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## The effects of domain satisfaction on overall life satisfaction in Türkiye

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**Abstract:** The aim of this study is to examine the determinants of overall life satisfaction in Türkiye by using six different life domains (e.g., housing, financial standing, work conditions, the government's security policies, health, and marriage). In this way, it will be possible to drive a more efficient policy implications through domain satisfactions. Life Satisfaction Survey Micro Data Set of the Turkish Statistical Institute was used in the study during the period 2014–2017, and the determinants of overall life satisfaction are estimated simultaneously using the regressions created for the six domain satisfactions. The empirical findings of the study show that financial satisfaction and marriage satisfaction increase life satisfaction more than other domains in Türkiye.

**Keywords:** life satisfaction; happiness; instrumental variable-ordered probit model; conditional-mixed process.

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## 1 Introduction

Although the happiness is the subject of many recent studies, Richard A. Easterlin was the first to work in this field. In his pioneering work, Easterlin (1974) revealed that there is a close relationship between income levels and happiness within and between countries. When he examined the effect of income changes over time on happiness, he found that contrary to expectations, income increases after a certain point did not increase the level of happiness. According to Easterlin, the increase in income goes with the increase in desire, as the individual with increasing income begins to desire what he does not have. As a result, there is no significant increase in average happiness after a level due to social comparison. This situation is called the Easterlin Paradox in the literature.

The number of studies on the economics of happiness has increased in the last few decades, and in parallel with this increase, the concepts of subjective well-being (SWB) and life satisfaction have also started to be used in the literature. Based on the importance of life satisfaction, this study aims to estimate the determinants of life satisfaction in Türkiye through six different domains of satisfaction. The satisfaction from marriage, the government's security policies, work conditions, housing conditions, financial conditions, and health conditions domains are analysed and linked to general satisfaction. In doing so, two challenging arguments are tested empirically:

- What are the determinants of each domain's satisfaction?
- Which domain has a greater impact on overall life satisfaction?

Or, do the different life domains have similar effects on overall life satisfaction? In this way, it is aimed to provide more effective policy inferences by taking into account different domain satisfactions. In order to address these issues, this study uses the Life Satisfaction Survey Micro Data Set of the Turkish Statistical Institute for the period 2014–2017.

This study contributes to the literature from various angles. The paper's main contribution is that this is the first study that estimates the overall life satisfaction from domain satisfactions simultaneously for Türkiye to the author's knowledge. As the SWB literature generally analyses developed countries, this study examining Türkiye also contributes to the happiness economics literature on developing countries. Since marriage satisfaction is generally ignored in the life satisfaction literature, this study contributes to the literature by including marital satisfaction in the analysis. There are few studies in the literature that estimate life satisfaction from domain satisfactions; however, this study is expected to contribute to the literature by using Roodman's Stata command conditional mixed-process (CMP) in the simultaneous equations, which has not been used before.

The remainder of the paper is organised as follows. Section 2 presents a review of empirical studies on happiness and life satisfaction. Section 3 introduces the data and the methodology employed in the paper. Section 4 reports and discusses the empirical results. The final section provides a brief summary and concluding remarks.

## **2 Literature review**

Following Easterlin (1974), numerous studies have been conducted to analyse happiness and its determinants. These studies have analysed the relationship between income and happiness for various countries and country groups using macro or micro-level data. While some of the studies analysed the simple relationship between these two variables (e.g., Peiro (2006), Lucas (2007), Stevenson and Wolfers (2008), Khalil (2022)), some of them made analyses based on the view that individuals or societies determine their happiness levels by comparing themselves with other people or groups that they saw as their equivalent (e.g., Veenhoven (1991), Clark et al. (2008), Diener et al. (2013), Tauseef (2022)).

In addition to a general analysis of the determinants of life satisfaction or happiness, a limited number of studies have attempted to analyse the effects of different domains of life satisfaction on overall satisfaction. In this group of studies, Van Praag et al. (2003) examined the effects of six different domains for Germany for the period 1992–1997. The authors concluded that financial, job, and health satisfaction were the domains that most affected overall satisfaction. In another study, Cummins (2005) classified 173 domain satisfactions under seven main headings to predict overall life satisfaction using the Comprehensive Quality of Life Scale (ComQol). ComQol is created by mean scores of 32 domain satisfaction studies from 1973 to 1994. In the study, it was accepted that general life satisfaction consists of the sum of the sub-domains, and based on this, it was concluded that the intimacy domain dominates overall life satisfaction.

Using a similar approach, Easterlin and Sawangfa (2009) analysed happiness via four domains (financial, family, job, and health satisfaction) based on the General Social Survey results between 1973 and 1994 for US. According to their findings, all domains have a similar effect on happiness, and none of the domain satisfactions alone can estimate the overall happiness level. The study found that the most critical variable affecting each domain and overall happiness level was education. Well-educated people are happier than others, and a higher level of education increases their satisfaction in all domains.

Studies examining the determinants of happiness in Türkiye use different data sources. Researchers commonly use the Turkish Statistical Institute's Life Satisfaction Surveys (LSS). Bozkuş et al. (2006), who are among these studies, analysed the 2004 data by using the Ordered Logit Model (OLM) method to analyse the level of happiness. The findings of this study show that men are happier than women, and being in high-income levels, living in an urban area and having good health status have positive effects on happiness levels. Those who are in the middle age group are happier than those who are in the younger age groups, and high educational attainment has a negative impact on happiness. In another study using LSS data, Şimşir (2013) examined the determinants of happiness in Türkiye using 2010 data. Although Şimşir (2013) also revealed that high income increases happiness, unlike the other study, the findings show that being a woman and living in a rural area increase happiness. Unlike other studies, Eren and Aşıcı (2017) analysed happiness not only for a single year but for the period 2004–2013 using the OLM method. According to their findings, working conditions and job satisfaction are as important as having a job for happiness. Having a

higher diploma degree has a positive effect on happiness if this degree provides a better income. Akay and Timur (2017) examined the effects of socio-demographic and economic factors on happiness for women and men separately based on the results of the LSS by employing the Generalised Ordered Logit Model for the years 2009 and 2014. People who can make a living, open a business, buy a car, are hopeful, and live in urban areas are happier and more satisfied than others. The effect of marriage differs through year and gender. Güzel and Görmüş (2023) used multiple linear regression analysis to determine which satisfactions affect happiness in Türkiye. Except for education satisfaction, all other satisfactions (health, marital status, housing, social life, etc.) were found to increase happiness.

