

Happiness in Italy: An empirical Analysis

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Abstract. *This paper provides empirical evidence on the determinants of happiness in Italy over the last 20 years. We investigate the correlation between happiness and several distinct socio-economic factors using individual data on Italian households obtained from the Survey on Household Income and Wealth. In addition to the usual demographic factors and income, we also consider the role of wealth and the comparison income effect. We find strong evidence of a North-South divide in happiness. In fact, our results indicate that in Southern Italy (i) males are happier than females and (ii) people are happier when their income is above the reference group income (and viceversa), i.e., there is a statistically significant symmetric comparison income effect. Further, we also study the role of additional dimensions of economic behavior, such as risk aversion and impatience, and the role of social factors, such as trust in people and interest in politics. We find that less risk-averse and less impatient individuals are happier than others and that greater trust in people and being interested in politics make people happier too.*

Keywords: Happiness, Income Comparison Effect, Risk aversion, Trust, Impatience

JEL Codes: I31

1. Introduction

In the hedonistic approach, happiness comes from avoiding suffering and from seeking pleasure in a perspective that emphasizes material goods. On the other hand, according to the eudaemonic approach, happiness entails satisfying and realizing one's true nature through a commitment to society and intellectual fulfillment. Aristotle believed that the possibility of living a happy life requires much more than mere pleasure: civil commitment, love, and friendship. Wealth and material goods are only a means to this end. The eudaemonic approach is also evident in Kant's ethics based on the idea that there is a universal moral duty that leads individuals to perform virtuous actions and therefore to happiness.

Happiness becomes a central topic in the economic debate around the 1970s when it began to be more and more evident that an analysis based on preferences only may not always provide good insights on subjective well-being related. New approaches have begun to consider some measure of personal "satisfaction" as an indicator of individual well-being and as a measure of a country's welfare. In macroeconomics, Di Tella et al. (2001) considered the relationship between happiness and the state of the economy considering 12 European countries. Their empirical findings suggest that happiness grows monotonically with the increase in income, changes in happiness are correlated with fluctuations in GDP, recessions create psychological damage - in addition to the increase in unemployment and the fall in GDP, and, finally, the welfare state seems to work as a compensatory force where higher unemployment benefits are associated with greater national well-being.

In a seminal paper, using cross-sectional data Easterlin (1974) shows that there is a robust correlation between income and happiness so that those who experience better economic conditions are on average happier than the others. Unfortunately, using time series data for several countries the positive

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association between income and happiness is found to be neither general nor robust: the richest countries are not always the happiest ones. Further, using data on surveys carried out in the US between 1946 and 1970 he finds that even though per capita income has increased by more than 60%, the share of people who believe they are "very happy" and "fairly happy" has not increased proportionally, but it has remained virtually constant. Therefore, happiness seems to depend very little on income fluctuations that may occur during a lifetime.

Since then, a huge literature on the demographic and socio-economic determinants of happiness/subjective well-being has grown (see, for instance, Dolan et al., 2008, and MacKerron, 2012, for comprehensive reviews of the literature). In addition to income, several dimensions of economic and social life have been found to exhibit some correlation with happiness. Among the established determinants of happiness, we have individual characteristics such as age, health, gender and education, the working status and conditions, the attitudes towards the others such as, for instance, the type of relationships, trust, volunteering, political engagement. A recent review by Lane (2017) summarizes the main findings of the relationship between happiness and some further dimensions of economic behavior such as selfishness, trust, reciprocity, risk, and time preferences.

In this paper, we provide a comprehensive analysis of the determinants of happiness in Italy using 7 waves of data from the Survey of Italian Households' Income and Wealth (SHIW). Scoppa and Ponzo (2008) carried out an empirical investigation on happiness using 2 waves of this survey (those conducted in 2004 and 2006) exploring the effect of income, wealth, and the usual socio-demographic factors. Sabatini (2014) explores the relationship between health and happiness for a single Italian province (Trento) finding that happiness is correlated with reported health status. Ferrante (2017) considers data from the 2006 SHIW wave and finds that the relationship between age and happiness may depend on the level and the type of education. Using data from several SHIW waves, Ruiiu and Ruiiu (2019) find that education has a positive effect on happiness and that the divergence between aspirations and achievements has a negative one, more so for individuals with higher levels of education. This result highlights the role of reference or comparison group in determining individual subjective well-being. Using a stochastic frontier approach, Bonanno et al. (2020) investigate differences in well-being across Italian regions providing a ranking of these regions in terms of efficiency scores. It turns out regions located in Northern Italy are, in general, closer to the efficient frontier than the others. The plan of the paper is as follows: the next section describes the data and the methodology. Next, we discuss the empirical results considering both the average marginal effect of specific regressors and the predicted probability of happiness. We consider regressors associated with economic conditions, demographic characteristics, social attitudes, and risk and time preferences. Some concluding remarks are left to the final section.

2. DATA AND METHODOLOGY

We consider data at the individual level from 7 waves of the Survey of Italian Households' Income and Wealth (SHIW) from 2004 to 2016. SHIW is carried out every two years by the Bank of Italy and it provides data on social, demographics, and economic characteristics of about 8,000 households for a total of almost 20,000 individuals² ().

The dataset contains individual data on gender, age, civil status, households' composition, employment, educational level as well as detailed information on income and wealth (both financial wealth and real assets). Starting from 2004 the following question on happiness has been asked in each wave:

² <http://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/bilanci-famiglie/index.html>

“Considering all the aspects of your life, how happy would you say you are? Please score on a scale from 1 to 10, where 1 means “extremely unhappy” and 10 “extremely happy,” and the intermediate numbers serve to graduate the response.”

