

Equality Preferences and the Democratic Voice: Evidence from the World Values Survey

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Abstract

This paper applies Buchanan's notion of a fiscal constitution to income distribution analysis. The fiscal constitution postulates that tax and transfer shares are broadly considered to be equitable and "semi-permanent." A testable hypothesis of the Buchanan model is that in countries with well-functioning democracies most individuals should be "content" with the underlying income distribution. We measure the degree of contentment by a clustering of responses near the median response and a lack of contentment by the dispersion of equality preferences. In a unique dataset, the World Values Survey (WVS), respondents were asked whether "incomes should be more equal..., or do we need larger differences in income as incentives?" As an example of dispersion of preferences we find that only 13 percent of US respondents are strongly dissatisfied (in either direction) with the US income distribution while 43 percent of Argentine respondents are strongly dissatisfied with the Argentina's income distribution. Using four waves of WVS data we model the distribution of responses to the equality question as a function of democracy/freedom indicators and the degree of income inequality.

Keywords: Income distribution; equality preferences; fiscal constitution; democracy

JEL codes: D31 D63 D72 H11

I. Introduction

There is an extensive literature, both theoretical and empirical, that models an individual's demand for redistribution. Alberto Alesina and Paola Giuliano (2009) argue that "the question of whether the government should redistribute from the rich to the poor and how much is probably the most important dividing line between the political left and political right at least on economic issues (p. 2)." Taking a more positive approach Anthony Downs (1957) states that a testable hypothesis from the economic theory of democracy is that "democratic governments tend to redistribute income from the rich to the poor (p.297)." Alesina and George-Marios Angeletos (2005) demonstrate that the degree of redistribution in a society is determined by that society's view of fairness. Their key finding is that although different societies have different experiences and hence different notions of fairness each society's notion of fairness tends to be somewhat stable. Elvire Guillaud (2013) provides an excellent survey of the literature on preferences for redistribution as well as empirical findings.

In this paper we consider a related but distinctively different question, which is, what determines the distribution of preferences for more or less equality (redistribution)? Empirically, we find that the vast majority of individuals in some countries appear to be content with the underlying income distribution, while in other countries a large numbers of individuals express strong preferences *for both more and less equality*. Nobel Laureate James Buchanan argues that a strong "democratic voice" allows a society to produce what is generally considered "fair" tax shares. A testable hypothesis of Buchanan's model is that in countries with well- functioning democracies most individuals should be "content" with the underlying income distribution. After

controlling for the underlying income distribution we argue that the dispersion of equality preferences reflects the presence or absence of a democratic voice in the country.¹

II. Buchanan's Fiscal Constitution and Concentration of Preferences

Buchanan and Tullock (1962) assert that “many scholars seem to have overlooked... [that] majority rule has been elevated to the status which the unanimity rule must occupy. At best, majority rule should be viewed as one among many practical expedients made necessary by the costs of securing widespread agreement on political issues when individual and group interests diverge (p.96).” Buchanan's (1954) critique of the Arrow theorem clarifies the role of majority rule as an instrument that facilitates the process of social choice. Instead of viewing majority rule as an impediment to consistent social choice, Buchanan (1954) states that “Majority rule provides the opportunity for any social decisions to be altered or reversed...In this way, majority decision-making becomes a means through which the whole group ultimately attains consensus (p. 119).” In fact, Buchanan (1954) argues that majority rule is only tolerable in a free society because it provides the losing coalition the opportunity to revisit the issue and allows for the potential of the reversal of the original decision. Thus, coalition organizers recognizing the fragility of a simple 51 to 49 majority will lead to broaden their membership. While Buchanan recognizes that in a world with transactions costs true unanimity will be rarely if ever achieved, he does note that “relatively complete consensus is present in the social group on many issues and... need not involve a Rousseau-like general will (p.121).” Thus, by re-defining the issue and expanding the coalition the dynamic process of majority voting often leads to what is called “near unanimous agreement.”

¹ Hirschmann (1970, p. 16) states: “Voice is political action par excellence.”

While majority voting in Buchanan's model clearly can lead to some consensus, when describing tax and transfer shares he appeals to the constitutional stage of decision making and introduces the concept of the "fiscal constitution." To appreciate the fiscal constitution one needs to consider first the naive view that tax and transfer shares are simply the result of the politically strong exploiting the politically weak. The predictions of this model are that taxes would be highly specific and subject to abrupt changes as the political power of the opposed groups wax and wane. But in fact we observe general taxes and relatively stable tax/transfer shares.

The failure of the naïve view to adequately describe empirical observation leads Buchanan to the fiscal constitution (Buchanan, 1970). Buchanan considers an economy where individuals are uncertain as to their future income and to their own desires for specific future public spending projects. In this setting determining tax/transfer shares becomes analogous to the "selection of the rules for a game" and each person acting on his own interest will be led to select rules that are broadly deemed "fair" (1970, p.139). One prediction from Buchanan's model is that given the "...uncertain[ity] as to his own economic status over this period of time, he may well "vote for" progressive taxes on income"(1970, p. 140). Equally important is the prediction that the net result is a set of tax structures "...conceived as inherent parts of a fiscal "constitution" that is changed only occasionally..." (1970, p. 139).

In sum, examining majority voting in a dynamic setting and the fiscal constitution suggest that supra-majorities of voters in a democratic country should accept the current tax and transfer shares as equitable. Simply stated, if democratic citizens are dissatisfied with the current income distribution they have the tools at hand to change it. The conclusion we draw from the above analysis of the democratic process (and our testable hypothesis) is that *most individuals in*

countries with well-operating democracies should be “content” with the income distribution in equilibrium, implying concentrated re-distributional preference around the center.

