

## **The Relationship Between Life Satisfaction and Job Satisfaction: Evidence from Türkiye Using Life Satisfaction Survey\***

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### **Abstract**

This study examines the relationship between job satisfaction and life satisfaction using the Life Satisfaction Surveys conducted by the Turkish Statistical Institute for the 2017–2022 period. It implements the Heckman selection methodology to correct for selection biases. The findings provide empirical evidence supporting a positive relationship between the two variables. This suggests that engaging in meaningful work and being in supportive environments significantly contribute to enhancing overall life satisfaction. The study deepens our understanding of the link between job satisfaction and life satisfaction, emphasizing the importance of organizational strategies and policies that promote a holistic approach to employee well-being and satisfaction.

**JEL Codes:** C31, J28, O52

**Keywords:** Life Satisfaction, Job Satisfaction, Work-Life Balance, Heckman Selection Model, Türkiye

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## **Yaşam Memnuniyeti İle İş Memnuniyeti Arasındaki İlişki: Yaşam Memnuniyeti Anketi Kullanarak Türkiye Örneği**

### **Öz**

Bu çalışma, Türkiye İstatistik Kurumu tarafından 2017–2022 dönemi için yayınlanan Yaşam Memnuniyeti Anketleri kullanılarak iş memnuniyeti ile yaşam memnuniyeti arasındaki ilişkiyi incelemektedir. Potansiyel yanlışlık sorunlarını gidermek için Heckman seçim modeli kullanılmıştır. Çalışma, iki değişken arasında pozitif bir ilişkiyi destekleyen ampirik bulgular sunmaktadır. Bu bulgu, anlamlı işlerde çalışmanın ve destekleyici bir iş ortamında bulunmanın genel yaşam memnuniyetini büyük ölçüde artırdığını göstermektedir. Çalışma, çalışan memnuniyeti ve refahına yönelik bütünsel bir yaklaşımı teşvik eden organizasyonel strateji ve politikaların önemine dikkat çekerek, iş memnuniyeti ile genel yaşam memnuniyeti arasındaki ilişkiye dair anlayışımızı derinleştirmektedir.

**JEL Kodları:** C31, J28, O52

**Anahtar Kelimeler:** Yaşam Memnuniyeti, İş Memnuniyeti, İş-Yaşam Dengesi, Heckman Seçim Modeli, Türkiye

## 1. Introduction

The relationship between job satisfaction and life satisfaction has gained importance as a critical area of research, reflecting the growing recognition of the workplace's role in shaping overall well-being. This study focuses on a detailed examination of this intricate relationship, building on essential research from organizational psychology, sociology, and behavioral economics, as well as the foundational work on subjective well-being by Diener et al. (1985). This remarkable body of work not only strengthens the theoretical foundation of this study but also underscores the significance of subjective well-being within the broader discourse on quality of life and workplace dynamics.

Our analysis builds on the ideas proposed by Diener (1984), Tait et al. (1989), and Locke (1969), all of whom make substantial contributions to the conceptual framework of life and job satisfaction. Their work provides a comprehensive framework for how individuals evaluate their levels of satisfaction across various contexts, including work and social life. The spillover theory, pioneered by Rice et al. (1980) and further expanded by Diener et al. (1985), establishes a significant link between job satisfaction and overall life satisfaction. This theory suggests that emotional and experiential elements from the work life transfer to other areas of life, either enriching or diminishing broader life satisfaction. This direct spillover effect is a critical component of our theoretical framework, illustrating how job satisfaction influences well-being beyond the workplace. The models proposed by Erdogan et al. (2012) further build on these theoretical pillars, stressing the importance of achieving balance between personal and professional life and highlights the role of corporate culture, policies, and work environments in promoting this balance.

To empirically explore these theoretical concepts, this study employs a mixed-methods approach, utilizing the Life Satisfaction Survey conducted by the Turkish Statistical Institute. This survey provides extensive data on individuals' views and experiences regarding job and life satisfaction and serves as a robust foundation for analysis within the Turkish context. To mitigate potential biases arising from non-random labor force participation, the Heckman selection model is applied as the methodological tool. This model enhances the reliability and validity of our findings by accounting for selection bias and enabling a deeper understanding of the dynamics between job satisfaction and life satisfaction.

The results of this study indicate that meaningful employment, a supportive work environment, and opportunities for professional advancement play significant roles in promoting overall well-being. The study confirms the expectation of a positive relationship between job satisfaction and life satisfaction while also identifying individual and societal factors that influence the strength of this relationship.

By integrating extensive theoretical contributions, empirical data from the Turkish Statistical Institute, and the methodological advantages of the Heckman selection model, this study advances our understanding of the mechanisms governing the relationship between job satisfaction and life satisfaction. Beyond contributing to relevant literature, this research has practical implications for promoting workplace well-being in today's world. Individuals, employers, and policymakers can leverage these evidence-based insights to develop strategies and interventions that enhance professional satisfaction and enrich personal life satisfaction. Ultimately, this study aims to pave the way for more informed approaches to achieving a harmonious work-life balance, contributing to the broader goal of inclusive human well-being.

This paper is structured as follows: Section 2 outlines the theoretical framework, providing the conceptual basis for understanding the relationship between job satisfaction and life satisfaction. Section 3 presents a review of the relevant literature, highlighting key studies and theories that inform the current research. Section 4 describes the data and methodology used in the analysis, including a detailed explanation of the empirical approach. Section 5 presents the findings of the study, offering insights into the interplay between job and life satisfaction. Finally, Section 6 concludes the paper, summarizing the key findings and discussing their implications for both theory and practice.

## **2. Theoretical Framework**

The nexus between job satisfaction and life satisfaction has attracted significant scholarly attention, as demonstrated by an extensive body of research examining this relationship (Judge et al., 2001). Tait et al. (1989) conducted a quantitative review that significantly contributed to our understanding of this process. Researchers have proposed several theoretical frameworks to clarify the complex relationship between life satisfaction and job satisfaction (Kabanoff, 1980; Muchinsky, 1993).

Interest in workers' levels of job satisfaction can be traced back to the 1930s, but studies examining the correlation between job satisfaction and overall life happiness did not emerge until the late 1950s (Brayfield et al., 1957; Hulin, 1969; Iris and Barrett, 1972). Despite its widespread use in both academic research and ordinary discourse, a clear definition of job satisfaction remains elusive (Aziri, 2011). Definitional ambiguity surrounding the concept of work further complicates efforts to clearly express job satisfaction. Investigating the nature and importance of work as a fundamental human activity is essential before providing a complete description of job satisfaction (Aziri, 2011).

Spector (1997) defines job satisfaction as the extent to which individuals either enjoy or dislike their work, implying that satisfaction and dissatisfaction are both

possible outcomes in any work setting. According to Karcioğlu et al. (2009), individual job satisfaction is characterized by a favorable disposition toward one's work, coupled with a sense of happiness derived from successfully adapting to the work environment. Karcioğlu et al. (2009) further argue that an individual's physical and mental health is reflected in their level of job satisfaction.

The concept of life satisfaction, originally introduced by Neugarten et al. (1961), is fundamentally linked to the dynamic interaction between an individual's expectations and their present circumstances. Diener et al. (1985) suggest that life satisfaction emerges when individuals evaluate their own lives and perceive them favorably. This experience is articulated through self-evaluation and subjective judgments about one's life (Pavot and Diener, 1993). Hong and Giannakopoulos (1994) argue that life satisfaction is shaped not only by employment experiences but also by leisure time activities. Similarly, Özdevcioğlu (2003) defines life satisfaction as emotional attitudes extending beyond one's professional life. Dikmen (1995) highlights the importance of achieving a subjective sense of well-being through quality time and alignment with life realities.

Delle Fave et al. (2011) conceptualize happiness as a multidimensional construct that can be examined through both hedonic and eudaimonic frameworks. The hedonic framework defines happiness as the pursuit of pleasure and the avoidance of pain, commonly referred to as subjective well-being. This construct encompasses cognitive dimensions, such as life satisfaction, as well as emotional components, including positive and negative affect (Deci and Ryan, 1995; Diener, 1984). Life satisfaction is widely recognized as a central indicator of overall well-being (Diener et al., 2013; Helliwell et al., 2013). Furthermore, Diener et al. (2013) highlight the positive association between higher levels of life satisfaction and organizational outcomes, such as career fulfillment, organizational commitment, and employee satisfaction.

As a cornerstone of industrial and organizational psychology, job satisfaction is linked to favorable outcomes such as improved job performance, organizational citizenship behavior, reduced absenteeism, and overall life satisfaction (Heller et al., 2002; Erdogan et al., 2012).

Three primary theories help explain the relationship between job satisfaction and life satisfaction: segmentation, compensation, and spillover theories, alongside bottom-up and top-down approaches. These frameworks offer insights into the ways these two constructs interact (Rain et al., 1991; Heller et al., 2002; Wang et al., 2010; Rice et al., 1980). The bottom-up approach provides a situational explanation, positing that individuals who derive satisfaction from their work are more likely to experience greater life satisfaction (Erdogan et al., 2012; Heller et al., 2004; Pavot and Diener, 1993). Heller et al. (2004) and Pavot and Diener (1993) demonstrate that work plays a significant role in day-to-day life, directly influencing overall life satisfaction. Conversely, the top-down approach, or dispositional explanation, suggests that inherent differences in personality

traits and affectivity influence levels of happiness across life domains, including work (Diener, 1996; Erdogan et al., 2012). According to this perspective, an individual's temperament serves as a fundamental predictor of both job satisfaction and life satisfaction. Diener et al. (2013) further argue that life satisfaction is positively correlated with favorable organizational outcomes, such as increased job satisfaction. Research by Brief et al. (1993) using both cross-sectional and longitudinal data supports this view, demonstrating the indirect impact of negative affectivity and health perceptions on life satisfaction. The segmentation hypothesis, proposed by Beehr and Gupta (1978), posits that job satisfaction and life satisfaction are distinct and unrelated aspects of personal experience. In contrast, compensation theory (Lambert, 1990) suggests that individuals compensate for dissatisfaction in one area of life by seeking fulfillment in another.

