

The Effect of Well-Being on Savings Behavior: Evidence from the World Values Survey

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Abstract: In recent years, there has been a growing interest in improving people's overall well-being. This appears to have overtaken the focus on more traditional measures of economic well-being, such as income and gross domestic product (GDP) per capita. This sudden shift is evident in the surge of social media coverage, various publications, and even academic research on the topic. Despite this increasing attention to well-being, the impact of well-being on economic behavior have yet to be fully explored in the literature. This paper addresses the gap by examining how two key measures of subjective well-being, self-reported happiness and life satisfaction, affect economic behavior. To investigate this relationship, we use data from the World Values Survey (WVS), the largest cross-national survey on human beliefs, norms, and values. The dataset spans all seven waves of the WVS, covering the years 1981 to 2022, and including responses from households across 108 countries. Recognizing the potential endogeneity arising from the reverse causality between the two measures of subjective well-being and savings, we adopt an instrumental variable (IV) identification strategy and employ a 2SLS estimation. We use the average annual temperature of countries as an instrument, drawing from the literature that links climate to well-being. Our empirical findings reveal that both happiness and life satisfaction have a statistically significant and positive effect on a household's savings behavior. In particular, happiness increases the likelihood of a household's saving by 18.7%. Meanwhile, life satisfaction shows a slightly lower but still significant increase in household savings by 7.93%.

Key Words: Subjective Well-Being; Happiness; Life satisfaction; Savings; World Values Survey

1. INTRODUCTION

According to the World Happiness Report, interest in well-being has grown rapidly in recent years, overtaking focus on measures of economic well-being, such as income and GDP per capita. This is evident in the surge of media coverage, publications, and academic research across psychology, sociology, philosophy, and economics. The global commitment to well-being is further underscored by the third UN Development Goal: which seeks to "ensure healthy lives and promote well-being for all at all ages", highlighting a strong global commitment to promoting individual well-being.

Despite the interest in well-being, its impact remains unexplored. Most research has focused on its

determinants while economic models, such as those of savings, have overlooked their role in decision making. As a result, the effects of well-being on economic outcomes have not yet been fully understood.

In this paper, we hope to fill in this gap by exploring the question: *How does well-being affect the savings behavior of individuals?* Specifically, we investigate how a person's subjective well-being—measured through self-reported happiness and life satisfaction—affects savings behavior.

We analyze data from the World Values Survey (WVS), covering 108 countries from 1981 to 2022, resulting in more than 300,000 household-level observations. To address the potential reverse causality between well-being and savings, we adopt an instrumental variable identification strategy and

estimate two-stage least squares (2SLS) models. Average annual temperature serves as the instrument to address the endogeneity and isolate the causal impact from well-being to savings.

Our findings reveal that happiness and life satisfaction have a positive impact on savings, though at varying extents. Happiness demonstrates an 18.7% increase in the likelihood of savings, while life satisfaction exhibits a lower increase of 7.93%.

1.1. Well-Being, Happiness, and Life Satisfaction

Although happiness and life satisfaction are used alternatively to well-being, there are clear distinctions among them. *Well-being* is a broad term that encompasses emotional states, specific life domains, and an overall life assessment, influenced by a range of social, environmental, and economic conditions factor (Rehdanz & Maddison, 2005). On the other hand, *happiness* is a more commonly used in academic research because of its clear and precise meaning. While some scholars define it as a type of emotion that reflects spiritual contentment or mental distress, in economics, Daniel Kahneman's defines it to include emotional and cognitive dimensions (Cui & Cho, 2019). Finally, *life satisfaction* is used as an alternative term for overall happiness. In some cases, it refers to the cognitive component that is synonymous with "contentment" in one's life.

In this study, we contain recognize and maintain the differences between happiness and life satisfaction, but do not distinguish it from the broader term well-being.

1.2. Well-being and Individual Behavior

One of the key channels through which well-being affects economic decision-making is through an individual's behavior. Specifically, through their attitude towards risk and their time preferences.

