Identifying Socio-Economic Characteristics Affecting Happiness in Armenia, Azerbaijan, and Georgia

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To identify the household socio-economic characteristics influencing happiness in Armenia, Azerbaijan and Georgia, a logistic regression model was estimated for each country using the data from the Caucasus Barometer survey conducted by the regional offices of the Caucasus Research Resource Centers in 2013. The results of estimation show that health status, marital status, religion, and personal debt were statistically significant determinants of happiness in Armenia, Azerbaijan, and Georgia. Income was a significant determinant of happiness in Azerbaijan and Georgia. Age and household size variables were statistically significantly impacting happiness in Armenia. Believing in the presence of democracy in the country and education were found to be statistically significant determinants of happiness in Azerbaijan.

Introduction

One of the most commonly shared goals in the world is probably the pursuit of happiness. Everyone tries to maximize happiness or subjective well-being throughout their lifetime. Thus, identifying the sources of people's well-being is a concern of great importance in the social sciences. Reaching higher standards of living and ensuring the social well-being of citizens is one of the most important responsibilities of the government. Previous research has shown that people, who have a higher level of social well-being, perform better. As such, by maximizing the social well-being, the government promotes social, economic, political, and cultural development of the country (Frey & Stutzer, 2002).

For decades, economic growth has been considered as one of the most comprehensive measures of social well-being. Although widely accepted as a measure of well-being, this approach has been rejected by a number of scholars. Particularly, recent studies tend to insist that at a certain level economic growth stops explaining social well-being; hence it cannot be accepted as a necessary and sufficient measure. Abramovitz (1959)concluded that "we must be highly skeptical of the view that long term changes in the rate of growth of welfare can be gauged even roughly from changes in the rate of growth of output" (p. 3). In his essay, Abramovitz (1959) distinguished two concepts of social well-being: social welfare or welfare at large and a narrower concept of economic welfare to be measured by national product. He suggested analyzing happiness taking these two concepts together as a more comprehensive measure of standard of living. Even with this comprehensive indicator as a better measure of social well-being in place, it is still hard to give a precise definition of happiness. In fact, defining happiness has been a question for mankind for thousands of years.

Defining Happiness

Since ancient times, great minds have tried to give a definition of the concept of happiness. Plato observed that "Happiness is living well". St. Augustine defined happiness as satisfaction of all desires throughout one's lifetime, given that nothing amiss is desired. For Kant, happiness

was the "end all men sought in life" (Unknown Source, 2014).Langford and Bentham (1996) defined happiness as "the sum of pleasures and pains". Subjective well-being is defined as satisfaction from life, dominance of positive toward negative. Considering all these definitions, the term "happiness", in this paper, shows the degree at which a society is satisfied with particular elements of life (e.g. satisfaction with living and economic conditions). It is worth mentioning that, in the present study, like in many other research articles on happiness, the concepts "happiness", "subjective well-being", and "life satisfaction" are used interchangeably.