Spillover theory, as conceptualized by Tait et al. (1989) and Rain et al. (1991), explains how experiences in one life domain influence another, thereby establishing parallels between work and life satisfaction. According to Sirgy et al. (2001), Piotrkowski (1979), Crouter (1984), Kelly and Voydanoff (1985), Piotrkowski and Crits-Christoph (1981) and Edwards and Rothbard (2000), spillover can manifest as either positive or negative, involving the transfer of values, skills, or behaviors across domains. Positive spillover occurs when satisfaction in one domain enhances satisfaction in another, while negative spillover arises when dissatisfaction in one area extends to other domains (Edwards and Rothbard, 2000; Repetti, 1987). Heller et al. (2002) summarize this perspective by stating, "Job experiences have an impact on other aspects of life, and vice versa, indicating a positive correlation between the two variables." While spillover theory remains predominant, Kabanoff (1980) and Rain et al. (1991) contend that comprehensive theoretical explanations are still lacking. Existing research, including studies by Judge and Watanabe (1993) and Rode (2004), underscores the necessity for further exploration of reciprocal causation and the psychological mechanisms that underpin these relationships.

### 3. Literature Review

In 1993, Judge and Watanabe published a study titled "*Another Look at the Job Satisfaction-Life Satisfaction Relationship*" which shed light on the complex relationship between job satisfaction and life satisfaction. This study was a breakthrough in the field. Their investigation is significant for its comprehensive methodology, which includes the use of both cross-sectional and longitudinal studies to disentangle the temporal dynamics of this relationship. By employing statistical methods such as covariance structure models and meta-analytic estimations, Judge and Watanabe provided fundamental insights into the ways job satisfaction and life satisfaction

influence each other reciprocally. In addition to revealing a strong link that diminishes over time, their findings emphasize the difficulty of disentangling directional factors.

The contribution of Schmitt and Bedeian (1982) further expanded theoretical and methodological boundaries in this field. By investigating the reciprocal relationship between life satisfaction and job satisfaction through two distinct analytical lenses, they demonstrated the robustness of their findings across diverse methodological approaches. Their work confirmed the existence of mutual influence, providing a comparative analysis that strengthens confidence in the reciprocal nature of the relationship between job and life satisfaction.

Near (1984) attempted to deconstruct the potential causal relationship between career satisfaction and overall life satisfaction. Contrary to the prevailing assumptions in the field, her findings revealed no clear causal link between these two constructs. The significance of this finding lies in its challenge to the prevalent notion of a straightforward reciprocal relationship. This suggests a more complex interplay that transcends basic causality. The study emphasized that while job satisfaction is an essential component of life satisfaction, it does not directly predict life contentment levels. This highlights the significant influence of external circumstances and individual differences on one's overall life satisfaction.

Gitmez and Morcol (1994) conducted an early investigation into the relationship between socio-economic status and life satisfaction within the Turkish labor market. Based on interviews with 145 individuals, their findings reveal a direct link between higher socio-economic status and increased life satisfaction. This study provides valuable insights into the role of socio-economic factors—such as education, income, and family assets—in shaping an individual's subjective well-being. The results underscore the significance of socio-economic stability and progress as key determinants of life satisfaction, while also offering policy-relevant implications for addressing well-being disparities across different socio-economic groups.

Akın and Şentürk (2012) examined the factors influencing individuals' satisfaction levels drawing on data from the European Quality of Life Survey. Their findings revealed the unexpected association between higher education levels and slightly lower satisfaction, as well as the significant impact of being male, married, and in good health. Additionally, they explored the complex relationship between age and satisfaction. This research deepens our understanding of the socio-demographic and health-related determinants of satisfaction, underscoring the necessity of considering a wide range of variables when assessing and enhancing individual well-being.

Through her comprehensive analysis of Life Satisfaction Surveys conducted between 2004 and 2013, Susanlı (2018) sheds light on the significant impact of unemployment on life satisfaction in Türkiye. Her research highlights the substantial gap in life satisfaction levels between employed and unemployed individuals, attributing part of this disparity to individuals' future job prospects. A key contribution of this study

is its suggestion that policies aimed at improving job prospects could significantly enhance life satisfaction for individuals.

## 4. Data and Methodology

The Turkish Statistical Institute (TURKSTAT) has been conducting the *Life Satisfaction Survey (LSS)* annually since 2003 to gauge the general perception of happiness, social values, and satisfaction levels across various life domains, including healthcare, social security, formal education, work-life, income, personal security, justice services, personal development, and future expectations among the Turkish population. This survey targets individuals aged 18 and older residing within the Republic of Türkiye's borders, excluding those living in institutional settings such as dormitories, elderly homes, special hospitals, military barracks, and officers' recreation quarters (TURKSTAT, 2023).

This study utilizes the Life Satisfaction Survey Micro Data Set from TURKSTAT, focusing on data from the waves conducted between 2017 and 2022. The dataset includes cross-sectional data for each year, with sample sizes as follows: 9,876 observations for 2017, 9,719 for 2018, 9,212 for 2019, 10,103 for 2020, 10,073 for 2021, and 9,841 for 2022. The total number of records in the dataset amounts to 58,824.

The dataset was initially segmented into individual-level information, followed by a cleaning and refinement process. The original life satisfaction variable, which ranges from 0 (not at all satisfied) to 10 (completely satisfied), was recoded into a binary outcome for the purposes of analysis. Responses from 0 to 6 were classified as 'unsatisfied' (coded as 0), while responses from 7 to 10 were classified as 'satisfied' (coded as 1). Variables such as “*Highest Education Level Attained*”, “*Life Satisfaction*”, “*Job Satisfaction*”, “*Income Satisfaction*”, “*Work Time Satisfaction*”, “*Feel Social Pressure of Job*”, and “*Feel Social Pressure of Income*” were recoded as well. This step involved standardizing variable definitions and categorizations, which are elaborated upon in Appendix. This phase was essential for establishing a benchmark for annual differences and for classifying individuals into distinct age categories. Finally, for the purpose of conducting a comprehensive study, data from all selected years were combined.

It is crucial to address sample selection bias in studies of job and life satisfaction because literature suggests that factors that are not directly observable can influence people's decisions to work (Clark, 2001). This highlights the importance of understanding how to deal with sample selection bias. If this bias is not considered, the true connections between job satisfaction and overall life satisfaction may remain undetected. By incorporating a selection equation that accounts for the employment decision, the Heckman correction approach—and specifically the probit model for



dichotomous outcomes—allows for a detailed evaluation of the satisfaction relationship (Guiso et al., 2005).

Prior research by Duarte et al. (2006) and van Praag et al. (2003), which used the Heckman selection model to address selection bias in similar contexts, provides support to this approach. In this method, the Heckman selection model is used to explore the complex connection between job satisfaction and life satisfaction. Both the theoretical framework and the empirical evidence supporting the approach's applicability are provided by this research. The study offers significant insights into the dynamics of life happiness and work satisfaction in Türkiye, ensuring that the results are statistically valid while also offering valuable information on employees' job satisfaction.

To address sample selection bias, the Heckman probit model employs a two-stage procedure involving two primary equations: the selection equation and the outcome equation, as explained below. This method is particularly effective when the dependent variable in the outcome equation is binary or dichotomous, ensuring unbiased and consistent estimates.

**Selection Equation:** The first stage of the Heckman probit model is the selection equation, which models the probability of an observation being included in the selected sample. This can be expressed as follows:

$$Pr(S_i = 1 | Z_i) = \Phi(Z_i\gamma) \quad (1)$$

Where,  $S_i$  is a binary indicator variable that takes the value 1 if the  $i^{th}$  observation is selected (i.e., employed in the context of this study) and 0 otherwise.  $Z_i$  represents the vector of variables influencing the selection process (gender, age, education level and marital status<sup>1</sup>),  $\gamma$  is a vector of parameters to be estimated, and  $\Phi$  denotes the standard normal cumulative distribution function. This specification allows for the estimation of the likelihood of being employed, a crucial step in correcting for selection bias (Heckman, 1979; Van de Ven and Van Praag, 1981).

**Outcome Equation:** The second stage, or the outcome equation, models the actual outcome of interest—life satisfaction in this case—conditional on being selected:

$$Y_i^* = X_i\beta + \varepsilon_i, \text{ if } S_i = 1 \quad (2)$$

$Y_i^*$  is the latent variable for the outcome of interest, which is observed only for the selected sample (employed individuals).  $X_i$  is the vector of covariates that affect the life satisfaction (social security registration, employment type, public sector, gender, age and marital status),  $\beta$  is a vector of parameters, and  $\varepsilon_i$  is the error term. The key aspect of the Heckman model is the correction for selection bias introduced in this stage through

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<sup>1</sup> The use of instrumental variables in the selection equation adopted approach; however, we did not implement this method. Instead, our specification follows the approach outlined in Escanciano et al. (2016), Honoré and Lu (2024).

the inclusion of the inverse Mills ratio, derived from the first stage, into the regression equation (Heckman, 1979; Maddala, 1983).

