

# Subjective Well-being Analysis as a Return on Investment in Education and its Effects from Socio-Economic Factors by Panel Ordered Probit Method

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## Abstract

This study attempted to deepen the understanding of how social, economic, and demographic factors affect subjective well-being through the Panel ordered probit method from the Indonesian Family Life Survey (IFLS) 4 and 5. Subjective well-being has emerged as an important indicator of quality of life. Subjective well-being is important for individuals because it reflects the level of happiness and life satisfaction that affects various aspects of life. The research method used is quantitative. Data collection and analysis in this study were conducted through econometric modeling. This research utilizes panel data analyzed using the Panel Ordered Probit Method with the help of STATA 17 software. The results showed that higher education levels increased the likelihood of a person feeling "Very Happy". In addition to education and age, control variables such as employment status, marital status, and residential location also show a significant influence on happiness; individuals who are employed have a 2.59% higher probability of feeling "Very Happy", while those who are married tend to be happier and less likely to feel "Unhappy" or "Very Unhappy". Location of residence was also influential, with individuals living in urban areas 0.97% more likely to feel "Very Happy" compared to those living in rural areas. Overall, the results confirm that education, employment status, social relationships through marital status, and neighborhood are important factors in influencing subjective well-being, emphasizing the importance of investing in education and policies that promote work-life balance and social relationships to improve people's well-being.

*Keywords:* Subjective Well-Being; Education; Social-Economic, Panel Ordered Ptobit

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## 1. Introduction

Subjective well-being has emerged as an important indicator of quality of life. Subjective well-being is important for individuals because it reflects the level of happiness and life satisfaction that has an effect on various aspects of life. High subjective well-being can improve mental and physical health, productivity, and social relationships, and aid better decision-making. In addition, subjective well-being is also a more holistic measure of life success, beyond material achievements. This observation alludes to the vagueness of a concept that is often used in everyday life but difficult to understand scientifically. Yet it is common knowledge in the literature that subjective well-being is lower among less educated people and higher among highly educated people. This can also be proven when looking at people who have diplomas are in a much better and more favorable situation than others. There is a high probability that they have relatively more income when compared to individuals who do not have a diploma.

There is cumulative evidence that children's subjective well-being decreases with age from 10 to 16 years (Casas et al., 2022) and there may be a relationship between age indicators and subjective well-being, but this may be seen in some age groups but not others. In addition, the issue of gender roles in modern literature is closely related to the experience of subjective well-being. According to some research results, it appears that greater gender well-being correlates with

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higher levels of overall happiness (Blanchflower & Bryson, 2024; Hoan & MacDonald, 2024; Meisenberg & Woodley, 2015; Ndoya et al., 2024).

In the existing literature, it is well-documented that higher education has a positive impact on productivity and income (Eid, 2012; Rana, 2022; Wolf, 2009). In addition, higher income means one can afford more goods and services, which ultimately leads to higher levels of happiness (Biswas-Diener et al., 2004). While employment status and subjective well-being have mixed relationships, the life satisfaction of the unemployed also influences the relationship between employment and well-being. Labor market policies have been the most recognized macro-level factor affecting their well-being (Jung, 2015). Other indicators such as rural-urban residence also affect subjective well-being, as social capital plays a significant role. City dwellers perceive an increase in happiness and life satisfaction, compared to rural dwellers who only see an increase in happiness. This shows that urban areas have a more advanced social capital infrastructure. Wahyuni in her research using large-scale data from 24,175 Indonesians, found that social capital improves household welfare through better income and expenditure.

This research was created taking into account that individual well-being is increasingly affected by social comparison, and that the relative income hypothesis, i.e. the fact that individuals derive happiness from comparing their material achievements with the income of others in the reference group, can plausibly capture the complexity of the interaction between economic issues and individual well-being. The hypothesis is proven in the happiness-related literature using panel data that allows control for unobservable conditions, situations or events, and personality traits (time-independent individual effects). Individual heterogeneity is looked at in this study when dealing with inherently unobservable outcomes related to individual satisfaction. This research examines how individuals' subjective well-being can be measured by socioeconomic factors that are thought to play an important role in individuals' satisfaction with life such as indicators of age, gender, latest level of education, employment status, and rural-urban residence.

By considering various dimensions such as the last level of education, age, gender, employment status, and location of residence. This research not only provides relevant empirical insights but also offers a foundation for designing more inclusive policies by processing data using econometric methods with ordered orbit panel models sourced from IFLS data in 2007 and 2014. This research can also deepen the understanding of the complexity of subjective well-being, which is an important step towards building a more prosperous society.

## 2. Literature Review

### 2.1. Subjective well-being

Subjective well-being or what is commonly referred to as subjective well-being is one of the approaches in positive psychology. According to (Diener et al., 2012), Subjective well-being is defined as a person's cognitive and affective evaluation of his or her life. This evaluation includes emotional reactions to various events as well as cognitive assessments of satisfaction and fulfillment. Thus, subjective well-being is a broad concept that includes the experience of pleasant emotions, low negative mood, and high life satisfaction. Subjective well-being is one of the predictors of an individual's quality of life because subjective well-being is one of individual success in various domains of life (Diener et al., 2012).

There are two theoretical approaches used in subjective well-being (Ariati, 2010). The first Bottom up theories which view that happiness and life satisfaction felt and experienced by a person depend on the amount of small happiness and a collection of happy events. To improve subjective well-being, this theory assumes the need to change the environment and situations that will affect individual experiences. Second, Top-down theories The subjective well-being experienced by a person depends on the way the individual assesses and interprets an event/occurrence in a positive light. This theoretical perspective considers that it is the individual who determines or plays a role in whether the events he experiences will create psychological well-being for him.

