U F M G

Cedeplar

AN OVERVIEW OF THE DETERMINANTS OF HAPPINESS IN BRAZIL IN 2006

André Braz Golgher

Dezembro de 2014

AN OVERVIEW OF THE DETERMINANTS OF HAPPINESS IN BRAZIL IN 2006

André Braz Golgher

Cedeplar/Face/UFMG

SUMÁRIO

ABSTRACT

This paper is the third of a series of five papers that discuss the determinants of happiness in Brazil using as database the World Values Survey (WVS) of 2006. Besides the variables discussed in the previous papers, this paper used variables associated with town size, regions of residence, job type, sense of belonging, tolerance, specific actions, number of children the individuals had, opinions about equality, government and personal fate, trust in more specific ways, and savings. First, the paper presents descriptive statistics of these variables. Then it discusses the determinants of happiness and satisfaction with life respectively with the use of ordered logistic models and OLS. The main findings of this paper for happiness were the following. Individuals who considered they were members of the world, Latin America, Brazil and/or the community tended to be happier. Persons that regarded themselves as partially autonomous were unhappier than those who strongly disagree that they were autonomous. Brazilians that were very proud of their nationality were happier than those who were not proud. Although married individuals tended to be happier, individuals with no child tended to be happier than those who had children. Happiness is more associated with trust on friends/acquaintances than with thin or general trust. Moreover, some general differences were observed while comparing models with the same set of explanatory variables for happiness and satisfaction. The results suggested different evaluative perspectives for these variables; possibly, to evaluate happiness might be considered a more long-term analysis than the evaluation of satisfaction.

Key-words: happiness, satisfaction with life, Brazil, WVS.

RESUMO

Este trabalho faz parte de uma série de cinco artigos que analisa os determinantes da felicidade no Brasil usando World Values Survey (WVS) como base de dados, e complementa a discussão dos dois primeiros. Primeiramente, o trabalho apresenta estatísticas descritivas sobre diversos fatores que podem influenciar os níveis gerais de felicidade e de satisfação com a vida, como local de residência, tipo de trabalho, senso de pertencimento, tolerância, número de filhos, confiança nas pessoas, etc. Em seguida, o texto discute os determinantes da felicidade e da satisfação com a vida fazendo uso de modelos logísticos ordenados para essa primeira variável e modelos MQO para a segunda. Os principais resultados encontrados foram os seguintes. Pessoas que se consideravam como pertencentes ao mundo, à América Latina, ao Brasil e a sua comunidade eram mais felizes e satisfeitos com a vida. Pessoas casadas tendem a ser mais felizes que outras pessoas, mas pessoas sem filhos apresentavam uma tendência de serem mais felizes que as demais com filhos. A felicidade é mais associada à confiança em amigos e conhecidos do que na confiança nas pessoas em geral. As pessoas avaliam a felicidade de forma diferenciada à satisfação com a vida.

Palavras-chave: felicidades, satisfação com a vida, Brasil, WVS.

1. INTRODUCTION

The topic happiness began to be explored in Economics in the seventies and became a popular one in the nineties. Most papers in the area discuss the determinants of happiness, as this series of papers, or the implementation of public policies designed to affect well-being levels (Frey, 2008). This is the third paper of a series that discusses the determinants of happiness in Brazil using the database World Values Survey (WVS). This presentation complements the two first studies, which are described below.

The first paper of the series "An introduction to the determinants of happiness in Brazil", introduced this field of inquire and presented some of the main determinants of happiness and satisfaction with life in Brazil. The main conclusions were the following: i) healthier individuals tended to be happier and more satisfied with life than others; ii) married individuals were the happiest and the most satisfied among all marital status categories; iii) unemployed individuals were the most miserable among all employment status classifications; iv) money matters, however, mostly because it buys health that impact positively on well-being; v) apparently, higher education buys happiness/satisfaction through higher income, and also due to lower levels of unemployment and/or better health, not because it has an intrinsic value. Other variables correlated only slightly with well-being levels, such as age, sex and ethnic group. These or similar variables were also discussed in many other studies addressing the determinants of happiness (For instance: Blanchflower and Oswald, 2004; Corbi and Menezes-Filho, 2006; Frey, 2008; Layard, 2005; Yang, 2008).

The second paper of the series "The influence of attitudes and beliefs on the determinants of happiness in Brazil" discussed some other variables that might affect well-being in Brazil, and complemented the first presentation, providing an extended overview of the determinants of happiness. This second paper discusses associations between well-being and variables related to the family, friends and community, religion, work and leisure, freedom and self-determination, politics, finance and wealth. The main conclusions of the second paper of the series were the following: i) individuals tend to be happier and more satisfied if they value more family relationships, trust others, judge they have a better financial situation, and feel they have more personal freedom and self-determination; ii) more religious people tend to be happier and more satisfied with life; iii) individuals that thought that marriage is an outdated institution tended to be unhappier and less satisfied; iv) individuals that were more interested in politics were happier, but not more satisfied; v) more left wing and political active individuals tended to be less satisfied with life. Some other variables, such as confidence in institutions, were not significantly associated with well-being. These or similar variables were analyzed in different studies that addressed the determinants of happiness (For instance: Kahneman et al, 2006; Slutzer and Frey, 2006; Frey, 2008; Laynard, 2005).

Both papers discussed the determinants of happiness and satisfaction with life using three WVS Brazilian waves of 1991, 1997 and 2006. WVS is a group of representative national surveys, which includes demographic variables, self-evaluations concerning health, happiness and satisfaction with life, and information associated to values, opinions, attitudes and beliefs (See http://www.worldvaluessurvey.org/ for further details about these databases).

This third paper of the series uses only this more recent database and includes some variables that were not analyzed in the other studies because they were not available in 1991 and/or 1997. In the previous papers it was emphasized that the WVS sample of the first two waves might not be nationally representative, what may not be a problem with this third wave. Inglehart et al (2000) observed that the samples in developed countries are often close to representative, while samples from developing countries are not random, especially for the first survey research waves.

The two main objectives of this presentation are: to further characterize the determinants of happiness and satisfaction with life in Brazil, giving a finer and more recent overview of the Brazilian reality regarding this topic; and to present some other variables of the WVS database that were not used in the first two paper of the series.

The focuses of this paper are the same two variables used previously in the series, which were slightly modified concerning the classification of the answers. The first variable is the one associated with happiness: "In general, you consider yourself a person that is: 1 – Not Happy; 2 – Quite Happy; and 3 – Very Happy." The other variable is the one related to satisfaction with life: "In general, are you satisfied or unsatisfied with your life". The answers ranged from 1 - Unsatisfied to 6 - Totally satisfied.

The first two papers of these series presented many aspects that might impact happiness and satisfaction with life, which were associated, as emphasized by Laynard (2005), with the main seven factors that stand out as the most important like family relationships, financial situation, work, community and friends, health, personal freedom and personal values. Moreover, Frey (2008) and Laynard (2005) discuss the association of democracy and government quality with happiness. Features such as honesty, lack of corruption, rule of law, efficiency and trust in political institutions affect overall happiness levels.

Also related to well-being is the use of personal time. Kahneman et al (2006) describes how passive leisure is less enjoyable than active leisure. Kahneman and Krueger (2006) rank many daily activities by net effect on hedonic level. Among the most enjoyable were intimate relation, socializing after work and eating. On the other hand, the least pleasant were commuting, working, childcare and housework.

Some of these topics are empirically analyzed in the next 12 sections. The first 9 sections present descriptively statistics of associations between different variables or group of variables, and happiness and satisfaction with life. Section two presents associations between town size and regions of residence, and well-being. Relations between job type and happiness/satisfaction are discussed in section 3. Sections 4 to 6 present associations between sense of belonging, tolerance and specific actions, and happiness/satisfaction. Notice that these topics discussed in sections 2 to 6 are not strongly related to the ones already discussed in the previous papers. After these five descriptive sections, the paper presents some topics that are more associated with variables already discussed in the previous papers. Section 7 discusses relations between the number of children individuals had and well-being, which depend on marital status, age and sex. Therefore, these last variables are also included in the presentation. Section 8 presents associations between opinions about equality, government, and personal fate, and happiness/satisfaction, which are related to the previously

discussed political variables, the felling of self-determination and if hard work bring success. Hence, these last variables are also included in the discussion. The second paper of the series discussed the association between general trust and well-being. This paper, in section 9, presents trust in more specific ways, including trust on people personally known, and on individuals met for the first time, of another religion and of another nationality. Section 10 presents associations between savings and happiness/satisfaction, which are in some aspects similar to the ones already discussed between household subjectively evaluated financial situation and well-being. After presenting these nine sections with descriptive statistics, the paper includes a section with a summary of the variables that will be included in the econometric models, which are a selection of those discussed in the first two papers and those presented here. Section 12 presents the econometric models. Similarly as before, there are two groups of models: the first for the happiness variable with ordered logistic models, and the second for the satisfaction variable with OLS models. Section 13 concludes the paper and presents an overview of the next two papers.

2. ASSOCIATIONS BETWEEN TOWN SIZE AND STATE OF RESIDENCE AND HAPPINESS/SATISFACTION

This section discusses the associations between town size and state of residence, and happiness/satisfaction. Geography might influence well-being due to different aspects. Some regions are naturally happier than others or variables not included in the models or non-observables might be correlated with place of residence. Moreover, towns of different sizes may affect differently many aspects of life that affect well-being. Some cities have a more pleasurable aesthetic appeal, neighborhood amenities and public goods. For instance, air and noise pollution levels, and the sense of safeness differ between tows of different size (Gandelman et al, 2012). Moreover, these authors describe that public goods, such as electricity, running water, sidewalks in good conditions, explain part of well-being variability.