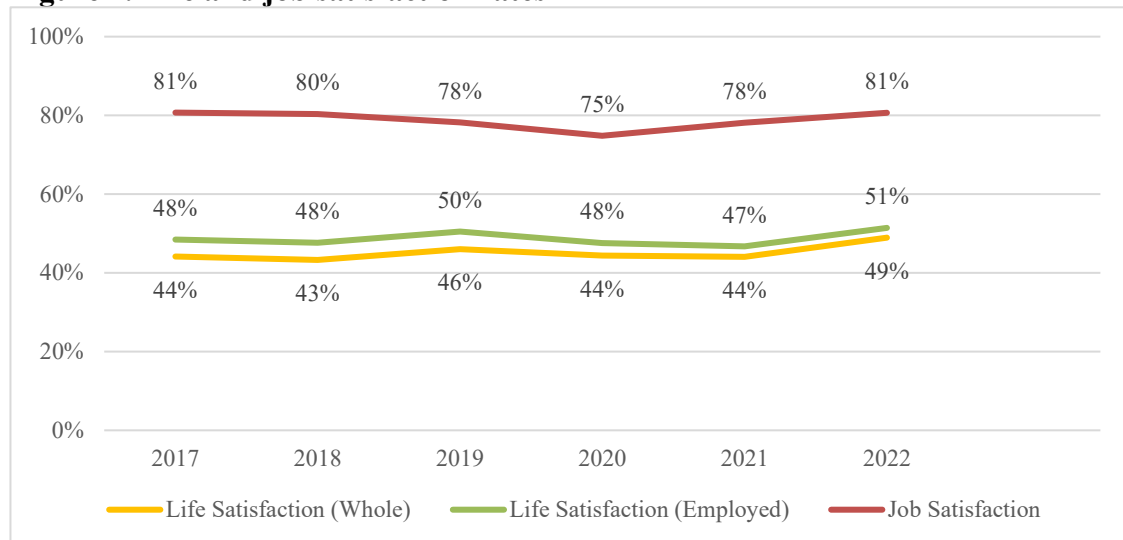
The inverse Mills ratio ( $\lambda_i$ ), which is added to the outcome equation to correct for selection bias, is derived from the selection equation and is defined as:

$$\lambda_i = \frac{\phi(Z_i\gamma)}{\Phi(Z_i\gamma)} \quad (3)$$

$\phi$  is the standard normal probability density function. The inclusion of inverse Mills ratio (IMR) in the outcome equation helps in adjusting for the non-random selection of observations into the sample, thereby ensuring that the parameter estimates  $\beta$  are both unbiased and consistent (Heckman, 1979; Greene, 2003).

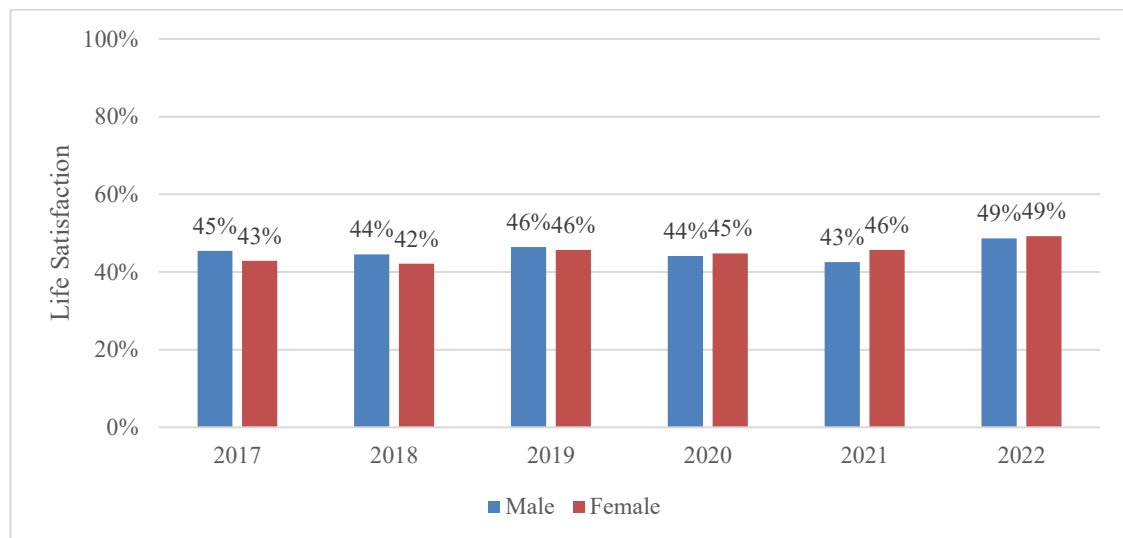
## 5. Results

This section provides a detailed examination of the relationship between socio-economic and demographic factors and life satisfaction. This section presents the findings on life and job satisfaction patterns across various demographic and job-related characteristics, including gender, marital status, education level, age, and employment sector. The evolution of satisfaction rates over time is examined to identify notable trends and differences across groups. Additionally, summary statistics for the key variables used in the estimation are provided to offer a detailed overview of the dataset. Finally, the results of the Heckman selection model's outcome equation are presented, highlighting the determinants of life satisfaction while accounting for potential selection bias. These findings provide deeper insights into the factors shaping subjective well-being and the role of labor market dynamics.

**Figure 1. Life and job satisfaction rates**

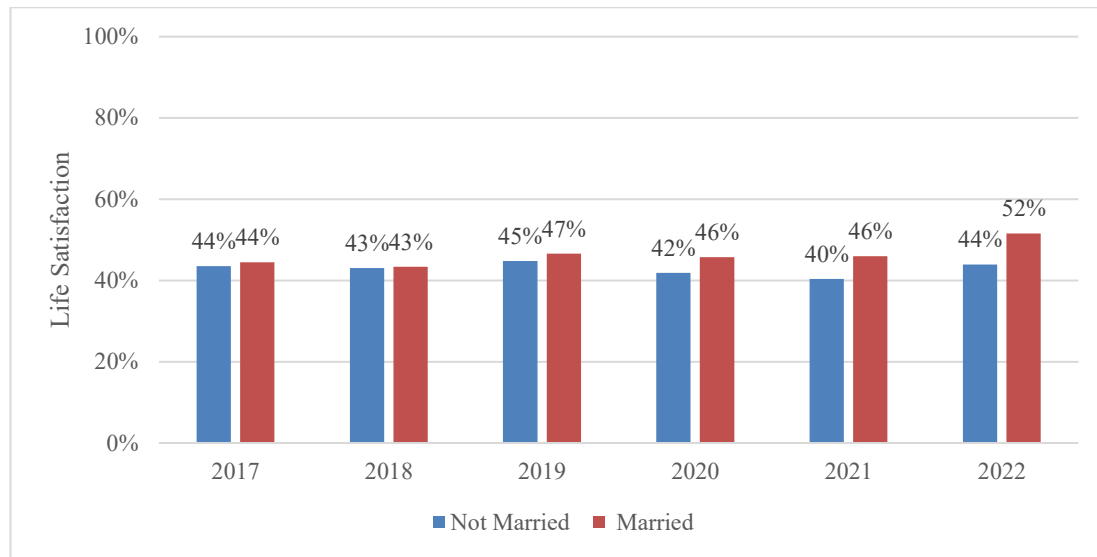
Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 1 presents the trends in job satisfaction, life satisfaction (for the full sample), and life satisfaction rates among the employed population in Türkiye from 2017 to 2022, highlighting potential effects of the COVID-19 pandemic. Job satisfaction remained relatively stable between 2017 and 2019 but experienced a notable decline in 2020, falling to 75%, which aligns with global economic instability, labor market shocks, where increased job insecurity, remote work transitions, and economic downturns led to heightened workplace dissatisfaction. However, job satisfaction recovered in the subsequent years, reaching pre-pandemic levels by 2022, suggesting an adaptation to new work dynamics and economic stabilization. In contrast, life satisfaction for the full sample exhibited minor fluctuations, remaining within a narrow range of 44% to 47% during the pandemic before rising to 49% in 2022. A similar pattern is observed for life satisfaction among the employed, which remained close to the overall trend but consistently showed slightly higher values, suggesting that employment status contributes positively to well-being. The post-pandemic increase in both life satisfaction measures indicates that well-being is shaped not only by economic factors but also by broader social and psychological adjustments. These findings emphasize the need for a deeper investigation into the interactions between job satisfaction and life satisfaction, particularly in the context of economic and labor market shifts.

**Figure 2. Life satisfaction rate by gender**

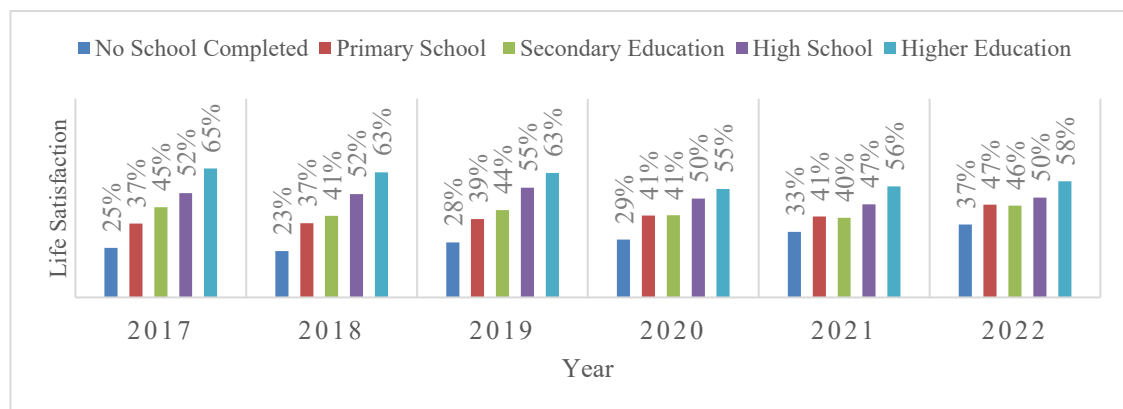
Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 2 illustrates life satisfaction rates for males and females in Türkiye from 2017 to 2022, revealing a generally stable pattern with minor fluctuations. While life satisfaction levels for both genders remained close throughout the period, a slight gender gap is evident in certain years, with males generally reporting slightly higher satisfaction than females, particularly in 2017, 2018, and 2021. However, this gap is not consistent over time, and in some years, such as 2019 and 2022, life satisfaction levels were nearly identical. By 2022, both male and female life satisfaction converged at 49%, suggesting an overall alignment in well-being perceptions between genders.

**Figure 3. Life satisfaction rate by marital status**

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 3 presents life satisfaction rates for married and non-married individuals in Türkiye from 2017 to 2022, highlighting a general pattern of higher life satisfaction among married individuals across most years. While the two groups reported nearly identical satisfaction levels in 2017 and 2018, a gap emerged in 2019, with married individuals exhibiting slightly higher satisfaction. This trend continued in subsequent years, with the disparity becoming more pronounced in 2022, when life satisfaction for married individuals reached 52% compared to 44% for non-married individuals. The consistent advantage in life satisfaction for married individuals suggests that marital status may play a role in overall well-being, potentially due to social and emotional support associated with marriage as suggested by Helliwell and Putnam (2004), Carr and Springer (2010), Waite and Gallagher (2000).