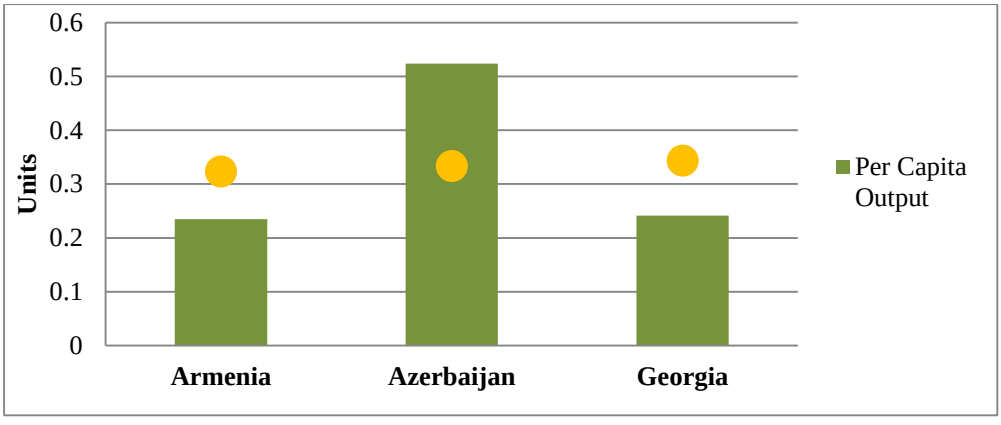
The Economics of Happiness

The economics of happiness is considered a comparably new yet a quickly developing branch of economics. The stream of research on economics of happiness started from Easterlin, who, in 1974, questioned one of the fundamental assumptions of neoclassical theory stating that the subjective well-being of the society is maximized by increased income (Easterlin, 1974). In his paper, Easterlin showed that the absolute value of income increased happiness. However, this statement was consistent only for comparisons within country. In cross-country comparisons, Easterlin revealed that happiness could merely be measured by per capita output (Easterlin, 1974). Since 1974, this topic has been largely discussed by a number of researchers. In fact, by the year 2000, more than 4,350 articles had been published on economics of happiness (Veenhoven, 2007). In addition, the study enters new stages of development and analyzes wider range of variables affecting the happiness of society.

Currently, as it is a rapidly progressing field of research, to the best of our knowledge, happiness has not been empirically analyzed in the countries of the South Caucasus (Armenia, Azerbaijan, and Georgia).However, the findings from the research on happiness may shed light on the factors affecting the well-being of the South Caucasus countries and will give an opportunity for policy makers to develop policies targeting an increase in happiness.

According to the Caucasus Barometer (CB) survey results, conducted by the Caucasus Research Resource Centers (CRRC)in 2013, the average happiness scores for Armenia, Azerbaijan, and Georgia were 6.4, 6.6, and 6.8,respectively. At the same time, following the neoclassical assumption that only income affects well-being, it needs to be pointed out that in 2013 the per capita Gross Domestic Product (GDP) of Azerbaijan (7,812 USD) was more than that of Armenia (3,505 USD) and Georgia (3,602 USD) (World Bank, 2014). These numbers, once again, highlight Easterlin paradox stating that income alone cannot fully describe happiness. There is a set of other variables that can explain the difference in happiness across countries. Figure 1 illustrates the relationship of average happiness score and per capita GDP level for Armenia, Azerbaijan, and Georgia.

Figure 1. The Relationship between Happiness Score and per Capita GDP for Armenia, Azerbaijan and Georgia



Source**:** The World Bank, 2014

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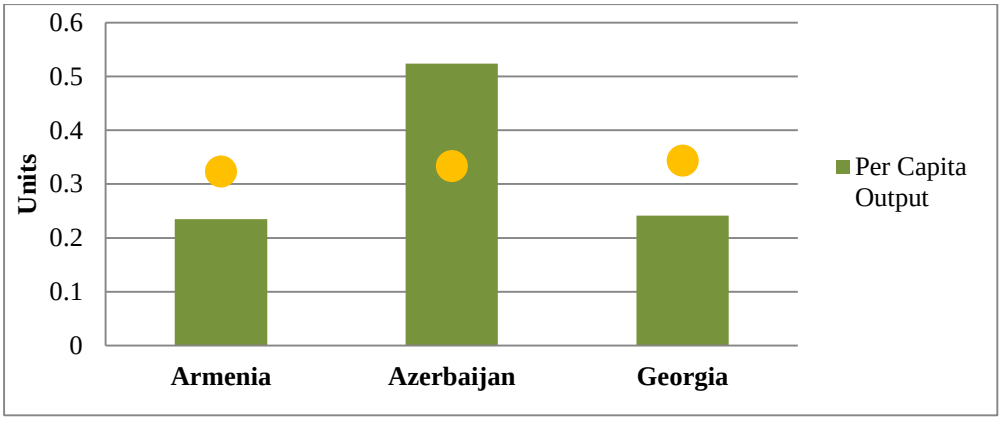

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older made people unhappy. In addition, whites reported to be happier than blacks.

As far as cross national comparisons, the results were ambiguous. The four lowest income countries were neither in the bottom nor in the top of the ranking of happiness. Nonetheless, a conclusion was drawn that within a country, income level plays a vital role in determining happiness, whereas in cross country comparisons the trend of happiness cannot be explained by national output (Easterlin, 1974).

Since 1974, a number of scholars have tried to explain this paradox named after Easterlin, thus advancing the development of the economics of happiness. A widely used explanation for the paradox was the concept of relative income playing the main role in determining happiness rather than the absolute value of income. An analogy with the example of height of a person was discussed, where an average American was taller than an average Indian. However, if one tried to ask them about their perception of their height, an equal distribution of answers would be observed. The reasonable explanation of this fact was that when answering the question about the height, each compared his/her height with the height of the society he/she lived in (Easterlin, 1974).

