2): 225–49.
- Wright, T. and Cropanzano, R. (2000), "Psychological well-being and job satisfaction as predictors of job performance", *Journal of Occupational Health Psychology*, 5(1): 84–94.
- Yann, A. (2018), Trust and social capital. In Stibliz, J. Fitoussi, J. and Durand, M. (eds). *For good measure: Advancing research on well-being metrics beyond GDP* (283-320), OECD Publishing, Paris.
- Yitzhaki, S. (1979), "Relative Deprivation and the Gini Coefficient", *The Quarterly Journal of Economics*, 93(2): 321-324.
- Zebardast, E., and Nooraie, H. (2018), "Investigating the relationship between housing satisfaction and quality of life in the decayed historic areas of Isfahan using path diagram", *Indoor and Built Environment*, 27(5): 645-657.

TABLES

Table 1. Descriptive statistics of domain satisfactions (2014)

	Mean	SD	Min	Max
Domain Satisfactions				
Financial Satisfaction	7.097	1.745	0	10
Job Satisfaction	6.998	1.809	0	10
Health Satisfaction	6.730	1.870	0	10
Housing Satisfaction	7.942	1.513	0	10
Leisure Satisfaction	6.617	1.815	0	9

Note: Adapted from the German Socio-Economic Panel.

Table 2. Pearson's correlation across domain satisfactions (2014)

	FS	JS	HS	HOS	LS	GS
FS	1.000					
JS	0.402 (0.000)	1.000				
HS	0.312 (0.000)	0.420 (0.000)	1.000			
HOS	0.348 (0.000)	0.285 (0.000)	0.226 (0.000)	1.000		
LS	0.209 (0.000)	0.269 (0.000)	0.257 (0.000)	0.295 (0.000)	1.000	
GS	0.412 (0.000)	0.508 (0.000)	0.496 (0.000)	0.314 (0.000)	0.292 (0.000)	1.000

Note: These are the pairwise correlation coefficients between the domains of life satisfaction used in this study and general satisfaction (GS) for the last year (2014), with *p*-values shown in parentheses. FS = Financial Satisfaction; JS = Job Satisfaction; HS = Health Satisfaction; HOS = Housing Satisfaction; and LS = Leisure Satisfaction.

Table 3. Descriptive statistics of explanatory variables (2014)

	Mean	SD	Min	Max
Common variables				
Economic resources				
Absolute income ^(a)	21.02	9.134	1.135	81.99
Absolute income ^{(a)(b)}	22.25	13.04	1.234	94.61
Adaptation ^(a)	19.99	8.778	3.510	80
Adaptation ^{(a)(b)}	21.15	13.56	0.238	87.50
Relative Deprivation	0.456	0.129	0	1.772
Relative Deprivation ^(b)	3.001	2.537	0.655	23.74
Relative Affluence	0.359	0.295	0	3.527
Relative Affluence ^(b)	0.473	0.321	0.050	3.476
Social-Cultural Capital				
Bridging	0.105	0.307	0	1
Worried	0.085	0.280	0	1
Mistrust	0.295	0.456	0	1
Bridging Worried	0.020	0.142	0	1
Bridging Mistrust	0.042	0.201	0	1
Worried Mistrust	0.145	0.352	0	1
Bridging Worried Mistrust	0.019	0.137	0	1
Socio-economic Characteristics				
Male	0.603	0.490	0	1
East	0.210	0.408	0	1
Age	49	9.340	24	74
Living partner	0.603	0.489	0	1
Children	0.472	0.792	0	4
Adults	2.053	0.826	1	6
Years education	13.22	0.797	7	18
Owner	0.557	0.497	0	1
Specific variables				
Financial Satisfaction				
Second earner	0.936	0	0	1
Job Satisfaction				
Unemployment experience	0.529	1.327	0	15
Working hours	40.39	9.201	6	80
Extra money ^(a)	24.79	60.82	0.158	825.6
Household inc/Working inc	1.189	1.180	0.086	32.37
Health Satisfaction				
Visits doctor	8.205	13.32	0	240
Sport	3.007	1.355	1	5
Housing Satisfaction				
Monthly housing costs ^(a)	10.93	0	0.125	178.7
No reforms	0.851	0	0	1
Exclusion restrictions (Psychological capital)				
Neuroticism	3.573	1.141	1	7
Extraversion	4.743	1.106	1	7
Openness	4.515	1.115	1	7
Agreeableness	5.306	0.908	1	7
Conscientiousness	5.840	0.851	1	7
LOC	3.502	0.858	1	7
Positive Rep	5.840	0.845	1	7
Negative Rep	3.027	1.340	1	7
Risk	4.814	2.132	0	10