The relative frequency of answers is graphed in Figure 1 (left panel), where four waves only are considered for clarity. There is substantial stability of happiness levels across time with a mode either at a reported level of 7 (2004 and 2008) or 8 (2012 and 2016). The right panel reports the distribution of happiness for a representative year (2016) where average happiness is equal to 7.03 with a standard deviation of 1.88, median happiness is 7 and about 70% of the respondents indicate a level of happiness between 5 and 8 (included).

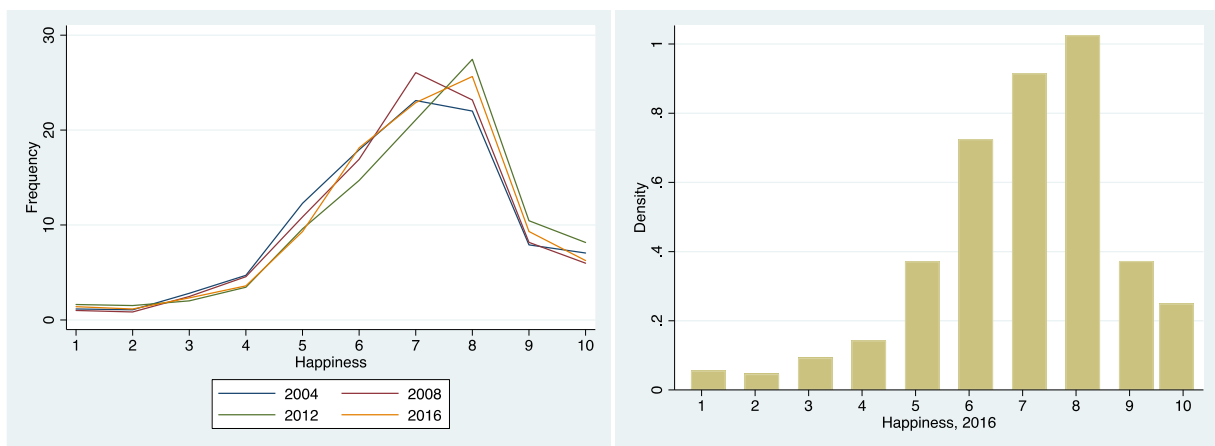


Figure 1. Distribution of reported Happiness, selected years

Table 1 reports the mean and the standard deviation of the main demographic and socio-economic variables that will be used in the regression analysis. For instance, females represent 43.5% of the sample and a college degree is the highest level of education obtained by 10.6% of respondents while a high school diploma by 31.6%. The average income is around 35000euros and the average wealth, which is rarely available in happiness studies, is about 260000euros (nominal variables have been deflated by the GDP deflator).

The average family size is 2.35. People living in Northern Italy make up 45.9% of the sample, those living in Southern Italy are about 32%. Only 10% of people live in big cities and the rest equally split into small and medium-sized cities. Retired are 45.6% of the sample, unemployed slightly less than 5%.

Given the ordinal nature of the dependent variable, *Happiness*, the empirical analysis will be carried out using the ordered Probit model. This approach assumes that there exists an underlying continuous latent happiness level, say y^* , which is linearly related to a set of regressors, say x , as follows $y^* = x'\beta + u$, where β is a vector of parameters and u is the error term. The response mechanism is such that reported happiness is equal to j for $j=1, \dots, 10$, such that

$$\begin{aligned} y=1 & \quad \text{if} \quad y^* = x'\beta + u \leq c_1 \\ y=2 & \quad \text{if} \quad c_2 < y^* = x'\beta + u \leq c_3 \\ & \dots \\ y=9 & \quad \text{if} \quad c_8 < y^* = x'\beta + u \leq c_9 \\ y=10 & \quad \text{if} \quad y^* = x'\beta + u \geq c_9 \end{aligned}$$

where the c 's represent a set of cut-off points discretizing the continuous latent y^* into 10 observed ordered categories. Therefore, the observable variable y takes 10 distinct values (1, 2, ..., 10) and its probability distribution is given by

$$\begin{aligned} \text{Prob}(y=1|x) &= \text{Prob}(y^* \leq c_1|x) = \text{Prob}(x'\beta + u \leq c_1|x) \\ \text{Prob}(y=2|x) &= \text{Prob}(c_1 < y^* \leq c_2|x) = \text{Prob}(x'\beta + u \leq c_2|x) - \text{Prob}(x'\beta + u \leq c_1|x) \\ &\dots \\ \text{Prob}(y=9|x) &= \text{Prob}(c_8 < y^* \leq c_9|x) = \text{Prob}(x'\beta + u \leq c_9|x) - \text{Prob}(x'\beta + u \leq c_8|x) \\ \text{Prob}(y=10|x) &= \text{Prob}(y^* \geq c_9|x) = \text{Prob}(x'\beta + u \geq c_9|x) \end{aligned}$$

Assuming that the error term u is distributed as a standard Normal random variable gives the ordered Probit model. The parameters β and the cut-off points c_j , $j=1, \dots, 9$, can then be estimated by Maximum Likelihood and inference can be conducted in the usual way. Differently from OLS, where the coefficients can be interpreted as marginal effects, estimated coefficients from ordered Probit models must be interpreted with care. In particular, a positive coefficient implies that an increase in the (associated) regressor determines an increase in the latent variable which, in turn, lowers the $\text{prob}(y=1|x)$ and increases the $\text{prob}(y=10|x)$ (the reverse applies for a negative coefficient). Nothing can be said on the probabilities associated to the intermediate categories by simple inspection of the estimated coefficients. Average marginal effects will be used for this purpose.