Diener, Suh, Lucas, and Smith (1999) tried to investigate the influence of age, health, education, income, religion, marital status, job morale, gender, and the intelligence of respondents on happiness using the "top down" approach developed previously by Diener (1984). This approach was opposite in design to the "bottom-up" approach suggesting that if basic needs are met the person is happy. The "top down" approach incorporates a set of socio-economic variables to explain the happiness, whereas the "bottom up" approach was taking only basic demographic variables. The results of the assessment showed that only marital status, religion, and optimism were statistically significantly affecting happiness, whereas other variables such as gender, age, and self-esteem were highly dependent on culture and did not appear to be statistically significant determinants of happiness (Diener et al., 1999).

Frey and Stutzer (2002) attempted to identify factors affecting the happiness. Using Euro barometer Survey data, the study aimed to identify the determinants of happiness using a weighted ordered log it

method. The first group of socio-economic variables included age, gender, marital status, nationality, education, and health. The second group of economic factors included unemployment, income, and inflation. The third group of institutional factors included democracy level in the country and government decentralization. The results of the research revealed that age had a U-shaped effect on happiness, meaning that young and old people reported to be happier than middle-aged people. Women were found to be happier than men, couples were happier than single, divorced and widowed people. Foreigners were found to be less happy than the natives. Bad health conditions statistically significantly decreased happiness.

Regarding economic factors, three major factors were identified: unemployment statistically significantly decreased happiness, income was positively correlated with happiness within the country whereas the cross country comparisons faced the Easterlin Paradox and, finally, analyzing time-series data, inflation statistically significantly decreased happiness. The study found that democracy had a statistically significant positive impact on happiness.

Happiness was also analyzed by Di Tella and MacCullock (2007). In their paper, they argued for the effectiveness of a classical approach of measuring the subjective well-being relying on income level, and suggested considering a more comprehensive indicator of happiness. They proposed a set of socio-economic determinants affecting the well-being of society besides income. The main focus of their paper was identifying the coefficient of correlation between inflation and unemployment. This would give an opportunity to predict the effects of fluctuations in those variables on the subjective well-being and offer proper policy recommendations for central banks. However, along with inflation and unemployment the estimated model contained variables describing personal characteristics such as employment status, income position, marital status, education, gender, age and age squared, as well as fixed effects of country and year. Their analysis was conducted employing Euro barometer Survey data and using an ordered profit regression model. The authors concluded that income, being a single measure of subjective well-being, was misleading and showed that it was highly correlated with inflation and unemployment, whereas if

happiness was estimated, the results might be more representative and robust. As well, the research of happiness could identify the channels through which the macroeconomic fluctuations affect happiness (such as income level, social status etc.).Thus, policies may be designed in a more directed manner (Di Tella & MacCullock, 2007).

Stevenson and Wolfers (2008) tried to reassess the Easterlin paradox and show that the absolute value of income statistically significantly affected human happiness. However, except the absolute value of income, the authors proposed that there was a set of socio-economic variables affecting happiness. To that end, they controlled for the effects of age and age squared, gender, democracy, national laws, health, marital status, favorable weather conditions, increased savings, reduced leisure, materialist values etc. The model was estimated using an ordinal logit technique and Euro barometer Survey data. The results of the estimation showed that income was not only significant but also robust across countries, within countries, and over time. All the comparisons between poor and rich within a country, across countries and over time yielded the same result proving that absolute value of income does affect the happiness and subjective well-being of the society. Also, their research showed that health and marriage boosted happiness.

Johns and Ormerod (2007) tried to reveal a set of socio-economic variables that statistically significantly affected happiness. To accomplish that, they suggested incorporating increased leisure time, crime, infant mortality, longevity, unemployment, inequalities between sexes, and public spending into the model. They also considered variables suggested by literature, which included stable family life, marital status, income, health, religious faith, living in cohesive community where people can be trusted, and good governance. The research was conducted using correlation analysis. The results of the study identified that there were no significant correlations between happiness and income, income inequality, unemployment, or equality between sexes. A positive correlation was found between happiness and life expectancy, and with both the violent crime rate and property crime rates.

The present study is similar to some of the foregoing studies in that it aims to empirically identify a set of socio-economic variables affecting

happiness. However, unlike the foregoing studies, the present study conducts the happiness analysis for the South Caucasus countries, Armenia, Azerbaijan, and Georgia, augmenting the models used before by incorporating additional socio-economic variables.