Individuals with high levels of subjective well-being will feel more confident, can establish better social relationships, and show better work performance. In addition, in stressful situations, individuals with high levels of subjective well-being can adapt and cope more effectively with these circumstances so that they feel a better life (Diener et al., 2012); (Biswas-Diener et al., 2004). In general, Diener explains that the effects of demographic factors for example (e.g. income, unemployment, marital status, age, gender, education, and the presence or absence of children) usually affect Subjective Well-being.

This study also considers other variables or so-called control variables such as gender, age, education, and employment status. Every individual certainly wants a happy and satisfying life until the end of life. However, in reality, as we get

older, humans cannot avoid the ups and downs in life. Various events that a person experiences can contribute to an increase or decrease in the level of life satisfaction (Khoirunnisa & Nurchayati, 2023). (Diener et al., 2012) state that age and gender have a relationship with subjective well-being, although the effect varies depending on the measurement strategy of the subjective well-being component used.

Research conducted by (Giacomoni, 2004) shows that demographic variables, including gender, only account for less than twenty percent of the variation in subjective well-being. This finding is in line with research by (Ningsih, 2013), who examined young adults aged 18-40 years and found no significant differences in subjective well-being based on demographic factors such as marital status, gender, or income. But according to (Abdullahi et al., 2019) the relationship between gender and subjective well-being in this study shows that there are significant differences between men and women in the components. The study concluded that men are more related to social well-being and life satisfaction, while women are more related to emotional well-being.

(Ningsih, 2013) suggests that in the young adult age group, personal circumstances do not have a major effect on overall life satisfaction. This increase confirms that age-related experiences can make a positive contribution to subjective well-being. This confirms that age can make a positive contribution to overall well-being. Although age can influence subjective well-being, it is important to consider that individual experiences and external factors, such as social support and living conditions, also play an important role in shaping one's life satisfaction.

## 2.2. Subjective Well-being of Urban-Rural Residence Areas

Urban-rural refers to the differences and relationships between urban (city) and rural (village) environments. The relationship between urban-rural environment and subjective well-being is strongly influenced by the level of economic development of a country. According to (Requena, 2016), living in rural areas can increase the level of subjective well-being in rich countries, while on the contrary rural conditions cannot compete with urban resources in creating better subjective well-being in developing countries.

The difference between living in urban and rural areas can produce different impacts on subjective well-being, depending on the economic and social context of each country. According to (Fang et al., 2022), the relationship between urban-rural settlement and subjective well-being shows that settlement quality has a significant impact on individual well-being. Research shows that subjective and objective evaluations of urban-rural settlements have a positive correlation. Good settlement quality contributes to higher levels of satisfaction among residents, with significant differences based on resident attributes such as occupation, age, education, and place of residence.

The relationship between urban-rural dynamics and subjective well-being (SMB) reveals a complex landscape that is influenced by a variety of factors, including housing quality, social relationships, and individual conditions. Rural residents often report higher levels compared to urban residents, although this gap is narrowing in some contexts. In developed countries, rural residents typically experience higher life satisfaction than urban residents (Eliophotou Menon, 2016). Factors contributing to this paradox include lower stress levels and a greater sense of life meaning among rural residents (Lolle, 2023).

In addition, there are studies find that social capital also has an important role in significantly improving subjective well-being, where urban residents experience greater improvements in happiness and life satisfaction compared to rural residents, where social capital primarily increases happiness but not life satisfaction (Nugroho et al., 2022). Another connection is the changing trends in Italy cited in “Subjective well-being in rural and urban Italy, 2023” where there was a shift from higher rural in 2008 to equal levels in both regions in 2018. This reflects evolving social dynamics and suggests that factors such as urbanization and social change can affect individuals' perceptions of their well-being. In this context, it is important to understand how the interaction between housing quality, social environment, and economic conditions can contribute to different urban and rural settings.

## 2.3. Education

Education contributes significantly to improving subjective well-being. According to (Yakovlev & Leguizamon, 2012) the relationship between education and subjective well-being suggests that higher education, such as a college degree, has a relatively strong positive impact on subjective well-being. The important role of academic expectations in mediating the relationship between academic engagement and subjective well-being. (Nuhermaria Agusta & Hawadi, 2023) found that higher levels of engagement in academic activities were associated with better subjective well-being outcomes.

Education is the development of knowledge, skills, and attitudes through structured learning experiences, both inside and outside the formal environment. Education also serves as a tool to improve the quality of life and well-being of individuals and society as a whole. According to (Yakovlev & Leguizamón, 2012) the relationship between education and subjective well-being shows that higher education, such as a college degree, has a relatively strong positive impact on subjective well-being.

(Huo & Chen, 2023) provides empirical evidence suggesting that education, when combined with the ability to establish extensive relationships, has a positive impact on individual well-being. Education not only improves skills and knowledge but also better prepares individuals to face life's challenges. This allows them to make more informed decisions, which in turn can increase life satisfaction (Yakovlev & Leguizamón, 2012).

Recent research has also highlighted the important role of academic expectations in mediating the relationship between academic engagement and subjective well-being. (Nuhermaria Agusta & Hawadi, 2023) found that higher levels of engagement in academic activities were associated with better subjective well-being outcomes. Students who actively participate in their learning process tend to have higher levels of happiness, thus emphasizing the importance of engagement in the educational environment as a key factor in achieving optimal well-being.

#### *2.4. Gender Type*

In a social and psychological context, sex also includes the roles, norms, and expectations shaped by society in relation to male and female behavior and identity. This is often referred to as gender, which includes the social and cultural aspects of the differences between men and women. According to (Abdullahi et al., 2019) the relationship between gender and subjective well-being in this study shows that there are significant differences between men and women in the components. The results showed that men were more related to social well-being and life satisfaction, while women were more related to emotional well-being. This means that women tend to have higher levels of emotional well-being than men, which may be due to social norms that require men not to show emotions, so they discuss their feelings less.