3. ESTIMATION RESULTS

3.1 Age and Gender

Several determinants of happiness are considered in this empirical investigation. The discussion starts by considering the usual socio-demographic determinants and income which also allows assessing the effect on the happiness of income comparisons across reference group. Estimation results for the ordered Probit model for these basic specifications are reported in Table 2 (all regressions include year dummies, cut-off points are not reported).

We start with the estimation results for the basic specification in column (1), where we only include socio-demographic variables and dummy variables for income quintiles, notice however that most comments apply in general. Estimated coefficients from ordered Probit models cannot be interpreted as marginal effects, as it would be the case when using OLS, but their sign can be used to predict the effect of a change in the relevant regressor on the probability of the lowest and highest outcome, i.e., the lowest and highest level of stated happiness. Age, gender, education, employment status, city size, macro-region and income have a statistically significant effect on happiness, as well as wealth and reference income in the broader specifications (Col (2)-(5)). In particular, females have a higher (lower) probability of being in the lowest (highest) bracket of reported happiness. The reverse occurs for people living with their partner or sons and attaining higher levels of education has a monotonically increasing effect on happiness. This same pattern occurs when we consider income quintiles suggesting that moving from the first to higher quintiles will increase (decrease) the probability of reporting the highest (lowest) level of happiness. This latter result is in line with the intuition and the empirical evidence that, in cross-sectional data, happiness increases with income. Similar remarks apply to other regressors so that, for instance, living in smaller cities increases the probability of reporting the lowest level of happiness and decreases the probability of reporting the highest one. Moving to Southern Italy has a statistically significant effect with a negative sign indicating that the probability of being unhappy would increase and the probability of being happy would decrease. A more detailed picture of the correlation between happiness and specific regressors can be obtained by looking at the average marginal effects and at the predicted probability of reporting a specific level of happiness. Average Marginal Effects (AME) for females are reported in Figure 2, left panel. It is clear how females face a higher probability of reporting levels of

happiness below the median level, i.e., more precisely in the range 1-6, and a lower probability of reporting levels of happiness in the range 8-10, i.e., above the median level of 7. The right panel of Figure 2 display the predicted probabilities of reporting some selected levels (less than or equal to 2, median, and greater than or equal to 9) of happiness as a function of age. The solid line indicates that the probability of reporting the median level of happiness is less than 20% for twenty years old individuals, it slowly increases up to 40 years old, and then it flattens from there on at slightly less than 25%. Similarly, the dashed line shows that the probability of reporting the two highest levels of happiness (9 and 10) starts at more than 30% and monotonically decreases with age up to 60 years when it flattens at more than 10%. As for the probability of reporting the lowest levels of stated happiness (dash-and-dotted line), apart from being rather small, it (very) slowly increases as age increases up to 60 years, and then it flattens.

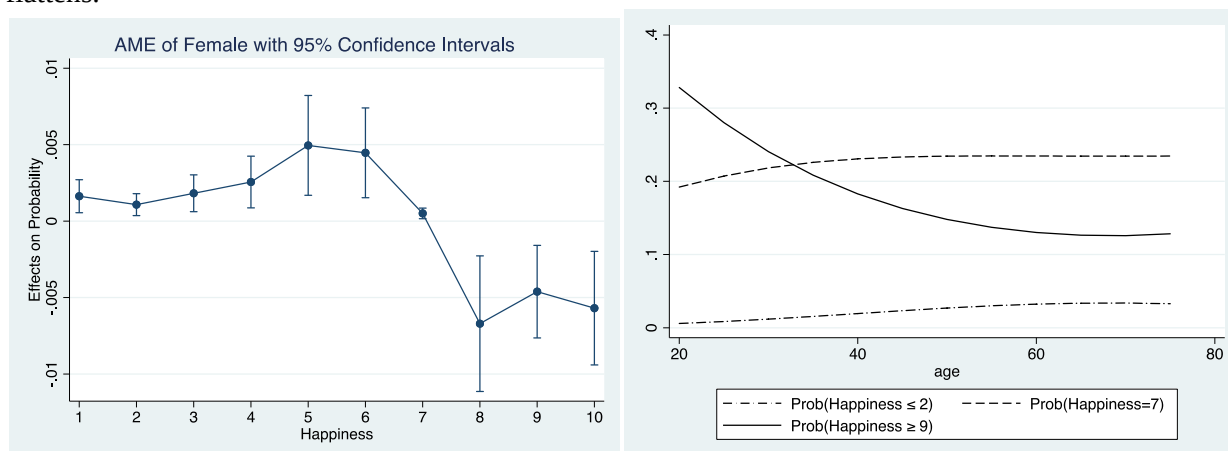


Figure 2. AME of Female (up) and predicted probabilities of Happiness as a function of age (down).

3.2 Wealth and comparison income effect

Table 2, Col. (2)-(5), reports estimation results for alternative specifications of the basic regression model where, in addition to income, we explicitly include an individual's wealth and we study the presence of the so-called income comparison effect. In column (2) we include wealth quintiles, whose coefficients exhibit a positive and increasing magnitude and are statistically different from zero. Further, we notice substantial stability in the coefficients associated with the regressors included in the previous specification (col. (1)). As an effect of the inclusion of wealth, the coefficients associated with income quintiles decrease in magnitude even though the sign, pattern, and statistical significance are unchanged. In Columns (3)-(5), we investigate the role of relative income, i.e., the income of a reference group, as a determinant of happiness. In the current analysis, the reference group is defined as the group of individuals living in the same macro-area (either North, Center or South), with the same educational level and with age in the (-5, +5) range. The average (log) income of the reference group is then included as a separate regressor in col. (3) and the difference between own (log) income and (log) reference income is further included in col. (4). Reference income is not statistically significant in col. (3) but the distance between own income and reference income is significant at the 1% level in col. (4). This result is in accordance with the intuition that individuals whose income is above the latent reference group income face a higher probability of reporting the highest level of happiness, after controlling for their own position in the income distribution.