**Figure 4. Life satisfaction rate by educational attainment**

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 4 illustrates life satisfaction rates across different educational levels from 2017 to 2022. Individuals with higher education consistently report the highest life satisfaction levels, while those with no formal schooling report the lowest. This suggests that education plays a significant role in shaping well-being, potentially due to better job opportunities, financial security, and social capital. Life satisfaction across all education groups remained relatively stable before the pandemic, with minor fluctuations. Higher education consistently showed the highest satisfaction (around 55-65%), while those with no schooling had the lowest (around 23-33%). Life satisfaction dropped in 2020 across all education levels, particularly among those with higher education (falling to 55%) and high school graduates (falling to 50%). This decline could reflect pandemic-related job insecurity, economic downturns, or increased work-life stress, especially for more educated individuals in professional occupations. While satisfaction levels for more educated individuals partially recovered in 2022—reaching 58% for higher education graduates—this remained below pre-pandemic levels. In contrast, those with lower education levels experienced a steady increase in satisfaction, with primary school graduates rising from 37% in 2017 to 47% in 2022. These findings underscore the complex interplay between education, economic conditions, and subjective well-being, particularly during periods of crisis.

**Table 1. Life satisfaction rate by age groups**

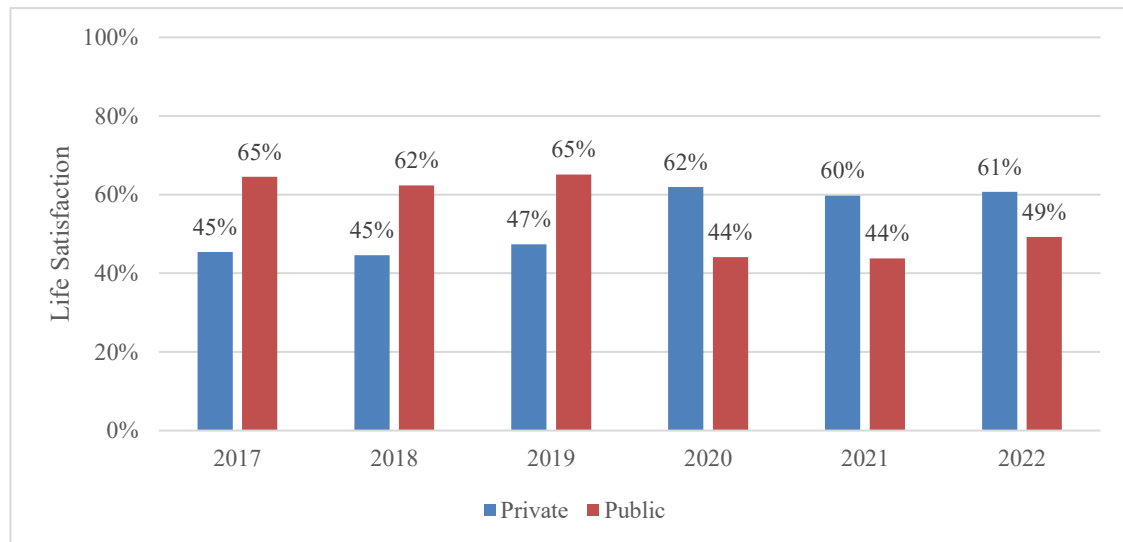
Year	18-24	25-34	35-44	45-54	55-64	65 and above
2017	50.87	51.28	45.71	38.38	39.37	33.86
2018	50.57	46.92	45.62	39.46	40.68	32.87
2019	49.81	47.35	52.50	42.96	37.82	41.86
2020	45.11	46.51	45.71	44.31	42.79	40.28
2021	44.26	46.18	43.74	43.76	42.00	43.89
2022	48.22	50.76	47.54	49.54	48.29	48.98

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Table 1 displays life satisfaction rates across different age groups in Türkiye from 2017 to 2022, revealing notable variations over time. In general, younger individuals (18-24 and 25-34) consistently reported higher life satisfaction compared to older groups, particularly before 2020. However, life satisfaction among these younger groups declined slightly in 2020 and 2021 before recovering in 2022. The middle-aged groups (35-44 and 45-54) exhibited more fluctuation, with a remarkable peak in 2019 for the 35-44 age group, followed by a decline and subsequent recovery in 2022. The 55-64 and 65+ age groups initially had the lowest satisfaction levels but saw a steady increase over the years, with 2022 marking a significant rise, bringing them closer to the younger groups. By 2022, the gap narrowed, suggesting a more balanced distribution of

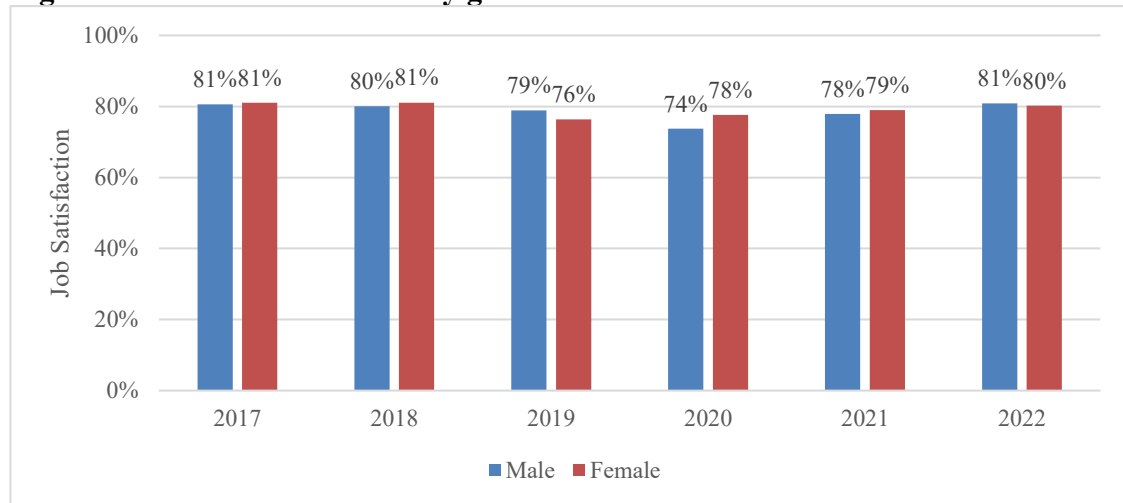
life satisfaction across different age groups. This pattern could be attributed to shifts in personal expectations, lifestyle adjustments, or broader societal changes that have influenced perceptions of well-being over time.

**Figure 5. Life satisfaction rate by sector**



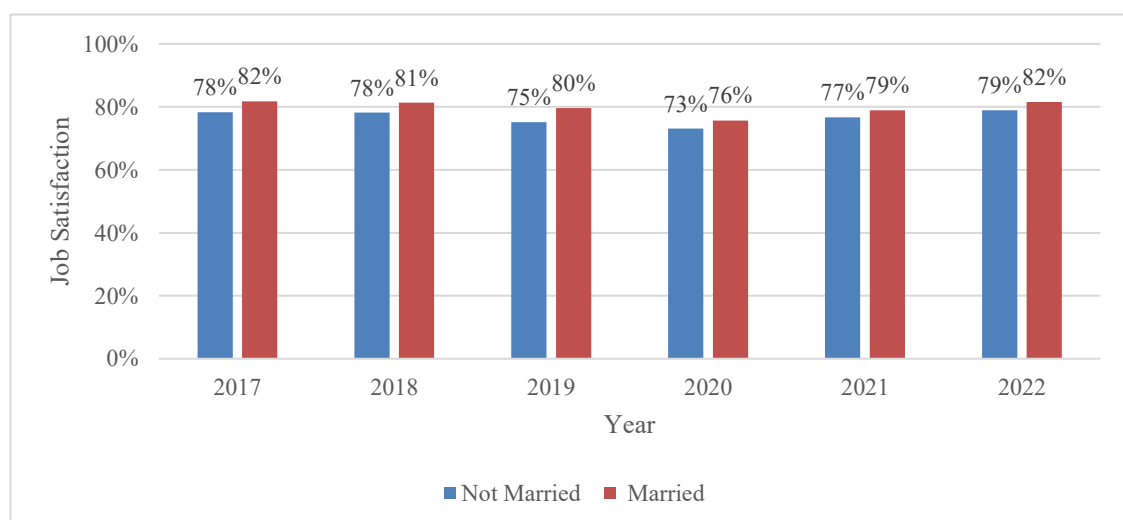
Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 5 presents life satisfaction rates by work sector (private vs. public) from 2017 to 2022. Between 2017 and 2019, public sector employees reported higher satisfaction levels (ranging from 62% to 65%) compared to private sector employees (45% to 47%). However, this trend reversed starting in 2020, with private sector satisfaction rising to 62% in 2020 and 61% in 2022, while public sector satisfaction dropped to 44% in 2020 before slightly recovering to 49% in 2022. This decline in public sector satisfaction during 2020–2021 may be linked to increased workload and pressure on public employees, particularly those in healthcare and essential services, during the pandemic. Meanwhile, the relative increase in private sector satisfaction could be attributed to remote work opportunities and greater flexibility, which may have mitigated some of the challenges faced by public employees during this period. The partial recovery of public sector satisfaction in 2022 suggests some normalization as pandemic-related pressures eased.

**Figure 6. Job satisfaction rate by gender**

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 6 depicts job satisfaction rates for males and females from 2017 to 2022, showing generally high satisfaction rates across both groups. While job satisfaction remained relatively stable, some fluctuations are clear. In 2019, female satisfaction lagged behind that of males, but in subsequent years, the gap narrowed. A decline is observed in 2020 for both genders, followed by a gradual recovery, with satisfaction levels reaching their highest point in 2022. The overall trend suggests that while job satisfaction levels experienced slight variations, they remained consistently high, with minimal gender differences in most years.