Research conducted by (Giacomoni, 2004) showed that demographic variables, including gender, only accounted for less than twenty percent of the variation in subjective well-being. This finding indicates that the factors that influence subjective well-being are more complex and not solely determined by gender. Furthermore, research (Ningsih, 2013) reinforces this view by showing that demographic factors, including gender, have no significant influence on subjective well-being. In a study conducted in Malang involving 401 young adults, no notable differences were found based on gender, marital status, or income level. The results of this study confirm that there are no significant differences in the appraisal of individuals' positive, and negative emotions, and life satisfaction that can be explained by demographic factors of gender (Spasić Šnele et al., 2020).

#### *2.5. The Age*

Every individual wants a happy and fulfilling life until the end of their life. However, in reality, as we age, humans cannot avoid the ups and downs in life. Various events that a person experiences can contribute to an increase or decrease in the level of life satisfaction (Khoirunnisa & Nurchayati, 2023). Diener et al. (2005) state that age and gender have a relationship with subjective well-being, although the effect varies depending on the measurement strategy of the subjective well-being component used.

Research conducted (Ningsih, 2013) on young adults aged 18-40 years found no significant differences based on demographic factors such as marital status, gender, or income. This finding suggests that in this age group, personal circumstances may not have a major effect on overall life satisfaction. A longitudinal study that spanned from 2007 to 2014 showed an increase among the productive age group (15-57 years), indicating that life satisfaction may increase over time (Yuniati et al., 2022). This confirms that age-related experiences can make a positive contribution to overall well-being. Although age can influence subjective well-being, it is important to consider that individual experiences and external factors, such as social support and living conditions, also play an important role in shaping one's life satisfaction.

#### *2.6. Employment Status*

Socioeconomic status is another influencing factor. Subjectivity in the perception of socioeconomic status support can affect individual happiness and life satisfaction. Socioeconomic status can affect happiness and life satisfaction, which suggests that how individuals perceive their economic status may be more important than objective measures (Gu,

2024). Employment status, as one of the objective indicators of socioeconomic status, is also closely related to subjective well-being. Individuals with higher employment status tend to report better levels of life satisfaction, happiness, and financial satisfaction. This relationship suggests that although subjective perceptions play an important role, objective factors such as employment status remain significant in shaping individual well-being (Maulana et al., 2018).

(Snyder, 2010) states three main concepts related to work. First, work is seen in financial terms. Second, work is understood as a career activity that facilitates achievement motivation, increases the need to compete among workers, and increases self-esteem and satisfaction. Third, work is considered an obligation that stems from individual beliefs to achieve useful social goals, serving as a means of self-development in a better direction.

Research conducted by (Ningsih, 2013) Economic status is an important factor that is an objective measure of subjective well-being. Employment status, as an objective indicator of socioeconomic status, is also closely related to subjective well-being. Individuals with higher employment status tend to report better levels of life satisfaction, happiness, and financial satisfaction. This relationship suggests that while subjective perceptions play an important role, objective factors such as employment status remain significant in shaping individual well-being (Dogarawa, 2012).

### 3. Methods

#### 3.1. The Data

The secondary data used in this study is the Indonesian Family Life Survey (IFLS) wave 4 conducted in 2007 and wave 5 conducted in 2014. IFLS is a household socio-economic survey that was first conducted in 1993 by RAND and the Demographic Institute of the University of Indonesia. In the 2007 IFLS survey, there were 29,060 individuals and 12,688 households and in the 2014 IFLS survey, there were 50,148 individuals and 16,931 households participating. The IFLS dataset presents the results of questionnaires covering various groups of questions, which form the basis for measuring socioeconomic variables as independent variables and social welfare variables as dependent variables.

#### 3.2. Dependent Variable

The dependent variable in this study is the subjective well-being of individuals, which is determined from the IFLS Book 3A question in question section SW12: “Considering the current situation, do you feel that you are very happy, happy, unhappy, or very unhappy?”: 1. Very happy; 2. Happy; 3. Unhappy; 4. Very unhappy;” Previous research has found that these questions have sufficient reliability and validity to measure individuals.

#### 3.3. Independent Variable

The independent variable in this study is education. In general, education can be converted into the numerical variable “years of education” or converted into the categorical variable “level of education”. This study categorizes education into five categories: elementary school and below junior high school senior high school college, and bachelor's degree and above. In the context of Indonesia's education system, the “senior high school” level of education can be interpreted to include education in senior high school (*Sekolah Menengah Atas*), vocational high school (*Sekolah Menengah Kejuruan*), and *Madrasah Aliyah*. While senior high school generally focuses more on academic education in preparation for college, while SMK focuses more on vocational and practical skills to prepare students to enter the workforce, both have the same duration of three years and are at the same level of education. *Madrasah Aliyah*, which is under the supervision of the Ministry of Religious Affairs, is also equivalent to senior high school but provides an additional portion of religious learning.

Therefore, this study can classify education in Indonesia into five categories of corresponding education levels: no schooling or only completed primary education, junior secondary education (*Sekolah Menengah Pertama* or equivalent), senior secondary education (*SMA/SMK/MA*), diploma or college education (*D1-D3*), and undergraduate education (*S1*) or higher (*S2, S3*). This classification reflects the structure of the education system in Indonesia, which refers to Law No. 20/2003 on the National Education System and allows for analysis that is more in line with local Indonesian characteristics. Since the education data in the form KW02n did not reflect specific years of education, the education variable was changed to “education level”.