Following Ferrer-i-Carbonell (2005), in col. (5) we also consider the possibility of asymmetric effects of deviations from group reference income. To this end, the regressor *poorer* is defined as the difference between reference income and own income whenever this difference is positive and zero otherwise, while the regressor *richer* is defined as the difference between own income and reference income if the difference is positive and zero otherwise. The general idea of the asymmetric effect is that individuals are less happy when their income is below reference income while they are not necessarily happier when

their income is above reference income. Recall that, from col. (3) and col. (4), we know that reference income does not significantly affect reported happiness while the distance between the individual's income and the reference group income has a positive effect. The interpretation is that a positive (negative) difference between the individual's income and the reference group would increase (decrease) the probability of reporting the highest level of happiness. Further, according to Ferrer-i-Carbonell (2005) income comparisons do exert an asymmetric effect and, in fact, from col. (5), we have that (i) the estimated coefficient of *poorer* is significant and negative, i.e., poorer people get less happy when their income is below the reference income and (ii) the estimated coefficient of *richer* is also significant and positive, i.e., richer people get happier when their income is above the reference income. However, differently from the findings in Ferrer-i-Carbonell (2005), not only do poorer individuals exhibit lower subjective well-being when their own income is lower than that of the reference group income but also richer people are happier when their own income is greater than reference group income. Thus, there is no asymmetric effect of departures from the group reference income. AMEs for *richer* and *poorer*, reported in Figure 3, provide a detailed picture of the effect of income comparisons on happiness (again, notice the differential effect below and above the median level of happiness).

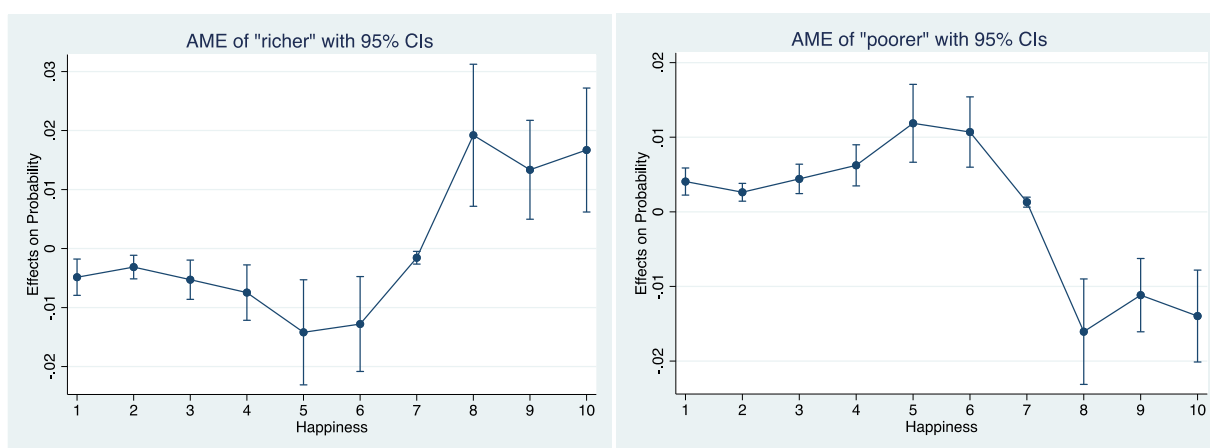


Figure 3. AME of "poorer" (left) and "richer" (right).

3.3 North-South divide

Results in col. (1) suggest substantial differences in reported happiness across Italy. Southerners display significantly lower levels of happiness with respect to people living in Center or Northern Italy. It may be therefore interesting to further investigate the issue of a possible North-South divide in reported happiness by estimating separate regression models for each of the three Macro-regions. Results are reported in Table 3 (year dummies and cutpoints are always included but not reported). Some differences are noticeable: first, the effect of gender on happiness does not appear to be stable across Italy, there is no effect in Northern Italy, a mildly significant negative effect in Center Italy, and a statistically significant negative effect in Southern Italy. Thus, the overall negative effect for Females found in Table 2 seems to be driven by Southern Italy. Similarly, living a medium-sized or in a large city has a negative effect while living with a partner and attaining higher educational levels exert a stronger positive effect for Southerners. More interesting is the effect of departures from the reference income group. There is no comparison income effect in Northern and Central Italy whereas, on the other hand, there is a sizeable and significant effect in Southern Italy so that when the reference income is higher (lower) than own income, the less (more) satisfied is the individual. Overall, we have not only significant differential effects of the demographic variables on happiness across macro-regions but also a specific comparison income effect in Southern Italy.

3.4 Health, type of work, and civil status

We now move to analyze some further dimensions which might be correlated with happiness such as health conditions, type of work, and civil status. For the latter, we distinguish between married, divorced, and widowed to study the possible impact of living alone after an adverse life event. As for the type of work, we separately consider unemployed, blue-collar workers, white collars and retired with self-employed as the excluded category. Finally, health conditions are obtained by the following question:

“I would now like to talk about the health of the household members. How would you describe the state of health of (excellent, good, fair, poor, very poor) at the end of ...?”