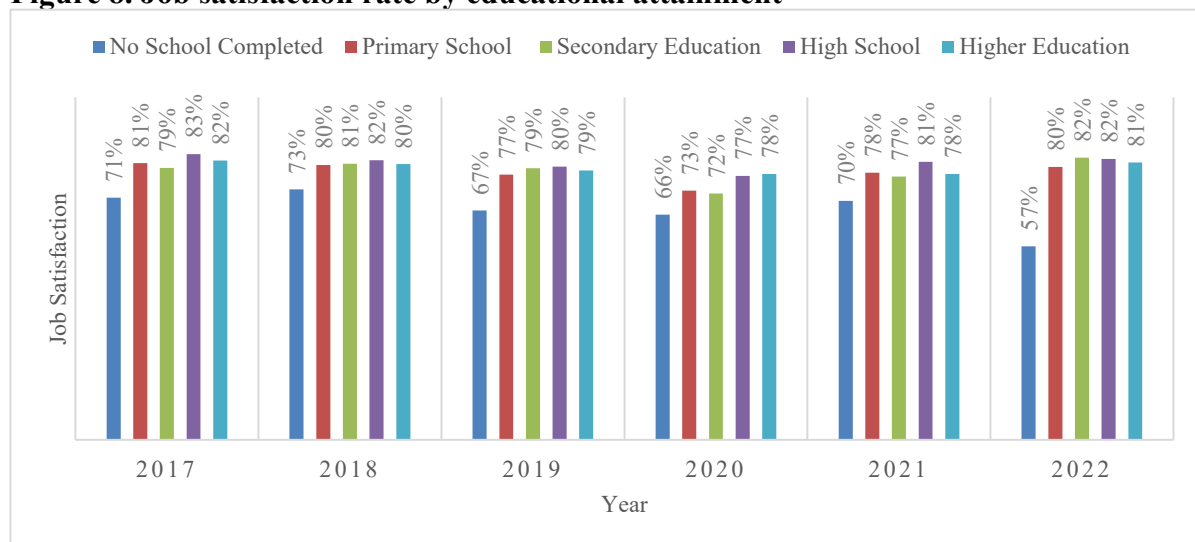
**Figure 7. Job satisfaction rate by marital status**

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.



Figure 7 illustrates job satisfaction trends for married and non-married individuals from 2017 to 2022. Across all years, married individuals consistently report higher job satisfaction compared to their non-married counterparts, though the gap varies over time. In 2017 and 2018, the difference is around 4 percentage points, with married individuals reporting job satisfaction levels of 82% and 81%, respectively, compared to 78% for non-married individuals. The gap narrows slightly in 2019 and 2020, reaching its lowest point in 2020, when satisfaction drops to 73% for non-married and 76% for married individuals. However, both groups show a gradual recovery after 2020, with job satisfaction rising to 79% for non-married individuals and 82% for married individuals by 2022. This pattern suggests that while marriage is associated with higher job satisfaction, broader economic or workplace factors likely influence overall trends for both groups.

**Figure 8. Job satisfaction rate by educational attainment**



Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 8 presents job satisfaction trends from 2017 to 2022 across different education levels. In general, individuals with higher education consistently report the highest levels of job satisfaction, while those with no formal schooling tend to have the lowest. From 2017 to 2019, job satisfaction remained relatively stable across all education groups, with minor fluctuations. However, a noticeable decline is observed in 2020, particularly among individuals with no formal schooling, where satisfaction dropped from 67% in 2019 to 66% in 2020, and among high school graduates, who saw a decline from 79% to 72%. This decline may reflect broader economic and labor market disruptions caused by the pandemic. Following this decline, job satisfaction levels recovered in 2021 and 2022, with some groups even surpassing pre-2020 levels. The most striking change occurs in 2022 when job satisfaction among individuals with no formal schooling drops significantly to 57%, creating a wider gap between education

groups. Meanwhile, individuals with higher education and high school degrees maintain relatively high satisfaction, reaching 81% and 82%, respectively. Overall, the data suggest that while job satisfaction remains relatively high across all education levels, individuals with lower education levels experience greater volatility, particularly in response to external economic conditions.

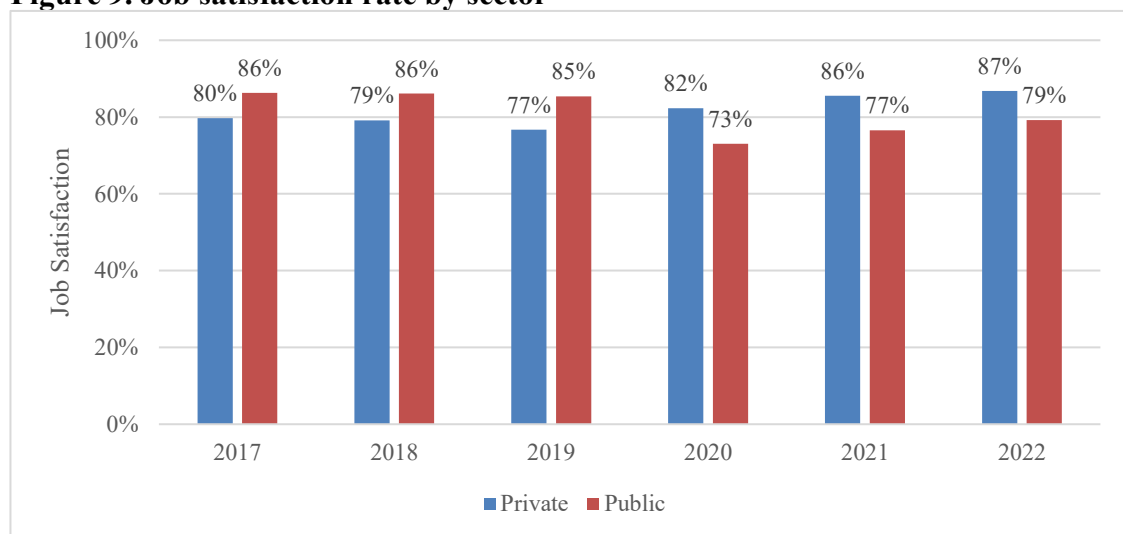
**Table 2. Job satisfaction rate by age groups**

Year	18-24	25-34	35-44	45-54	55-64	65 and above
2017	79.26	78.94	80.90	82.68	81.02	88.96
2018	76.04	82.08	79.19	80.00	85.98	81.92
2019	73.03	79.11	78.09	80.37	76.73	80.67
2020	70.07	74.35	74.36	76.36	77.86	84.99
2021	76.02	76.82	77.48	80.20	82.82	78.72
2022	82.38	79.71	80.32	82.26	76.43	89.34

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Table 2 presents job satisfaction rates by age group from 2017 to 2022, exhibiting notable fluctuations over time. Younger individuals (18-24) consistently report lower job satisfaction, declining from 73.03% in 2019 to 70.07% in 2020 before recovering strongly to 82.38% in 2022. The 25-34 and 35-44 age groups follow a similar pattern, experiencing declines in 2020 but gradually rebounding. Middle-aged individuals (45-54) maintain relatively stable satisfaction levels, while older groups (55-64 and 65+) report the highest satisfaction, with the 65+ group peaking at 89.34% in 2022. The consistently higher satisfaction among older individuals may reflect greater job stability, work-life balance, or adjusted expectations from employment.

**Figure 9. Job satisfaction rate by sector**



Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied.

Figure 9 presents job satisfaction trends for private and public sector employees from 2017 to 2022. In the earlier years, public sector employees consistently reported higher job satisfaction than their private sector counterparts, with a gap of 6 percentage points in 2017 and 7 points in 2019. However, this trend shifted in 2020 when public sector satisfaction dropped to 73%, while private sector satisfaction remained relatively stable at 82%. From 2021 onward, private sector satisfaction surpassed public sector satisfaction, peaking at 87% in 2022, while public sector satisfaction remained lower at 79%. This shift may reflect changes in working conditions, job expectations, or sector-specific challenges, particularly during and after the pandemic.

Table 3 presents the distribution of key variables used in the analysis, highlighting the proportions of individuals across different categories of various satisfaction variables, job characteristics, and demographic factors. Life satisfaction is relatively balanced, with 51.43% of individuals reporting being satisfied, while 48.57% are unsatisfied. Job satisfaction is notably high, with 80.38% of respondents indicating satisfaction, whereas only 8.08% are unsatisfied, and 11.54% remain neutral. Income and work time satisfaction show more variation, with 34.88% of individuals expressing dissatisfaction with their income, while 42.41% report being satisfied. Work time satisfaction follows a similar pattern, where 21.58% are unsatisfied, and 62.51% are satisfied. Business relationship satisfaction is positive, with 88.01% expressing satisfaction. However, social pressure from job and income remains a concern, affecting 4.74% and 6.29% of respondents, respectively. Regarding employment characteristics, 90.48% of respondents are registered in the social security system, highlighting a high level of formal employment. Public sector employees constitute the majority of the sample (79.49%), while private sector employees make up 20.51%. The majority are regular or casual employees (79.63%), followed by self-employed individuals (13.5%), employers (4.74%), and unpaid workers (2.59%). In terms of demographics, males represent 69.83% of the sample, and females 30.17%. A significant portion of the respondents are married (71.62%), while 28.38% are not married. Age distribution shows that the largest group belongs to the 35-44 age category (31.79%), followed by 25-34 (26.67%) and 45-54 (21.95%). Younger individuals (18-24) make up 9.43%, while older age groups (55-64 and 65 and above) account for 8.10% and 2.6%, respectively.

**Table 3. Descriptive statistics**

<b>Life Satisfaction</b>	Unsatisfied	48.57
	Satisfied	51.43
<b>Job Satisfaction</b>	Unsatisfied	8.08
	Neutral	11.54
	Satisfied	80.38
<b>Income Satisfaction</b>	Unsatisfied	34.88
	Neutral	22.71
	Satisfied	42.41
<b>Work time Satisfaction</b>	Unsatisfied	21.58
	Neutral	15.91
	Satisfied	62.51
<b>Business Relationship Satisfaction</b>	Unsatisfied	2.79
	Neutral	9.20
	Satisfied	88.01
<b>Social Pressure from Job</b>	No	95.26
	Yes	4.74
<b>Social Pressure from Income</b>	No	93.71
	Yes	6.29
<b>Social Security Registered</b>	No	9.52
	Yes	90.48
<b>Work Sector</b>	Private	20.51
	Public	79.49
<b>Employment Type</b>	Regular/casual employee	79.63
	Employer	4.74
	Self employed	13.5
	Unpaid	2.59
<b>Gender</b>	Males	69.83
	Females	30.17
<b>Marital Status</b>	Married	71.62
	Not married	28.38
<b>Age Group</b>	18-24	9.43
	25-34	26.67
	35-44	31.79
	45-54	21.95
	55-64	8.10
	65 and above	2.6

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds.