For the U.S., the Gallup-Healthways Well-being Index is a well-known source of data for states and cities and has six sub-indexes: life evaluation, physical health, emotional health, healthy behavior, work environment and basic access (For details look at http://www.healthways.com/solution/default.aspx?id=1125). Specifically for life evaluation, the databases show that adults living in large metropolitan areas enjoyed higher overall well-being than those in small towns and rural areas. Part of the explanation for these differences is that inhabitants of metropolitan areas had lower levels of obesity, diabetes, cancer or other health issues that prevent normal activities. On the other hand, individuals living in small towns and rural areas felt safer walking alone at night and have lower daily stress. However, these last variables affected less well-being than the previous ones.

Other authors also discussed the association between town size and well-being. Peiró (2007) analyzed data for 15 countries using the WVS. He observed that town size did not seem to affect happiness/satisfaction significantly. Differently, Graham and Felton (2006) analyzed Latin America and found that individuals living in villages were happier than in cities. Dolan et al (2008) also

emphasize that rural inhabitants tend to be happier than those living in large cities, although part of this result might be due to controlling for lower income in smaller villages.

Regarding town size, the WVS has a variable with the population of the individual's town, which is classified in ranges, from less than 5 thousand to more than 500 thousand inhabitants. Few individuals lived in towns with less than 20000 inhabitants. Therefore, I grouped some population categories and obtained the following five ranges for town size: less than 20000 inhabitants, from 20000 to 50000, from 50000 to 100000, from 100000 to 500000, and 500000 and above.

Table 1 shows the results for this variable. Differences on happiness and satisfaction levels between the town sizes were small and mostly not significant. Bonferroni, Sidak and Scheffe tests indicated that for happiness, individuals in towns with population between 100 and 500 thousands were unhappier that those who lived in towns with population between 50 and 100 thousands. For satisfaction, towns with population between 20 and 50 thousands had a higher level than towns with population from 100 to 500 thousands. That is, apparently the most miserable individuals seem to be those who live in towns with population between 100 to 500 thousands. These towns may lack some fine features of smaller ones, while not presenting some of the main advantages of larger urban centers. However, actually, many towns of this population size are located in the outskirts of metropolitan regions with a rather different life dynamics than isolated towns of the same population.

TABLE 1
Number of observations and means values for happiness and satisfaction by town size

Population in thousands	Number of observations	Happiness	Satisfaction
Less than 20	250	2.23	7.77
20 to 50	210	2.23	8.03*
50 to 100	190	2.35*	7.71
100 to 500	400	2.20*	7.36*
500 and over	450	2.26	7.61

Source: WVS, 2006
* Significant differences

The Gallup-Healthways Well-being Index also discusses well-being for states in the U.S. Those around the Mississippi river and those located in the middle east of the U.S. were the unhappiest, while the states in the American north-central areas, close to New England and the Hawaii were the happiest. Some states might be happier than others because of many aspects. The states close to the Mississippi river tend to be poorer. Hawaii has a better weather, natural beauties and the sea. States close to New England might have lower levels of criminality.

The WVS had data for 20 states in Brazil. For many the number of observations was small and they were grouped in six regional variables: São Paulo state (SP), North/Northeast regions, Central-West region, Minas Gerais and Espírito Santo states (MG/ES), Rio de Janeiro state (RJ) and South region.

Table two shows the results for happiness and satisfaction for those regions. Happiness and satisfaction levels differed between these areas, although most differences were insignificant. SP was

unhappier than MG/ES, and it was unhappier and less satisfied than the North/Northeast regions. Roughly, the country could be divided in two: the South region, SP and Central-West region were unhappier and less satisfied regions, while the North/Northeast, MG/ES and RJ had higher levels of well-being.

TABLE 2
Number of observations and means values for happiness and satisfaction by region

Region	Number of observations	Happiness	Satisfaction
SP	430	2.17*	7.42*
North/Northeast	310	2.30*	7.99*
Central-West	100	2.23	7.58
MG/ES	260	2.33*	7.66
RJ	190	2.28	7.71
South	200	2.19	7.54
Total	1490	2.25	7.64

Source: WVS, 2006
* Significant differences

The differences presented in this section for town size and region of residence were small, but significant for some comparisons. Some areas tend to be happier due to many factors, and the econometric models may partially explain these differences.

3. ASSOCIATIONS BETWEEN JOB TYPE AND HAPPINESS/SATISFACTION

The first paper of the series discussed differences between employment statuses. The main conclusion was that the unemployed were the most miserable. This section presents the association between individual's job type and well-being. Some classifications of job type, such as farmers that own the farm, are not numerous and in order to avoid small samples, the job types were grouped in eight categories: employer/manager, professional worker, non-manual office worker, supervisor and skilled manual worker, semi-skilled manual worker, unskilled manual worker, agricultural worker, never had a job, and others.

Table 3 shows the results for these job types. Happiness levels ranged from 2.18 to 2.31. The semi-skilled manual workers had the smallest value and the non-manual worker and supervisor/skilled manual worker had the largest among the well-defined categories. The category others had the largest value among all categories. For satisfaction, values ranged from 7.28 for the unskilled to 7.96 for employer/manager and for others. Despite these differences, they were small and well-being levels showed no statistically significant differences. In a similar vein, Dolan et al (2008) stated that there are insufficient evidence to draw clear conclusions regarding job type and happiness/satisfaction.

TABLE 3
Number of observations and means values for happiness and
satisfaction for a variable related to job type

Job	Number	Happiness	Satisfaction
Never had a job	236	2.21	7.73
Employer/manager	95	2.26	7.96
Professional worker	113	2.24	7.73
Non manual-office worker	118	2.31	7.67
Supervisors/Skilled manual worker	242	2.31	7.64
Semi-skilled manual worker	234	2.18	7.60
Unskilled manual worker	243	2.22	7.28
Agricultural worker	105	2.25	7.77
Others	48	2.35	7.96
Total	1436	2.24	7.64

Source: WVS, 2006.
Note: * statistically significant

4. ASSOCIATIONS BETWEEN SENSE OF BELONGING AND HAPPINESS/SATISFACTION

This section discusses associations between the sense of belonging and well-being. As discussed previously, community and friends are strongly associated with happiness/satisfaction and the sense of belonging is part of the importance of friends and community. Frey (2008) emphasizes that one of the main aspects that we should care in order to be happier is to "make friends and value them". Laynard (2005) states that features associated with friends and the community are among the most important in determining happiness levels. Putmam (2000) describes the collapse of social capital in the U.S. in recent decades. Due to different aspects, such as urban sprawl, dual bread winner households, time allocated to TV and passive leisure, and differences related to generations, individuals decreased their participation in formal and informal socializing channels. This influenced negatively the sense of belonging and consequently also well-being. However, Dolan et al (2008) points out that evidences that greater community involvement positively affects well-being are no so robust.

The WVS database has different questions related to the feeling of belonging and I selected six of them. The first five are quite similar: "I see myself as a world citizen; I see myself as citizen of Latin America; I see myself as citizen of Brazil; I see myself as member of my local community; and I see myself as an autonomous individual." All of them with answers ranging from 1 – Strongly disagree to 4 - Strongly agree.

Table 4 shows the results for these five questions. Notice that most individuals strongly agreed or agreed that they were citizens of the world or Brazil, and that they were a member of their community. For Latin America citizenship, the values were smaller for these two answers, although still the majority answered one of them. In a similar vein, more than 90% disagreed or strongly

disagreed with the statement that they saw themselves as an autonomous person. That is, in general, Brazilians consider themselves as a citizen of the mentioned regions, as a member of their community and/or do not regard themselves as an autonomous person.

Some answers were not numerous, such as strongly disagree for world, Latin America, or Brazil citizenship, or for community membership. This also occurred for strongly agree for I consider myself an autonomous person. These categories were grouped with the category disagree for the first four and agree for the last. The results for happiness and satisfaction are shown in table 4 for these grouped variables.

Individuals with a sense of belonging whether as citizen of the world, Latin America or Brazil, or as a member of their community tended to be happier and more satisfied with life, especially for the strongly agree. Differences were statistically significant for this category. Moreover, individuals who considered themselves as autonomous were unhappier and less satisfied. All differences were statistically significant. That is, individuals who felt they belonged to a group/region tend to show higher levels of well-being.

TABLE 4
Number of observations and means values for happiness and satisfaction for
variable related to belonging

Answer	I see myself as a citizen of			I see myself as a member of my	I see myself as an
	World	Latin America	Brazil	Community	Autonomous
Strongly agree	27.0	17.6	32.4	30.5	2.6
Agree	51.7	47.4	60.4	61.5	7.0
Disagree	19.2	29.9	6.6	7.2	45.2
Strongly disagree	2.2	5.2	0.6	0.8	45.2
	Happiness				
Strongly agree	2.34*	2.40*	2.35*	2.36*	-
Agree	2.21	2.22	2.21	2.19	2.02*
Disagree	2.23	2.21	2.14	2.22	2.21*
Strongly disagree	-	-	-	-	2.33*
	Satisfaction				
Strongly agree	8.00*	8.11*	7.89*	8.01*	-
Agree	7.51	7.57	7.57	7.50	6.82*
Disagree	7.53	7.53	7.21	7.35	7.57*
Strongly disagree	-	-	-	-	7.89*

Source: WVS, 2006.

Note: * statistically significant

The last question presented in this section is the following: "How proud are you of your nationality?" Answers ranged between 1 – Very proud and 4 – Not at all proud. This last category was not numerous and was grouped with the "3 - Not very proud".

Table 5 shows the results for this last question. Most individuals were very or quite proud of being Brazilians. Notice, however, that 2006 was a World Cup year, what tends to increase national proudness. Those who were very proud were happier and more satisfied than others. Most differences were statistically significant.