Besides Life Satisfaction Surveys, another source that contains data for Türkiye is the World Values Survey. Selim (2008) used the 1990, 1996, and 2001 World Values Survey results to analyse life satisfaction and happiness in Türkiye. His findings reveal that high income, marriage, and good health positively affect life satisfaction and happiness. However, being unemployed and an increasing number of children affect life satisfaction negatively. In addition, as people age, their life satisfaction decreases. Akın and Şentürk (2012) obtained similar results to Selim (2008) using the European Quality of Life Survey data: being married and having good health affect happiness positively. On the other hand, education level reduces happiness because people with higher education have higher expectations. In a recent study that uses data from the World Values Survey, Seçilmiş (2021) analysed the determinants of life satisfaction and happiness, focusing on value orientation. The study's findings reveal that Turkish people have shown more materialistic value orientation in the last two decades, and a significant relationship exists between value orientations and SWB.

Apart from the studies mentioned above focusing on absolute happiness, there are also studies in the literature that analyse relative happiness for Türkiye. In these studies, which mainly used LSS data, it was found that relative income is more important than absolute income level (e.g., Dumludağ (2016), Caner (2015), Çirkin and Göksel (2016), Uğur (2019)).

In all the studies mentioned above, the factors affecting life satisfaction or happiness were evaluated in general. In this study, unlike other studies, first, the factors affecting six life domains were evaluated separately, then the results obtained from these six domains were evaluated simultaneously, and the determinants of general life satisfaction were estimated from there.

### **3 Data**

The Life Satisfaction Survey has been conducted at the country level by the Turkish Statistical Institute since 2003 in order to determine the general happiness perception, social values, and general satisfaction levels of people in their basic life areas. The survey covers all non-institutional adult populations aged 18 and above who reside within the Republic of Türkiye's borders. The study used the LSS micro datasets of TURKSTAT between 2014 and 2017. The datasets containing cross-sectional data for the selected years include 36,238 observations. The dataset covers 7984 observations for 2014, 9397 for 2015, 8981 for 2016 and 9876 for 2017. Estimates in the study are limited to married and working individuals only because of testing financial satisfaction and marriage satisfaction domains. As a result of this limitation, the number of observations included in the study decreased to 11,615.

The dataset includes two data groups at the individual and household level.<sup>1</sup> These individual and household data are merged for all four years one by one. The codes of

some variables (for example, 'highest level of education attained', 'presence of plumbing in residence', 'presence of a toilet in residence', 'the existence of bathroom in residence') differ from year to year, so these variables were recoded to eliminate these differences. The age variable is also recoded by creating age groups. Then, the data is appended to combine the years. Finally, dummy variables were created for the respective years.

Some of the independent variables in the domains were created from the following question in the questionnaire: 'What makes you happiest in life?' The options for respondents are success, job, health, love, and money. Four dummy variables are separately created for money, job, health, and love answers. These dummies are used in the corresponding domains (money in financial satisfaction, job in job satisfaction, health in health satisfaction, and spouse and love in marriage satisfaction).

The equations of each domain are created by convenient independent variables for them. All dependent variables are categorical ones. Dependent variables of five domains are ordered with a systematic increase ranging from 1 'very dissatisfied' to 5 'very satisfied'. Additionally, the dependent variable of safety satisfaction is ranged from 1 'very insecure' to 5 'very secure'.

The direct question about overall life satisfaction has been asked only since 2017 in the LSS, so the life satisfaction question could not be used in this study. The happiness level measures overall life satisfaction in this study. In the raw data, the life satisfaction variable ranges from 1 'very happy' to 5 'very unhappy'. All categorical dependent variables recoded from systematic decreasing form to increasing form to interpret variables in terms of satisfaction levels. To illustrate, if the sign of the coefficient of an independent variable is positive, this means that an increase in the independent variable increases satisfaction.

In the survey, water cut dummies were derived from the question: "Is there a water cut problem in the dwelling you live in?". The question has two options: 'yes' and 'no'. It also has some missing values, but these missing values match with the presence of mains water in the dwelling. In other words, the mains water dummy is created by water cut missing values, so there are three dummies for water cut.

## 4 Methodology

Binary Outcome Models are used where the dependent variable only takes values 0 or 1. Logit Model (LM) and Probit Model (PM) are widely used as binary outcome models. If the values of the dependent variable represent a sequence, ordered models are used. Instrumental Variable-Ordered Probit Model (IV-OPM) estimates life satisfaction in this study with Roodman's Stata command CMP (Roodman 2011). IV-OPM is a different version of Amemiya's (1978) and Newey's (1987) IV-OPM. The difference between Instrumental Variable-Probit and Instrumental Variable-Ordered Probit Models is that discrete endogenous regressor is categorical in IV-OPM. In IV-OPM, equations are jointly estimated using Stata's user-written command CMP (Roodman 2011).

CMP is essentially a seemingly unrelated regression (SUR) estimation program. CMP converts to ML SUR to consistently estimate parameters in simultaneous estimates. Furthermore, equation systems became recursive and fully observed by adding the observed endogenous variables into  $X_j$ , which is the vector of the predetermined variables (Roodman 2011). The intuition under this process is shown below in equation systems:

$$y_1^* = \theta_1 + \varepsilon_1 \quad (1)$$

$$y_2^* = \theta_2 + \varepsilon_2 \quad (2)$$

$$\theta_1 = \beta_1 x \quad (3)$$

$$\theta_2 = \delta y_1 + \beta_2 x \quad (4)$$

$$y = g(y^*) = [1(y_1^* > 0), 1(y_2^* > 0)]^1 \quad (5)$$

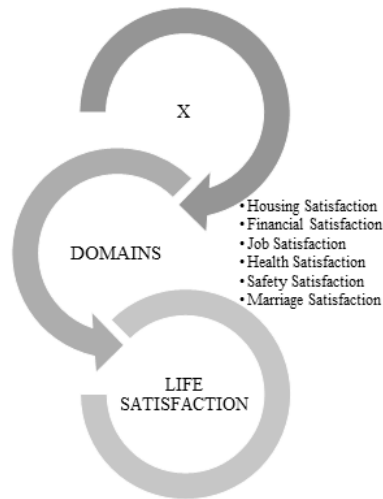
$$\varepsilon|x \sim i. i. d. N(0, \Sigma) \quad (6)$$

$$\Sigma = \begin{bmatrix} 1 & \rho \\ \rho & 1 \end{bmatrix} \quad (7)$$

The term  $y_2^*$  is the life satisfaction variable, and  $y_1^*$  is the combinations of all domain satisfactions from the simultaneous equation systems, while  $\theta$ ,  $\beta$ , and  $\delta$  are the coefficients we estimate.

In Figure 1, there are two stages to attain life satisfaction. In the first stage, a set of explanatory variables explain six domain satisfactions. In the second stage, life satisfaction is constituted through these six domains. Van Praag et al. (2003) described this process as a two-layer model. The model used in this study is similar to that used by Van Praag et al. (2003). The authors also used six domains to estimate life satisfaction as in the study; five of these domains are the same as in this study.