Table 4 presents the results of the Heckman selection model for the outcome equation, which examines the relationship between life satisfaction and job satisfaction, alongside a set of control variables.<sup>2</sup> To assess the robustness of our findings, six model specifications were estimated, all with the binary life satisfaction variable as the dependent variable. In addition to job satisfaction, alternative work-related variables—such as income satisfaction, work-time satisfaction, business relationship satisfaction, social pressure from job, and social pressure from income—were incorporated in separate models given the potential correlation among these variables and concerns about multicollinearity. Multicollinearity can inflate standard errors, distort coefficient estimates, and reduce the precision of the results, making it difficult to isolate the individual effects of closely related variables. By introducing these variables sequentially, we aim to mitigate these issues and ensure a more reliable estimation. Furthermore, job characteristics (such as social security registration, employment type and public sector employment) and demographic variables (including gender, age, and marital status) were included as control variables.

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<sup>2</sup> We estimated regressions by gender considering the fact that selectivity is usually more relevant for the female sample. The results are presented in the Appendix in Tables A2a and A2b. The separate regressions by gender exhibit similar results both within each gender group and when compared to the outcome equation in the Heckman selection model. This alignment between the gender-specific regressions and the Heckman model outcomes provides additional support for the robustness of our estimates.

**Table 4. Heckman selection model results**

		(1)	(2)	(3)	(4)	(5)	(6)
<b>Job Satisfaction</b>	Unsatisfied	-0.06*** (0.012)					
	Satisfied	0.14*** (0.008)					
<b>Income Satisfaction</b>	Unsatisfied		-0.13*** (0.007)				
	Satisfied		0.10*** (0.006)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.04*** (0.008)			
	Satisfied			0.081*** (0.006)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.05*** (0.01)		
	Satisfied				0.12*** (0.008)		
<b>Social Pressure from Job</b>						-0.10*** (0.01)	
<b>Social Pressure from Income</b>							-0.12*** (0.01)
<b>Social Security Registered</b>		0.09*** (0.008)	0.09*** (0.008)	0.11*** (0.008)	0.11*** (0.008)	0.11*** (0.008)	0.116*** (0.008)
<b>Public sector</b>		0.009 (0.006)	0.007 (0.006)	0.01* (0.006)	0.01* (0.006)	0.007 (0.006)	0.008 (0.006)
<b>Employment Type</b>	Employer	0.06*** (0.01)	0.04*** (0.01)	0.05*** (0.01)	0.06*** (0.01)	0.06*** (0.01)	0.06*** (0.01)
	Self employed	0.01** (0.007)	0.009 (0.007)	-0.002 (0.007)	0.006 (0.007)	0.004 (0.007)	0.002 (0.007)
	Unpaid	0.03*** (0.01)	0.02** (0.01)	0.01* (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
<b>Female</b>		0.205*** (0.006)	0.193*** (0.006)	0.208*** (0.006)	0.211*** (0.006)	0.213*** (0.006)	0.212*** (0.006)
<b>Married</b>		0.033*** (0.006)	0.03*** (0.007)	0.03*** (0.006)	0.03*** (0.006)	0.03*** (0.006)	0.03*** (0.006)
<b>Age Group</b>	25-34	-0.11*** (0.009)	-0.09*** (0.01)	-0.11*** (0.009)	-0.11*** (0.009)	-0.11*** (0.009)	-0.11*** (0.009)
	35-44	-0.15*** (0.009)	-0.13*** (0.01)	-0.15*** (0.009)	-0.15*** (0.009)	-0.16*** (0.009)	-0.16*** (0.009)
	45-54	-0.13*** (0.01)	-0.11*** (0.01)	-0.13*** (0.01)	-0.13*** (0.01)	-0.13*** (0.010)	-0.13*** (0.010)
	55-64	-0.008 (0.01)	-0.002 (0.01)	-0.005 (0.01)	-0.002 (0.0)	-0.002 (0.011)	-0.005 (0.011)
	65 and above	0.11*** (0.01)	0.11*** (0.01)	0.12*** (0.01)	0.12*** (0.01)	0.12*** (0.01)	0.12*** (0.01)
<b>Rho</b>		-0.82*** (0.014)	-0.79*** (0.016)	-0.84*** (0.014)	-0.84*** (0.014)	-0.84*** (0.014)	-0.84*** (0.014)
<b>Chi-squared</b>		654.02	603.68	603.77	612.15	587.32	582.27
<b>Observations</b>		26,015	26,015	26,015	26,015	26,015	26,015

Standard errors in parentheses \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Source: TURKSTAT Life Satisfaction Survey, 2017-2022 rounds. Sample weights are applied. Year time dummies are incorporated to account for temporal effects. Coefficients are marginal effects.

The results indicate a strong relationship between job satisfaction and life satisfaction. Job satisfaction plays a crucial role in shaping overall well-being. Individuals who are satisfied with their jobs are 14% more likely to report being satisfied with their lives compared to those who are undecided. On the other hand, those who are dissatisfied with their jobs have a 6% lower probability of being satisfied with life. This finding aligns with previous research demonstrating the centrality of job satisfaction to overall well-being (Frey and Stutzer, 2002). Job satisfaction not only provides financial stability but also affects emotional and psychological well-being through factors such as autonomy, recognition, and workplace environment (Diener and Seligman, 2004). The stronger positive effect for satisfied individuals, compared to the negative impact for the unsatisfied, suggests that fulfillment at work carries greater weight in enhancing well-being than job dissatisfaction does in diminishing it.

The additional specifications further emphasize the robust role of work-related factors in shaping overall life satisfaction. Replacing job satisfaction with income satisfaction, work time satisfaction, business relationship satisfaction, social pressure from job, and social pressure from income yields consistent results, with all variables exhibiting significant associations and similar effect directions. These findings suggest that various dimensions of work experience—beyond job satisfaction alone—contribute meaningfully to subjective well-being. Financial security, work-life balance, interpersonal dynamics in the workplace, and perceived social pressures all appear to influence life satisfaction, underscoring the multifaceted nature of work-related determinants of well-being. The consistency of results across these specifications reinforces the robustness of our findings. The robustness of these results across different specifications highlights the broader relevance of occupational conditions in shaping individuals' overall quality of life.

Being registered in the social security system increases the likelihood of life satisfaction by 9% compared to those who are not registered. This finding supports previous evidence that access to social security reduces economic anxiety and increases subjective well-being (Sun and Xiao, 2012). Social security provides a safety net against income shocks, unemployment, and health risks, contributing to a greater sense of stability and life satisfaction (Glatz and Eder, 2020; Gitmez and Morcöl, 1994). In contexts where informal employment is prevalent, such as in Türkiye, social security registration signals formal employment, which often correlates with better working conditions and social protections.

The employment type variable further contextualizes job-related influences on life satisfaction. Regarding employment types, employers are 6% more likely to be satisfied with life compared to casual workers, while self-employed individuals are only 1% more likely. Unpaid workers also exhibit a 3% higher probability of life satisfaction than casual workers. This suggests that financial independence and control over one's work environment may contribute positively to life satisfaction, though the magnitude

varies depending on the level of financial compensation and autonomy associated with different employment types (Aysan and Aysan, 2017; Drobnič et al., 2010). Gender and marital status also have significant implications for life satisfaction. Women are 20.5% more likely to report being satisfied with their lives compared to men, supporting previous findings that women often report higher subjective well-being despite potential gender disparities in employment and wages (Şengül and Lopcu, 2020; Yıldız et al., 2021). This paradox may stem from differences in social networks, emotional resilience, or expectations of well-being across genders (Şengül and Lopcu, 2020; Yıldız et al., 2021). Additionally, married individuals are 3.3% more likely to be satisfied with their lives than those who are unmarried, which supports the research indicating that married individuals tend to be happier than their unmarried counterparts (Verbakel, 2012; Diener et al., 2000). Marriage provides emotional support, companionship, and economic benefits, which contribute to increased well-being (Diener et al., 2000). However, the effect size is relatively small, suggesting that other factors, such as job satisfaction and financial security, may play a more significant role.

Age group comparisons reveal an interesting pattern. Compared to young adults aged 18-24, individuals aged 25-34 are 11% less likely to be satisfied with their lives, and those in the 35-44 age group are 15% less likely. Similarly, individuals aged 45-54 experience a 13% lower probability of life satisfaction. These findings may reflect the midlife dip in happiness, often attributed to career pressures, financial responsibilities, and family burdens (Caner, 2016; Blanchflower, 2021). However, individuals aged 65 and above are 11% more likely to be satisfied with life than young adults, suggesting a U-shaped pattern in life satisfaction, where older individuals may experience improved well-being due to improved financial security, lower stress levels and greater life perspective (Blanchflower, 2021; Jivraj et al., 2014). Overall, the results emphasize the crucial roles of job satisfaction, social security registration, employment type, gender, marital status, and age in shaping subjective well-being. These findings contribute to the growing body of literature on life satisfaction determinants and highlight the importance of policies that improve job quality, social protection, and work-life balance.

The insignificance of the public sector variable suggests that, after controlling for other factors, working in the public sector does not have a statistically meaningful impact on life satisfaction compared to working in the private sector. This finding contrasts with some studies that suggest public sector employment provides greater job security, better benefits, and a more predictable work-life balance, which might enhance life satisfaction (Özsoy et al., 2014; Cannas et al., 2019). However, other research indicates that the public sector is not necessarily associated with higher subjective well-being, particularly in contexts where wage differentials between public and private employment are minimal or where job stability is offset by bureaucratic inefficiencies and limited career progression (Cannas et al., 2019; Qu and Robichau, 2023; Dirzyte and Patapas, 2022).