Nonetheless, notice that there is a strong possibility of circular causality. Prouder individuals tend to be happier, but also happier individuals tend to be prouder of their country. Inglehart et al (2008) points out that national pride is positive correlated with happiness, as observed here, however, only when religiosity is not controlled. The econometric models further discuss this relationship between well-being, national pride and religiosity.

TABLE 5

Number of observations and means values for happiness and satisfaction for variable related to national proud

	Proportion (%)	Happiness	Satisfaction
Very proud	39.3	2.36*	8.05*
Quite proud	44.5	2.20	7.51*
Not very proud/ Not at all proud	16.2	2.10	7.00*

Source: WVS, 2006.

Note: * statistically significant

These five questions discussed in this section are probably strongly correlated. Table 6 shows the spearman correlations between them, all of them were statistically significant. The correlations between citizenship of the world, Latina America, Brazil and member of the community showed correlations between 0.35 and 0.56. The correlations between I see myself as an autonomous and the other variables were all negative, as expected, but with smaller magnitude. The variable national pride was also correlated with the other variables, but less strongly.

TABLE 6

Spearman correlations between the variables of sense of belonging

	World	Latin America	Brazil	Community	Autonomous
Latin America	0.42	-	-	-	-
Brazil	0.44	0.47	-	-	-
Community	0.40	0.35	0.56	-	-

| Autonomous | -0.15 | -0.20 | -0.31 | -0.25 | - |
| National Pride | 0.20 | 0.17 | 0.24 | 0.20 | -0.14 |

Source: WVS, 2006.

PCA suggested that the variables I see myself as a citizen of the world, Latin America or Brazil and I see myself as a member of my community could be grouped. These four variables were summed and a new variable was created and named sense of citizenship/membership. Therefore, I ended with three variables for sense of belonging, which will be included in the econometric models: sense of citizenship/membership, sense of being autonomous, and national pride.

5. ASSOCIATIONS BETWEEN TOLERANCE AND HAPPINESS/SATISFACTION

This section discusses the association between tolerance and happiness. Inglehart et al (2008) discussed the evolution of global happiness in the period between 1981 and 2007 having tolerance levels as one of the well-being determinants. Contrary to the set point theory, which states that happiness levels only fluctuate around fixed points without showing lasting trends, they observed that in the great majority of the countries well-being levels increased in the period. They associated this increase in happiness/satisfaction with the expansion of free choice, including democratization and social tolerance. Following these authors, social tolerance, including tolerance of out-groups, broadens the range of individuals' choice possibilities and consequently might increase happiness. It is not just being tolerant that may increase well-being; living in a tolerant society also is favorable for happiness.

In the Brazilian WVS of 2006 there is the following question related to this topic: "Can you mention those individuals who you would not like to have as neighbors?" There are different groups in the population that are cited: drug addicted, other ethnic groups, individuals with aids, immigrant workers, homosexuals and heavy drinkers. It is expected that individuals who tolerate having one of these groups as neighbors might have a greater propensity of accepting others, as the answers might be positively correlated.

I applied PCA to the data to verify if some of these groups could be grouped. This analysis suggested that persons who tolerated heavy drinkers as neighbors also accepted drug addicted individuals, and those who did not admit individuals with aids as neighbors, also did not want immigrant workers or persons of other ethnic groups. Therefore, after performing this procedure I grouped the six initial variables in three groups of not wanted individuals: heavy drinkers and drug addicted; other ethnic group, individuals with aids and immigrant workers; and homosexuals.

For the first group, the variables were summed and the variable has three classifications: 0 – Do not tolerate any of them, 1 – Tolerate one, and 2 – Tolerate both. The numbers for intolerance in the second group of variables were small, as most Brazilians tolerated these groups or thought they should accept them as neighbors. Hence, I created a dummy variable for 1 - Mentioned one or more of the three groups or 0 - Did not mention any of them. The variable for homosexuals was not grouped to any other and remained as a dummy.

Table 7 shows the results for the distribution of these three variables and the mean level of happiness and satisfaction for each category. A majority of Brazilians, approximately 80%, did not want heavy drinkers or drug addicted individuals around in the neighborhood. Among those individuals, roughly half did not want any of those groups as neighbors, while the other half could tolerate one of them. Happiness and satisfaction levels did not vary significantly between the three categories of this variable.

The great majority of Brazilians accepted having other ethnic group, individuals with aids and immigrant workers as neighbors. Only 18.8% mentioned they did not want one or more of those groups as neighbors. Happiness and satisfaction levels were rather similar between those who tolerated these groups and those who did not, with any statistical differences.

A minority did not want homosexuals as neighbors, 21.8% of the total. This minority showed a similar level of happiness, but had higher levels of satisfaction. This point might be associated with higher levels of well-being for more conservative individuals, contrary to the discussed above.
The results here do not corroborate the findings in Inglehart et al (2008) who stated that tolerance is a strong predictor of well-being. However, the discussion in this section is not a controlled one as this other study. The econometric models might present a different perspective.

TABLE 7
Number of observations and means values for happiness and satisfaction for
variable related to tolerance

Heavy drinkers/drug addicted		
Proportion of do not want as neighbors any category (%)	41.4	
Proportion of do not want as neighbors one category (%)	36.4	
	Happiness	Satisfaction
Do not want as neighbors any category	2.26	7.77
Do not want as neighbors one category	2.23	7.59
Accept both categories	2.26	7.66
Other ethnic group/individuals with aids/immigrant workers		
Proportion of do not want one of those as neighbors (%)	18.8	
	Happiness	Satisfaction
Don't want	2.29	7.71
Accept	2.24	7.64
Homosexuals		
Proportion of do not want as neighbors (%)	21.8	
	Happiness	Satisfaction
Don't want	2.28	7.90*
Accept	2.24	7.59*

Source: WVS, 2006
Note: * statistically significant

6. ASSOCIATIONS BETWEEN SPECIFIC ACTIONS AND HAPPINESS/SATISFACTION

The previous section discussed some variables related to tolerance, which are associated with personal values. Personal values are one of the most important aspects associated with the determinants of well-being (Laynard, 2005). This section presents some variables also related to personal values that might as well affect happiness.

The WVS asks if it is justifiable to do some actions in a scale of 1 – Never justified to 10 – Always justified. These actions are: claiming government benefits, avoiding a fare on public transport, cheating on taxes, accepting a bribe, for a man to beat his wife, being a homosexual, being a prostitute, doing an abortion, getting a divorce, performing an euthanasia and committing a suicide.

Some of these answers, as expected, showed a positive and significant correlation, what might indicate that they indicate a similar perspective upon life. In order to reduce the number of variables, I applied a PCA to the data and it indicated that two groups of variables could be grouped. The first one contains the variables associated with homosexuality, prostitution, divorce and euthanasia. These variables are highly correlated, i.e., individuals that thought that to be a homosexual was not justified tended to think the same about to prostitute, getting a divorce and performing an euthanasia. Hence, I summed the answers of these four variables. As answers potentially ranged from 4 to 40, the variable was considered a continuous one and named the variable as liberalism; the greater the value the more liberal is the individual.

The variables avoiding a fare on public transport, cheating on taxes and claiming government benefits were also grouped and the answers were summed, as they indicated a similar perspective upon life, which is related to obtaining benefits illegally or through the government. This new variable, named benefits, is also treated as a continuous one. The greater the values, the more justified is to pursue benefits.

Two other variables were highly correlated with these last ones, but less associated theoretically: a man can beat his wife and commit suicide. Due to theoretical differences, these variables were not grouped with the above-mentioned. Two others variables also remained ungrouped, as they were not highly correlated with others: getting an abortion and accepting a bribe. Most people answered that it was never justified to do any of these four actions. Therefore, a dummy was created for each: 0 – never justified, 1 – Somewhat justified.

Thus, after performing the PCA I obtained six variables for specific actions. The first two, liberalism and benefits, were treated as continuous. The other four were dichotomized, being one somewhat justified and zero never justified.

Table 8 shows the results for the first two variables for correlations between them and happiness/satisfaction. All correlations were significant, but of small magnitude. Individuals that were more liberal slightly tended also to consider justified obtaining legal or illegal benefits. Correlations between these two variables and happiness and satisfaction were all negative, suggesting that more liberal individuals and the ones that think it was justified to obtain benefits were slightly unhappier and less satisfied with life.

TABLE 8
Correlations between happiness/satisfaction and liberalism and benefits

	Benefits	Happiness	Satisfaction
Liberalism	0.066*	-0.084*	-0.063*
Benefits	-	-0.052*	-0.083*

Source: WVS, 2006
Note: * statistically significant

Table 9 shows the results for the other four dichotomous variables. Although these variables represent a quite different perspective upon life, they are positively and significant correlated, with values ranging from 0.315 and 0.513 for a Spearman coefficient. The econometric models will include just the two first variables.

A minority in Brazil thought that it is sometimes justified for a man to beat his wife (16.6%), for anyone to commit suicide (24.8%), to accept a bribe (28.0%) and to get an abortion (36.9%). Interestingly, differences for happiness levels were non-significant for all these variables. That is, individuals that thought that it was somewhat justified to do any of these actions were similarly happy as those who believed they were never justified. However, the never group was always more satisfied with life. These results might clarify some of the differences between being happy and being satisfied with life.

TABLE 9
Number of observations and means values for happiness and satisfaction for variable related to actions

Is it justified for a man to beat his wife?		
Depends or sometimes (%)	16.6	
	Never	Depends or sometimes
Happiness	2.26	2.21
Satisfaction	7.71*	7.31*
Is it justified to suicide?		
Depends or sometimes (%)	24.8	
	Never	Depends or sometimes
Happiness	2.25	2.25
Satisfaction	7.75*	7.33*
Is it justified accepting a bribe?		
Depends or sometimes (%)	28.0	
	Never	Depends or sometimes
Happiness	2.26	2.21
Satisfaction	7.74*	7.45*
Is it justified making an abortion?		
Depends or sometimes (%)	36.9	
	Never	Depends or sometimes
Happiness	2.23	2.27
Satisfaction	7.78*	7.42*

Source: WVS, 2006.
Note: * statistically significant

All the variables presented so far were discussed separately from those presented in the previous papers. Next sections address some other variables that are more intimately associated with others already discussed in the previous papers and hence are discussed together with them.