Empirical Specification

To identify the socio-economic variables influencing the state of happiness, a logistic regression model was estimated, where the binary dependent variable, which indicates whether the respondent is happy (=1) or not (=0), is modeled as a function of a set of socio-economic characteristics (variables). The empirical specification of the logistic regression model estimated in this study is as follows:

$$log\ (\frac{happy_{ij}}{1-happy_{ij}})=\beta_0+$$
$$\beta_1 capital_{ij}+\beta_2 urban_{ij}+\beta_3 female_{ij}+\beta_4 health\_fair_{ij}+\beta_5 health\_good_{ij}+\beta_6 debtpers\_yes_{ij}+\beta_7 democ\_yes_{ij}+\beta_8 atleast\_higheredu_{ij}+\beta_9 secondry\_technicaledu_{ij}+\beta_{10} resempl\_yes_{ij}+\beta_{11} married_{ij}+\beta_{12} div\_sep\_wid_{ij}+\beta_{13} monytot\_0\_250_{ij}+\beta_{14} rlgious\_yes_{ij}+\beta_{15} respage_{ij}+\beta_{16} hhsize_{ij}+u_{ij}$$

where, $log(\frac{happy_{ij}}{1-happy_{ij}})$ is the natural logarithm of odds ratio of happiness of thei-th respondent from country j (j=1 for Armenia, j=2 for Azerbaijan, and j=3 for Georgia),

$capital_{ij}$ is dummy variable for settlement type taking on 1 for capital and 0 otherwise for thei-th respondent from country j,

$urban_{ij}$ is dummy variable for settlement type taking on 1 for urban areas and 0 otherwise for thei-th respondent from country j,

$female_{ij}$is dummy variable for gender taking on 1 for female and 0 otherwise for thei-th respondent from country j,

$health_fair_{ij}$is dummy variable for health condition taking on 1 for fair health condition and 0 otherwise for thei-th respondent from country j,

$health\_good_{ij}$ is dummy variable for health condition taking on 1 for good health condition and 0 otherwise for thei-th respondent from country j,

$debtpers\_yes_{ij}$ is dummy variable of personal debt taking on 1 if the respondent has a personal debt and 0 otherwise for thei-th respondent from country j,

$democ\_yes_{ij}$ is dummy variable for democracy taking on 1 if the respondent believes that his/her country is democratic and 0 otherwise for thei-th respondent from country j,

at least_$higheredu_{ij}$is dummy variable for education taking on 1 if the respondent has at least higher education and 0 otherwise for thei-th respondent from country j,

secondry_$technicaledu_{ij}$is dummy variable for education taking on 1 if the respondent has secondary technical education and 0 otherwise for thei-th respondent from country j,

resempl_$yes_{ij}$is dummy variable for employment taking on 1 if the respondent is employed and 0 otherwise for thei-th respondent from country j,

$married_{ij}$is dummy variable for marital status taking on 1 if the respondent is married and 0 otherwise for thei-th respondent from country j,

div_sep_$wid_{ij}$is dummy variable for marital status taking on 1 if the respondent is divorced or separated or widowed and 0 otherwise for thei-th respondent from country j,

monytot_$0_250_{ij}$is dummy variable for monthly household income taking on 1 if the respondent has monthly household income of 0-250USD and 0 otherwise for thei-th respondent from country j,

rlgious_$yes_{ij}$is dummy variable for religion taking on 1 if the respondent is religious and 0 otherwise for thei-th respondent from country j,

$respage_{ij}$is the age of thei-th respondent form country j,

$hhsize_{ij}$is the household size of thei-th respondent form country j,

$u_{ij}$is the random error term, and βs are the parameters to be estimated.

The model was estimated using the STATA 10 software package declaring survey design for the dataset with **svyset** syntax. The dependent variable, happiness, was evaluated using self-anchoring striving scheme developed by Cantril (1965). The respondents were asked to evaluate their happiness on a 10-point scale taking 1 as extremely unhappy and 10 as extremely happy. To incorporate this variable into model, the scores from one to 5 inclusive were grouped together as unhappy and the scores from 6 to 10 inclusive were grouped as happy.

All the variables except age and household size entered the model as dummy variables, while age was measured in years and the household size was measured in the number of household members present in the family. First, by observing the statistical significance of the parameter estimates associated with independent socio-economic variables, key characteristics were determined. Then, by using the magnitudes of these parameter estimates, the percent change in odds ratios of being happy were calculated.

The parameter estimates associated with having good health, education, being employed, married, having more than251 USD monthly household income, and being religious were anticipated to positively affect happiness, whereas personal debt and age variables were expected to negatively affect happiness. The sign of the parameter estimates associated with settlement type, gender, presence of democracy and household size can be either positive or negative.