The statistical fit of the model is also notable, reinforcing the validity of the Heckman selection approach. The rho values, ranging from -0.79 to -0.84, indicate a consistently strong negative correlation between the error terms of the selection and outcome equations. This confirms the presence of selection bias and justifies the use of the Heckman correction. Moreover, the chi-squared values, ranging from 582.27 to 654.02, demonstrate the model's statistical significance, providing strong evidence against the null hypothesis that rho equals zero. These results reinforce the robustness of the model, ensuring reliable inferences about the determinants of life satisfaction while highlighting the necessity of addressing selection bias in the analysis.<sup>3</sup>

## 6. Conclusion

This study explores the complex relationship between job satisfaction and life satisfaction, emphasizing the crucial role that workplace contentment plays in shaping individuals' overall well-being. Building on foundational studies by Judge and Watanabe (1993) and Schmitt and Bedeian (1982), the findings support the spillover hypothesis, which asserts that satisfaction in the workplace positively influences life satisfaction. The study also aligns with prior research by Kresha (1982) and Park (2011), which highlights the transformative potential of stimulating work environments in fostering both professional and personal growth.

A central aspect of this research is the recognition of the significance of community variables, as highlighted by Iverson and Maguire (2000). Their work emphasizes the importance of incorporating social and familial contexts into workplace strategies. This perspective advocates for an inclusive approach to workplace development that prioritizes autonomy, recognition, support, and equitable compensation. To enhance employee satisfaction and well-being, the study proposes practical strategies such as flexible work arrangements and wellness programs. These initiatives not only improve individual well-being but also generate broader societal benefits by fostering a healthier and more balanced workforce.

The findings reveal the multifaceted impact of job satisfaction on societal and economic dimensions. Supportive work environments improve individual well-being and also help foster societal stability. By reducing unemployment and improving job quality, job satisfaction contributes to the social fabric and promotes economic growth. Additionally, a satisfied workforce enhances productivity, which in turn supports

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<sup>3</sup> As part of a sensitivity analysis, we examined subsamples based on gender and age groups to explore whether the results remained consistent across different subsets of the data. This attempt aimed to evaluate the potential influence of these factors on the findings, ensuring that the conclusions are not driven by specific demographic characteristics. The results are presented in the Appendix in Tables A3a and A3h.

sustainable development. High levels of workplace contentment create a happier, more cohesive society, further promoting long-term societal progress.

The study also addresses the critical issue of workplace inequality. Promoting equitable job satisfaction practices is essential for advancing social justice and reducing disparities among different demographic groups. A satisfied workforce typically experiences lower turnover rates and greater loyalty, which strengthens the sustainability of industries and ensures long-term economic stability.

The policy recommendations derived from this research highlight the importance of improving job security, fostering inclusive work environments, and promoting work-life balance. These measures are pivotal in building thriving, resilient societies. Furthermore, incorporating the Quality of Work Life (QWL) framework into organizational strategies offers a practical means to prioritize job satisfaction, ultimately boosting overall happiness and societal well-being.

Future research should focus on conducting longitudinal studies to better understand the lasting effects of job satisfaction on life satisfaction. Expanding studies across different demographics and cultural contexts will enhance the generalizability of the findings and facilitate the development of tailored interventions. Ultimately, this study advocates for a holistic approach that balances both the professional and personal domains, aiming to maximize employee satisfaction while contributing to societal prosperity and sustainable development.

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#### DISCLOSURE STATEMENTS:

**Research and Publication Ethics Statement:** This study has been prepared in accordance with the rules of scientific research and publication ethics.

**Contribution rates of the authors:** First author (50%), Second author (50%).

**Conflicts of Interest:** Author states that there is no conflict of interest.

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## Appendix

**Table A1. Variables definitions**

Variable	Definition	Modified Scale	
Life Satisfaction	When you think as a whole, rate your recent life satisfaction between 0 and 10 ("0: Not at all satisfied", "10: Very satisfied")	0	Unsatisfied
		1	Satisfied
Job Satisfaction	Are you satisfied with your job?	1	Unsatisfied
		2	Neither Satisfied nor
		3	Unsatisfied Satisfied
Income Satisfaction	Are you satisfied with the income that you get from your job?	1	Unsatisfied
		2	Neither Satisfied nor
		3	Unsatisfied Satisfied
Work Time Satisfaction	Are you satisfied with the time spend (taking) for work from arrival to departure?	1	Unsatisfied
		2	Neither Satisfied nor
		3	Unsatisfied Satisfied
Business Relationship Satisfaction	Are you satisfied with relationships with people about your business?	1	Unsatisfied
		2	Neither Satisfied nor
		3	Unsatisfied Satisfied
Social Pressure from Job	Do you feel any social pressure resulting from your job?	0	No
		1	Yes
Social Pressure from Income	Do you feel any social pressure resulting from your level of income?	0	No
		1	Yes
Social Security Registered	Are you registered to any social security institution?	0	No
		1	Yes
Work Sector (Private or Public)	Is your workplace/business belongs to the private or public sector?	0	Private
		1	Public
Employment Type	What is your employment status in your main job?	1	Regular/Casual Worker
		2	Employer
		3	Self Employed
		4	Unpaid Family Worker
Gender	Sex of the individual	0	Male
		1	Female
Marital Status	What is your marital status?	0	Not Married
		1	Married
Age Group	Coded age groups	1	18-24
		2	25-34
		3	35-44
		4	45-54
		5	55-64
		6	+65
Educational Attainment	What is your completed level of education?	1	No school completed
		2	Primary school
		3	Secondary education
		4	High school
		5	Higher education

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A2b. Regression results (female)**

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.0858*** (0.0272)					
	Satisfied	0.173*** (0.0188)					
<b>Income Satisfaction</b>	Unsatisfied		-0.164*** (0.0165)				
	Satisfied		0.108*** (0.0157)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.0338 (0.0216)			
	Satisfied			0.121*** (0.0185)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.0553 (0.0443)		
	Satisfied				0.162*** (0.0207)		
<b>Social Pressure from Job</b>						-0.0958*** (0.0300)	
<b>Social Pressure from Income</b>						-0.136*** (0.0273)	
<b>Social Security Registered</b>		0.185*** (0.0230)	0.188*** (0.0225)	0.215*** (0.0228)	0.217*** (0.0232)	0.219*** (0.0233)	0.216*** (0.0233)
<b>Public sector</b>		0.0247* (0.0143)	0.0186 (0.0142)	0.0254* (0.0144)	0.0246* (0.0145)	0.0213 (0.0146)	0.0222 (0.0145)
<b>Employment Type</b>	Employer	0.104** (0.0408)	0.0992** (0.0402)	0.101** (0.0409)	0.111*** (0.0411)	0.112*** (0.0410)	0.114*** (0.0411)
	Self employed	0.0115 (0.0250)	0.00808 (0.0242)	-0.0191 (0.0250)	-0.00572 (0.0249)	-0.00860 (0.0251)	-0.00947 (0.0251)
	Unpaid	-0.0410* (0.0212)	-0.0533** (0.0218)	-0.0596*** (0.0214)	-0.0539** (0.0218)	-0.0490** (0.0218)	-0.0508** (0.0218)
<b>Married</b>		0.0763*** (0.0147)	0.0709*** (0.0146)	0.0794*** (0.0147)	0.0804*** (0.0147)	0.0837*** (0.0148)	0.0829*** (0.0148)
<b>Age Group</b>	25-34	-0.00974 (0.0246)	0.00367 (0.0243)	-0.000328 (0.0245)	-0.00330 (0.0246)	-0.00531 (0.0249)	-0.00543 (0.0249)
	35-44	-0.0615** (0.0248)	-0.0360 (0.0246)	-0.0525** (0.0248)	-0.0548** (0.0249)	-0.0557** (0.0252)	-0.0554** (0.0253)
	45-54	-0.121*** (0.0262)	-0.0925*** (0.0259)	-0.105*** (0.0261)	-0.110*** (0.0264)	-0.111*** (0.0266)	-0.111*** (0.0266)
	55-64	-0.153*** (0.0336)	-0.125*** (0.0335)	-0.140*** (0.0336)	-0.141*** (0.0339)	-0.140*** (0.0343)	-0.143*** (0.0342)
	65 and above	-0.159*** (0.0495)	-0.154*** (0.0485)	-0.135*** (0.0498)	-0.140*** (0.0497)	-0.130*** (0.0499)	-0.132*** (0.0501)
	<b>Constant</b>	0.183*** (0.0387)	0.302*** (0.0374)	0.205*** (0.0393)	0.138*** (0.0414)	0.283*** (0.0372)	0.289*** (0.0372)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.197*** (0.0392)					
	Satisfied	0.445*** (0.0287)					
<b>Income Satisfaction</b>	Unsatisfied		-0.416*** (0.0260)				
	Satisfied		0.361*** (0.0241)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.151*** (0.0281)			
	Satisfied			0.247*** (0.0237)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.190*** (0.0552)		
	Satisfied				0.339*** (0.0284)		
<b>Social Pressure from Job</b>						-0.329*** (0.0416)	
<b>Social Pressure from Income</b>							-0.402*** (0.0405)
<b>Social Security Registered</b>		0.300*** (0.0301)	0.331*** (0.0320)	0.363*** (0.0282)	0.369*** (0.0283)	0.373*** (0.0281)	0.376*** (0.0284)
<b>Public sector</b>		0.00645 (0.0236)	0.00515 (0.0246)	0.0163 (0.0233)	0.0152 (0.0230)	0.00803 (0.0230)	0.00965 (0.0231)
<b>Employment Type</b>	Employer	0.205*** (0.0376)	0.148*** (0.0378)	0.184*** (0.0373)	0.210*** (0.0369)	0.191*** (0.0369)	0.192*** (0.0370)
	Self employed	0.0347 (0.0245)	0.0171 (0.0256)	-0.00849 (0.0235)	0.0174 (0.0236)	0.0113 (0.0234)	0.00623 (0.0236)
	Unpaid	0.111* (0.0621)	0.0987 (0.0667)	0.0215 (0.0573)	0.0791 (0.0582)	0.0679 (0.0560)	0.0609 (0.0567)
<b>Married</b>		-0.151*** (0.0274)	-0.110*** (0.0286)	-0.154*** (0.0271)	-0.160*** (0.0270)	-0.156*** (0.0269)	-0.155*** (0.0269)
<b>Age Group</b>	25-34	-0.349*** (0.0392)	-0.276*** (0.0415)	-0.357*** (0.0383)	-0.360*** (0.0384)	-0.369*** (0.0381)	-0.366*** (0.0385)
	35-44	-0.422*** (0.0414)	-0.338*** (0.0437)	-0.441*** (0.0405)	-0.440*** (0.0405)	-0.452*** (0.0402)	-0.44*** (0.0406)
	45-54	-0.310*** (0.0427)	-0.233*** (0.0445)	-0.318*** (0.0417)	-0.313*** (0.0418)	-0.325*** (0.0415)	-0.32*** (0.0418)
	55-64	0.139*** (0.0489)	0.136*** (0.0514)	0.138*** (0.0476)	0.155*** (0.0475)	0.153*** (0.0472)	0.143*** (0.0475)
	65 and above	0.699*** (0.0670)	0.652*** (0.0733)	0.722*** (0.0636)	0.758*** (0.0636)	0.769*** (0.0629)	0.755*** (0.0635)
<b>Constant</b>		-0.0162 (0.0629)	0.161** (0.0635)	0.157*** (0.0576)	-0.0208 (0.0603)	0.304*** (0.0531)	0.299*** (0.0537)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							