Starting with perceived health status, from col. (1) in Table 4, we notice a steady decrease in the estimated coefficients of reported health as the perceived health conditions worsen, which is in accordance with the intuition that happiness is negatively affected by bad or worsening health conditions. Predicted probabilities for the two lowest, median, and the two highest levels of happiness are graphed in Figure 4 (left panel). We notice how the predicted probability of reporting the median level of happiness (solid line) is stable in the Excellent-Fair range and it falls significantly as health conditions deteriorate. A decreasing pattern occurs for the highest levels of happiness (dashed line), the reverse is true for the lowest level of happiness where the probability of the two lowest levels of happiness increases as perceived health worsens. Overall, these results are following the intuition that good (bad) health conditions affect positively (negatively) subjective well-being.

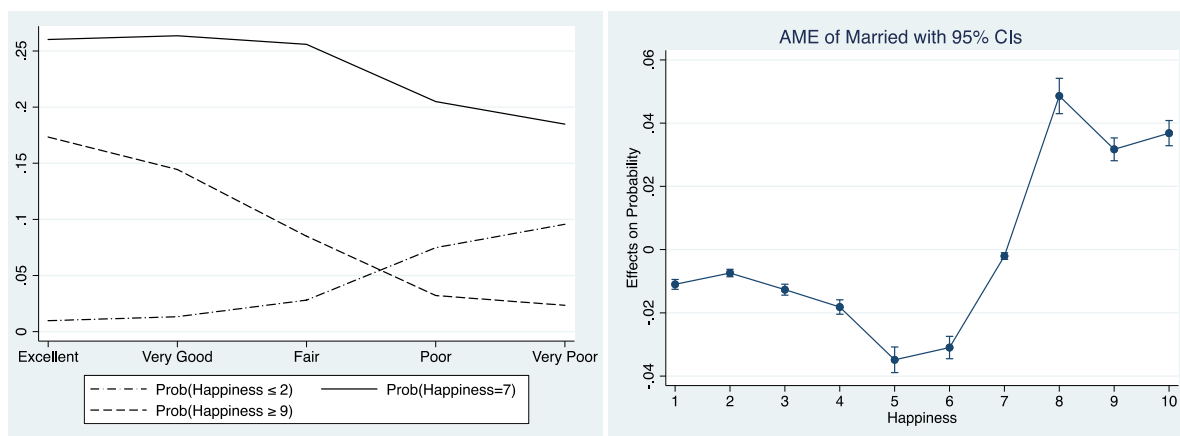


Figure 4. Prediction of Happiness as a function of perceived Health status and AME of Married.

Table 4, col. (2) and (3), report results for the effect of the civil status and the type of work. AME for married people is reported in Figure 5 (right panel). Married people (which includes people living with a partner) face a higher probability of being happier and a lower probability of reporting the lowest level of happiness, suggesting that being alone has a negative effect on happiness whereas, on the other hand, a marriage or a stable relationship exert a positive effect on happiness. A reverse pattern can be observed for people being in a relationship. As expected, divorced and widowed individuals experience a significant fall in happiness with respect to the people living with a partner. As for the type of work, white-collar workers are significantly happier than blue-collar or self-employed ones as is the case for retired ones. Finally, as expected, unemployment has a negative effect on subjective well-being.

3.5 Time, risk preferences, and social attitudes

Specific factors related to individual time and risk preferences and social attitudes which may possibly affect happiness appear in distinct waves of the survey. In particular, time preferences, interest in politics are investigated in 2004, risk preferences in each wave since 2004, trust in people in 2010.

A separation between individuals willing to bear some risk and those willing to bear none can be recovered from the following question.

When managing your financial investments, would you describe yourself as someone who looks for:

- *Very high returns, regardless of a high risk of losing part of your capital*
- *a good return, with reasonable security for your invested capital*
- *a reasonable return, with a good degree of security for your invested capital*
- *low returns, without any risk of losing your capital*

While there might not be consensus on what the term “high”, “good” and “reasonable” mean in financial investments in that different individuals may have a different interpretation or feel about them, there is no ambiguity in the last option where there is “no risk” of losing the invested capital. Therefore, we label as “risk-averse” those who choose this last answer. Table 5, Col. (1), reports regression results when the dummy for “risk aversion” is included. We notice the negative and statistically significant coefficient which implies that people less willing to take a risk have a higher (lower) probability of reporting the lowest (highest) level of happiness. AME for risk aversion is graphed in Figure 5 (top left graph). In general, the AME is rather small which is in accordance with the literature reviewed in Lane (2017). The Mood Maintenance Hypothesis (Isen and Patrick, 1983) would suggest that a positive mood induces more risk-averse behavior while the Affect Infusion Model (Forgas, 1995) would suggest a reverse result so that positive mood leads to risk-seeking behavior. The empirical evidence is mixed so that, for instance, Guven and Hoxha (2015) report results in favor of the Affect Infusion Model while Kamstra et al. (2003) findings are in favor of the Mood Maintenance Hypothesis as are our results from the SHIW survey on Italy.

There are some empirical papers on the correlation between happiness and time preferences. For instance, Guven and Hoxha (2015) provide some evidence on a positive effect of mood on happiness in that happier people are more patient. However, there is little empirical evidence on a direct effect of impatience on happiness even though Stutzer and Meier (2016) find that self-control problems affect negatively happiness. Preliminary insights on the effect of the time preferences (or impatience) of individuals on happiness can be obtained considering the following question:

Imagine you were told you had won on the lottery the equivalent of your household’s net annual income. The sum will be paid to you in a year. However, if you give up part of the sum you can have the rest immediately. To get the money right away would you give up 5 percent of this sum?

1. *Yes*
2. *No, I’d wait a year to collect the whole amount*

where we label as “impatient” an individual who is willing to give up some amount of money in exchange for the immediate availability of a sum. From col. (2) in Table 5 we observe a negative and statistically significant coefficient suggesting that impatient people face a greater probability of reporting the lowest level of happiness. AME can be found in Figure 5 (top right graph).