### 3.4. Control Variables

Previous research has found that in addition to education, individuals' subjective well-being is also influenced by gender, marital status, age, area of residence, and employment status (Wang et al., 2023). Since many studies have found that the relationship between age and happiness is U-shaped, rather than linear, (Hayo, 2007), when the age factor needs to be considered, the square of age is generally added. Furthermore, since income has a skewed distribution, when it is included in the model, it is necessary to take its natural logarithm. Therefore, the final control variables in this study are: gender (1 = "male", 0 = "female"); age; age squared; marital status (1 = "married", 0 = "not married"); area of residence (1 = "urban", 0 = "rural"); and employment status (1 = "employed", 0 = "not employed").

### 3.5. Econometric Model

Secondary data collection and analysis in this study were conducted through qualitative and quantitative approaches. This study utilizes panel data analyzed using the Panel ordered probit regression method with the help of STATA 17 software. The panel ordered probit regression method is designed to explain the relationship between ordinal scale dependent variables and one or more independent variables. Ordinal variables are categorical and ordered variables, for example, "bad", "good", and "very good". The focus of this study is to see how educational variables affect subjective well-being with socioeconomic variables as control variables. Subjective well-being is a dependent variable that has three categories consisting of very happy (1), happy (2), unhappy (3), and very unhappy (4). This model only has 1 threshold (the first category is considered 0). The probability of these three categories is written as follows:

$$\begin{aligned} \text{Prob}(y_{it} = 0) &= \Phi(\mu_0 - x_{it}\beta), \\ \text{Prob}(y_{it} = 1) &= \Phi(\mu_1 - x_{it}\beta) - \Phi(\mu_0 - x_{it}\beta), \\ \text{Prob}(y_{it} = 2) &= \Phi(\mu_2 - x_{it}\beta) - \Phi(\mu_1 - x_{it}\beta), \\ \text{Prob}(y_{it} = 3) &= 1 - \Phi(\mu_2 - x_{it}\beta), \end{aligned}$$

Subsequently, the change in the marginal effect on the independent variable is as follows:

$$\begin{aligned} \frac{\partial P(y_{it} = 0)}{\partial x_{it}} &= -\phi(\mu_0 - x_{it}\beta) \cdot \beta \\ \frac{\partial P(y_{it} = 1)}{\partial x_{it}} &= [\phi(\mu_0 - x_{it}\beta) - \phi(\mu_1 - x_{it}\beta)] \cdot \beta \\ \frac{\partial P(y_{it} = 2)}{\partial x_{it}} &= [\phi(\mu_1 - x_{it}\beta) - \phi(\mu_2 - x_{it}\beta)] \cdot \beta \\ \frac{\partial P(y_{it} = 3)}{\partial x_{it}} &= \phi(\mu_2 - x_{it}\beta) \cdot \beta \end{aligned}$$

## 4. Result and Discussions

### 4.1. Results

This study uses an ordered probit panel model to analyze IFLS data in 2007 and 2014. To better see the magnitude of the influence of the dependent variables on subjective well-being and to find out how the impact of changes for each category, this study looks at the average marginal effects of these variables on each level of happiness which becomes 4 levels. The marginal effects are, in order, very happy, happy, unhappy, and very unhappy. The descriptive statistics shown on Figure 1.

The results can be seen in Figure 2, Model 1 shows that people with higher levels of education have a higher probability of being very happy by 2.59%, and Model 2 explains that if the individual's education is higher it tends to reduce the probability of being happy by 0.51%, Model 3 explains that higher levels of education tend to reduce the probability of being unhappy by 1.87%, and model 4 explains that people with higher levels of education tend to reduce the probability of being very unhappy by 0.2%. These findings indicate the importance of education in improving subjective well-being.

In the age variable, the marginal effects show a more complex relationship. The probability of being in the “Very Happy” category decreases by 0.59% for every additional year of age, but the presence of a non-linear effect (indicated by the squared age variable) shows that this decrease slows down and even reverses at certain ages, creating an inverted U pattern. This means that happiness tends to decrease at productive ages but increases again at older ages. Meanwhile, the probability of the “Happy” category increases at younger ages, but in a non-linear pattern, this probability decreases at older ages. In addition, if the individual is male, they will tend to have a 1.76% lower probability of being very happy than females.

Variables	Obs	Mean	Stdev	Min	Max
type_gender	57,324	0.484	0.500	0	1
age	57,324	35.88	14.38	14	90
umursq	57,324	1,494	1,202	196	8,100
marital status	49,919	0.685	0.465	0	1
swb	57,313	1.986	0.451	1	4
education_last	57,324	2.252	1.073	1	5
employment status	56,126	0.605	0.489	0	1
region_living	57,324	0.577	0.494	0	1

**Figure 1.** Descriptive Statistics

Source: Processed by Researchers

Variables	(1)	(2)	(3)	(4)
	Very Happy	Happy	Unhappy	Very Unhappy
education_last	0.0259*** (0.00109)	-0.00513*** (0.000448)	-0.0187*** (0.000817)	-0.00206*** (0.000140)
age	-0.00582*** (0.000444)	0.00115*** (0.000124)	0.00420*** (0.000325)	0.000463*** (4.33e-05)
age_sq	4.79e-05*** (5.27e-06)	-9.47e-06*** (1.26e-06)	-3.46e-05*** (3.83e-06)	-3.81e-06*** (4.69e-07)
type_gender	-0.0176*** (0.00224)	0.00314*** (0.000453)	0.0130*** (0.00169)	0.00145*** (0.000203)
region_living	0.00971*** (0.00213)	-0.00182*** (0.000409)	-0.00710*** (0.00158)	-0.000786*** (0.000180)
employment status	0.00646*** (0.00235)	-0.00124*** (0.000445)	-0.00470*** (0.00173)	-0.000519*** (0.000194)
marital status	0.0616*** (0.00224)	0.000129 (0.00121)	-0.0548*** (0.00253)	-0.00690*** (0.000488)
Observations	48,883	48,883	48,883	48,883
Number of pidlink	36,563	36,563	36,563	36,563

**Figure 2.** Results of Marginal Effect

*Robust standard errors in parentheses*

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: Regression results of IFLS 2007 and 2014 data, (Processed by Researchers).