**Figure 1** Formation of life satisfaction



Source: Van Praag et al. (2003)

The following two equations are designed in terms of the study in which Easterlin and Sawangfa (2009) estimate life satisfaction from selected domain satisfactions and explain the above cycle.

$$LS = LS(yeardummies, DS_1, \dots, DS_j) \quad j = 1, \dots, J \quad (8)$$

$$DS_j = DS_j(\text{yeardummies}, \text{gender}, \text{educationallevels}, \text{incomebrackets}, x_j) \quad (9)$$

The domains consist of common and specific explanatory variables that are represented by the notation  $X$ . Gender, educational levels, and income brackets are included in all domains. However, some explanatory variables (e.g., age groups, job status) are shared between selected domains, and some are unique for each domain. Simultaneous estimation solves the endogeneity problem by eliminating the relationship between error terms.

## 5 Results

### 5.1 Housing satisfaction

The regression results for housing satisfaction are presented in Table A1. In the Life Satisfaction Survey, housing satisfaction was measured using the following question: “Are you satisfied with your dwelling?”. As can be followed from Appendix Table A1, married female workers feel less satisfied with their homes than married male workers. All educational levels are statistically insignificant except for primary and secondary school graduates. Housing satisfaction increases in line with an increase in satisfaction with neighbours and the neighbourhood, and among all variables, satisfaction with the neighbourhood has the most significant effect. As in our study, Morris et al. (1976) also showed that neighbourhood satisfaction strongly impacts housing satisfaction. The increase in household size decreases housing satisfaction due to the restriction of living space. In line with the results of some recent studies in the literature, we found that homeowners are more satisfied than the tenants (See Elsinga and Hoekstra (2005) and Ucal and Günay (2022)). The number of rooms and square meters of a house positively influences housing satisfaction. The presence of a bathroom also positively affects housing satisfaction compared to the lack of a bathroom. Consistent with our expectations, people who do not have problems such as leaky roofs, moist walls, decayed window sash, inadequate daylight, a sewer overflow, or a flood in their houses are more satisfied than people who have any of these problems. The people who do not face a power cut or water cut problem in their houses have higher housing satisfaction. We obtained similar results with the study of Ucal and Günay (2022) on the negative relationship between fuel poverty and satisfaction. No statistically significant differences were found between income brackets and housing satisfaction.

### 5.2 Financial satisfaction

Financial satisfaction was measured using the following question: “Are you satisfied with your earnings from your work?” in the LSS survey. The results for the financial satisfaction are presented in Table A2. As shown in Table A2, the age effect is U-shaped for financial satisfaction. We found that females are less satisfied than males. The financial satisfaction of the illiterate category is greater than any other category. Moreover, the individuals who finished secondary vocational school have the lowest financial satisfaction and have higher income expectations concerning other categories. Private sector workers are less satisfied than public sector workers, and unpaid family workers have more financial satisfaction compared to self-employed. As expected, people who see money as the greatest source of happiness are less satisfied than people who do not. Our study also showed that those who think their future household income will be better are more satisfied than those who think it



will be worse. We report that respondents who think that the future Turkish job market will be better are more satisfied than respondents who think it will be worse. If an individual has gotten a job in the recent year, his/her income has increased, or s/he has not experienced a decrease in income or savings, s/he has positive financial satisfaction. Our study supports Van Praag et al.'s (2003) findings regarding the positive relationship between having savings and financial satisfaction. Those who have not cut back on vacation expenses in the recent year are more satisfied than those who have cut back. The person who cares about other people's personal belongings is more satisfied than the person who does not care. This finding is consistent with Uğur (2019). Financial satisfaction decreases if the number of people providing income in households increases. The financial satisfaction of those who can very easily make ends meet with the monthly household income is higher than the other categories. Financial satisfaction increases as income increases, but the rate of increase in financial satisfaction is lower in the highest income bracket. This finding is consistent with the moderate versions of the Easterlin Paradox. It also relates to the adaptation and comparison theories in explaining the money-happiness relationship.

### *5.3 Job satisfaction*

The LSS survey measured job satisfaction by asking, "Are you satisfied with your job?". According to the findings regarding job satisfaction presented in Table A3, people in the youngest age group are less satisfied than all other age groups. Young people's dissatisfaction with their work may cause high brain drain. Job satisfaction is higher for female and older workers. Our results fully support Clark's (1996) findings, except for findings on education. The individuals who finished secondary vocational school have the highest job satisfaction. It should be noted that vocational secondary school graduates have the highest job satisfaction and the lowest financial satisfaction among all educational levels. Private sector workers are less satisfied than public sector workers. In parallel to financial satisfaction, the job satisfaction of public sector workers is also higher. This may be related to public sector jobs being more secure than private sector jobs. Employee respondents are more satisfied than self-employed respondents. Job satisfaction of individuals who are very satisfied with their household income, leisure time, commuting time, and colleagues is higher than individuals who are not satisfied. Those who think their future job status will be better are more satisfied than those who think it will be worse. As expected, the job satisfaction of those who have been unemployed in the recent year is very low (Clark and Oswald (1994)). Our study showed that there had been an increase in job satisfaction of those who have set up a new business in the recent year. If an individual's income has increased, or s/he has not experienced a decrease in income, s/he has positive job satisfaction. We found that people who care about other people's jobs are less satisfied with their work. The membership of a labour union has a positive effect on job satisfaction. Job satisfaction of those who can meet their needs very easily with their monthly household income is better than others. No statistically significant differences were found between income brackets and job satisfaction.

### *5.4 Health satisfaction*

Health satisfaction was measured using the following question: "Are you satisfied with your health?" in the survey, and the estimation results for health satisfaction are presented in Table A4. As shown in this table, health satisfaction decreases with age. Females are less satisfied than males. We found that satisfaction with household income positively influences

health satisfaction, like Frijters et al. (2005). The health satisfaction of citizens who are very satisfied with the government's health services is higher than others. Green services provided by the municipality have positive impacts on health satisfaction. Those who are registered to a social security system are more satisfied than those who are not registered. People who are registered to bank fund<sup>2</sup> are the most satisfied category among all other social security institutions. People who have faced a health problem in the recent year are less satisfied than people who have not faced it. This finding may be consistent with Deaton's (2008) work. Deaton (2008) pointed out that people in their 50s have lower health satisfaction than their elders. This is because people in this age group are experiencing severe health problems for the first time. Although their health is still better than their elders, experiencing the fear of death for the first time harms their health satisfaction. In our results, this situation becomes evident mainly in the 40s in Türkiye. Fuel poverty negatively affects health satisfaction which is supported by Ucal and Günay (2022). Health satisfaction increases if the number of people providing income in households increases. No statistically significant differences were found between income brackets and health satisfaction.