7. ASSOCIATIONS BETWEEN NUMBER OF CHILDREN AND HAPPINESS/ SATISFACTION

Laynard (2005) states that family relationships are among the most important features that impact on the individual´s well-being. Frey (2008) presents ten points that we should care if we want to be happier, and to get married is the second most decisive after "doing most with our gens". Specifically for the Brazilian WVS data, as already discussed in the previous papers, married individuals were the happiest. This section analyzes another point associated with family relationships that is whether having children affects happiness levels.

There is a strong cultural belief that children increase the well-being of parents, what have supported norms about the desirability of having children. One would expect that the relation Partner + Children = Happiness holds (Kohler et al, 2005). This relationship is reinforced if one notice that even though the taboo against childlessness has decreased, levels of childlessness have remained generally low (Margolis and Myrskyla, 2011).

That is, the equation above apparently holds. However, following these last authors, parenthood changes the parents´ lives in both positive and negative ways. For instance, having a child strengthens social ties with family and friends and creates new roles for adults, which carry rights and responsibilities. On the other hand, becoming a parent also increases housework, often decreases relationship quality between parents, and can be a wealth burden. Moreover, parenthood brings higher levels of anxiety and depression (Kohler et al, 2005).

The Second Demographic Transition (STD) thesis highlights some arguments that associate fertility with happiness. The SDT is characterized by an increase in the importance given for self-realization, psychological well-being, and personal freedom and self-expression. Thus, childbearing is no longer considered the main phenomena of the individual's life course as in the recent past (Aassve et al, 2012). That is, parenthood is not necessary associate with higher levels of happiness, possibly the correlation might even be a negative one.

Some authors discussed empirically the relationship between fertility and happiness. Margolis and Myrskyla (2011) observed that globally having children is associated with decreased happiness. Peiró (2007) noticed that the number of children seemed not to be an important factor determining happiness, although it did influence negatively financial satisfaction. Slutzer and Frey (2006) noted in an OLS pooled estimation that there was a small but positive correlation between satisfaction and having up to three children. Conversely, when they applied a fixed effects model, they observed negative correlations between having children and satisfaction with life. Aassve et al (2012) observed that the number of children was positively correlated with happiness for men, but was non-significant for women. Differently, having the first child was positively related to happiness for women, but not for men.

The results discussed above seem non-conclusive. Margolis and Myrskyla (2011) argue that the relationship between fertility and happiness may differ depending on life cycle stages and other aspects, what can partially explain these differences.

First, parenthood may affect happiness differently depending on marital status and sex. For instance, married couples might consider that having children is more positively associated with well-being than single individuals. In addition, women and men might experience parenthood differently. Margolis and Myrskyla (2011) observed that differences between marital status and between sexes were small. Differently, Aassve et al (2012) found out that there was a positive association between having a child and happiness for those in a partnership both men and women, while they observed that single fatherhood was related to a decrease in happiness.

The relationship between fertility and happiness may also change over the life cycle, as younger individuals might face parenthood differently than older ones. Aassve et al (2012) observed that the relationship between having children and happiness was positive for older individuals, but negative for younger ones. They present mechanisms that might explain these findings. For instance, at younger ages the time and monetary costs of raising children are generally higher than they are at older ages. Conversely, as children reach adulthood they may provide financial and emotional support and care for aging parents. These results suggest that children are a long-term investment in well-being, as parents may place a higher value on the gains in happiness in older ages from having children when compared to the short-term costs at young ages.

Another point that should be considered is the number of children. Kohler et al (2005) analyzing twins in Denmark with age between 25 and 45 observed that the first child had a large positive effect on women and on men. Nevertheless, additional children did not increase happiness for men or women, actually decreased for women. The models that included marital status indicated that for males having children had no significant impact, while for women the first child brought happiness and the higher order children only misery. For older individuals, with age between 50 and 70, both for men and women, to be currently in partnership increased happiness, and children had no effect.

The results discussed in these last paragraphs do not corroborate the relationship Partner + Children = Happiness. For young parents the relationship might be the following for men: Partner = Happiness. For women, it can be written as Partner + 1 Child = Happiness. For older individuals this first equation might hold.

Moreover, the relationship between fertility and well-being may vary according to institutional and cultural context. Aassve et al (2012) emphasized that variations on happiness associated with fertility might be linked to how the political institutions facilitate childbearing through transfers and parental leave. They found out that in Europe, parents in social democratic countries are happier than parents in countries with conservative or liberal welfare regimes. Probably because the welfare state in these first countries decreases the costs of raising children and eases the combination of parenthood, marriage and work, what might be particularly important for young individuals (Margolis and Myrskyla, 2011). On the other hand, these last authors stated that in places with weak welfare states, older people with children would be happier than those without because children often act as insurance for old ages.

In addition, Margolis and Myrskyla (2011) discussed the relationship between the country's total fertility rate and happiness. They observed that for individuals in the 20-39 age group happiness declined with the number of children. However, for the age group of 40 and above, the lower the overall fertility level, the more positive the happiness-fertility relationship becomes, possibly because in places with very low fertility levels, there are a selection into childbearing of those who value children the most.

Concerning parenthood, the Brazilian WVS wave of 2006 asks the number of children that the person had, and the answers ranged from zero to eight or more. Few people answered five or more and these answers were grouped with four children. Moreover, in order to reduce the number of categories, these categories were further grouped with 3 children. Hence, the final variable for the number of children has the answers from 0 –None to 3 – Three or more.

The theoretical presentation above highlighted the importance to discuss the effect of parenthood including variables related to marital status, sex and age. Table 10 presents the distribution of individuals for these variables classified by the number of children.

Most married people had kids and the same was observed for living together, separated/divorced and widow/widower. On the other hand, for singles, the great majority did not have any kids. The numbers in each category of marital status and number of children are small, and most differences were not significant. However, for happiness, married individuals with any number of children and living together with two children were happier that living together with three or more children. Notice, however, that these differences might depend on the perceived stability of living together relationships. Non married couples tend to be as happy as married ones if they perceive they have a stable relationship (Dolan et al, 2008).

For sex, most differences were statistically insignificant. Only one, the comparison between males with two children and females with three or more was significant, the males were happier. All differences for age groups were insignificant.

Notice that differences were significant only for happiness. For satisfaction, all differences were non-significant. Dolan et al (2008) stated that children affects non-significantly everyday emotions (for them happiness), but nevertheless individuals tend to consider them important for overall well-being (For them satisfaction). That is, they found significant coefficients for satisfaction and non-significant for happiness, the contrary than the observed here. By the way the questions in the WVS are formulated in Portuguese, Brazilians may consider satisfaction a term associated with a shorter temporal analysis and happiness a longer one, which might explain the results observed here.

TABLE 10
Number of observations and means values for happiness and satisfaction by number of children

Number of children	Married	Living together	Separated/ divorced	Widow/ widower	Single
Distribution					
0	60	26	14	4	315
1	112	54	33	12	48
2	192	72	41	16	17
3 or more	255	98	49	61	16
Total	619	250	137	93	396
Happiness					
0	2.37*	2.12	2.21	2.75	2.26
1	2.32*	2.11	2.12	2.50	2.15
2	2.32*	2.36*	2.22	2.06	2.06
3 or more	2.29*	2.00*	2.21	2.11	2.00
Total	2.31	2.14	2.19	2.18	2.23
Satisfaction					
0	7.77	7.27	7.36	9.00	7.63
1	7.93	7.39	6.48	7.83	7.73
2	7.77	7.94	6.88	6.94	7.82
3 or more	7.91	7.09	8.22	7.51	6.13
Total	7.86	7.42	7.31	7.52	7.59
	Men	Women	Below 40	Above 40	Total
Distribution					
0	215	206	350	71	421
1	100	160	172	88	260
2	131	207	159	179	338
3 or more	178	303	129	352	481
Total	624	876	810	690	1500
Happiness					
0	2.25	2.31	2.31	2.11	2.28
1	2.20	2.25	2.26	2.17	2.23
2	2.34*	2.26	2.34	2.25	2.29
3 or more	2.25	2.16*	2.16	2.20	2.19
Total	2.26	2.23	2.28	2.20	2.24
Satisfaction					
0	7.57	7.72	7.69	7.39	7.64
1	7.60	7.58	7.63	7.51	7.59
2	7.75	7.61	7.68	7.65	7.66
3 or more	7.97	7.49	7.24	7.82	7.66
Total	7.73	7.59	7.60	7.69	7.64

Source: WVS, 2006
Note: * statistically significant

8. ASSOCIATIONS BETWEEN OPINIONS ABOUT EQUALITY, GOVERNMENT AND PERSONAL FATE, AND HAPPINESS/SATISFACTION

In the previous paper, I presented different variables that were associated with those discussed in this section, such as "How much freedom of choice and control do you have over your life?" and "Hard work brings success?" Both variables were positively associated with well-being: individuals with greater freedom and life self-control and those who thought that hard work bring success were happier and more satisfied with life. Concerning politics, a variable related to self-positioning in a political scale ranging from "1 - Right" to "10 - Left" was also presented. This variable was not associated with happiness, although it was negatively correlated with satisfaction.