Other control variables, namely employment status and marital status, also have a significant effect. Individuals who are employed have a 6.16% higher probability of being in the “Very Happy” category compared to those who are not employed. In contrast, marital status had the strongest impact on happiness, with married individuals having a higher probability of being in the “Very Happy” and “Happy” categories and a lower probability of being in the “Unhappy” or “Very Unhappy” categories. Overall, these variables show the importance of education, employment, and social relationships in influencing subjective well-being. Finally, for the area of residence, it shows that living in an urban area compared to a rural area affects the probability of being in each happiness category. In the “Very Happy” category, the marginal effect coefficient is positive, meaning that living in an urban area increases the probability of a person

feeling “Very Happy” by 0.97% compared to those living in a rural area which is in line with previous studies ((Castelletti et al., 2024); (Gao & Wang, 2023); (Ge & Li, 2020); (Navarro-Carrillo et al., 2020); (Núñez-Naranjo et al., 2024); (Salameh et al., 2022); (Salluca Vasquez et al., 2024); (Samsu et al., 2023); (Suchkov, 2023); (Wang et al., 2023)).

#### 4.2. Discussions

This study shows that the higher the level of education, the greater the probability of individuals being very happy. The level of higher education in Indonesia has a significant positive correlation with happiness, which is driven by various interrelated factors (Haryati, 2023). Economically, higher education opens up better job opportunities and higher incomes, providing economic stability that reduces stress and increases life satisfaction. In addition to economic benefits, higher education also facilitates self- and personal development, including increased self-acceptance and family harmony (Sitohang et al., 2017), which are very important for subjective well-being. Social capital, such as trust, altruism, and community participation, are also strengthened through education, which in turn increases happiness through strengthening social ties and community trust. In addition, urban residents who tend to have higher levels of education report higher levels of happiness than rural residents, partly due to better access to resources and opportunities (Idaiani & Sapatarini, 2023). Demographic factors such as age and marital status also interact with education in influencing happiness, where the positive effects of education tend to increase with age, and married individuals with higher education tend to be happier. From a psychological and health perspective, education is correlated with better health status and better access to health information and services. The psychological benefits of education, such as increased environmental mastery and personal growth, also contribute to higher levels of happiness as individuals are able to cope more effectively with life’s challenges (Rahayu, 2016). However, it is important to recognize that happiness is influenced by the broader context, including income inequality, regional disparities, and cultural factors, as well as other factors such as health and social relationships, making higher education an important pillar but not the sole determinant of happiness in Indonesia.

Then all control variables in this study also have a significant effect on individual subjective well-being. First, the gender variable, namely men in Indonesia tend to have lower levels of happiness than women, is a complex problem influenced by a series of interrelated socio-economic, cultural, and psychological factors. Economic pressure and job instability are significant contributors, especially because societal expectations often place men as the main breadwinners so that unemployment or financial difficulties can reduce their happiness (Nandini & Afiatno, 2020). In addition, strong cultural norms in Indonesia often place a heavier burden on men to carry out traditional roles, which can lead to stress and dissatisfaction if these expectations are not met. In terms of social capital, men may have more limited access to strong social support networks than women, who tend to be more active in community and family interactions that are important sources of happiness. Psychological factors such as a sense of security and subjective health also play a role, where men may experience higher levels of stress related to these issues (Hardini & Wasiaturrahma, 2020). In addition, the challenge of achieving satisfaction through personal growth and environmental mastery may be more felt by men because of the pressure to conform to certain socially determined roles. The interaction between education and age also affects happiness differently between men and women, where the benefits of higher education on happiness may be more pronounced for women in terms of personal growth and satisfaction (Maulana et al., 2018). Therefore, to improve male happiness in Indonesia, it is important to consider and address these factors through appropriate policies and promote more inclusive social capital and support systems.

Second, employment and marital status variables have been shown to be significant contributors to an individual’s level of happiness, which is influenced by a mesh of socioeconomic and cultural factors that reinforce subjective well-being. Employment not only provides financial stability that is essential for meeting basic needs and personal aspirations, but also provides a sense of purpose, and social identity, and increases social capital through expanding networks and interactions, which overall contribute to better health and lower potential for divorce. Meanwhile, marriage offers deep emotional and social support, which is consistently associated with higher levels of happiness compared to unmarried individuals, as well as potentially providing financial security, especially for working women who benefit from (Nisrina Nursyiana & Badriyah, 2022) shared economic responsibilities. (Aryogi, 2016). In the context of Indonesian culture, marriage is also highly valued and often brings greater social acceptance, thus increasing subjective well-being. However, it is important to note that occupation and marital status are not the only determinants of happiness, as other factors such as education, health, and religiosity also play an important role, with higher levels of education and better health often correlating with increased happiness (Sohn, 2016).