### 5.5 *Safety satisfaction*

Safety satisfaction was measured using the following question: 'How secure do you feel when you are walking alone in your neighbourhood?' in the survey. The estimation results in Table A5 show that as people age, they feel safer walking in the street. The findings also reveal that females feel less secure than males. Illiterate people feel fully secure themselves in the streets. Supporting Van Praag et al. (2003), we also found that more education has a negative effect on environment satisfaction. If people feel that the police or gendarmes intervene on time, they feel more secure than people who do not think the same. People who have experienced fraud in the recent year feel less secure than people who have not experienced it. Those who do not feel pressured because of their gender or political views feel more secure than those who do. People who can make ends meet very easily feel more secure than those who can make ends with great difficulty. Those who have experienced robbery feel less secure than those who have not experienced it. No statistically significant differences were found between income brackets and safety satisfaction.

### 5.6 *Marriage satisfaction*

In the LSS, marriage satisfaction was measured using the question, "Are you satisfied with your marriage?". The findings in Appendix Table A6, reveal that females are less satisfied in their marriages than males. No statistically significant differences were found between age groups and marriage satisfaction. Completing any level of education has a positive effect on marriage satisfaction. Those who say their spouses or love makes them happy are more satisfied than those who do not. People who feel very satisfied with their household income also have higher marriage satisfaction. People who feel very satisfied with their relatives have higher marriage satisfaction. This finding is consistent with Levenson et al. (1993). Individuals who are satisfied with their social life and spare time for themselves have higher marriage satisfaction. Contrary to Ryder's (1973) work, having a newborn baby makes couples' marriages even stronger in Türkiye. The person who cares about other people's family life is more satisfied than the person who does not care about it. It is expected that relativity in family life makes people happier. Wealthier people are found to have more marriage satisfaction than poor people.

### 5.7 Life satisfaction

In this study, the effects of six domain satisfactions on life satisfaction is analysed. The Instrumental Variable-Ordered Probit Model has been applied to life satisfaction using Roodman's Stata command CMP. Life satisfaction is estimated from six domains by using IV-OPM between 2014 and 2017. The sample consists of married people who have a job. The estimation results for overall life satisfaction is presented in Table 1.

Regressors do not have a constant term, so normalisation occurs. Hence, cut points appear with increasing thresholds from  $\alpha_0 = -\infty$  to  $\alpha_m = \infty$  for  $m$  outcomes,  $0_1, \dots, 0_m$ . The cut points are unknown free parameters in the IV-OPM (Roodman 2011). An endogeneity problem arises from the estimation of life satisfaction. Rho and atanhrho values in Table 1 test for the endogeneity among domains. When the rho coefficients lie between  $-1$  and  $1$ , there is endogeneity. In Table 1, all rho values are within the specified number range. Thus, the unobservable relationships between domain satisfactions bring about this endogeneity problem.

The results indicate that financial and marriage satisfaction play a key role in reaching the best possible life for any individual. Life satisfaction is most strongly influenced by financial satisfaction among all other life domains. People who are financially satisfied with their lives also have higher overall life satisfaction in Türkiye. Marriage satisfaction is the domain with the second highest impact on overall life satisfaction. In Türkiye, which has a traditional family structure, it is seen that the overall life satisfaction of people with high marriage satisfaction is also high. Yakut et al. (2021) obtained a similar result regarding marriage satisfaction. These two domains are followed by health satisfaction, job satisfaction, and housing satisfaction. Safety satisfaction has the lowest impact on life satisfaction. Year dummies are not statistically significant.

In the literature, the debate over whether money buys happiness has increased considerably in recent years. Our estimation results show that financial satisfaction increases as income increases, but the rate of increase in financial satisfaction is lower in the highest income group. This finding is consistent with the moderate versions of the Easterlin Paradox (Pehlivan et al., 2022) also found the same results). The finding is also in line with the adaptation and comparison theories in explaining the money-happiness relationship. It may be regarded as evidence that people adapt to higher income levels after an increase in income. This is because the increase in happiness is lower than the increase in their income levels. Comparison effect can be another reason for the lower increase in happiness in higher income brackets: As people switch to higher income brackets, the environment where the comparison is made changes. In the new environment, people who experience income increases start to compare themselves with higher income brackets, limiting the positive effect of income increase on happiness. Therefore, this study is closer to the literature supporting (Easterlin, 1974).

Marriage satisfaction is the second most influential domain for life satisfaction. Contrary to popular belief, marriage satisfaction increases at higher educational levels. Increasing the level of education can increase marriage satisfaction and overall life satisfaction in Türkiye. Marriage satisfaction of women is meager when compared to men. Lower marriage satisfaction of women may be related to the high domestic violence rates in Türkiye.

**Table 1** Simultaneous estimation results for life satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	0.012	0.0563
2016	-0.031	0.0431
2017	-0.014	1.0743
Housing satisfaction	0.104*** <sup>1</sup>	0.0242
Financial satisfaction	0.550***	0.0236
Job satisfaction	0.346***	0.0349
Health satisfaction	0.370***	0.0348
Safety satisfaction	0.089***	0.0225
Marriage satisfaction	0.522***	0.0477
/cut 11	1.497***	0.3207
/cut 12	2.689***	0.3216
/cut 13	3.144***	0.3220
/cut 14	6.483***	0.3252
/cut 21	-0.463	0.9991
/cut 22	1.046	0.9994
/cut 23	1.734*	0.9994
/cut 24	4.013***	0.9998
/cut 31	-1.531***	0.5047
/cut 32	-0.231	0.5050
/cut 33	0.323	0.5052
/cut 34	3.074***	0.5066
/cut 41	-1.439***	0.4412
/cut 42	-0.198	0.4404
/cut 43	0.468	0.4404
/cut 44	2.954	0.4411
/atanhrho 12	0.023	0.2821
/atanhrho 13	1.091***	0.2825
/atanhrho 14	1.640***	0.2827
/atanhrho 15	3.495***	0.2832
/atanhrho 16	-1.031*	0.5646
/atanhrho 17	-0.593	0.5642
/atanhrho 23	-0.102	0.5641
/atanhrho 24	2.753***	0.5651
/atanhrho 25	4.836***	0.1997
/atanhrho 26	5.862	0.1979
/atanhrho 27	6.990***	0.1968
/atanhrho 34	8.758***	0.1956
/atanhrho 35	0.128***	0.0142
/atanhrho 36	0.113***	0.0159
/atanhrho 37	0.113***	0.0153
/atanhrho 45	0.063***	0.0140
/atanhrho 46	0.054***	0.0166
/atanhrho 47	-0.061***	0.0230
/atanhrho 56	0.344***	0.0190
/atanhrho 57	-0.044**	0.0172
/atanhrho 67	0.061***	0.0117
/rho 12	0.128	0.0140
/rho 13	0.112	0.0157