Data Description

To conduct the analysis, household survey data gathered by the CRRC's regional offices in Armenia, Azerbaijan, and Georgia within the framework of the 2013 CB survey were used. These data are available at

the CRRC-Armenia's website and they contain all the necessary information to successfully complete the analysis. The sample used in this study contains information on Armenian, Azerbaijani and Georgian respondents who were at least 18 years old at the time when the survey was conducted. A total of 1,337 observations for Armenia, 1,488 for Azerbaijan, and 1,590 observations for Georgia were used in the analysis. The following sets of household socio-economic characteristics (variables) were analyzed: demographic factors including happiness, age, gender, settlement type, marital status, education and household size; economic factors including household income, employment status, and personal debt; situational factors including health condition and religiousness; and institutional factor examining the presence of democracy in the country.

Percentages of respondents by socio-economics characteristics for the three countries are shown in Table 1.

	Armenia, n=1337, %	**Azerbaijan, n=1488, %**	**Georgia, n=1590, %**
Happiness			
Happy	60.82	66.97	64.94
Unhappy	39.19	33.03	35.06
Settlement type			
Capital	31.86	32.83	25.99
Rural	32.04	39.08	44.49
Urban	36.10	28.09	29.52
Gender			
Female	66.20	52.58	60.63
Male	33.80	47.42	39.37
Healthstatus			
Fair	45.38	32.29	40.99
Good	28.74	54.20	34.15
Poor	25.88	13.51	24.87
Personal debt			
Yes	50.01	35.28	41.03

No	49.99	64.72	58.97
Presence of democracy			
Yes	61.86	80.78	87.39
No	38.14	19.22	12.61
Education			
At least higher education	28.33	20.37	36.16
Less than higher education	41.57	63.42	37.90
Secondary technical education	30.09	16.21	25.94
Employment			
Employed	39.69	43.04	41.45
Unemployed	60.31	56.96	58.55
Marital status			
Married	64.17	71.56	60.89
Single	15.02	14.93	16.93
Divorced/Separated/Widowed	20.81	13.51	22.18
Household income			
0-250 USD	54.56	19.29	59.16
251 USD and more	45.44	80.71	40.85
Religiousness			
Religious	74.89	38.61	71.09
Not religious	25.11	61.40	28.91
Age			
Age (average)	46.73	42.96	49.45
Household size			
Household size (average)	3.81	4.22	3.49

Demographic Factors

As Table 1 shows, the respondents considering themselves to be happy constituted more than 60% in the three countries with Azerbaijan having the greatest percentage of happy respondents (66.97%) and Armenia having the lowest percentage of happy respondents (60.82%).For Georgian respondents, 64.94% considered themselves to be happy. For the settlement type, the respondents from Armenia had nearly equal distribution with urban respondents constituting the highest36.10%, whereas the respondents from Azerbaijan and Georgia were mainly from rural areas with 39.08% and 44.49%, respectively. As far as Armenian respondents, females constituted 66.20%.In Georgia, the percentage of female respondents was 60.63% and in Azerbaijan 52.58%. In Azerbaijan, the respondents whose highest educational attainment was less than higher education constituted 63.42%, followed by Armenia (41.57%), and Georgia (37.90%). For Armenia, Azerbaijan, and Georgia more than 60% of respondents reported to be married with Azerbaijan having the greatest percentage of married respondents (71.56%) followed by Armenia (64.17%), and Georgia (60.89%). Age was a continuous variable ranging from 18 to 93. The average age of respondents was 46.73, 42.96 and 49.45 in Armenia, Azerbaijan, and Georgia, respectively. The average household size for all the three countries was approximately 4 persons.

Economic Factors

Half of the respondents from Armenia had personal debts, whereas 64.72% and 58.97% of respondents from Azerbaijan and Georgia respectively, reported having no personal debts. Roughly 60% of respondents from all the three countries reported being unemployed with Armenia having the highest percentage of unemployed respondents (60.31%) followed by Georgia (58.55%) and Azerbaijan (56.96%). Most of the respondents from Azerbaijan reported a monthly household income of more than 251 USD (80.71%), whereas in Armenia (54.56%) and Georgia (59.16%) more than half of the respondents reported household income of up to 250 USD.