Third, the variables of residential areas have a significant effect on subjective well-being. Living in urban areas in

Indonesia is significantly associated with a higher likelihood of experiencing greater happiness, mainly due to better access to resources and opportunities that are important for subjective well-being (Mayuzumi, 2023). Economic advantages in urban areas are reflected in higher income levels, which directly contribute to happiness by allowing individuals to meet their needs and enjoy leisure activities. In addition, urban residents generally have better access to quality education and health facilities, which not only improve employment prospects but also enrich socio-cultural engagement and improve physical and mental health, both of which are important pillars of happiness (Rakhmawati, 2024). Urban environments also offer a more diverse social and cultural landscape, providing many opportunities for social interaction and personal growth, and tend to have higher levels of social capital, including trust and community participation, which strengthen a sense of belonging and community support. Demographic factors such as marital status and certain age groups that are more common in urban areas also indicate higher levels of happiness (Pramono, 2018). Urban lifestyles that often offer more leisure options and a balance between work and family life also contribute to overall happiness. Overall, the greater availability of resources and opportunities in urban areas in Indonesia tends to be more dominant in driving higher levels of happiness compared to rural areas.

## 5. Conclusions

This study uses 2007 and 2014 IFLS data in marginal effects, and as a result finds that education has a significant influence on individuals' subjective well-being, where a higher level of education increases the likelihood of an individual feeling "Very Happy" by 2.59%. This pattern suggests that education not only increases an individual's potential to achieve higher levels of happiness but also minimizes the likelihood of being at lower levels of happiness. Age also affects well-being in a non-linear pattern, where happiness tends to decrease by 0.59% per year at productive age, but reverses at older ages, creating an inverted U pattern as found in the ordered probit panel regression coefficients. In addition to education and age, control variables such as employment status, marital status, and residential location also show a significant influence on happiness; employed individuals are 6.16% more likely to feel "Very Happy", while those who are married tend to be happier and less likely to feel "Unhappy" or "Very Unhappy". Location of residence was also influential, with individuals living in urban areas being 0.97% more likely to feel "Very Happy" compared to those living in rural areas.

Overall, the results confirm that education, employment status, social relationships through marital status, and neighborhood are important factors in influencing subjective well-being, emphasizing the importance of investing in education and policies that promote work-life balance and social relationships to improve people's well-being. Although social factors such as marital status are the most influential variables in this study, economic factors such as education and employment status are also significant variables in subjective well-being. Moreover, people's decision to marry is also influenced by education (Huo & Chen, 2023) so education needs to get attention from the Indonesian government to improve subjective well-being in Indonesia. What the government can do is by making greater investments in education. Greater investment will increase the level of education and reduce unemployment and also it will increase subjective well-being.

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## References

Abdullahi, A. M., Orji, R., & Kawu, A. A. (2019). Gender, Age and Subjective Well-Being: Towards Personalized Persuasive Health Interventions. *Information 2019*, Vol. 10, Page 301, 10(10), 301. <https://doi.org/10.3390/INFO10100301>

Ariati, J. (2010). SUBJECTIVE WELL-BEING (KESEJAHTERAAN SUBJEKTIF) DAN KEPUASAN KERJA PADA STAF PENGAJAR (DOSEN) DI LINGKUNGAN FAKULTAS PSIKOLOGI UNIVERSITAS DIPONEGORO. *Jurnal Psikologi*, 8(2), 117–123. <https://doi.org/10.14710/JPU.8.2.117-123>

Aryogi, I. (2016). Subjective Well-being Individu dalam Rumah Tangga Di Indonesia. *Jurnal Ilmu Ekonomi Terapan*, 1(1). <https://doi.org/10.20473/JIET.V1I1.1900>

Biswas-Diener, R., Diener, E., & Tamir, M. (2004). The psychology of subjective well-being. *Daedalus*, 133(2), 18–25. <https://doi.org/10.1162/001152604323049352>

Blanchflower, D., & Bryson, A. (2024). The Gender Well-Being Gap. *Social Indicators Research*, 173(3), 1–45. <https://doi.org/10.1007/S11205-024-03334-7>

Casas, F., González-Carrasco, M., Oriol, X., & Malo, S. (2022). Economic and Children's Subjective Well-Being Indicators at the National Level in 35 Countries. *Child Indicators Research*, 15(5), 1539–1563. <https://doi.org/10.1007/S12187-022-09918-4/FIGURES/8>

Castelletti, C., Ogunlaiyi, F., Miret, M., Lara, E., & Oyebode, O. (2024). Demographic and socio-economic inequalities in subjective wellbeing: analysis of repeated cross-sectional health surveys in England 2010–2019. *Journal of Public Health*, 46(4), e604–e613. <https://doi.org/10.1093/PUBMED/FDAE247>

Diener, E., Oishi, S., & Lucas, R. E. (2012). Subjective Well-Being: The Science of Happiness and Life Satisfaction. *The Oxford Handbook of Positive Psychology*, (2 Ed.). <https://doi.org/10.1093/OXFORDH/9780195187243.013.0017>

Dogarawa, A. B. (2012). Impact of Higher Education on Worker Productivity and Salary in Kaduna State. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.1751068>

Eid, A. (2012). Higher education R&D and productivity growth: An empirical study on high-income OECD countries. *Education Economics*, 20(1), 53–68. <https://doi.org/10.1080/09645291003726855>

Eliophotou Menon, M. (2016). Productivity as an indication of quality in higher education: the views of employed graduates in Greece. *Quality in Higher Education*, 22(3), 183–196. <https://doi.org/10.1080/13538322.2016.1249120>

Fang, C., Ma, H., Bao, C., Wang, Z., Li, G., Sun, S., & Fan, Y. (2022). Urban–rural human settlements in China: Objective evaluation and subjective well-being. *Humanities and Social Sciences Communications* 2022 9:1, 9(1), 1–14. <https://doi.org/10.1057/s41599-022-01417-9>