**Table 1** Simultaneous estimation results for life satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
/rho 14	0.112	0.0151
/rho 15	0.063	0.0139
/rho 16	0.054	0.0166
/rho 17	−0.061	0.0229
/rho 23	0.331	0.0166
/rho 24	−0.044	0.0173
/rho 25	0.0606	0.0117
/rho 26	−0.054	0.0184
/rho 27	−0.450	0.0203
/rho 34	0.141	0.0142
/rho 35	0.009	0.0135
/rho 36	0.169	0.0151
/rho 37	−0.313	0.0267
/rho 45	0.067	0.0128
/rho 46	0.319	0.0135
/rho 47	−0.141	0.0289
/rho 56	0.022	0.0139
/rho 57	−0.068	0.0246
/rho 67	−0.159	0.0325
Log Likelihood	−69897844	
N	11,615	

<sup>1</sup> \*\*\*,\*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

The effect rankings of domain satisfaction on overall satisfaction estimated for Türkiye are quite similar to the findings obtained by Van Praag et al. (2003). Van Praag et al. (2003) estimated general satisfaction separately for workers in West and East Germany, and the study gives different outputs for these two groups of workers. Life satisfaction is influenced most by financial, health, and job satisfaction. They have a separate order for west and east workers, but these three domains are in the top three. However, environment and leisure satisfaction have the lowest positive effect on life satisfaction, just like in safety satisfaction in Van Praag et al.'s (2003) study.

## 6 Conclusion

The aim of this study is to analyse the determinants of overall life satisfaction in Türkiye through six domain satisfactions, which are housing satisfaction, financial satisfaction, job satisfaction, health satisfaction, safety satisfaction, and marriage satisfaction. We used the Life Satisfaction Survey Micro Data Sets of the TURKSTAT for the years between 2014 and 2017 in the study. In the empirical analysis, the determinants of overall life satisfaction are estimated by using the Instrumental Variable-Ordered Probit Model (IV-OPM) with Roodman's user-written Stata command conditional mixed process (CMP).

We find that financial satisfaction and marriage satisfaction significantly increase life satisfaction more than the other domains. In order to increase the overall satisfaction levels of the Turkish people, the government must implement some policies. Since overall life satisfaction is mainly affected by financial and marriage satisfaction, the policies must be towards these domains.

Since it is known that the share of those working with minimum wage in total employees is over 40% in Türkiye, governments must protect the purchasing power of the minimum wage and exclude the minimum wage from income tax in order to increase financial satisfaction. Implementing policies that increase marriage satisfaction will also positively affect overall life satisfaction. According to our findings, married couples who live in their own houses have higher marriage satisfaction than those who live in rent. Therefore, government policies to offer low-rate mortgage loans to married couples can increase marriage satisfaction.

Our findings call for some future work. To illustrate the mechanism behind the lower satisfaction levels of married women can be enlightened in a more specific study. The relationship between the lower happiness levels of young workers and the growing migration of the young population abroad is an important issue that deserves to be the subject of another study.

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## Compliance with Ethical Standards

## Conflict of Interest

The authors declare no conflict of interest.

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## Notes

<sup>1</sup>Codebook can be provided upon request.

<sup>2</sup>Bank Fund is a fund that is established for employees in some banks, insurance, reinsurance companies, chambers of commerce, and chambers of industry.



## Appendix

**Table A1** Simultaneous estimation results for housing satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	0.065	0.0691
2016	0.052	0.0532
2017	0.016	1.3390
Gender (ref: Male)		
Female	−0.104*** <sup>1</sup>	0.0308
Education (ref: Illiterate)		
Literate but not a graduate	−0.060	0.1105
Primary school	0.152*	0.0860
Primary education	0.132	0.1149
Secondary school	0.263***	0.0929
Vocational secondary school	0.335	0.2482
High school	−0.053	0.0939
Vocational high school	0.022	0.0959
2 or 3 higher education	−0.028	0.1040
Faculty	0.009	0.0973
Master/Doctorate	−0.156	0.1211
Satisfaction with neighbourhood (ref: Very dissatisfied)		
Very satisfied	3.123***	0.1128
Satisfied	1.336***	0.0954
Average	0.700***	0.1000
Dissatisfied	0.553***	0.0994
Satisfaction with neighbours (ref: Very dissatisfied)		
Very satisfied	0.836***	0.1353
Satisfied	0.596***	0.0579
Average	0.485***	0.127
Dissatisfied	0.314***	0.1309
Household Size	−0.033***	0.0080
Tenure Status (ref: Owner)		
Tenant	−0.378***	0.0301
Lodging	−0.019	0.0949
Other	−0.042	0.0435
Rooms	0.161***	0.0234
Square Meter	0.004***	0.0005
Presence of piped water system (ref: Absent)		
Within dwelling	0.515***	0.1859
Out of dwelling	−0.648***	0.2448
Presence of toilet (ref: Within dwelling)		
Out of dwelling	−0.022	0.0692
Absent	0.252	0.3284
Presence of Bath (ref: Absent)		
Within dwelling	0.897***	0.2000
Out of dwelling	1.343***	0.2381
Leaky Roofs Problem (ref: Yes)		
No	0.532***	0.0314
Daylight Problem (ref: Yes)		
No	0.144***	0.0332

**Table A1** Simultaneous estimation results for housing satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Flood Problem (ref: Yes)		
No	0.287***	0.0468
Noisy Neighbours Problem (ref: Yes)		
No	0.070*	0.0418
Noisy Streets Problem (ref: Yes)		
No	0.030	0.0338
Power Cut Problem (ref: Yes)		
No	0.056*	0.0329
Water Cut Problem (ref: Yes)		
No	0.102***	0.0374
No mains water	0.123	0.0984
Heating Problem (ref: Yes)		
No	0.185***	0.0330
Income Brackets (ref: Income bracket 1)		
Income bracket 2	0.083*	0.0453
Income bracket 3	0.052	0.0426
Income bracket 4	-0.021	0.0437
Income bracket 5	-0.039	0.0508
Log Likelihood	-69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

**Table A2** Simultaneous estimation results for financial satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	0.042	0.0574
2016	0.017	0.0440
2017	0.032	1.0926
Age Groups (ref: 18 < age < 25)		
24 < age < 35	-0.287*** <sup>1</sup>	0.0687
34 < age < 45	-0.308***	0.0704
44 < age < 55	-0.283***	0.0724
54 < age < 65	-0.207***	0.0770
64 < age	-0.092	0.0975
Gender (ref: Male)		
Female	0.092***	0.0281
Education (ref: Illiterate)		
Literate but not a graduate	-0.356***	0.0873
Primary school	-0.274***	0.0684
Primary education	-0.232**	0.0940
Secondary school	-0.330***	0.0740
Vocational secondary school	-0.835***	0.1720
High school	-0.298***	0.0754
Vocational high school	-0.335***	0.0772
2 or 3 higher education	-0.353***	0.0846
Faculty	-0.343***	0.0796
Master/Doctorate	-0.460***	0.0979
Workplace (ref: Public)		