Happiness or positive emotions are said to influence an individual's attitude toward risk-taking. This idea is supported by two opposing theories. The Affect Infusion Model (AIM) developed by Forgas (1995) posits that persons with positive moods tends to take more risks, while those with negative moods tend to be more cautious. Isen & Patrick (1983) found through betting experiments that positive affect risk-taking but varied with the risk level. Meanwhile, Apergis et

al. (2019) found that happiness leads to higher shares of investment in risky assets in portfolios, in households in France, Germany, Italy, the Netherlands, and the UK. Meanwhile, Cui & Cho (2019), found a non-linear relationship between self-reported happiness and the likelihood of investing in risky financial markets among Chinese households.

In contrast to the AIM, the Mood Maintenance Model (MMM) states that individuals in a positive mood tend to maintain their status quo and avoid risks (Apergis et al., 2019; Cui & Cho, 2019). In a laboratory experiment, Drichoutis & Nayga (2013) discovered that subjects who were induced with a positive mood increased their risk aversion. In contrast, Raghunathan & Pham (1999) observed that sad individuals preferred riskier, high-reward options in gambling and job-seeking contexts, suggesting that sadness and anxiety create different goals and convey different types of information.

In an empirical study, discovered that German and Dutch households, influenced by good weather, were more risk averse, chose safer investments like life insurance, savings accounts, and operating assets and avoided investments such as stocks and bonds. Guven (2012) extended this by exploring the causal role of happiness on financial decisions, more specifically on saving, spending, and debt using the same dataset of Dutch and German households. This time, he concluded that happy people tend to save more, spend less, and are less likely to be in debt.

Meanwhile, a person's well-being may also affect his time preferences. Time preferences, as defined by Irvin Fischer, refers to how an individual trades off their present and future consumption based on utility, influenced by subjective and external factors. In an experiment Ifcher & Zarghamee (2011), reported that subjects induced with a positive mood chose larger-later over the smaller-sooner payoffs. Guven affirms these results, showing that happier people are more likely to prioritize the future, believing that they will live longer (Guyen, 2009, 2012; Guven & Hoxha, 2015).

1.3. Well-being and Interpersonal Behavior

Well-being can also affect interpersonal behavior such as trust, building social capital, generosity, and selfishness.

Two theoretical models explain how emotions and positive affect can influence trust and social capital.

First is the Mood-As-Information Model. This suggests that mood serves as a guide when individuals make evaluative judgments—so when they are happy, they will feel good about trusting others (Mislin et al., 2015). Second, the Mood Maintenance Model argues that a positive mood encourages people to maintain the status quo and avoid risks, promoting trusting behavior (Apergis et al., 2019; Cui & Cho, 2019). Supporting this, Mislin et al. (2015) found that positive emotions increased trust between strangers in a two-person trust game, providing better motivation compared to potential material gains.

Meanwhile, exploring the link between trust, social capital, and economic behavior, Rao et al. (2016) discovered that the marginal effect of happiness on the decision to invest in stocks and mutual funds among households in China is higher in regions where there is a high level of trust or social capital.

There are also several studies who examined the link between happiness, generosity, and economic behavior. Mislin et al. (2015), using German data and Cohen's path analysis, found that happiness more strongly drives charitable giving than the reverse, supporting the MMM. Conversely, Pulcu et al. (2015) showed that individuals with depression were less generous in both donations and cooperation tasks, highlighting the role of emotions in moral and social decisions.

Literature on selfishness offer different findings. Tan & Forgas (2010) conducted public and lab setting experiments and found that a positive mood increased internally focused behavior (selfishness) in a dictator game while sadness encouraged greater external orientation and concern with social norms.

2. DATA AND METHODOLOGY

2.1. Data

Data on savings, happiness, life satisfaction, and the control variables are from the World Values Survey while data on the average annual temperature are from Berkeley Earth. The resulting dataset is a repeated cross-sectional individual survey response data from 108 countries from 1981 to 2022.