This section discusses the association between happiness and satisfaction, and five variables that are apparently related to these three cited variables. These five variables are the following, all ranging between 1 and 10. For equality: "1 - We need larger income differences as incentives", "10 - Incomes should be made more equal". For competition: "1 - Competition is good", "10 - Competition is harmful". For the person´s or the government´s responsibility: "1 - People should take more responsibility", "10 - The government should take more responsibility". For business ownership: "1 - Private ownership of business should be increased", "10 - Government ownership of business should be increased". Finally, for fate: "1 - People shape their fate themselves", "10- Everything is determined by fate".

These five variables represent a perspective from the more liberal economics perspective to one more government controlled. At first, it is expected positive correlations between them. However, although they show some theoretical similarities, correlations are weakly negative, not significant or weakly positive. That is, these questions represent different perspectives for Brazilians, and they were not grouped.

Table 11 shows the correlations between the three mentioned variables discussed in the previous paper and the ones discussed in this section. Most correlations were non-significant, however, three pairs or groups of variables presented significant correlations. First, freedom is negatively correlated with personal fate. Notice how these variables were categorized. They represent approximately the same perspective upon life: individuals that consider they have greater life self-control also tend to believe that people shape their fate themselves. However, notice that the correlation is not of high magnitude.

Second, the variable hard work bring success was positively correlated with competition is harmful, and negatively correlated with government ownership of business. The second negative correlation was expected: individuals that think hard work bring success tend to consider that private ownership of business should increase. The first positive correlation was not at first expected. Individuals that consider that hard work bring success tend to think that competition is harmful. Tentative explanations can be given, but all need more careful analysis than the one presented here. Maybe those who think work bring success are those who face a more strict competition, and so think it is harmful. Alternatively, perhaps, this result is partially explained by cohort differences.

Roughly speaking, while the first pair of variables was related to personal life, this second is associated with professional aspects. Regarding politics, individuals that consider themselves left wing also give greater value to income equality and to government ownership of business, what was expected, but correlations were of small magnitude. Concluding, the five variables discussed here are theoretically related to the three discussed previously, however, correlations are non-significant or weak.

TABLE 11
Correlations between life self-control, hard work bring success and political positioning and variables associated with economic liberalism and fate

	Equality	Private vs state ownership of business	Government responsibility	Competition good or harmful	Personal Fate
Freedom	-0.043	-0.024	0.048	-0.042	-0.126*
Hard work	-0.015	0.025	-0.122*	0.209*	0.022
Positioning	0.084*	-0.027	0.064*	0.024	-0.038

Source: WVS, 2006.
Note: * statistically significant

Table 12 shows the results for the correlations between the five variables discussed in this section, and happiness/satisfaction. Most correlations were non-significant and only one showed a negative value of small magnitude, the one between equality and happiness. That is, individuals who considered incomes should be made more equal were slightly unhappier.

TABLE 12
Correlations between happiness/satisfaction and variables associated with economic liberalism

	Equality	Private vs state ownership of business	Government responsibility	Competition good or harmful	Fate
Happiness	-0.054*	-0.012	-0.027	-0.025	0.027
Satisfaction	-0.032	0.032	-0.028	-0.025	0.017

Source: WVS, 2006.
Note: * statistically significant

Notice that the correlations between these variables and well-being do not resemble the ones for freedom and hard work, as they are much weaker or non-significant. These results suggest that these two variables discussed in the previous paper might be better ones to be considered as determinants of well-being than those presented in this paper. The econometric models will further discuss this point.

According to Dolan et al (2008), few studies explored associations between well-being and political views, such as pro-market values. However, they describe a study with positive associations between well-being and a more liberal economic perspective in Latin America.

9. ASSOCIATIONS BETWEEN TRUST AND HAPPINESS/SATISFACTION

The variable "Can most people be trusted?" was analyzed in the previous paper, where it was observed that very few people trusted others in Brazil. However, this small group in the population was happier and more satisfied than the great majority, although the results in controlled analysis were weak. This section discusses trust in more specific ways. The WVS has other questions associated with trust and I selected four of them. The first one is: "People you know personally can be trusted?" Answers ranged from "1- Not trust at all" to "4 - Trust completely." This type of trust linked to friends and acquaintances is named thick trust (Putnam, 2000). The other three questions, which had the same answers as this first mentioned were the following: "People you meet for the first time can be trusted?", "People of another nationality can be trusted?" and "People of another religion can be trusted?" This type of general trust on society members is denominated thin trust (Putnam, 2000).

Table 13 shows the distribution of the answers for these four variables. Brazilians tend to be so distrustful that only a small minority, 14.2%, trusted completely people they know. Most individuals trust people they know a little, 49.9%, or do not trust them very much, 26.2%. Nearly no one trusts completely individuals who are met for the first time or people of another nationality. Few people trust a little these groups of individuals, while most Brazilians do not trust very much or do not trust at all these individuals. Brazilians tend to trust individuals of other religions a little more than these last two groups of people, and less than people they know personally.

Given that some answers were not numerous, I grouped the categories "not trust very much" and "not trust at all" for the variable people you know personally. Moreover, for the other three questions, the categories "trust completely" and "trust a little" were grouped.

The table shows the mean values for happiness and satisfaction for these three new categories for each question. For happiness, trust in the individuals known personally seems to influence positively on well-being, but the associations with other types of trust were not significant. For satisfaction, similarly, persons were more satisfied if they trusted people they knew and for people you meet for the first time differences were not statistically significant. Differently, however, trust on individuals of another nationality and of another religion was also correlated with well-being. These results suggest that trust on closer relationships impact significantly on our level of happiness, and general trust influence mostly levels of satisfaction with life, as emphasized by Dolan et al (2008).

TABLE 13
Number of observations and means values for happiness and satisfaction for
variable related to trust

	People you know personally	People you meet for the first time	People of another nationality	People of another religion
Trust completely	14.2	1.1	2.5	5.7
Trust a little	49.9	15.7	24.5	44.6
Not trust very much	26.2	29.4	29.1	33.6
Not trust at all	9.7	53.8	43.9	16.1
	Happiness			
Trust completely	2.40*	-	-	-
Trust a little or more	2.25*	2.30	2.28	2.24
Not trust very much or less	2.18*	2.24	2.24	2.27
Not trust at all	-	2.23	2.24	2.20
	Satisfaction			
Trust completely	8.22*	-	-	-
Trust a little	7.68*	7.80	7.82*	7.71*
Not trust very much	7.36*	7.65	7.70	7.66
Not trust at all	-	7.61	7.53*	7.47*

Source: WVS, 2006.
Note: * statistically significant

All four trust variables present positive correlations. Correlations although not perfect were positive and significant, and magnitudes ranged from 0.085 to 0.462. That is, individuals that trust people they know tend to trust other society members in general.

PCA suggested that the variables associated with thin trust could be grouped. Hence, a variable was created summing them and was named thin trust. This new variable is included in the econometric models, where it is treated as continuous. However, notice that correlations between this variable and happiness and satisfaction, though positive, were non-significant.

10. ASSOCIATIONS BETWEEN SAVING AND HAPPINESS/SATISFACTION

This last descriptive section presents a question related to savings: "How can you describe the family savings during past year", with the answers ranging from "1- Spent savings and borrowed money" to "4 - Saved money." This question is associated with another one discussed in the previous paper "How is your satisfaction with the financial situation of the household?", with possible answers in a ten scale range from "1 – Totally dissatisfied" to "10 – Totally satisfied". The variables were positively and significantly correlated, although the magnitude was not large, and varied between 0.160 and 0.180 depending on the correlation type, if Pearson or non-parametric.

Previous results showed that financial situation was positively correlated with happiness and satisfaction with life, even when controlling for income level. Table 14 shows the results for the distribution and mean values for happiness and satisfaction for the variable savings. Notice that concerning savings, the majority in Brazil "just got by." That is, they did not spend savings or saved any money. More than 20% spent savings, and a small minority, 13%, saved money. Individuals that saved money were happier and more satisfied with life; however, differences were small and non-significant.

TABLE 14
Number of observations and means values for happiness and satisfaction for
variable related to savings

Category	Proportion (%)	Happiness	Satisfaction
Spent savings and borrowed money	12.1	2.16	7.42
Spent some savings and borrowed money	9.6	2.22	7.39
Just got by	64.9	2.26	7.69
Saved money	13.4	2.29	7.88

Source: WVS, 2006.
Note: * statistically significant

These results presented in table 14 and the weak correlation between financial situation and savings suggest that the subjectively evaluated financial situation is a stronger determinant of well-being than the variable savings. The results of the econometric models in the previous paper of the series showed a positive and significant coefficient for this first variable, even after controlling for income level, while most coefficients for income were non-significant. Dolan et al (2008) emphasized that the perception of financial status might have a stronger predictive power than actual income as determinant of well-being.

This section ends the descriptive statistics of variables that might affect happiness and satisfaction levels. The two previous papers "An introduction to the determinants of happiness in Brazil" and "The influence of attitudes and beliefs on the determinants of happiness in Brazil" presented some other variables. All variables from this first paper and some selected variables from this second will be included in the econometric models. Concerning the variables presented in this third paper, some groups of variables were strongly correlated and PCA suggested they could be grouped. All groups of variables of this third paper will also be incorporated in the models, most of them grouped. The next section summarizes all these variables.

11. A SUMMARY WITH ALL VARIABLES

This section summarizes all variables that will be used as explanatory ones in the econometric models. In the paper "The determinant of happiness in Brazil: an introduction", I discussed

associations of sex, age and ethnic groups with well-being. I observed that: males tended to be slightly happier than females; the age group of 55 years old and above was to some extent happier than younger individuals, but with small differences; ethnic groups showed similar values for happiness and satisfaction. Other variables discussed in this paper were self-evaluated health, marital status, employment status, income, and education attainment. I verified that healthier individuals tended to be happier; married individuals were the happiest; unemployed were the unhappiest among all employment status categories. Moreover, for income, I verified that there was an increase in both well-being indicators for low-income individuals and differences for the other groups were not significant. Education showed some not at first expected results. Individuals with only a high school degree were the unhappiest/least satisfied, while the happiest/more satisfied were the ones with no education at all or with an incomplete tertiary schooling level. Individuals with a higher degree did not show higher levels of well-being. All these variables already discussed in details in this paper will be included in the econometric models.