Note: ^a These variables are measured in hundreds of euros. ^b These variables are built considering working income rather than household income, that is, they are used in job satisfaction analyses. Adapted from the German Socio-Economic Panel.

Table 4. Social and cultural capital variables

	Concept	Variables	Scale
<i>Bridging</i>	<i>Cross-cutting ties</i>	Attendance to social gatherings	
		Attendance to cultural events, pop or jazz concerts	1 (<i>never</i>)
		Attendance to the cinema	2 (<i>less frequently</i>)
		Attendance to church or religious events	3 (<i>monthly</i>)
		Participating in sports	4 (<i>weekly</i>)
		Participating in local politics	5 (<i>daily</i>)
		Performing volunteer work	
<i>Worried</i>	People's concerns	Worried about finances	
		Worried about economic development	1 (<i>not concerned at all</i>)
		Worried about peace	2 (<i>somewhat concerned</i>)
		Worried about the environment	3 (<i>very concerned</i>)
<i>Mistrust</i>	Trust in other people to reflect the cultural background of a person in terms of individual attitudes and values of wariness in people	On the whole trust in other people	1 (<i>totally disagree</i>)
		Nowadays cannot trust anyone	2 (<i>disagree</i>)
		They are wary of foreigners	3 (<i>agree slightly</i>)
			4 (<i>totally agree</i>)

Table 5. Estimation results for domain satisfactions, 1998–2014

	FS		JS		HS		HOS		LS	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Common variables										
Economic Resources^a										
Absolute income	5.799*** (0.916)	3.910*** (0.963)	0.665 (0.640)	-1.418** (0.665)	-0.105 (0.917)	-1.868* (0.992)	0.056 (1.134)	-1145 (1.193)	0.370 -1151	-1032 -1178
Adaptation	0.945** (0.319)	0.726** (0.327)	-0.300 (0.204)	-0.287 (0.203)	0.768** (0.318)	0.462 (0.320)	1.201** (0.411)	1.143** (0.422)	0.266 (0.365)	-0.043 (0.373)
Relative Deprivation	-0.030 (0.062)	-0.038 (0.063)	0.020 (0.023)	0.005 (0.022)	0.003 (0.054)	-0.005 (0.054)	-0.133** (0.063)	-0.159** (0.063)	-0.201** (0.062)	-0.172** (0.060)
Relative Affluence	0.140** (0.050)	0.180*** (0.052)	0.112** (0.052)	0.158** (0.051)	0.057 (0.053)	0.081 (0.054)	0.077 (0.064)	0.104 (0.066)	-0.044 (0.063)	-0.020 (0.064)
Social-Cultural Capital										
Bridging	0.135*** (0.038)	-0.074 (0.343)	0.046 (0.035)	0.331 (0.306)	0.077** (0.037)	0.514 (0.346)	0.062 (0.042)	0.470 (0.354)	0.254*** (0.034)	0.242 (0.374)
Worried	-0.271*** (0.034)	-0.938** (0.393)	-0.200*** (0.035)	-0.647* (0.369)	-0.147*** (0.037)	-0.313 (0.403)	-0.081** (0.036)	-0.182 (0.458)	-0.143*** (0.036)	-0.173 (0.418)
Mistrust	-0.122*** (0.030)	-1.408*** (0.378)	-0.141*** (0.030)	-1.309*** (0.326)	-0.110** (0.035)	-0.728* (0.376)	-0.067* (0.035)	-1.439*** (0.363)	-0.065** (0.033)	-0.700** (0.345)
Bridging_Worries	-0.158** (0.050)	-0.563 (0.430)	-0.100** (0.044)	-0.563 (0.352)	-0.079 (0.050)	-0.939** (0.402)	-0.077 (0.066)	-0.651 (0.488)	0.133** (0.047)	-0.092 (0.375)
Bridging_Mistrust	-0.098** (0.046)	-0.295 (0.547)	-0.105** (0.047)	0.205 (0.481)	-0.053 (0.050)	0.313 (0.585)	-0.032 (0.047)	0.038 (0.584)	0.088 (0.058)	-0.421 (0.578)
Worries_Mistrust	-0.409*** (0.033)	-1.744*** (0.213)	-0.322*** (0.033)	-1.906*** (0.188)	-0.300*** (0.035)	-1.667*** (0.223)	-0.118** (0.039)	-0.926*** (0.213)	-0.242*** (0.036)	-1.403*** (0.210)
Bridging_Worries_Mistrust	-0.347*** (0.059)	-1.005* (0.534)	-0.279*** (0.063)	0.611 (0.551)	-0.142** (0.060)	1.011** (0.506)	-0.138** (0.062)	0.382 (0.582)	-0.002 (0.050)	-0.774 (0.504)
Socio-demographic Characteristics										
Male	-0.028 (0.032)	-0.056 (0.035)	-0.015 (0.032)	-0.050 (0.034)	-0.033 (0.033)	-0.072** (0.036)	-0.041 (0.036)	-0.053 (0.039)	0.041 (0.032)	0.027 (0.035)
East	-0.109** (0.038)	-0.019 (0.038)	-0.003 (0.041)	0.128** (0.040)	-0.082** (0.041)	0.033 (0.044)	-0.001 (0.045)	0.076 (0.048)	-0.047 (0.042)	0.037 (0.045)
Age	-0.363** (0.113)	-0.169 (0.112)	-0.402*** (0.112)	-0.090 (0.113)	-0.377** (0.115)	-0.083 (0.120)	-0.199 (0.141)	-0.052 (0.146)	-0.023 (0.115)	0.114 (0.118)
Age2	0.373** (0.124)	0.170 (0.123)	0.394** (0.124)	0.075 (0.124)	0.242* (0.126)	-0.062 (0.130)	0.220 (0.159)	0.070 (0.163)	0.043 (0.129)	-0.111 (0.131)