Gao, B., & Wang, J. (2023). The Mediating Effects of Peer Relationship and Self-Esteem on the Relations Between Subjective Socioeconomic Status and Subjective Well-Being for High School Students. *Chinese Education and Society*, 56(2), 163–172. <https://doi.org/10.1080/10611932.2023.2251842>

Ge, C.-L., & Li, Y.-S. (2020). *The Effect of Education on Residents' Subjective Well-Being*. 335–342. <https://doi.org/10.2991/ASSEHR.K.200207.052>

Giacomoni, C. H. (2004). Subjective well-being: the search for quality of life. *Temas Em Psicologia*, 12(1), 43–50. [http://pepsic.bvsalud.org/scielo.php?script=sci\\_arttext&pid=S1413-389X2004000100005&lng=pt&nrm=iso&tlang=pt](http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1413-389X2004000100005&lng=pt&nrm=iso&tlang=pt)

Gu, S. (2024). The Impact of Higher Education on Economic Growth: A Comparative Analysis of China, Germany, and the United States. *Advances in Economics, Management and Political Sciences*, 99(1), 105–113. <https://doi.org/10.54254/2754-1169/99/2024OX0191>

Hardini, M., & Wasiaturrahma, W. (2020). Social capital dimensions and individual happiness in Indonesia: The micro-level study. *Jurnal Ekonomi Pembangunan*, 18(2), 147–162. <https://doi.org/10.29259/JEP.V18I2.12753>

Haryati, H. U. (2023). The Effect of Education on Happiness, Self-Acceptance, and Family Harmony (Empirical Evidence from Indonesia). *The Journal of Indonesia Sustainable Development Planning*, 4(1), 35–56. <https://doi.org/10.46456/JISDEP.V4I1.371>

Hoan, E., & MacDonald, G. (2024). "Sisters Are Doin' It for Themselves": Gender Differences in Singles' Well-Being. *Social Psychological and Personality Science*. <https://doi.org/10.1177/19485506241287960>

Huo, C., & Chen, L. (2023). The impact of the educational marriage-matching model on the household income gap. *Frontiers in Psychology*, 13, 1082970. <https://doi.org/10.3389/FPSYG.2022.1082970/BIBTEX>

Idaiani, S., & Saptarini, I. (2023). Urban and rural disparities: evaluating happiness levels in Indonesian women. *Healthcare in Low-Resource Settings*, 11(s2). <https://doi.org/10.4081/HLS.2023.12005>

Jung, D. B. (2015). EFFECTIVENESS OF HIGHER EDUCATION TO LABOR PRODUCTIVITY. *PEOPLE: International Journal of Social Sciences*, 1(1), 01–22. <https://doi.org/10.20319/PIJSS.2015.11.0122>

Khoirunnisa, R., & Nurchayati, N. (2023). Kesejahteraan Subjektif pada Lanjut Usia Terlantar. *Jurnal Psikologi Teori Dan Terapan*, 14(1), 124–140. <https://doi.org/10.26740/JPTT.V14N1.P124-140>

Lolle, H. L. (2023). Differences in subjective well-being between rural and urban areas in Denmark. *Rural Quality of Life*, 348–369. <https://doi.org/10.7765/9781526161642.00032>

Maulana, H., Obst, P., & Khawaja, N. (2018). Indonesian perspective of wellbeing: A qualitative study. *Qualitative Report*, 23(12), 3136–3152. <https://doi.org/10.46743/2160-3715/2018.3508>

Mayuzumi, Y. (2023). Survey of rural and urban happiness in Indonesia during the corona crisis. *Asia-Pacific Journal of Regional Science*, 7(1), 29–67. <https://doi.org/10.1007/S41685-022-00265-4>

Meisenberg, G., & Woodley, M. A. (2015). Gender Differences in Subjective Well-Being and Their Relationships with Gender Equality. *Journal of Happiness Studies*, 16(6), 1539–1555. <https://doi.org/10.1007/S10902-014-9577-5>

Nandini, D., & Afiatno, B. E. (2020). Determinants Of Subjective Well-Being: Evidence Of Urban Indonesia. *Jurnal Ekonomi Pembangunan*, 18(1), 1. <https://doi.org/10.22219/JEP.V18I1.11687>

Navarro-Carrillo, G., Alonso-Ferres, M., Moya, M., & Valor-Segura, I. (2020). Socioeconomic Status and Psychological Well-Being: Revisiting the Role of Subjective Socioeconomic Status. *Frontiers in Psychology*, 11, 543258. <https://doi.org/10.3389/FPSYG.2020.01303/BIBTEX>

Ndoya, H., Belomo, M. L., Okere, D. F., & Talla, M. B. (2024). Does Gender Equality Promote Happiness in Developing Countries? *Journal of Economic Issues*, 58(1), 59–84. <https://doi.org/10.1080/00213624.2024.2307788>

Ningsih, D. A. (2013). SUBJECTIVE WELL BEING DITINJAU DARI FAKTOR DEMOGRAFI (STATUS PERNIKAHAN, JENIS KELAMIN, PENDAPATAN). *Cognicia*, 1(2). <https://doi.org/10.22219/COGNICIA.V1I2.1662>

Nisrina Nursyiana, & Badriyah, N. (2022). DETERMINAN KEBAHAGIAAN PEREMPUAN BEKERJA DI INDONESIA: ANALISIS DATA INDONESIA FAMILY LIFE SURVEY. *Journal of Development Economic and Social Studies*, 1(3), 421–432. <https://doi.org/10.21776/JDESS.2022.01.3.07>

Nugroho, T. W., Hanani, N., Toiba, H., & Sujarwo, S. (2022). Promoting Subjective Well-Being among Rural and Urban Residents in Indonesia: Does Social Capital Matter? *Sustainability* 2022, Vol. 14, Page 2375, 14(4), 2375. <https://doi.org/10.3390/SU14042375>