In the second paper of the series, "The influence of attitudes and beliefs on the determinants of happiness in Brazil", I presented some other variables that may also affect well-being. Many variables were not significant in the econometric models discussed in this paper. Hence, I selected some of them that will be included in the econometric models in this third paper of the series. Details of each variable are presented in this previous paper. I summarize the main results of the selected variables. Family relationships are among the most important features that impact on the individual´s well-being. The econometric models in the previous paper showed that individuals that give more importance to the family tended to be happier than others are. People that are more religious and those who more often attended religious service also tended to be happier and more satisfied than others. The other selected variables from the second paper of the series were discussed in the previous sections of this third paper. Individuals tend to be happier if they consider they have more personal freedom and more self-determination. The self-evaluated financial situation was positively correlated with happiness and satisfaction with life. Political positioning showed a negative association with satisfaction. Individuals that trust others tend to be happier.

This third paper discussed some other variables, some were related to the above-mentioned and some represented a totally different dimension, such as town population and state of residence. In the econometric models I include dummies for both groups of variables. For the first, they are the following four dummies for the population of the individual's town (1 – Yes, 0 – No): from 20000 to 50000, from 50000 to 100000, from 100000 to 500000, and 500000 and above. The category less than 20000 inhabitants is the reference. For state of residence, the five dummies indicate if the individual lived in a particular region (1 – Yes, 0 – No): the North/Northeast regions, the Central-West region, MG/ES states, RJ state or the South region. The state of SP is the reference.

The descriptive statistics showed some statistically significant differences for population size and region of residence. By including this variable in the econometric model, we might apprehend if differences are also observed in a controlled analysis.

Eight dummies are also included for job type (1–Yes, 0-No): employer/manager, professional worker, non-manual office worker, foreman or skilled manual worker, semi-skilled manual worker, unskilled manual worker, agricultural worker, and others. The reference is never had a job.

The next group of variables included in the models is the one related to the sense of belonging. As already discussed, PCA suggested that some of the variables could be grouped, and a variable named sense of citizenship/membership was created, which is treated in the models as continuous. For the variable I see myself as autonomous, which is categorical with three classifications, two dummies were created for the answers strongly disagree (1 – Yes, 0- No) and disagree (1 – Yes, 0- No). The category agree/strongly agree is the reference. Similarly, two other dummies are included for the variable national pride: very proud (1 – Yes, 0- No) and quite proud (1 – Yes, 0- No), with not very proud/not at all proud as reference. Therefore, I ended with three types of variables for sense of belonging: sense of citizenship/membership, sense of being autonomous and national pride.

Other group of variables discussed previously is associated with tolerance. The model includes three dummies for this groups: one for do not want other ethnic group/individuals with aids/immigrant workers as neighbors; another for do not want homosexuals as neighbors; and a third for do not want heavy drinkers/drug addicted as neighbors (1 – Yes, 0- No).

The models also include two continuous variables related to actions that are justified or not to be done, which were named liberalism and benefits. Given the results of the descriptive section, further analysis concerning correlations and due to preliminary econometric analysis, the other variables of the group were not included in the econometric models. Hence, the variables if it was justified for a man to beat his wife, or to someone to commit suicide, accept a bribe, or get an abortion were excluded from the models.

All the other variables discussed in this paper have stronger associations with the variables presented in the previous ones. For instance, the effects of number of children on happiness might depend, among other variables, on the individual´s marital status, sex or age. Therefore, initially, these variables should be analyzed jointly and with interactions. The models include three dummies indicating the number of children (1 – Yes, 0- No): for one child, two, and three and more. The reference is no child. The descriptive analysis showed little or non-significant differences for well-being levels for different categories of number of children when they were classified by sex and age. Hence, no interactions between these variables and number of children were included in the econometric models. The results in preliminary econometric models for interactions between marital status and number of children were poor, and they were dropped from the models.

General trust was discussed previously. This paper presented four different questions about the topic. For people you know personally there are two dummies in the models for trust completely (1 – Yes, 0 – No) and trust a little (1 – Yes, 0 – No), with do not trust very much/not at all as reference. As described, the other three variables were grouped and a variable, named thin trust, which is treated as a continuous one, was included in the models.

Previous analysis included the variables freedom, hard work and political positioning. This third paper of the series discussed five variables associated with these three that are included in the models as continuous ones: income equality, private vs. state ownership of business, government responsibility, competition is good or harmful, and personal fate. Although these variables are theoretically correlated, they do not show strong parametric or non-parametric correlations between them, and hence were not grouped.

Finally, the variable savings, which is associated with financial situation, enters the models as a continuous variable.

12. ECONOMETRIC MODELS

This section presents the results for the econometric models. Similarly as before, there are two types of models: the first an ordered logistic model for the happiness variable, and the second an OLS model for the satisfaction variable.

The results are discussed in two tables. In table 15, I present six models with different sets of explanatory variables presented in this third paper of the series, all with the variable happiness as the dependent one. The objective is to observe different groups of variables in a slightly controlled analysis before including all of them in a more complete one, which is model 6.

Table 16 also shows the results for six different models, the first three have the variable happiness as the dependent one. Model 7 has as explanatory variables those discussed in the first paper of the series. The next model also includes some selected variables of the second paper, while model 9 incorporates as well the variables of this third paper. The objective while discussing these three models is to build a more complete model, observing the robustness of the results. Model 10 has the same set of explanatory variables as model 9, but the dependent variable is satisfaction with life. The objective while presenting these two last models is, besides giving an overview of the determinants of both happiness and satisfaction, to compare them in order to apprehend possible differences in evaluative perspectives for thee well-being indicators. In addition, some variables were dropped from these last two models and ones that are more parsimonious were obtained, models 11 and 12. The main objective to attain these more parsimonious models is that they will be the basis for the discussion of the fifth paper of the series.

Model 1 includes 17 dummies for town size population, region of residence and job types. Table 1 showed that individuals who lived in towns with population between 50 and 100 thousand were happier. This model corroborates this finding in a lightly controlled analysis. Individuals who lived in towns in this population category tended to be happier than those living in small towns, which is the reference. The other dummies for population size did not show a significant coefficient. Table 2 showed that individuals who lived in MG/ES states or in the North/Northeast regions tended to be happier. Model 1 showed that individuals who lived in one of those two regions or also in RJ state were happier than those who lived in SP state, which was the reference. The coefficients for the Central-West and South regions dummies were not significant. Table 3 presented the results for job types with non-significant differences between them. Differently, the econometric model showed some significant differences. The reference is the group with individuals who never had a job. Non-manual workers and skilled manual workers were happier than the reference group, and the other coefficients were non-significant.

Model 2 included the variables for sense of belonging and tolerance. Individuals who considered they were members of the world, Latin America, Brazil and/or the community tended to be happier. On the same vein, persons that regarded themselves as partially autonomous were unhappier than those who strongly disagree that they were autonomous. Brazilians that were very proud of their nationality were happier than those who were not proud. These results point to the same direction, corroborating the results in tables 4 and 5, with possibly a circular causation: individuals that fell they belong to a larger entity than the person tend to be happier; and/or happier individuals tend to consider

themselves part of a greater body than the self. The variables for tolerance did not show significant coefficients, as observed for happiness in table 6.

Model 3 includes the continuous variables for liberalism, benefits, and equality/government/fate. In the descriptive section, the first two showed a negative correlation with happiness in table 8 and the next five, presented weak or non-significant correlations with well-being in table 9. These same results are observed in model 3 for a slightly controlled analysis. Individuals that are more liberal and those that thought it was justified to obtain benefits from de government were unhappier.

The dummies for the number of children are included in model 4. As results might depend on marital status, as anticipated, the dummies for these last variables are also incorporated in the model. Table 10 in the descriptive section showed that the greatest differences for well-being were observed for married individuals, which tended to be happier, while differences for the number of children were mostly non-significant. The results of model 4 corroborate the differences for marital status, as in previous papers. For the number of children, individuals with no child tended to be happier than those who had children, at least when marital status is also included in the models.

Model 5 corroborates the findings presented descriptively in tables 13 and 14. Happiness is more associated with trust on friends/acquaintances than with thin or general trust. Moreover, the variable subjectively evaluated financial situation was positively related to happiness, while savings shows a non-significant coefficient.

Model 6 incorporates all variables discussed in models 1 to 5. Some results observed in these models did not change much in this more complete one. For sense of belonging, tolerance, equality/government/fate, trust and financial/savings, the conclusions are approximately the same.

For population size, model 1 showed non-significant coefficient for large cities, while model 6 showed a positive one. That is, in a slightly controlled analysis in model 1, large cities inhabitants were equally happy as individuals who lived in small villages. Model 6, which controls for many variables, showed that the former were happier. Might this result be associated with smaller levels of sense of belonging and trust in larger urban areas?

Similarly, the positive coefficients observed for the North/Northeast regions and MG/ES states in model 1 were not observed in model 6, which shows non-significant coefficients for both dummies. One possible question to be answered is the following: are individuals in these regions happier due to their higher levels of sense of belonging/trust? For job types, a similar tendency was observed for non-manual and skilled manual workers, which showed positive coefficients in model 1 and non-significant in model 6.