Table 5. Estimation results for domain satisfactions, 1998–2014 (cont.)

	FS		JS		HS		HOS		LS	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Living_partner	0.045 (0.033)	0.044 (0.034)	0.041 (0.033)	0.063* (0.033)	-0.017 (0.034)	0.005 (0.034)	0.114** (0.039)	0.134*** (0.040)	0.117*** (0.035)	0.109** (0.036)
Children	0.040** (0.015)	0.029* (0.015)	0.043** (0.016)	0.031* (0.016)	0.047** (0.017)	0.034** (0.017)	-0.017 (0.019)	-0.023 (0.019)	-0.091*** (0.015)	-0.103*** (0.015)
Adults	0.054** (0.017)	0.071*** (0.017)	0.036* (0.018)	0.045** (0.018)	0.038** (0.018)	0.043** (0.018)	0.021 (0.020)	0.028 (0.020)	-0.032* (0.018)	-0.017 (0.017)
Years_education	0.136* (0.077)	-0.256** (0.097)	0.155** (0.067)	-0.377*** (0.091)	0.139* (0.082)	-0.248** (0.106)	0.012 (0.085)	-0.384*** (0.100)	-0.086 (0.081)	-0.414*** (0.102)
Owner	0.081** (0.026)	0.023 (0.029)	0.026 (0.027)	-0.077** (0.029)	0.008 (0.028)	-0.073** (0.031)	0.446*** (0.033)	0.395*** (0.035)	0.037 (0.028)	0.006 (0.031)
Specific variables										
Financial Satisfaction										
Second earner	0.068* (0.035)	0.065* (0.035)								
Job Satisfaction										
Unemployment experience			0.069 (0.081)	0.087 (0.081)						
Working hours			0.010 (0.013)	0.009 (0.013)						
Extra money			0.102 (0.102)	0.089 (0.101)						
Household_inc/Working_inc			0.117** (0.039)	-0.045 (0.041)						
Health Satisfaction										
Visits_doctor						-1.715*** (0.100)	-1.681*** (0.099)			
Sport						0.035** (0.011)	0.034** (0.011)			
Housing Satisfaction										
Monthly_housing_costs							0.143*** (0.021)	0.144*** (0.021)		
No_reforms							-0.042* (0.022)	-0.037* (0.022)		

Table 5. Estimation results for domain satisfactions, 1998–2014 (cont.)