**Table A2** Simultaneous estimation results for financial satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Private	−0.123***	0.0340
Employment Status (ref: Self-employed)		
Employee	0.017	0.0283
Employer	0.060	0.0484
Unpaid family worker	0.132***	0.0514
Money	−0.224***	0.0553
Household Income in Future (ref: Worse)		
Better	0.432***	0.0384
Same	0.282	0.0345
No Idea	0.258***	0.0493
Turkish Job Market in Future (ref: Worse)		
Better	0.183***	0.0352
Same	−0.003	0.0317
No Idea	0.017	0.0514
Turkish Economy in Future (ref: Worse)		
Better	0.035	0.0356
Same	0.017	0.0336
No Idea	0.021	0.0494
Got a Job <sup>2</sup> (ref: Yes)		
No	−0.136***	0.0382
Irrelevant	−0.015	0.0497
Lost The Job <sup>2</sup> (ref: Yes)		
No	0.018	0.0509
Irrelevant	0.0382	0.0658
Income Decreased <sup>2</sup> (ref: Yes)		
No	0.234***	0.0282
Irrelevant	0.149	0.0962
Income Increased <sup>2</sup> (ref: Yes)		
No	−0.228***	0.0238
Irrelevant	−0.269***	0.1007
Savings Decreased <sup>2</sup> (ref: Yes)		
No	0.050**	0.0252
Irrelevant	−0.104***	0.0369
Cut Down Vacation Expenses <sup>2</sup> (ref: Yes)		
No	0.231***	0.0248
Irrelevant	−0.073***	0.0272
Bought a New Car <sup>2</sup> (ref: Yes)		
No	−0.148***	0.0331
Bought a New House <sup>2</sup> (ref: Yes)		
No	−0.090*	0.0503
Sold The Car <sup>2</sup> (ref: Yes)		
No	−0.111***	0.0383
Irrelevant	−0.057	0.0602
Sold The House <sup>2</sup> (ref: Yes)		
No	0.021	0.0754
Irrelevant	0.060	0.0893
Got Into Debt <sup>2</sup> (ref: Yes)		
No	0.179***	0.0228

**Table A2** Simultaneous estimation results for financial satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Paid His/Her Debt <sup>2</sup> (ref: Yes)		
No	-0.021	0.0222
Irrelevant	-0.047	0.0450
Newborn Baby <sup>2</sup> (ref: Yes)		
No	-0.138***	0.0387
Got Promotion <sup>2</sup> (ref: Yes)		
No	-0.013	0.0648
Your Options About Other People's Belongings (ref: Important)		
Neutral	-0.016	0.0503
Unimportant	-0.071**	0.0350
Your Opions About Other People's Income (ref: Important)		
Neutral	0.080	0.0493
Unimportant	-0.007	0.0327
Others' Opions About Your Belongings (ref: Important)		
Neutral	-0.126**	0.0557
Unimportant	0.034	0.0373
Others' Opions About Your Income (ref: Important)		
Neutral	-0.088	0.0553
Unimportant	-0.049	0.0360
Irrelevant	0.060	0.1700
Feeling Social Pressure on Your Income (ref: Always)		
Never	1.449	0.9849
Sometimes	1.275	0.9870
Often	1.072	0.9915
Interested in Economy (ref: Yes)		
Neutral	0.030	0.0253
No	0.085***	0.0247
No Idea	0.362***	0.0987
Household Size	0.003	0.0063
Tenure Status (ref: Owner)		
Tenant	-0.091***	0.0235
Lodging	0.192***	0.0748
Other	-0.026	0.0326
Number of Person Providing Household Income	-0.069***	0.0160
Ability to Make Ends Meet (ref: With a great difficulty)		
Very easily	1.421***	0.0825
Easily	1.034***	0.0455
Fairly easily	0.809***	0.0399
With a difficulty	0.526***	0.0376
Income Brackets (ref: Income bracket 1)		
Income bracket 2	0.111***	0.0343
Income bracket 3	0.281***	0.0340
Income bracket 4	0.333***	0.0376
Income bracket 5	0.235***	0.0467
Log Likelihood	-69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

<sup>2</sup> It happened in the recent year.

**Table A3** Simultaneous estimation results for job satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	−0.012	0.0646
2016	0.033	0.0497
2017	−0.010	1.2388
Age Groups (ref: 18 < age < 25)		
24 < age < 35	0.094	0.0789
34 < age < 45	0.151* <sup>1</sup>	0.0802
44 < age < 55	0.165**	0.0826
54 < age < 65	0.258***	0.0874
64 < age	0.112	0.1105
Gender (ref: Male)		
Female	0.231***	0.0314
Education (ref: Illiterate)		
Literate but not a graduate	0.101	0.0989
Primary school	0.251***	0.0766
Primary education	0.401***	0.1073
Secondary school	0.323***	0.0835
Vocational secondary school	0.697***	0.2130
High school	0.266***	0.0846
Vocational high school	0.426***	0.0869
2 or 3 higher education	0.335***	0.0953
Faculty	0.229***	0.0884
Master/Doctorate	0.174	0.1100
Workplace (ref: Public)		
Private	−0.120***	0.0404
Employment Status (ref: Self-employed)		
Employee	0.178***	0.0338
Employer	0.211	0.0562
Unpaid Family Worker	−0.157***	0.0592
Job	0.057	0.0801
Satisfaction with Household Income (ref: Very dissatisfied)		
Very Satisfied	0.824***	0.1403
Satisfied	−0.039	0.077
Average	−0.040	0.0705
Dissatisfied	−0.159**	0.0628
Satisfaction with Leisure Time (ref: Very dissatisfied)		
Very Satisfied	0.586***	0.1174
Satisfied	0.375***	0.0653
Average	0.318***	0.0667
Dissatisfied	0.135**	0.0632
Satisfaction with Commuting Time (ref: Very dissatisfied)		
Very Satisfied	0.241**	0.0992
Satisfied	0.044	0.0791
Average	−0.012	0.0836
Dissatisfied	−0.202**	0.0818
Satisfaction with Co-Worker (ref: Very dissatisfied)		
Very Satisfied	1.036***	0.2441
Satisfied	0.318	0.2391
Average	−0.062	0.2416