Model 3 showed that more liberal individuals an those that thought it was justified to pursue benefits from the government were unhappier, what was not observed in model 6. Maybe differences in sense of belonging/trust might also explain these differences. The comparison between models 4 and 6 showed one difference, which was for marital status. The dummy for separated/divorced was negative in model 4 and was non-significant in model 6. Different aspects might explain this difference, but all need further analysis. Maybe, this category of marital status has a smaller sense of belonging or trust than others have and/or is overrepresented in some areas. Finally, while in model 4

individuals with children were unhappier that those who did not have children, model 6 indicates that only individuals with three of more children were unhappier than others. This might have happened because financial situation is being controlled in model 6 and not in model 4.

TABLE 15
Econometric models for happiness

Population	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
< 20	Ref.					Ref.
20 to 50	0.189					0.374
50 to 100	0.480**					0.606**
100 to 500	-0.020					0.0785
> 500	0.186					0.379*
Region						
SP	Ref.					Ref.
North/Northeast	0.370**					0.136
Central-West	0.193					0.163
MG/ES	0.453**					0.323
RJ	0.338*					0.414*
South	-0.048					-0.255
Job type						
Never had a job	Ref.					Ref.
Employer/Manager	0.196					-0.109
Professional	0.198					-0.214
Non-manual	0.390*					0.156
Skilled-manual	0.395**					0.235
Semi-skilled-manual	0.000					-0.160
Unskilled-manual	0.139					0.269
Agricultural	0.216					0.129
Others	0.493					0.479
Sense of belonging						
Sense of citizenship/membership		0.063**				0.064*
Autonomous						
Strongly disagree		Ref.				Ref.
Disagree		-0.217*				-0.174
Agree		-0.945**				-1.09**
National pride						
Not very proud		Ref.				Ref.
Quite proud		0.208				0.162
Very proud		0.674*				0.644**
Tolerance						
Ethnic/aids/immigrants		0.067				0.068
Drinkers/drug		-0.002				-0.080
Homosexuals		0.043				0.131
Specific actions						
Liberalism			-0.022**			-0.011
Benefits			-0.014*			-0.001
Equality/Government/Fate						
Equality			0.024			0.022
Private/Government			0.003			-0.011

People/Government			-0.022			-0.031
Competition			-0.018			0.001
Personal Fate			-0.017			-0.038
Marital Status						
Married				Ref.		Ref.
Living together				-0.556**		-0.478**
Separated/Divorced				-0.401**		-0.007
Widow/Widower				-0.355		-0.463
Single				-0.487**		-0.517**
Number of children						
Zero				Ref.		Ref.
One				-0.299*		-0.128
Two				-0.167		-0.090
Three or more				-0.444**		-0.414**
Trust						
Friends/Acquaintances					0.377**	0.346**
Thin					-0.026	-0.016
General					0.117	0.089
Financial/Savings						
Savings					0.058	0.016
Financial					0.118**	0.120**
Cut 1	-1.76	-1.61	-2.93	-2.78	-0.75	-0.84
Cut 2	1.20	1.43	0.04	0.17	2.26	2.43
Log likelihood	-1282	-1270	-1208	-1350	-1143	-891

Source: WVS, 2006
Note: * $p < 0.10$, **$p < 0.05$.

Table 16 presents six other models, the first three have the variable happiness as the dependent one. Model 7 includes the variables discussed in the first paper of the series, with similar results. The coefficients for sex, ethnic group and age were non-significant. Married individual and those with better health were happier. The unemployed were unhappier than retired individuals and full time workers. Only two coefficients for income were significant, those for the fifth and last groups. One coefficient for education was significant, the negative one for the high school dummy.

These results were also observed in model 8, with one exception, which was the non-significant coefficient for retired. This same model showed that individuals that thought the family was important, that had a better subjectively evaluation of their financial situation, that considered they had more self-determination and that were more religious were happier. The coefficient for general trust was not significant and that for hard work was negative, what was not observed in the second paper of this series, which discussed models with data for all three waves of the WVS. The previous papers extensively discussed these two models.

Model 9 includes the variables discussed in the previous papers and those from this paper. The results for this model when compared with model 8 indicate one greater change, which was that males were unhappier. Some aspects discussed in this paper might justify this difference between males and

females. Another difference while comparing the models was the positive coefficient for students. Why are they equally happy in model 8 and happier after controlling for the variables in model 9?

Comparing models 6 and 9, the dummy for the South region became negative, and the dummy for three or more children became non-significant. Some questions arise from these findings. Are South region dwellers different from others in Brazil in some aspects? Do they trust others more? Alternatively, are they over represented among the married? Why are individuals with three or more children unhappier? Maybe is their worst financial situation or health?

The next comparison is between models 9 and 10 have the same explanatory variables, but the first has as dependent variable happiness, while the other has satisfaction. As the first model is an ordered logistic and the second is an OLS, comparisons should be made with precautions. Some results are approximately similar. Individuals with better health, employed, with a better financial situation, with more self-determination, more religious, that considered themselves less autonomous and with more national pride were happier and more satisfied with life. Age, the number of children, general and thin trust, and savings were not associated with happiness or satisfaction, as coefficients were not significant.

However, some general differences were observed, while comparing happiness and satisfaction. The next three paragraphs discuss, respectively the variables presented in the first, second and third paper of the series.

Males were unhappier, but not less satisfied than females. Whites are equally happier than non-whites are, but less satisfied with life. Why are these differences observed? Do men trust friends/acquaintances more than women do? Employers/managers are mostly white. In addition, married individuals tend to be happier, but not more satisfied. If happiness can be considered a more long-term analysis than satisfaction, this point might suggest small differences between this group of individuals and others with different marital status for everyday life evaluation and larger differences for life fulfillment. Income is weakly related to happiness or satisfaction, but slightly more with the first, what might suggest that higher income individuals may have a higher everyday working burden, as emphasized by Kahneman et al (2006), and a higher level for long-term life evaluation. On the other hand, education seems to be more related to satisfaction than to happiness. Brazilians with very low standards of formal education tend to answer they are totally satisfied with their life, what might indicate, among other possibilities, a low level of evaluative power and/or lower benchmarks for satisfaction evaluation.

Other aspect that might be related to the different evaluative perspectives between happiness and satisfaction are the differences observed for the family coefficient. The results suggest that individuals that gave larger importance to the family were happier, but not more satisfied. Political positioning was negatively correlated with satisfaction and unrelated with happiness. Probably because less satisfied individuals tend to be more left wing.

Town size and region of residence are not associated with satisfaction, but individuals in municipalities with population between 50 and 100 thousand tend to be happier, and inhabitants in the South region tend to be unhappier. One job type, employer/manager, showed a positive coefficient for satisfaction, indicating a different life dynamics that do not implicate in greater happiness. Tolerance

with homosexuals was positively associate with satisfaction, but not with happiness, suggesting an increase in overall everyday life satisfaction without greater long-term increase in well-being. The contrary was observed for thrust on people you know.

These results indicate different evaluative perspectives for happiness and satisfaction. Models 11 and 12 also compare these two dependent variables, but with a more parsimonious set of explanatory variables. The variables discussed in the first paper of the series were maintained, as they are the core model for the determinants of well-being. The variables discussed in the second paper that did not show statistical significance were dropped from the model, such as general trust, hard work and temple frequency. Some other variables presented in this paper were also dropped, such as some types of tolerance, the variables related to liberalism, benefits, government, thin trust and savings. The results for the remaining variables did not change significantly when comparing model 11 with model 9, and model 12 with model 10. This more parsimonious set of explanatory variables will be the basis for further analysis, discussed in the last paper of the series, which may try to answer some of the questions presented above.

TABLE 16
Econometric models for happiness and satisfaction

Variables	Dependent variable					
	Happiness	Happiness	Happiness	Satisfaction	Happiness	Satisfaction
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Male	-0.115	-0.084	-0.292*	0.048	-0.270*	-0.011
White	-0.113	-0.074	0.098	-0.252*	-0.081	-0.173
Age	-0.006	-0.005	-0.006	-0.0062	-0.007	-0.005
Married	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Cohabitation	-0.586**	-0.442**	-0.405*	-0.041	-0.475**	-0.233
Separated/Divorced	-0.327	-0.275	-0.119	-0.149	-0.154	-0.146
Widowed	-0.243	-0.187	-0.237	-0.195	-0.158	-0.237
Single/Never married	-0.620**	-0.468**	-0.465*	0.011	-0.459*	-0.141
Poor and fair health	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Good health	0.643**	0.468**	0.554**	0.058	0.531**	-0.060
Very good health	1.70**	1.47**	1.54**	0.668**	1.56**	0.596**
Unemployed	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Students	0.362	0.268	0.916**	0.278	0.703*	0.380
Housewife	0.133	-0.002	0.209	0.562**	0.325	0.454*
Retired	0.528**	0.358	0.616*	0.407	0.631*	0.305
Self-employed	0.225	0.095	0.387	0.246	0.359	0.256
Part time	0.396	0.277	0.632	0.526	0.606	0.364
Full time	0.591**	0.504**	0.888**	0.240	0.813**	0.400
Income 1	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Income 2	0.115	0.270	0.145	0.090	0.361	0.225
Income 3	-0.033	0.010	0.137	0.080	0.254	0.088
Income 4	-0.048	-0.036	-0.220	-0.323	-0.039	-0.276
Income 5	0.537**	0.599**	0.559*	0.070	0.752**	0.004
Income 6	0.155	0.173	-0.060	-0.0168	0.091	-0.056