**Table A3c. Heckman selection model results (Age Group 18-24)**

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.303** (0.123)					
	Satisfied	0.531*** (0.0922)					
<b>Income Satisfaction</b>	Unsatisfied		-0.398*** (0.0850)				
	Satisfied		0.382*** (0.0767)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.267*** (0.0995)			
	Satisfied			0.279*** (0.0849)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.263 (0.194)		
	Satisfied				0.445*** (0.101)		
<b>Social Pressure from Job</b>						-0.328*** (0.113)	
<b>Social Pressure from Income</b>							-0.232** (0.110)
<b>Social Security Registered</b>		0.419*** (0.0812)	0.457*** (0.0802)	0.500*** (0.0811)	0.477*** (0.0814)	0.477*** (0.0815)	0.482*** (0.0816)
<b>Public sector</b>		0.108 (0.117)	0.0780 (0.121)	0.110 (0.116)	0.0776 (0.113)	0.0607 (0.114)	0.0727 (0.113)
<b>Employment Type</b>	Employer	0.157 (0.218)	0.178 (0.209)	0.208 (0.231)	0.182 (0.215)	0.193 (0.215)	0.195 (0.215)
	Self employed	0.322** (0.136)	0.268** (0.136)	0.266** (0.133)	0.280** (0.135)	0.284** (0.133)	0.282** (0.133)
	Unpaid	0.228* (0.121)	0.217* (0.121)	0.131 (0.116)	0.183 (0.117)	0.153 (0.115)	0.155 (0.115)
<b>Female</b>		-0.0122 (0.134)	0.0404 (0.151)	-0.0229 (0.134)	-0.0512 (0.132)	-0.0721 (0.133)	-0.0759 (0.132)
<b>Married</b>		0.0721 (0.116)	0.118 (0.122)	0.0699 (0.115)	0.0351 (0.113)	0.0271 (0.115)	0.0239 (0.114)
<b>Constant</b>		-1.080*** (0.198)	-0.754*** (0.199)	-0.803*** (0.195)	-1.066*** (0.196)	-0.644*** (0.176)	-0.66*** (0.175)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

**Table A3d. Heckman selection model results (Age Group 25-34)**

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.112* (0.0654)					
	Satisfied	-0.441*** (0.0416)					
<b>Income Satisfaction</b>	Unsatisfied		0.505*** (0.0437)				
	Satisfied		0.306*** (0.0387)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.0672 (0.0446)			
	Satisfied			0.265*** (0.0391)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.107 (0.0910)		
	Satisfied				0.367*** (0.0450)		
<b>Social Pressure from Job</b>						-0.296*** (0.0593)	
<b>Social Pressure from Income</b>							-0.449*** (0.0597)
<b>Social Security Registered</b>		0.246*** (0.0536)	0.270*** (0.0564)	0.313*** (0.0512)	0.298*** (0.0517)	0.314*** (0.0512)	0.310*** (0.0512)
<b>Public sector</b>		0.0371 (0.0338)	0.0226 (0.0354)	0.0435 (0.0335)	0.0352 (0.0334)	0.0364 (0.0332)	0.0362 (0.0333)
<b>Employment Type</b>	Employer	0.123 (0.0847)	0.104 (0.0826)	0.150* (0.0830)	0.189** (0.0819)	0.175** (0.0833)	0.176** (0.0833)
	Self employed	0.0522 (0.0534)	0.0383 (0.0548)	0.0344 (0.0528)	0.0661 (0.0537)	0.0584 (0.0527)	0.0523 (0.0532)
	Unpaid	0.219*** (0.0822)	0.154* (0.0880)	0.138* (0.0808)	0.157* (0.0803)	0.192** (0.0797)	0.179** (0.0809)
	<b>Female</b>	0.651*** (0.0368)	0.604*** (0.0393)	0.648*** (0.0375)	0.660*** (0.0367)	0.660*** (0.0374)	0.654*** (0.0374)
<b>Married</b>		0.0786** (0.0326)	0.112*** (0.0333)	0.0927*** (0.0322)	0.0832*** (0.0322)	0.0904*** (0.0321)	0.0854*** (0.0323)
<b>Constant</b>		-1.100*** (0.0968)	-0.699*** (0.0968)	-0.938*** (0.0918)	-1.089*** (0.0949)	-0.776*** (0.0854)	-0.755*** (0.0861)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.288*** (0.0611)					
	Satisfied	0.376*** (0.0419)					
<b>Income Satisfaction</b>	Unsatisfied		-0.445*** (0.0372)				
	Satisfied		0.297*** (0.0350)				
<b>Work time Satisfaction</b>	Unsatisfied			-0.198*** (0.0443)			
	Satisfied			0.165*** (0.0377)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.188** (0.0853)		
	Satisfied				0.356*** (0.0434)		
<b>Social Pressure from Job</b>						-0.307*** (0.0667)	
<b>Social Pressure from Income</b>							-0.37*** (0.0603)
<b>Social Security Registered</b>		0.249*** (0.0500)	0.260*** (0.0497)	0.317*** (0.0484)	0.334*** (0.0481)	0.333*** (0.0488)	0.338*** (0.0490)
<b>Public sector</b>		-0.0232 (0.0326)	-0.0367 (0.0336)	-0.0206 (0.0326)	-0.0238 (0.0323)	-0.0350 (0.0322)	-0.0273 (0.0323)
<b>Employment Type</b>	Employer	0.277*** (0.0599)	0.196*** (0.0604)	0.253*** (0.0595)	0.269*** (0.0596)	0.253*** (0.0594)	0.260*** (0.0594)
	Self employed	0.0275 (0.0422)	-0.0200 (0.0426)	-0.0435 (0.0411)	-0.00651 (0.0411)	-0.0182 (0.0410)	-0.0192 (0.0413)
	Unpaid	-0.00430 (0.0722)	-0.0627 (0.0774)	-0.0387 (0.0689)	-0.0250 (0.0686)	-0.0181 (0.0674)	-0.0254 (0.0685)
<b>Female</b>		0.709*** (0.0362)	0.670*** (0.0378)	0.715*** (0.0362)	0.729*** (0.0359)	0.733*** (0.0360)	0.729*** (0.0359)
<b>Married</b>		0.0973** (0.0416)	0.0950** (0.0425)	0.110*** (0.0418)	0.110*** (0.0412)	0.112*** (0.0413)	0.111*** (0.0415)
<b>Constant</b>		-1.177*** (0.0965)	-0.824*** (0.0948)	-1.033*** (0.0932)	-1.316*** (0.0956)	-0.980*** (0.0875)	-0.98*** (0.0880)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							







**Table A3h. Heckman selection model results (Age Group 65 and above)**

		1	2	3	4	5	6
<b>Job Satisfaction</b>	Unsatisfied	-0.0284 (0.0955)					
	Satisfied	0.159** (0.0707)					
<b>Income Satisfaction</b>	Unsatisfied		-0.214*** (0.0510)				
	Satisfied		0.0875 (0.0565)				
<b>Work time Satisfaction</b>	Unsatisfied			0.0186 (0.0929)			
	Satisfied			0.0874 (0.0557)			
<b>Business Relationship Satisfaction</b>	Unsatisfied				-0.0800 (0.147)		
	Satisfied				0.182*** (0.0568)		
<b>Social Pressure from Job</b>						-0.0906 (0.135)	
<b>Social Pressure from Income</b>							-0.22*** (0.0862)
<b>Social Security Registered</b>		0.184*** (0.0621)	0.0759 (0.0482)	0.203*** (0.0587)	0.142** (0.0566)	0.210*** (0.0581)	0.191*** (0.0559)
<b>Public sector</b>		0.275** (0.130)	0.315*** (0.0774)	0.280** (0.126)	0.156 (0.100)	0.239* (0.125)	0.248** (0.117)
<b>Employment Type</b>	Employer	0.0899 (0.0987)	0.0912 (0.0991)	0.109 (0.102)	0.101 (0.0979)	0.0944 (0.0989)	0.0921 (0.0977)
	Self employed	0.00118 (0.0528)	0.0415 (0.0506)	-0.00988 (0.0519)	-0.00700 (0.0525)	-0.0116 (0.0517)	-0.0101 (0.0504)
	Unpaid	0.0776 (0.0799)	0.102 (0.0773)	0.0587 (0.0775)	0.112 (0.0718)	0.0676 (0.0759)	0.0790 (0.0734)
	<b>Female</b>	0.444*** (0.0831)	0.427*** (0.0824)	0.460*** (0.0809)	0.370*** (0.0764)	0.453*** (0.0800)	0.445*** (0.0789)
<b>Married</b>		-0.268*** (0.0831)	-0.304*** (0.0834)	-0.269*** (0.0825)	-0.263*** (0.0791)	-0.268*** (0.0812)	-0.26*** (0.0800)
<b>Constant</b>		0.419* (0.231)	0.676*** (0.182)	0.463** (0.230)	0.726*** (0.213)	0.580*** (0.221)	0.600*** (0.214)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							