	FS		JS		HS		HOS		LS	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
λ2 Bridging		1.321*** (0.378)		1.206*** (0.328)		0.648* (0.377)		1.402*** (0.366)		0.661* (0.347)
λ3 Worried		0.709* (0.390)		0.495 (0.367)		0.209 (0.402)		0.123 (0.459)		0.066 (0.420)
λ4 Mistrust		1.410*** (0.212)		1.673*** (0.189)		1.449*** (0.224)		0.844*** (0.212)		1.236*** (0.209)
λ5 Bridging and Worried		0.185 (0.341)		-0.325 (0.306)		-0.463 (0.346)		-0.446 (0.352)		-0.005 (0.374)
λ6 Bridging and Mistrust		0.216 (0.543)		-0.298 (0.477)		-0.352 (0.579)		-0.064 (0.586)		0.532 (0.559)
λ7 Worried and Mistrust		0.416 (0.424)		0.463 (0.356)		0.876** (0.404)		0.567 (0.472)		0.241 (0.383)
λ8 Bridging, Worried and Mistrust		0.711 (0.526)		-0.855 (0.542)		-1.122** (0.497)		-0.510 (0.581)		0.831 (0.511)
Constant	-4.419*** (0.695)	-1.964** (0.857)	0.199 (0.477)	2.506*** (0.571)	0.808 (0.705)	2.718** (0.859)	-1.845* (0.953)	-0.257 (1.088)	-0.799 (0.888)	1147 (0.996)
Atrho	Atrho12	Atrho13	Atrho14	Atrho15	Atrho23	Atrho24	Atrho25	Atrho34	Atrho35	Atrho45
Model 1	0.421*** (0.014)	0.326*** (0.015)	0.406*** (0.015)	0.282*** (0.015)	0.436*** (0.015)	0.299*** (0.014)	0.279*** (0.013)	0.270*** (0.015)	0.259*** (0.014)	0.297*** (0.015)
Model 2	0.404*** (0.014)	0.311*** (0.015)	0.399*** (0.015)	0.269*** (0.015)	0.418*** (0.015)	0.288*** (0.014)	0.264*** (0.013)	0.262*** (0.015)	0.246*** (0.014)	0.292*** (0.015)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	28,820	28,820	28,820	28,820	28,820	28,820	28,820	28,820	28,820	28,820

Note: CMP estimation with standard errors in parentheses using cluster and weights. Model 1 is the exogenous estimation for each domain. Model 2 is the endogenous estimation for each domain. Atrho coefficients show the correlation between different domains. In particular: 12 financial and job, 13 financial and health, 14 financial and housing, 15 financial and leisure, 23 job and health, 24 job and housing, 25 job and leisure, 34 health and housing, 35 health and leisure, 45 housing and leisure. ^a The variables capturing income characteristics are built using working income rather than household income in the job satisfaction analysis. * $p < .1$. ** $p < .05$. *** $p < .001$

Table 6. Estimation results for the categories of social-cultural capital, 1998–2014