Situational Factors

Slightly more than half of the respondents from Azerbaijan (54.20%) reported to have good health, whereas Armenians (45.38%) and Georgians (40.99%) had mainly fair health. For Armenian and Georgian respondents, 74.89% and 71.09%, respectively were religious, whereas in Azerbaijan 61.40% of the respondents did not consider themselves to be religious.

Institutional Factors

As Table 1 depicts, most of the Georgians believed that they had democracy in their country (87.39%), with 80.78% of Azerbaijanis believing that they had democracy, and only 61.86% of Armenians agreed that there was democracy in Armenia.

Estimation Results

Cross Tabulations

Before proceeding to our estimation results from the logistic model, the relationship between happiness and socio-economic variables in the three countries is discussed using the method of cross tabulation. The results of cross tabulations are presented in Table 2. The cross tabulation of happiness and socio-economic variables gives opportunity to draw the profile of a happy person for each country.

*A Happy Armenian***.** A happy Armenian was an unemployed (56.16%) married (72.03%) female (65.82%) in her 40s with an average household size of four members, living in capital (34.77%), with less than higher education (41.94%), and with an average monthly household income of more than 251 USD (51.06%). Her health condition was evaluated as "fair" (44.84%), she did not have personal debt (52.74%), considered herself to be religious (79.18%), and believed that there was democracy in Armenia (63.71%).

*A Happy Azerbaijani***.** A happy Azerbaijani was an unemployed (53.28%) married (76.52%) female (50.66%) in her 40s with an average

household size of four members, living in rural areas (38.46%), with less than higher education (59.30%), and with an average monthly household income of more than 251 USD (85.50%). Her health condition was evaluated as "good" (66.64%), she did not have personal debt (69.99%), did not consider herself to be religious (56.82%), and believed that there was democracy in Azerbaijan (85.33%).

*A Happy Georgian***.** A happy Georgian was an unemployed (54.45%) married (66.08%) female (59.95%) in her 40s with an average household size of four members, living in rural areas (42.76%), with at least higher education (40.17%), and with an average monthly household income of up to 250 USD (50.51%). Her health condition was evaluated as "good" (42.26%), she did not have personal debt (59.52%), considered herself to be religious (76.51%), and believed that there was democracy in Georgia (89.05%).

Overall, it is obvious that a happy person has mostly similar characteristics across Armenia, Azerbaijan, and Georgia, perhaps because of many similar traditions and norms embedded in these societies as well as a common Soviet past.

Logistic Regression

The log it parameter estimates, the associated p-values, and percent change in odds ratios are presented in Table 3. The results are interpreted in terms of statistically significant percent change in odds ratios, at the 1, 5, and 10 percent significance levels. Based on the p-value of the likelihood ratio χ^2 statistic, which is equal to zero for Armenia, Azerbaijan and Georgia, it can be concluded that all the parameter estimates associated with independent variables were jointly statistically significant.

In Armenia, living in the capital increased the odds of being happy by 39.31%, relative to living in rural areas, everything else held constant. In Azerbaijan, being a female decreased the odds of being happy by 25.15%, compared to being a male, everything else held constant. Having fair health, in Armenia, Azerbaijan, and Georgia, increased the odds of being happy by 50.9%, 71.66%, and 55.73%, respectively, compared to having poor health, everything else held constant. In Armenia, Azerbaijan, and

Georgia, having good health increased the odds of being happy by 229.99%, 614.99%, and 232.4%, respectively, compared to having poor health, everything else held constant. This result is consistent with the results obtained by Frey and Stutzer (2002) and Stevenson and Wolfers (2007).