2.2. Empirical Framework

To estimate the impact of happiness and life satisfaction on savings, we regress the following

equations:

$$savings_{iw} = \beta_0 + \beta_1 happiness_{cw} + \beta_2 thrift_{cw} + \theta' controls_{cw} + \delta' regions + \partial' waves + \varepsilon_{cw} \quad (1)$$

$$savings_{iw} = \beta_0 + \beta_1 life_satisfaction_{cw} + \beta_2 thrift_{cw} + \theta' controls_{cw} + \delta' regions + \partial' waves + \varepsilon_{cw} \quad (2)$$

savings is a binary variable where: (1) saved money and (0) otherwise. Happiness is an ordered categorical variable where (0) “not at all happy”; (1) “not very happy”; (2) “quite happy”; (3) “very happy”. Meanwhile, *life_satisfaction* is an ordered categorical variable following the Cantril Ladder where 1 corresponds to a respondent who is “dissatisfied” with their life and 10 to “satisfied”. Meanwhile, the subscript *i* refers to the households surveyed, and *w* is the WVS wave.

Behaviors that affect savings, as well as socio-economic demographics, are added as control variables. First is *thrift*, a persistent cultural motive that affects household savings (Fuchs-Schundeln et al., 2020). Next is *age* which, as explained in the life-cycle hypothesis of Modigliani, can influence financial decisions because individuals aim to maintain a stable consumption level throughout their lives. *Gender* is also added as a control variable as several studies find that gender affects savings or asset accumulation (Renneboog & Spaenjers, 2012).

The number of children in the household is also added, though its effect is ambiguous. More children may prompt parents to save while in countries with limited capital markets, children can be viewed as a form of retirement support (Orbeta, 2006). Social status is added as another control variables because it can affect savings. Individuals in upper classes often have greater income opportunities and wealth accumulation through due to advantageous social and economic interactions (Weiss & Fershtman, 1998), boosting their capacity to save. Employment is also controlled for, since individuals with stable, full-time jobs typically earn more increasing their ability to save.

Finally, I included regional¹ and WVS² wave dummies, eliminating unobserved heterogeneity across different regions and waves.

2.3. Estimation Method and Instrumental Variable

Several studies recognize the presence of reverse causality between well-being and savings.³ To address this potential endogeneity, we use an instrumental variable identification strategy and employ a two-stage least squares (2SLS) estimation model to isolate the causal direction from happiness and life satisfaction to savings. We use the average annual temperature of each country as an instrument for both models, drawing on existing research that highlights the influence of climate on well-being (Frijters & Van Praag, 1998; Rehdanz & Maddison, 2005).

When using average annual temperature as an instrumental variable, the relevance, independence, and exclusion assumptions must hold. The relevance assumption is confirmed through a significant F-test after the first stage regression of both models⁴, where the endogenous variable (happiness and life-satisfaction) is regressed on the instrument and other controls. Next, the independence assumption, which requires that the instrument is uncorrelated with the error term, is difficult to verify as no statistical tests prove this. Finally, the exclusion restriction assumes that average annual temperature affects savings only through happiness and life satisfaction. Like the independence assumption, this cannot be statistically proven. To address this, scholars typically rely on theoretical reasoning, previous studies, and intuition to rule out alternative pathways. In this study, we explore two potential pathways: income and agriculture.

Some studies have found a negative relationship between temperature and aggregate output (Doğanlar et al., 2022), with more substantial effect for low-income countries (Raddatz, 2009). Meanwhile, agriculture is another potential pathway because its

production is highly sensitive to climate conditions. Exceeding certain temperature thresholds and weather shocks are detrimental to crop yields in studies conducted in the U.S. (Schlenker & Roberts, 2009), and Thailand (Pipitukdee et al., 2020). Although these studies seem to suggest that income and agriculture are a violation of the exclusion restriction, we argue otherwise. Income is directly related to savings because savings is a portion of disposable income. Mellon (2020) lists this as one of the exceptions of the exclusion restriction because income is part of the outcome variable. Agriculture, however, could be a stronger concern because it provides a source of income and, consequently, savings for business owners and farmers. Yet, a tabulation of the WVS responses on profession indicates that only 6.92% of the entire dataset work in the agricultural sector, therefore it is not a dominant income source of the respondents.

We also argue that most research finds only extreme climate events significantly affects agricultural production. In contrast, studies on well-being focus on standard climate measures such as average temperatures and high temperatures (Rehdanz & Maddison, 2005). Since we use average annual temperature, there is a small probability that this could provide a path to savings via agriculture, thus not violating the exclusion restriction.