Whether there is a correlation between trust in people and happiness is an interesting issue to be investigated. In the 2010 wave, the following question on trust in people has been posed:

“Please consider the following statement: “It is always all right to keep money you have accidentally come into possession of even when it would be possible to return it to the rightful owner (say, if you find

a wallet with the owner's documents)". How strongly to you agree, on a scale from 1 to 10 where 1 means "totally disagree" and 10 means "totally agree"? The intermediate scores serve to graduate your response."

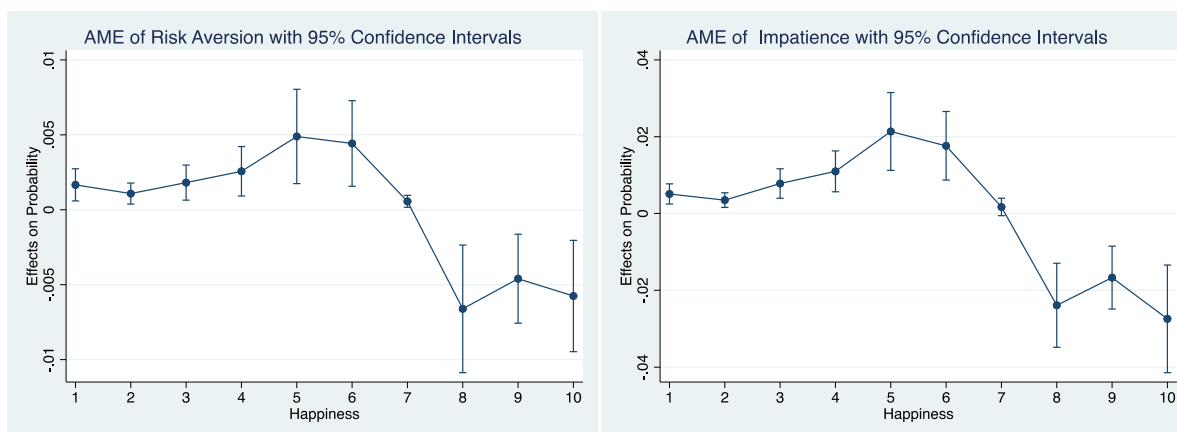
Regression results for the normalized answers in the (0, 1) interval can be found in col. (3). The positive and statistically significant coefficient indicates that as trust increases the probability of the lowest level of happiness decreases and, at the same time, the probability of the highest level of happiness increases. These findings are in accordance with the experimental and non-experimental literature on the effect of trust on happiness, see, for instance, Kuroki (2011) and Lu et al. (2019). The effects on the intermediate levels of happiness can be obtained by looking at the AME in Figure 5 (bottom left graph).

Finally, is interest in politics correlated with happiness? This can be assessed by considering the following question:

"How interested are you in politics?"

1. *Very*
2. *Fairly*
3. *Not very*
4. *Not at all*

On the one hand, we aggregate "Very" and "Fairly" and, on the other hand, "Not very" and "Not at all" to differentiate those who are interested in politics from those who are not. Col. (4) reports the estimated results when a dummy variable for interest in politics is included and AME can also be found in Figure 5 (bottom right graph).



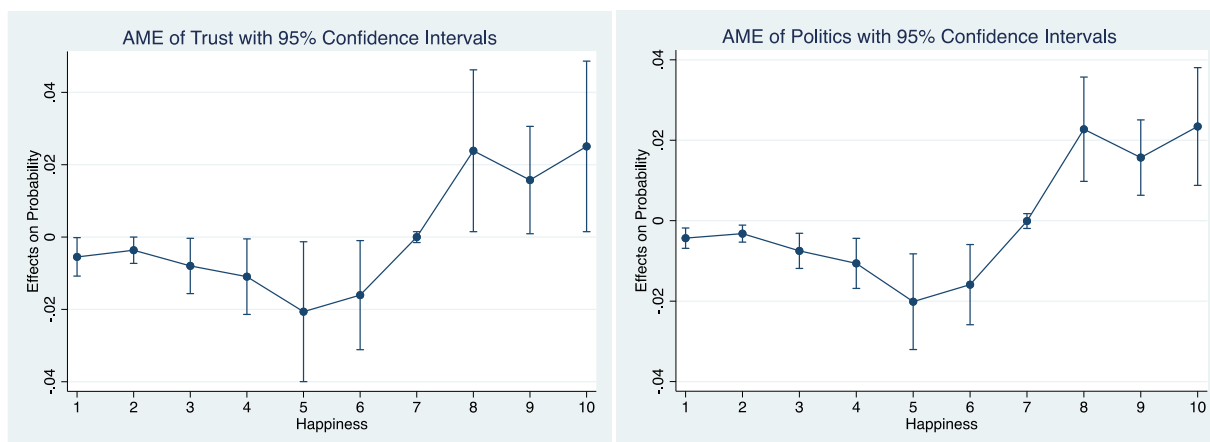


Figure 5. AME of Risk aversion, Impatience, Trust and Politics

5. Conclusion

In this paper, we study the determinants of happiness in Italy over the period 2004-2016 using individual data. We examine the correlation between happiness and several distinct socio-economic factors. We consider the usual demographic variables, and we also consider the role of wealth and the comparison income effect. We find strong evidence of a North-South divide in happiness so that, for instance, (i) gender is correlated with happiness and (ii) asymmetric comparison income effect is found to be statistically significant in Southern Italy only. We also provide a study of the role of additional dimensions of economic behavior, such as risk aversion and impatience, and the role of social factors, such as trust in people and interest in politics. We find that less risk averse and less impatient individuals are happier than the others. Further, we also find that higher trust in people and interests in politics make people happier too.