Table 1. Cross Tabulations of Happiness and Socio-Economic Variables

	Armenia		**Azerbaijan**		**Georgia**	
	Happy (%)	**Unhappy (%)**	**Happy (%)**	**Unhappy (%)**	**Happy (%)**	**Unhappy (%)**
Settlement type						
Capital	34.77	27.34	31.28	35.96	27.91	22.42
Urban	33.06	40.83	30.26	23.70	29.33	29.87
Rural	32.18	31.83	38.46	40.34	42.76	47.71
Gender						
Female	65.82	66.79	50.66	56.49	59.95	61.90
Male	34.18	33.21	49.34	43.51	40.05	38.10
Healthstatus						
Poor	17.72	38.54	7.87	24.93	17.80	37.96
Fair	44.84	46.21	25.49	46.08	39.93	42.93
Good	37.44	15.24	66.64	28.98	42.26	19.11
Personal debt						
Yes	47.26	54.29	30.01	45.96	40.48	42.06
No	52.74	45.71	69.99	54.04	59.52	57.94
Presence of democracy						
Yes	63.71	58.97	85.33	71.57	89.05	84.31
No	36.29	41.03	14.67	28.43	10.95	15.69
Education						
At least higher education	30.56	24.88	23.31	14.39	40.17	28.75
Less than higher education	41.94	41.00	59.30	71.78	35.12	43.05
Secondary technical education	27.50	34.12	17.39	13.83	24.72	28.20
Employment						
Yes	43.84	33.25	46.72	35.60	45.55	33.84
No	56.16	66.75	53.28	64.40	54.45	66.16
Marital status						
Single	15.37	14.47	13.73	17.35	16.90	16.98
Married	72.03	51.99	76.52	61.52	66.08	51.26
Divorced/Separated/Widowed	12.60	33.54	09.75	21.12	17.01	31.76
Household income						
0-250 USD	48.94	63.28	14.50	29.01	50.51	75.16
251 USD and more	51.06	36.72	85.50	70.99	49.49	24.84
Religiousness						
Yes	79.18	68.24	43.18	29.34	76.51	61.04

No	20.82	31.76	56.82	70.66	23.49	38.96
Age						
Age	44	52	42	45	47	54
Household size						
HH size	4	3	4	4	4	3

Having a personal debt decreased the odds of being happy by 25.63% in Armenia, by 30.59% in Azerbaijan, and by 20.06% in Georgia, compared to having no personal debts, other things held constant. This finding is consistent with the result obtained by Thompson (2012).The presence of democracy turned out to be a statistically significant determinant of happiness only in Azerbaijan. Believing in the presence of democracy in this country increased the odds of being happy by 108.15%, compared to not believing in the presence of democracy, everything else held constant. This result is consistent with the result obtained by Johns and Ormerod (2007). Having at least higher education and secondary technical education in Azerbaijan increased the odds of being happy by 61.14% and 42.62%, respectively, compared to having less than higher education, everything else held constant. This finding is consistent with the one obtained by Diener et al (1999).

Being married increased the odds of being happy in Armenia by 118.75%, in Azerbaijan by 148.57%, and in Georgia by 91.59%, compared to being single, everything else held constant. This finding is consistent with the one obtained by Diener et al (1999). Having a household income less than 250 USD per months decreased the odds of being happy by 42.59% in Azerbaijan and by 49.89% in Georgia, compared to having a household income of more than 251 USD, everything else held constant. This result is consistent with the one obtained by Easterlin (1974). In Armenia, Azerbaijan, and Georgia being religious increased the odds of being happy by 83.15%, 88.29%, and 107.08%, respectively, relative to not being religious, everything else held constant. This result compares favorably with the finding obtained by Johns and Ormerod (2007). Regarding age, in Armenia, for each additional year of age the odds of being happy decreased by 0.97%, everything else held constant. The result is consistent with the finding by Diener et al (1999). Household size had a statistically significant effect

only in Armenia. For each additional household member, the odds of being happy increased by 8.98%, everything else held constant.

Gender, presence of democracy in the country, education, employment and household income variables were statistically insignificant determinants of happiness in Armenia. In Azerbaijan, happiness was not affected by settlement type, employment, age, and household size variables. Finally, happiness was not affected by settlement type, gender, presence of democracy in the country, education, employment, age, and household size variables in Georgia.

Table 2. Estimation Results from Logistic Regression

	ARMENIA		**AZERBAIJAN**		**GEORGIA**	
	Coefficient	**% change in odds ratios**	**Coefficient**	**% change in odds ratios**	**Coefficient**	**% change in odds ratios**
Settlement type *(base: Rural)*						
Capital	0.33** *(0.047)*	39.31	-0.19 *(0.467)*	-17.23	-0.11 *(0.561)*	-10.81
Urban	-0.01 *(0.960)*	-0.79	0.19 *(0.412)*	20.36	-0.12 *(0.575)*	-11.17
Gender *(base: Male)*						
Female	0.20 *(0.160)*	22.48	-0.29** *(0.036)*	-25.15	0.23 *(0.102)*	26.07
Health status *(base: Poor)*						
Fair	0.41** *(0.013)*	50.90	0.54** *(0.019)*	71.66	0.44*** *(0.008)*	55.73
Good	1.19*** *(0.000)*	229.99	1.97*** *(0.000)*	614.99	1.20*** *(0.000)*	232.40
Personal debt *(base: No)*						
Yes	-0.30** *(0.019)*	-25.63	-0.37** *(0.030)*	-30.59	-0.22* *(0.063)*	-20.06
Presence of democracy *(base: No)*						
Yes	0.11 *(0.411)*	11.84	0.73*** *(0.000)*	108.15	0.25 *(0.144)*	27.77
Education *(base: Less than higher education)*						
At least higher education	0.07 *(0.676)*	7.09	0.48*** *(0.002)*	61.14	0.24 *(0.126)*	26.69
Secondary technical	-0.22	-19.46	0.35*	42.62	0.15	16.26