Income 7	0.208	0.223	0.292	-0.028	0.244	0.044
Income 8	0.576**	0.502*	0.467	0.339	0.488	0.400
Less than elementary school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Elementary school	0.242	0.199	0.279	-0.417**	0.295	-0.404**
Less than high school	0.244	0.173	0.290	-0.259	0.228	-0.313
High school	-0.304*	-0.366**	-0.319	-0.560**	-0.408*	-0.610**
Some university level	-0.063	-0.161	-0.138	-0.133	-0.256	-0.291
University degree	-0.152	-0.187	0.021	-0.303	-0.015	-0.482*
Family		0.655**	0.680**	0.153	0.576**	0.272
Trust		0.016	-0.132	-0.110	-	-
Finance		0.081**	0.089**	0.182**	0.098**	0.162**
Freedom		0.118**	0.109**	0.159**	0.112**	0.166**
Hard work		-0.038**	-0.032	0.019	-	-
Religiosity		0.220**	0.210**	0.234**	0.262**	0.208**
Less than once a month		Ref.	Ref.	Ref.	-	-
Once a month		0.048	0.066	0.225	-	-
Once a week		-0.008	-0.080	0.081	-	-
More than once a week		0.144	0.374	0.199	-	-
Political position		0.002	-0.002	-0.051*	0.015	-0.052**
Population						
< 20			Ref.	Ref.	Ref.	Ref.
20 to 50			0.348	0.257	0.272	0.365*
50 to 100			0.729*	0.157	0.747**	0.156
100 to 500			0.190	-0.160	0.177	-0.014
> 500			0.405	0.080	0.458**	0.191
Region						
SP			Ref.	Ref.	Ref.	Ref
North/Northeast			0.102	0.060	0.152	0.134
Central-West			-0.276	-0.284	-0.126	-0.127
MG/ES			0.223	-0.172	0.256	-0.007
RJ			0.352	0.105	0.195	0.174
South			-0.440*	-0.144	-0.259	-0.210
Job type						
Never had a job			Ref.	Ref.	Ref.	Ref.
Employer/Manager			0.089	0.871**	0.380	0.785**
Professional			-0.152	0.238	0.074	0.304
Non-manual			0.234	0.393	0.364	0.260
Skilled-manual			0.230	0.239	0.370	0.169
Semi-skilled-manual			0.002	0.249	0.134	0.294
Unskilled-manual			0.451	0.113	0.547**	0.122
Agricultural			0.142	0.005	0.335	0.051
Others			0.852*	0.364	0.905**	0.405
Sense of belonging						
Sense of citizenship/membership			0.067	0.019	0.047	0.033
Autonomous						
Strongly disagree			Ref.	Ref.	Ref.	Ref.
Disagree			-0.212	-0.153	-0.159	-0.161
Agree			-0.874**	-0.855**	-0.630**	-0.792**
National pride						

Not very proud			Ref.	Ref.	Ref.	Ref.
Quite proud			0.249	0.120	0.313	0.177
Very proud			0.599**	0.408**	0.740**	0.525**
Tolerance						
Ethnic/aids/immigrants			0.299	-0.063	-	-
Drinkers/drug			-0.136	-0.115	-	-
Homosexuals			-0.018	0.308*	0.130	0.270*
Specific actions						
Liberalism			-0.010	-0.001	-	-
Benefits			0.015	-0.007	-	-
Equality/Government/Fate						
Equality			0.015	0.009	-	-
Private/Government			-0.001	0.037*	-	-
People/Government			-0.015	0.001	-	-
Competition			-0.014	-0.019	-	-
Personal fate			-0.023	0.018	-	-
Number of children						
Zero			Ref.	Ref.	Ref.	Ref.
One			0.010	0.150	-0.197	0.039
Two			0.353	0.346	0.177	0.149
Three or more			0.169	0.340	0.011	0.144
Trust/Savings						
Trust-Friends/Acquaintances			0.261**	0.153	0.273**	0.152*
Trust-Thin			-0.044	-0.032	-	-
Savings			-0.002	-0.041	-	-
Cut 1/Constant	-1.97	-0.18	1.49	4.79**	2.06	4.71
Cut 2	1.27	3.20	5.23	-	5.73	-
Log likelihood/Adj R-squared	-1175	-1015	-703	0.193	-804	0.196

Source: WVS, 2006
Note: * p < 0.10, **p < 0.05.

13. CONCLUSIONS

Happiness is nowadays a quite popular field of inquire among economists and social scientist. This paper is the third of a series that discusses the determinants of happiness in Brazil using as database the World Values Survey (WVS) of 1991, 1997 and 2006. It complements the first two discussions presented in the papers "An introduction to the determinants of happiness in Brazil" and "The influence of attitudes and beliefs on the determinants of happiness in Brazil." These first two papers analyzed variables in these three different waves of the WVS. However, some variables were not available for all of them and were present in the most recent one. This third paper of the series incorporated all the variables previously discussed and this new set of variables.

First, this paper presented some descriptive statistics of some variables that might influence the levels of happiness and satisfaction, but were not discussed before. These variables were associated with town size, regions of residence, job type, sense of belonging, tolerance, specific

actions, number of children individuals had, opinions about equality, government, and personal fate, trust in more specific ways, and savings.

Then the paper discussed the determinants of happiness and satisfaction with life with the use of econometric models. Given that the data for happiness is categorical with a clear ordered structure, I applied ordered logistic models. For satisfaction, given the high number of categories and low expected probabilities for negative numbers, I assumed that the variable could be considered as a continuous one and used an OLS model. The main general results for happiness are detailed below.

Individuals who considered they were members of the world, Latin America, Brazil and/or the community tended to be happier. On the same vein, persons that regarded themselves as partially autonomous were unhappier than those who strongly disagree that they were autonomous. Brazilians that were very proud of their nationality were happier than those who were not proud. As observed previously, married individuals tended to be happier, however, individuals with no child tended to be happier than those with children were, at least when marital status is also included in the models. Happiness is more associated with trust on friends/acquaintances than with thin or general trust. Moreover, the variable subjectively evaluated financial situation was positively related to happiness, while savings shows a non-significant coefficient

Then, two models with the same set of explanatory variables, but that differed in the dependent variable, the first had as dependent variable happiness, while the other had satisfaction, were compared. Some general differences were observed, suggesting different perspectives while evaluating these well-being indictors. Possibly, to evaluate happiness can be considered a more long-term analysis than the evaluation of satisfaction. For instance, married individuals tend to be happier, but not more satisfied with life, what might suggest small differences in everyday life evaluation and large differences in life fulfillment, when compared with other marital status. Income is weakly related to happiness or satisfaction, but slightly more with the first, what might suggest that, although happier, higher income individuals may have a higher everyday working burden. Family might be important to determine happiness, but not satisfaction, what might also be related to this distinct temporal span of analysis.

The three first papers of the series are the bases for the presentations of the last two papers of the series. The forth paper is mostly based on the findings of the first two and presents the dynamics of happiness, satisfaction and some selected explanatory variables using an Age-Period-Cohort (APC) approach. The last paper of the series expands the conclusions of this third paper, with further analysis regarding the explanatory variables and profiles of blissful and miserable individuals.

The insights associated with the determinants of happiness, presented in the two previous papers of the series, in this third paper, and in the next two ones make it possible to develop new visions of lifestyle, well-being and social policies, enhancing what might be considered a very narrow perspective of reality generally discussed in economy.

The fourth paper of the series, "The determinants of happiness and satisfaction in Brazil through the lenses of the APC approach", has as its main objective to analyze the dynamics of happiness and satisfaction with life using an Age-Period-Cohort (APC) approach. The last paper of the

series discusses specifically the most miserable and the most blissful in Brazil in 2006 and is entitled "The most miserable and the most blissful individuals in Brazil."

REFERENCES

Aassve, A., Goisis, A. and Sironi, M. (2012) Happiness and Childbearing across Europe. Social Indicators Research 108: 65-86.

Blanchflower, D. and Oswald, A. (2004) Well-being over time in Britain and the USA. Journal of Public Economics 88.

Corbi, R. e Menezes-Filho, N. (2006) Os determinantes da felicidade no Brasil. Revista de Economia Política 26 (4).

Dolan, P., Peasgood, T. and White, M. (2008) Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. Journal of Economic Psychology 29: 94-122.

Frey, B. (2008) Happiness – A revolution in Economics. CES, The MIT press, Cambridge, USA.

Gandelman, N., Piani, G. and Ferre, Z. (2012) Neighborhood determinants of quality of life. Journal of Happiness Studies 13: 547-563.

Graham, C.and Felton, A. (2006) Inequality and Happiness: Insights from Latin America. Journal of Economic Inequality (4): 107 -122.

Inglehart, R., Foa, R., Peterson, C. and Welzel, C. (2008) Development, freedom, and rising happiness – A global perspective (1981-2007). Perspective on Psychological Science 3 (4): 264 – 285.

Kahneman, D. and Krueger, A. (2006) Developments in the measurement of subjective well-being. Journal of Economic Pespective 20 (1).

Kahneman, D., Krueger, A., Schkade, D., Schwarz, N. and Stone, A. (2006) Would you be happier if you were richer? A focusing illusion. Science 312, 1908.

Kohler, H. Behrman, J., and Skytthe, A. (2005) Partner + Children = happiness? The effects of partnership and fertility on well-being. Population and development review 31 (3): 407-445.

Layard, R. (2005) Happiness – Lessons from a New Science. Penguin Books, NY, USA.

Margolis, R. and Myrskyla, M. (2011) A global perspective on happiness and fertility. Populatin and Development Review 37 (1): 29-56

Peiró, A. (2007) Happiness, satisfaction and socioeconomic conditions: some international evidence. In: Bruni and Perta (ed.) Handbook on the Economics of Happiness, Edward Elgar Publishing Limited, Cheltenham/UK.

Putnam, R. (2000) Bowling alone. Simon & Schuster paperbacks: New York.

Slutzer, A. and Frey, B. (2006) Does marriage make people happy, or do happy people get married? Journal of Socio-economics 35: 326-347.

Yang Y. (2008) Social Inequalities in Happiness in the United States, 1972 to 2004: na age-period-cohort analysis. American Sociological Review 73.