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Appendix no.1

Table 1. Descriptive Statistics, SHIW 2004-2016

Variable	Mean	StdDev	Variable	Mean	StdDev
Happiness	6.868	1.838	Unemployed	0.046	
Age	59.198	16.337	Retired	0.456	
Female	0.435		Small Town	0.443	
Married	0.567		Medium Town	0.458	
Widowed	0.194		Large Town	0.099	
Divorced	0.087		North	0.459	
No education	0.049		Center	0.219	
Primary education	0.244		South	0.323	
Junior High School	0.283		Household size	2.357	1.254
High School	0.316		Income	35240.55	31403.79
College	0.106		Wealth	261666.7	491926.7

Appendix no.2

Table 2. Basic Specifications SHIW 2004-2016 (robust SE in parenthesis)

	(1)	(2)	(3)	(4)	(5)
Age	-0.0444*** (0.0031)	-0.0477*** (0.0031)	-0.0457*** (0.0035)	-0.0388*** (0.0033)	-0.0386*** (0.0033)
Age ²	0.00032*** (0.00003)	0.00034*** (0.00003)	0.00034*** (0.00003)	0.00028*** (0.00003)	0.00028*** (0.00003)
Female	-0.050*** (0.016)	-0.050*** (0.016)	-0.049*** (0.016)	-0.047*** (0.016)	-0.048*** (0.016)
Married	0.328*** (0.018)	0.331*** (0.018)	0.328*** (0.018)	0.323*** (0.018)	0.323*** (0.018)
Junior High School	0.109*** (0.023)	0.102*** (0.023)	0.105*** (0.024)	0.141*** (0.024)	0.138*** (0.024)
High School	0.205*** (0.024)	0.187*** (0.024)	0.196*** (0.029)	0.263*** (0.026)	0.262*** (0.026)
College	0.285*** (0.031)	0.260*** (0.032)	0.270*** (0.041)	0.367*** (0.035)	0.367*** (0.035)
Unemployed	-0.390*** (0.041)	-0.395*** (0.041)	-0.390*** (0.041)	-0.344*** (0.042)	-0.363*** (0.041)
Medium City	-0.131*** (0.016)	-0.128*** (0.016)	-0.131*** (0.016)	-0.130*** (0.016)	-0.132*** (0.016)
Large City	-0.059** (0.024)	-0.049** (0.024)	-0.057** (0.024)	-0.060** (0.024)	-0.059** (0.024)
Center	-0.012 (0.019)	-0.024 (0.019)	-0.012 (0.019)	-0.016 (0.019)	-0.014 (0.019)
South	-0.176*** (0.018)	-0.185*** (0.018)	-0.171*** (0.020)	-0.208*** (0.019)	-0.207*** (0.019)
Sons/Daughters	0.027* (0.017)	0.029* (0.017)	0.027 (0.017)	0.032* (0.017)	0.033** (0.017)
II income quintile	0.298*** (0.024)	0.251*** (0.025)	0.298*** (0.024)	0.234*** (0.027)	0.238*** (0.027)
III income quintile	0.429*** (0.025)	0.343*** (0.027)	0.427*** (0.026)	0.328*** (0.031)	0.334*** (0.031)
IV income quintile	0.534*** (0.027)	0.424*** (0.030)	0.531*** (0.028)	0.398*** (0.037)	0.403*** (0.036)
V income quintile	0.666*** (0.030)	0.522*** (0.034)	0.662*** (0.031)	0.479*** (0.045)	0.481*** (0.045)
II wealth quintile		0.115*** (0.025)			
III wealth quintile		0.162*** (0.026)			
IV wealth quintile		0.216*** (0.027)			
V wealth quintile		0.249*** (0.031)			
log(ref. income)			0.020 (0.034)		
Log(income) – log(ref.income)				0.126*** (0.024)	
Richer					0.140*** (0.045)
Poorer					-0.117*** (0.026)
N	19675	19675	19666	19591	19675
Log-Likelihood	-36653.5	-36611.2	-36633.0	-36462.6	-36636.2
Pseudo R-squared	0.0457	0.0468	0.0457	0.0458	0.0461

Note: ***, ** and * stand for statistically significant at the 1%, 5% and 10% level, respectively.

Table 3. North-South divide, SHIW 2004-2016 (robust SE in parenthesis)

	(1)	(2)	(3)
Age	-0.041*** (0.005)	-0.034*** (0.007)	-0.040*** (0.006)
Age ²	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Female	-0.034 (0.023)	-0.057* (0.034)	-0.060** (0.029)
Married	0.284*** (0.026)	0.314*** (0.039)	0.398*** (0.032)
Junior High School	0.114*** (0.036)	0.155*** (0.050)	0.138*** (0.040)
High School	0.224*** (0.039)	0.202*** (0.052)	0.341*** (0.047)
College	0.238*** (0.052)	0.384*** (0.068)	0.533*** (0.068)
Unemployed	-0.482*** (0.072)	-0.286*** (0.088)	-0.319*** (0.059)
Medium City	-0.105*** (0.023)	-0.024 (0.034)	-0.242*** (0.028)
Large City	-0.060* (0.034)	0.011 (0.056)	-0.097** (0.042)
Sons	0.048* (0.025)	-0.004 (0.036)	0.030 (0.029)
II income quintile	0.256*** (0.043)	0.223*** (0.063)	0.189*** (0.041)
III income quintile	0.368*** (0.049)	0.325*** (0.069)	0.273*** (0.050)
IV income quintile	0.448*** (0.055)	0.422*** (0.079)	0.315*** (0.064)
V income quintile	0.560*** (0.068)	0.525*** (0.093)	0.355*** (0.085)
Richer	0.096 (0.065)	0.144 (0.102)	0.180** (0.084)
Poorer	-0.054 (0.040)	-0.114* (0.059)	-0.202*** (0.043)
N	9043	4324	6308
Log-Likelihood	-16286.4	-7999.0	-12184.5
Pseudo R-squared	0.0366	0.0444	0.0495

Note: ***, ** and * stand for statistically significant at the 1%, 5% and 10% level, respectively.