**Table A3** Simultaneous estimation results for job satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Dissatisfied	-0.321	0.2469
Job Status in Future (ref: Worse)		
Better	0.579***	0.0500
Same	0.432***	0.0444
No Idea	0.342***	0.0623
No Job in Future	-0.064	0.1201
Turkish Job Market in Future (ref: Worse)		
Better	-0.070**	0.0329
Same	-0.095***	0.0321
No Idea	0.047	0.0471
Got a Job <sup>2</sup> (ref: Yes)		
No	-0.006	0.0455
Irrelevant	0.058	0.0605
Lost The Job <sup>2</sup> (ref: Yes)		
No	0.131**	0.0595
Irrelevant	0.044	0.0800
Opened a Workplace <sup>2</sup> (ref: Yes)		
No	-0.308***	0.0893
Irrelevant	-0.263***	0.0975
Income Decreased <sup>2</sup> (ref: Yes)		
No	0.165***	0.0313
Irrelevant	0.008	0.1088
Income Increased <sup>2</sup> (ref: Yes)		
No	-0.126***	0.0280
Irrelevant	0.056	0.1126
Got Promotion <sup>2</sup> (ref: Yes)		
No	-0.129*	0.0774
Your Opions About Other People's Job (ref: Important)		
Neutral	-0.115**	0.0509
Unimportant	-0.010	0.0309
Your Opions About Other People's Income (ref: Important)		
Neutral	0.072	0.0602
Unimportant	-0.048	0.0373
Others' Opions About Your Job (ref: Important)		
Neutral	-0.185***	0.0668
Unimportant	-0.178***	0.0400
Others' Opions About Your Income (ref: Important)		
Neutral	0.063	0.0709
Unimportant	0.068	0.0443
Irrelevant	0.356*	0.1873
Feeling Social Pressure on Your Job (ref: Always)		
Never	0.113	0.3980
Sometimes	-0.046	0.4054
Often	-0.444	0.4113
Interested in Labour Union (ref: Yes)		
Neutral	-0.118**	0.0548
No	-0.100**	0.0414
No Idea	0.043	0.0990

**Table A3** Simultaneous estimation results for job satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Ability to Make Ends Meet (ref: With a great difficulty)		
Very easily	0.589***	0.0998
Easily	0.360***	0.0541
Fairly easily	0.344***	0.0461
With a difficulty	0.104**	
Income Brackets (ref: Income bracket 1)		
Income bracket 2	−0.005	0.0405
Income bracket 3	0.066*	0.0386
Income bracket 4	−0.044	0.0404
Income bracket 5	−0.025	0.0484
Log Likelihood	−69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

<sup>2</sup>It happened in the recent year.

**Table A4** Simultaneous estimation results for health satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	−0.0003	0.0617
2016	0.040	0.0475
2017	0.010	1.1858
Age Groups (ref: 18 < age < 25)		
24 < age < 35	−0.205*** <sup>1</sup>	0.0800
34 < age < 45	−0.523***	0.0814
44 < age < 55	−0.551***	0.0832
54 < age < 65	−0.787***	0.0883
64 < age	−1.001***	0.1091
Gender (ref: Male)		
Female	−0.248***	0.0285
Education (ref: Illiterate)		
Literate but not a graduate	−0.121	0.0983
Primary school	0.046	0.0747
Primary education	0.205*	0.1071
Secondary school	0.008	0.0819
Vocational secondary school	−0.166	0.1949
High school	0.166**	0.0839
Vocational high school	0.034	0.0856
2 or 3 higher education	0.124	0.0943
Faculty	0.056	0.0883
Master/Doctorate	0.112	0.1098
Health	0.010	0.0248
Satisfaction with Household Income (ref: Very dissatisfied)		
Very satisfied	1.482***	0.1242
Satisfied	0.551***	0.0737
Average	0.396***	0.0688
Dissatisfied	0.216	0.0637

**Table A4** Simultaneous estimation results for health satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Satisfaction with General Health Service (ref: Very dissatisfied)		
Very satisfied	0.722***	0.0936
Satisfied	0.401***	0.0829
Average	0.252***	0.0868
Dissatisfied	0.132	0.0864
No idea	0.717***	0.1749
Satisfaction with Water Services (ref: Very dissatisfied)		
Very satisfied	0.131	0.0883
Satisfied	0.037	0.0636
Average	0.036	0.0727
Dissatisfied	0.015	0.0683
No idea	-0.608***	0.1616
No service by municipality	0.151	0.1075
Satisfaction with Green Services (ref: Very dissatisfied)		
Very satisfied	0.147	0.0919
Satisfied	0.088	0.0572
Average	0.225***	0.0650
Dissatisfied	0.123**	0.0593
No idea	-0.213**	0.0900
No service by municipality	0.061	0.0757
Satisfaction with Pollution Prevention (ref: Very dissatisfied)		
Very satisfied	0.135	0.1115
Satisfied	0.024	0.0621
Average	-0.203***	0.0713
Dissatisfied	0.017	0.0655
No idea	0.012	0.0660
No service by municipality	0.042	0.0697
Unknown	0.038	0.0742
Registration to Social Security Institution (ref: Not Registered)		
Social insurance institution	0.086**	0.0421
Social security organization for artisans and the self-employed	0.190***	0.0478
Government retirement fund	0.116**	0.0569
Bank fund	0.417**	0.1799
Experienced Health Problem <sup>2</sup> (ref: Yes)		
No	0.901***	0.0382
Feeling Social Pressure on Your Job (ref: Always)		
Never	-0.111	0.4105
Sometimes	-0.487	0.4181
Often	-0.336	0.4252
Interested in Health (ref: Yes)		
Neutral	-0.003	0.0273
No	0.062*	0.0353
No idea	0.189	0.2065
Presence of Toilet (ref: Within dwelling)		
Out of Dwelling	0.069	0.0596
Absent	0.005	0.2854
Leaky Roofs Problem (ref: Yes)		
No	0.013	0.028



**Table A4** Simultaneous estimation results for health satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Daylight Problem (ref: Yes)		
No	−0.025	0.0300
Heating Problem (ref: Yes)		
No	0.086***	0.0296
Number of Person Providing Household Income	0.034*	0.0177
Ability to Make Ends Meet (ref: With a great difficulty)		
Very easily	0.263***	0.0965
Easily	0.058	0.0537
Fairly easily	−0.009	0.0457
With a difficulty	−0.070	0.0435
Income Brackets (ref: Income bracket 1)		
Income bracket 2	0.017	0.0408
Income bracket 3	−0.014	0.0404
Income bracket 4	−0.015	0.0443
Income bracket 5	0.004	0.0551
Log Likelihood	−69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

<sup>2</sup>It happened in the recent year.