	<i>Bridging</i>	<i>Worried</i>	<i>Mistrust</i>	<i>Bridging_</i> <i>Worried</i>	<i>Bridging_</i> <i>Mistrust</i>	<i>Worried_</i> <i>Mistrust</i>	<i>Bridging_</i> <i>Worried_</i> <i>Mistrust</i>
Economic resources							
Absolute income	-0.888 (0.578)	-0.512 (0.478)	-0.353 (0.557)	0.357 (0.425)	0.037 (0.329)	0.719* (0.403)	-0.530** (0.206)
Adaptation	-0.268 (0.190)	0.129 (0.160)	-0.022 (0.173)	0.064 (0.107)	-0.018 (0.085)	-0.008 (0.088)	0.003 (0.077)
Relative Deprivation	-0.020 (0.029)	0.013 (0.035)	-0.015 (0.032)	0.014 (0.021)	-0.006 (0.017)	0.033* (0.020)	-0.010 (0.018)
Relative Affluence	0.043 (0.034)	0.031 (0.026)	0.000 (0.032)	-0.018 (0.023)	0.002 (0.018)	-0.046** (0.021)	0.025** (0.011)
Psychological capital							
Neuroticism	0.002 (0.011)	0.009 (0.011)	0.022** (0.010)	-0.002 (0.006)	-0.005 (0.006)	0.002 (0.005)	-0.001 (0.006)
Extraversion	-0.013 (0.012)	0.020* (0.011)	0.001 (0.011)	0.005 (0.006)	-0.012* (0.006)	-0.003 (0.005)	-0.007 (0.006)
Openness	-0.005 (0.013)	-0.002 (0.011)	0.005 (0.011)	0.002 (0.006)	0.003 (0.006)	0.002 (0.005)	0.010* (0.005)
Agreeableness	-0.009 (0.013)	-0.017 (0.012)	0.004 (0.012)	0.007 (0.006)	-0.002 (0.006)	0.000 (0.006)	0.011* (0.006)
Conscientiousness	0.008 (0.010)	0.004 (0.008)	-0.006 (0.009)	-0.016** (0.007)	0.005 (0.005)	0.003 (0.004)	-0.003 (0.006)
LOC	-0.001 (0.013)	-0.012 (0.010)	0.005 (0.011)	0.009* (0.006)	0.009 (0.006)	0.002 (0.005)	0.002 (0.006)
Positive_Rep	-0.002 (0.010)	-0.002 (0.011)	-0.014 (0.011)	0.004 (0.005)	-0.001 (0.004)	0.004 (0.005)	0.012* (0.005)
Negative_Rep	-0.003 (0.011)	0.001 (0.010)	0.015 (0.010)	-0.009 (0.005)	-0.002 (0.005)	0.001 (0.004)	0.000 (0.004)
Risk	0.009** (0.003)	-0.009* (0.005)	-0.008 (0.006)	0.005** (0.002)	0.005** (0.002)	-0.010* (0.005)	0.005 (0.003)
Socio-demographic characteristics							
Male	-0.003 (0.014)	-0.024* (0.014)	-0.008 (0.015)	0.020** (0.009)	0.020** (0.007)	0.000 (0.007)	-0.004 (0.007)
East	0.015 (0.065)	0.005 (0.055)	0.030 (0.062)	0.053* (0.031)	0.014 (0.040)	-0.015 (0.026)	-0.013 (0.019)
Age	-0.042 (0.078)	0.152** (0.075)	-0.067 (0.091)	0.034 (0.047)	-0.058 (0.038)	-0.048 (0.037)	0.020 (0.035)
Age2	0.075 (0.083)	-0.159** (0.081)	0.075 (0.098)	-0.054 (0.049)	0.046 (0.043)	0.040 (0.038)	-0.035 (0.039)
Living partner	0.059** (0.021)	-0.006 (0.018)	-0.007 (0.020)	-0.037** (0.015)	-0.007 (0.012)	-0.007 (0.011)	-0.016 (0.012)
Children	0.009 (0.011)	0.001 (0.009)	-0.004 (0.011)	-0.011 (0.007)	-0.008 (0.007)	-0.007 (0.006)	-0.002 (0.007)
Adults	-0.003 (0.011)	0.006 (0.009)	0.009 (0.011)	-0.006 (0.007)	0.000 (0.008)	-0.012** (0.005)	-0.007 (0.006)
Years education	0.074 (0.112)	0.156** (0.062)	-0.037 (0.112)	-0.033 (0.041)	-0.011 (0.040)	-0.003 (0.034)	-0.005 (0.035)
Owner	-0.009 (0.022)	0.019 (0.017)	-0.015 (0.021)	0.002 (0.012)	0.007 (0.010)	0.005 (0.010)	-0.011 (0.010)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chamberlain-Mundlak terms	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	28,820	28,820	28,820	28,820	28,820	28,820	28,820

Note: Standard errors in parentheses using clustering. * $p < .1$. ** $p < .05$. *** $p < .001$.