education	*(0.154)*		*(0.071)*		*(0.342)*	
Employment *(base: NO)*						
Yes	0.07 *(0.648)*	7.19	-0.25 *(0.120)*	-22.15	0.10 *(0.445)*	10.55
Marital status *(base: Single)*						
Married	0.78*** *(0.000)*	118.75	0.91*** *(0.000)*	148.57	0.65*** *(0.000)*	91.59
Divorced/Separated /Widowed	-0.31 *(0.250)*	-26.47	0.20 *(0.441)*	22.64	0.06 *(0.785)*	5.75
Household income *(base: 251 USD and more)*						
0-250 USD	-0.13 *(0.374)*	-11.78	-0.55*** *(0.002)*	-42.59	-0.69*** *(0.000)*	-49.89
Religiousness *(base: No)*						
Yes	0.61*** *(0.000)*	83.15	0.63*** *(0.001)*	88.29	0.73*** *(0.000)*	107.08
Age						
Respondent's age	-0.01*** *(0.055)*	-0.97	0.0007 *(0.900)*	0.07	-0.004 *(0.299)*	-0.44
Household size						
Household size	0.09** *(0.011)*	8.98	-0.03 *(0.430)*	-3.08	0.04 *(0.271)*	4.30
χ^2	**10.95**		**15.68**		**9.81**	
p-value	***(0.000)***		***(0.000)***		***(0.000)***	

indicates 10% significance level, ** indicates 5% significance level, and * indicates 1% significance level.*

Summary and Policy Recommendations

The aim of this paper was to identify a set of socio-economic variables that affected happiness in Armenia, Azerbaijan and Georgia. To that end, a logit model was estimated using the CB dataset collected by the CRRC in 2013. Also, using the method of cross tabulations, profiles of a happy Armenian, a happy Azerbaijani, and a happy Georgian were drawn up.

The log it estimation results revealed that in all three countries having a fair and a good health condition, being married and religious statistically significantly increased the odds of being happy, whereas having personal debts decreased it. A relatively low household income decreased the odds of being happy in Azerbaijan and Georgia. Living in capital, being young, and having more household members increased the odds of being happy in Armenia. In Azerbaijan, being male, believing in the presence of

democracy in the country, and having at least higher education and secondary technical education increased the odds of being happy.

The cross tabulation results identified that a happy Armenian was an unemployed, married female in her 40s, with an average household size of four members, living in capital, with less than higher education, and had average monthly household income of more than 251 USD. Her health condition was evaluated as "fair", she did not have a personal debt, considered herself to be religious and believed that there was democracy in Armenia. The profile of a happy Azerbaijani was similar to that of a happy Armenian with the difference that a happy Azerbaijani lived in rural areas, her health was evaluated as "good" and she did not consider herself to be religious. Concerning a happy Georgian, again, it can be noted that the profile of a happy Georgian was similar to that of a happy Armenian with the difference that a happy Georgian had at least higher education and household income of up to 250 USD.

Policy Recommendations

- Based on the estimation results, the following set of policy recommendations is proposed in order to boost happiness:
- Improve the living standards in rural areas in Armenia bringing them closer to the level in the capital city through rural development programs.
- Enhance the social status of females in Azerbaijan, possibly by facilitating female involvement in education, employment, health care and other social status boosting programs.
- Support the healthcare system and make it affordable for everyone in the society.
- Implement personal debt reduction strategies (e.g. provide low-interest loans, create additional employment opportunities).
- Strengthen and support the current democracy institutions in Azerbaijan.

- In Azerbaijan, expand the establishment of higher education and secondary technical education facilities and increase people's involvement in them.
- Promote marriages by providing affordable housing conditions to newly married couples.
- In Azerbaijan and Georgia increase household income through welfare programs.
- Promote religiosity and increase the role of religious institutions.
- In Armenia, improve living standards of the old by providing convenient nursing houses, cheap healthcare packages, convenient employment opportunities etc.
- In Armenia, promote and support having many children by providing social welfare packages to families.

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