Appendix no.4

Table 4. Health, type of work and civil status, SHIW 2004-2016 (robust SE in parenthesis)

	(1)	(2)	(3)
Age	-0.045*** (0.007)	-0.044*** (0.003)	-0.045*** (0.003)
Age ²	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Female	-0.136*** (0.037)	-0.033** (0.016)	-0.046*** (0.016)
Married	0.470*** (0.041)	0.257*** (0.024)	0.338*** (0.018)
Junior High School	0.121** (0.051)	0.103*** (0.023)	0.119*** (0.023)
High School	0.217*** (0.053)	0.196*** (0.024)	0.195*** (0.024)
College	0.272*** (0.070)	0.270*** (0.032)	0.262*** (0.032)
Medium City	-0.115*** (0.035)	-0.130*** (0.016)	-0.132*** (0.016)
Large City	-0.154*** (0.050)	-0.059** (0.024)	-0.061** (0.024)
Center	-0.048 (0.040)	-0.012 (0.019)	-0.012 (0.019)
South	-0.041 (0.041)	-0.174*** (0.018)	-0.177*** (0.018)
Sons/Daughters	-0.111** (0.046)	0.045*** (0.017)	0.029* (0.017)
II income quintile	0.266*** (0.052)	0.296*** (0.024)	0.292*** (0.024)
III income quintile	0.332*** (0.055)	0.425*** (0.025)	0.419*** (0.025)
IV income quintile	0.472*** (0.060)	0.532*** (0.027)	0.520*** (0.027)
V income quintile	0.559*** (0.064)	0.668*** (0.030)	0.652*** (0.030)
Unemployed	-0.222** (0.100)	-0.396*** (0.041)	-0.357*** (0.044)
Blue Collar			-0.004 (0.027)
White Collar			0.109*** (0.026)
Retired			0.077*** (0.027)
Good Health	-0.130*** (0.042)		
Fair Health	-0.468*** (0.059)		
Poor Health	-0.984*** (0.088)		
Very Poor Health	-1.132*** (0.158)		
Divorced		-0.071** (0.033)	
Widowed		-0.150*** (0.030)	
N	4205	19675	19675
Log-Likelihood	-7640.9	-36641.5	-36640.6
Pseudo R-squared	0.0755	0.0460	0.0460

Note: ***, ** and * stand for statistically significant at the 1%, 5% and 10% level, respectively.

Table 5. Time and risk preferences and social attitudes, SHIW 2004-2016 (robust SE in parenthesis)

	(1)	(2)	(3)	(4)
Age	-0.044*** (0.003)	-0.042*** (0.008)	-0.041*** (0.008)	-0.043*** (0.009)
Age ²	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Female	-0.047*** (0.016)	0.007 (0.044)	0.005 (0.044)	0.028 (0.047)
Married	0.329*** (0.018)	0.438*** (0.050)	0.435*** (0.050)	0.455*** (0.055)
Junior High School	0.108*** (0.023)	0.192*** (0.062)	0.187*** (0.062)	0.198*** (0.064)
High School	0.200*** (0.024)	0.265*** (0.064)	0.256*** (0.065)	0.250*** (0.069)
College	0.277*** (0.031)	0.206** (0.082)	0.188** (0.082)	0.129 (0.091)
Unemployed	-0.390*** (0.041)	-0.147 (0.138)	-0.144 (0.138)	-0.220 (0.155)
Medium City	-0.133*** (0.016)	-0.048 (0.042)	-0.039 (0.043)	-0.049 (0.045)
Large City	-0.063*** (0.024)	-0.079 (0.061)	-0.086 (0.061)	-0.089 (0.066)
Center	-0.010 (0.019)	-0.055 (0.050)	-0.045 (0.050)	-0.049 (0.055)
South	-0.181*** (0.018)	-0.190*** (0.049)	-0.180*** (0.049)	-0.213*** (0.052)
Sons/Daughters	0.029* (0.017)	-0.034 (0.046)	-0.042 (0.045)	-0.040 (0.050)
II income quintile	0.298*** (0.024)	0.228*** (0.067)	0.227*** (0.067)	0.169** (0.071)
III income quintile	0.426*** (0.025)	0.226*** (0.069)	0.231*** (0.069)	0.173** (0.073)
IV income quintile	0.529*** (0.027)	0.424*** (0.073)	0.433*** (0.073)	0.341*** (0.077)
V income quintile	0.659*** (0.030)	0.610*** (0.079)	0.626*** (0.079)	0.563*** (0.084)
Risk aversion	-0.048*** (0.016)			
Impatience		-0.192*** (0.046)		
Trust			0.185** (0.088)	
Politics				0.175*** (0.052)
N	19675	2739	2739	2427
Log-Likelihood	-36649.0	-5158.0	-5164.6	-4577.6
Pseudo R-squared	0.0458	0.0437	0.0425	0.0420

Note: ***, ** and * stand for statistically significant at the 1%, 5% and 10% level, respectively.