Nuhermaria Agusta, C., & Hawadi, L. F. (2023). Subjective Well-Being pada Siswa SMA selama Pandemi Covid-19: Peran Academic Hope sebagai Mediator. *Jurnal Psikologi : Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan*, 10(2), 231–252. <https://doi.org/10.35891/JIP.V10I2.4292>

Núñez-Naranjo, A., Morales-Urrutia, X., & Simbaña-Taipe, L. (2024). Social capital, education, and subjective well-being in Ecuador. *Frontiers in Sociology*, 9, 1417538. <https://doi.org/10.3389/FSOC.2024.1417538/BIBTEX>

Pramono, R. W. D. (2018). The transect of happiness and community's capability in urbanizing Yogyakarta. *IOP Conference Series: Earth and Environmental Science*, 126(1). <https://doi.org/10.1088/1755-1315/126/1/012099>

Rahayu, T. P. (2016). The Determinants of Happiness in Indonesia. *Mediterranean Journal of Social Sciences*. <https://doi.org/10.5901/MJSS.2016.V7N2P393>

Rakhmawati, R. (2024). Indonesian Happiness Factor: A Panel Data Analysis. *Jurnal Ekonomi Dan Studi Pembangunan*, 16(1), 16. <https://doi.org/10.17977/UM002V16I12024P016>

Rana, S. K. (2022). Empirical Data Study from Higher Education Sector about Improving Productivity of Employees via Job Involvement. *Amity Journal of Professional Practices*, 2(01). <https://doi.org/10.55054/AJPP.V2I01.632>

Requena, F. (2016). Rural–Urban Living and Level of Economic Development as Factors in Subjective Well-Being. *Social Indicators Research*, 128(2), 693–708. <https://doi.org/10.1007/S11205-015-1051-1/TABLES/5>

Salameh, A. A., Amin, S., Danish, M. H., Asghar, N., Naveed, R. T., & Munir, M. (2022). Socio-economic determinants of subjective wellbeing toward Sustainable Development Goals: An insight from a developing country. *Frontiers in Psychology*, 13, 961400. <https://doi.org/10.3389/FPSYG.2022.961400/BIBTEX>

Salluca Vasquez, C., Salluca Vasquez, E. K., Salluca Vasquez, E., Salluca Vasquez, J. M. A., & Munive Viscarra, C. (2024). Subjective well-being of older adults and its relationship with depression, educational level and economic dependence. *Salud, Ciencia y Tecnología - Serie de Conferencias, ISSN-e 2953-4860, N°. 3, 2024 (Ejemplar Dedicado a: Salud, Ciencia y Tecnología - Serie de Conferencias)*, 3(3), 713. <https://doi.org/10.56294/sctconf2024.713>

Samsu, S. H., Lajuni, N., & Yun, W. S. (2023). Factors Influencing Subjective Economic Well-Being. *International Journal of Academic Research in Economics and Management Sciences*, 12(4). <https://doi.org/10.6007/IJAREMS/V12-I4/18294>

Sitohang, Y. O., Sasmita, Y., Andriyana, Y., & Pawitan, G. (2017). The Analysis of Nascent Entrepreneurs' Happiness Level in Indonesia. *Jurnal Dinamika Manajemen*, 8(2). <https://doi.org/10.15294/JDM.V8I2.12765>

Snyder, C. R. (2010). *Positive Psychology: The Scientific and Practical Explorations of Human Strengths (Google eBook)*. 588. [https://books.google.com/books/about/Positive\\_Psychology.html?hl=id&id=T3aW7gWMgpQC](https://books.google.com/books/about/Positive_Psychology.html?hl=id&id=T3aW7gWMgpQC)

Sohn, K. (2016). The Role of Spousal Income in the Wife's Happiness. *Social Indicators Research*, 126(3), 1007–1024. <https://doi.org/10.1007/S11205-015-0934-5>

Spasić Šnele, M., Todorović, J., & Komlenić, M. (2020). GENDER ROLES AND DIMENSIONS OF FAMILY FUNCTIONING AS PREDICTORS OF SUBJECTIVE WELL-BEING IN MEN AND WOMEN. *Tm-Technisches Messen*, 68(1). <https://doi.org/10.22190/TEME200310052S>

Suchkov, E. D. (2023). Some factors of subjective economic well-being. *Izvestiya of Saratov University. Philosophy. Psychology. Pedagogy*, 23(1), 74–78. <https://doi.org/10.18500/1819-7671-2023-23-1-74-78>

Wang, B., Zhao, H., Shen, H., & Jiang, Y. (2023). Socioeconomic status and subjective well-being: The mediating role of class identity and social activities. *PLOS ONE*, 18(9), e0291325. <https://doi.org/10.1371/JOURNAL.PONE.0291325>

Wolf, A. (2009). The Economics and Finance of Higher Education. *International Encyclopedia of Education, Third Edition*, 573–583. <https://doi.org/10.1016/B978-0-08-044894-7.00856-3>

Yakovlev, P., & Leguizamon, S. (2012). Ignorance is not bliss: On the role of education in subjective well-being. *Journal of Socio-Economics*, 41(6), 806–815. <https://doi.org/10.1016/J.SOCEC.2012.08.009>

Yuniati, F., Haryanti, R. S., Pengawasan, P., Poltekkes, E., Palembang, K., & Poltekkes, J. K. (2022). Subjective Well-Being Penduduk Usia Produktif Usia Produktif Indonesia Tahun 2007-2014: Analisis Data Longitudinal Indonesian Family Life Survey. *JKM: Jurnal Keperawatan Merdeka*, 2(1), 60–65. <https://doi.org/10.36086/JKM.V2I1.1242>