**Table A5** Simultaneous estimation results for safety satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	−0.050	0.0567
2016	−0.043	0.0437
2017	−0.084	1.0813
Age Groups (ref: 18 < age < 25)		
24 < age < 35	0.044	0.0712
34 < age < 45	0.105	0.0723
44 < age < 55	0.251*** <sup>1</sup>	0.0741
54 < age < 65	0.308***	0.0787
64 < age	0.518***	0.1006
Gender (ref: Male)		
Female	−0.535***	0.0271
Education (ref: Illiterate)		
Literate but not a graduate	−0.251***	0.0933
Primary school	−0.241***	0.0717
Primary education	−0.161	0.0983
Secondary school	−0.241***	0.0774
Vocational secondary school	−0.613***	0.1832
High school	−0.273***	0.0787
Vocational high school	−0.311***	0.0803
2 or 3 higher education	−0.246***	0.0869
Faculty	−0.415***	0.0816
Master/Doctorate	−0.205**	0.1000

**Table A5** Simultaneous estimation results for safety satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Satisfaction with Neighbourhood (ref: Very dissatisfied)		
Very satisfied	1.095***	0.0998
Satisfied	0.582***	0.0895
Average	0.264***	0.0958
Dissatisfied	-0.077	0.0949
Satisfaction with Public Order Services (ref: Very dissatisfied)		
Very satisfied	0.729***	0.0949
Satisfied	0.313***	0.0837
Average	0.159*	0.0870
Dissatisfied	-0.018	0.0860
No idea	0.068	0.0986
A Timely Intervention by the Police (ref: Yes)		
No	-0.315***	0.0316
No idea	-0.097**	0.0449
Satisfaction with Behavior of the Police (ref: Satisfied)		
Do not satisfied	-0.031	0.0316
No idea	0.007	0.0474
Experienced Sexual Assault <sup>2</sup> (ref: No)		
Yes	0.378	0.332
Experienced Fraud <sup>2</sup> (ref: No)		
Yes	-0.363***	0.0921
Experienced Other Sufferings <sup>2</sup> (ref: No)		
Yes	-0.252	0.1787
Social Rights and Freedoms in 5 Years (ref: Worse)		
Better	0.101***	0.0319
Same	0.025	0.0348
No idea	0.023	0.0445
Others' Opions About Your Entrance and Exit		
Time to Home (ref: Important)		
Neutral	0.021	0.0409
Unimportant	-0.017	0.0223
Feeling Social Pressure on Your Gender (ref: Always)		
Never	0.410**	0.1883
Sometimes	0.248***	0.1945
Often	0.271	0.2045
Feeling Social Pressure on Your Political View (ref: Always)		
Never	0.564***	0.1429
Sometimes	0.526***	0.1497
Often	0.378**	0.1604
Household Size	0.048***	0.0063
Ability to Make Ends Meet (ref: With a great difficulty)		
Very easily	0.393***	0.0848
Easily	0.152***	0.0462
Fairly easily	0.145***	0.0404
With a difficulty	0.016	0.0401

**Table A5** Simultaneous estimation results for safety satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Income Brackets (ref: Income bracket 1)		
Income bracket 2	−0.026	0.0366
Income bracket 3	−0.082**	0.0346
Income bracket 4	−0.009	0.0358
Income bracket 5	0.043	0.0425
Experienced Robbery <sup>2</sup> (ref: No)		
Yes	−0.327***	0.0468
Log Likelihood	−69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

<sup>2</sup>It happened in the recent year.

**Table A6** Simultaneous estimation results for marriage satisfaction

	<i>Coefficient</i>	<i>Standard error</i>
Year Dummies (ref: 2014)		
2015	0.039	0.0675
2016	−0.036	0.0519
2017	−0.081	1.2962
Age Groups (ref: 18 < age < 25)		
24 < age < 35	0.153* <sup>1</sup>	0.0873
34 < age < 45	−0.064	0.0901
44 < age < 55	−0.078	0.0925
54 < age < 65	−0.019	0.0978
64 < age	−0.143	0.1208
Gender (ref: Male)		
Female	−0.209***	0.0319
Education (ref: Illiterate)		
Literate but not a graduate	−0.142	0.1098
Primary school	0.475***	0.0837
Primary education	0.535***	0.1152
Secondary school	0.475***	0.0906
Vocational secondary school	0.198	0.219
High school	0.642***	0.0924
Vocational high school	0.561***	0.0945
2 or 3 higher education	0.465***	0.1025
Faculty	0.550***	0.0956
Master/Doctorate	0.543***	0.1170
Spouse	0.627***	0.0500
Love	0.088***	0.0326
Satisfaction with Household Income (ref: Very dissatisfied)		
Very satisfied	0.519***	0.1414
Satisfied	−0.119	0.0786
Average	−0.237***	0.0748
Dissatisfied	−0.213***	0.0702

**Table A6** Simultaneous estimation results for marriage satisfaction (continued)

	<i>Coefficient</i>	<i>Standard error</i>
Satisfaction with Social Life (ref: Very dissatisfied)		
Very satisfied	0.849***	0.1228
Satisfied	0.155**	0.0700
Average	0.216***	0.0711
Dissatisfied	0.115*	0.0682
Satisfaction with Relatives (ref: Very dissatisfied)		
Very satisfied	0.542***	0.1750
Satisfied	0.114	0.1667
Average	-0.131	0.1697
Dissatisfied	-0.128	0.1737
Satisfaction with Friend Relationships (ref: Very dissatisfied)		
Very satisfied	0.539	0.4062
Satisfied	0.133	0.4022
Average	0.233	0.4042
Dissatisfied	-0.102	0.4081
Experienced Maltreating <sup>2</sup> (ref: No)		
Yes	-0.859***	0.305
Got Married <sup>2</sup> (ref: Yes)		
No	0.012	0.0791
Newborn Baby <sup>2</sup> (ref: Yes)		
No	-0.159***	0.0484
Your Opions About Other People's Family Life (ref: Important)		
Neutral	0.068	0.0467
Unimportant	-0.085***	0.0299
Others' Opions About Your Family Life (ref: Important)		
Neutral	-0.033	0.0500
Unimportant	0.025	0.0289
Feeling Social Pressure on Your Gender (ref: Always)		
Never	0.040	0.2251
Sometimes	-0.407*	0.2315
Often	-0.228	0.2424
Household Size	0.035***	0.0075
Tenure Status (ref: Owner)		
Tenant	-0.001	0.0290
Lodging	0.338***	0.0874
Other	0.108***	0.0413
Income Brackets (ref: Income bracket 1)		
Income bracket 2	0.084**	0.0439
Income bracket 3	0.151***	0.0414
Income bracket 4	0.135***	0.0429
Income bracket 5	0.313***	0.0500
Log Likelihood	-69897844	
N	11,615	

<sup>1</sup>\*\*\*, \*\* and \* indicate significance at 1 %, 5 %, and 10 %, respectively.

<sup>2</sup>It happened in the recent year.