3. RESULTS AND DISCUSSION

3.1. Regression Results

Tables 1 and 2 present the results of the regressions of both models, where Column 1 is the baseline OLS regression and Columns 2 to 4 add the rest of the control and dummy variables.

In Table 1, the coefficients of happiness in all columns indicate that a one-level increase in the self-reported happiness level increases the probability of saving by 5.92% in the OLS regression (Column 1) and 18.70% for the 2SLS regression (Column 3). Table 2 shows similar results. The coefficient of the life

¹ Each country was categorized into one of six regions: Africa, Asia, Europe, North America, Oceania, and South America.

² There are 7 waves from 1981 to 2022.

³ The Wu-Hausman test confirms that both key variables of interest are indeed endogenous and need this needs to be addressed.

⁴ The tabulated results are available upon request from the author.

satisfaction variable in all columns show that a one-level increase in the reported life satisfaction of an individual, the probability of saving increases by 2.28% in the OLS regression, and 7.93% in the 2SLS regression.

Table 1. Results - Happiness

Variables	(1) OLS	(2) 2SLS2	(3) 2SLS3
Happiness	0.0592***	0.208***	0.187***
Controls	Yes	Yes	Yes
Regions	Yes	Yes	Yes
Waves	Yes	No	Yes

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 2. Results – Life Satisfaction

Variables	(1) OLS	(2) 2SLS2	(3) 2SLS3
Life Satis.	0.0228***	0.0812***	0.0793***
Controls	Yes	Yes	Yes
Regions	Yes	Yes	Yes
Waves	Yes	No	Yes

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Tests of endogeneity and the relevance assumption conducted⁵ confirm that happiness and life satisfaction, are endogenous and that the instrument, average temperature, is correlated with the endogenous variable.

3.2. Discussion

The positive and significant 2SLS coefficients of happiness and life satisfaction suggests that higher well-being increases the likelihood of saving. These support the Mood Maintenance Model which posits that happy people tend to avoid risk and prefer safer options (Apergis et al., 2019; Cui & Cho, 2019). Since savings are among the safest forms of investment, those with higher well-being tend to favor them. The results also seem to confirm that an improved well-being encourages individuals to prioritize future over

present rewards, because it leads to greater patience (Güven, 2009, 2012; Güven & Hoxha, 2015; Lane, 2017) and maintain self-control working towards long-term goals (McLeish & Oxoby, 2007).

Additionally, the findings also point to trust and social capital as potential channels, aligning with the Mood-as-Information and Mood Maintenance Models. Social capital facilitates shared financial goals, accountability, exchange of financial habits and advice, and support during financial hardship, helping individuals preserve their savings.

Interestingly, the positive sign of the happiness and life satisfaction coefficients appears to contrast with much of the generosity and selfishness literature, which generally suggests that happy people tend to be more generous.

4. CONCLUSIONS

Interest in improving our well-being has been gaining traction around the world over the past few years. This is further evident in the global commitment to improve well-being undertaken by several international institutions like the United Nations. However, the impact of well-being on a person's economic behavior has yet to be fully explored.

This paper investigates the impact of well-being, proxied by self-reported happiness and life satisfaction, on savings behavior using data from the seven waves of the World Values Survey. Employing a 2SLS model with the average annual temperature of each country as an instrument, the results show that both happiness and life satisfaction increases the likelihood of saving by 18.7% and 7.93%, respectively.

Future research can focus on exploring any potential heterogeneity among cohorts in the sample. Additionally, the literature points out several potential channels through which well-being may affect savings. This can be explored and tested empirically in the future.

5. ACKNOWLEDGMENTS

This paper was made possible through the guidance of Dr. Anne Go, Dr. Mariel Monica Sauler, Dr. Gerardo Largoza, Dr. Lawrence Dacuyucy of De La Salle University-Manila, and Dr. Jubo Yan of Nanyang Technological University, Singapore. It is

⁵ The tabulated results are available upon request.

currently being supported by the CLTSOE Research Writing Grant for Graduate Students.

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