III. Data

The World Values Survey (WVS) is a worldwide survey that collects information about changing social values and their impact on people’s economic, social, and political life. The WVS provides representative national samples for up to 97 countries in six waves. The data used in our study is from the second (1990), third (1995), fourth (1999-2004) and fifth (2005-2008) WVS waves (the sixth wave data is not yet available). Our overall sample contains 140 country-years².

Figure 1 presents the survey questions of interest in this paper. First, we note that although the data is clearly ordinal, the numerical values, 1-10, are assigned by the respondent, not the researcher. Question 1, the “equality” question collects opinions regarding individuals’ preferences for equality. We are primarily interested in the relationship between democratic voice and equality preference and this question directly addresses our concern. However, both Questions 2 and 3 might be reasonable proxies for feelings about the underlying income distribution and can provide a robustness check on our primary equality results.

Question 2 asks individuals to weigh the tradeoff between state and individual responsibility for citizens’ livelihoods. This question might be interpreted as a comment on the “fairness” of the overall income distribution. Alternatively, it might be the respondent’s response to the government’s role in helping the poor, elderly, and disabled.

Question 3 collects responses on the role of hard work and luck/connections on the probability of achieving a “better life”. For Question 3 the connection to the tax/transfer shares is less readily apparent. Alesina and Angeletos (2005) use this WVS question to investigate the

² See Data Appendix for specific country-waves.

role of luck and effort with regards to people's preferences for redistribution. They find that in countries with high tax to GDP shares people are more likely to believe that luck/connections is the path to a better life; conversely, in those countries with low tax to GDP ratios respondents are more likely to choose hard work. They conclude that these opinions reflect contentment with the social choice process.

Figures 2a-c provide plots of the Wave 5 (2006) responses to the three questions for Argentina and the United States. Figure 2a examines the "equality" question and it is clear that Argentines hold highly polarized view on the appropriate degree of income inequality. In fact, 24 percent of Argentine respondents selected value 1, which indicates the strongest possible desire for greater equality. Conversely, 19 percent of Argentines selected value 10, which is the strongest possible support for more incentives and less equality. Correspondently, only 5 percent of Americans selected value 1 and 8 percent selected value 10.

Figure 2b plots responses to the government responsibility for livelihoods question. Again, we find the Argentines more polarized, with 16 percent taking the strongest possible position on government responsibility and 27 percent taking the strongest position on individual responsibility. In contrast, 13 percent of Americans take the strongest pro-government position and 9 percent take the strongest pro-individualist position. We do note that the Americans tend to be more left-centered on the government responsibility question than on the income inequality question. This may reflect the common view that Americans express more concern for helping the poor than on the overall income distribution.

Figure 2c compares responses to the hard work vs. luck/connections question. Here the Argentine data shows spikes at values of 1, 5, and 10. In contrast, the American data is heavily

skewed toward the “hard work” choice. In fact, nearly one-half of Americans selected a number of 3 or less and less than two percent held the strongest view toward luck and connections.

IV Empirical Analysis

Our hypothesis is that the clustering of responses around the center to the question regarding satisfaction with the current level of income inequality is determined by the responsiveness of the political system (i.e., the degree of democratic voice), controlling for the underlying degree of income inequality.³ The first main empirical issue is the choice of the measures for distributional preferences, democracy, and income inequality.

Table 1 presents summary measures for the three WVS questions for mean response, absolute deviation of responses and the standard deviation of responses. The mean responses to the “equality” and “state responsibility” are both very close to 6 while the mean response for “hard work” is 4.44. We note that the “hard work” question was not included in the Wave 4 questionnaire.

The second issue is to identify a proper measure of the underlying income distribution. Self-interest will lead those at the top of the income distribution to contend that wide income disparities incentivize workers, while those at the bottom will naturally prefer more equality as it leads to a positive income transfer. We use the standard Gini coefficient to control for the inequality in the country’s income distribution. For OECD countries we use their after-tax, after transfer measure; for non-OECD countries we use the Gini coefficients that are provided by the World Bank.

One of the most important data issues is the measure of democratic voice. We have identified two measures that cover our entire time span of 1990 to 2007 (including 140 country-

³ We note that the rejection region (not concentrated) includes, *but is not limited to*, polarized income distributions like Argentina’s described above.

years). These are the Freedom House Political Rights Index,⁴ which has three discrete measures: free, partly free, and not free, and the Heritage Foundation Index of Economic Freedom, which is continuous. For all waves except Wave 2 (1990), the World Bank Government Accountability Index is available (127 country-years). This index “reflects perceptions of the extent to which a country’s citizens are able to participate in selecting their country’s government.”

For Wave 5 only (50 countries) Freedom House provides an index that combines scores for the freedom of the electoral process, political pluralism and functioning of the government. For our sample this score ranges from 2 (China) to 40 (Canada). In addition, we consider *the Economist* magazine’s Index of Democracy for 2008 (Wave 5 only). Table 2 provides the summary statistics for various freedom indexes, real GDP per capita, and the Gini coefficient.

As noted above, we are interested in the distribution of responses to the question of more or less income inequality. However, for comparison we begin our regression analysis with a model of mean question responses (see Table 3) as a function of the Gini coefficient and real per capita GDP. Interestingly, the Gini coefficient is not significantly correlated with the desire for more or less equality (see Table 3 Column 1) or with the belief in luck and connections (column 3). A negative and statistically significant coefficient in the state *vs.* individual responsibility equation implies that higher Gini’s are correlated with a demand for greater state responsibility in providing livelihoods. Real GDP is negative and significant for the first two questions, implying that preferences for equality and state intervention are normal goods. In contrast, higher GDP is positively correlated with a belief in luck and connections. This may suggest that rent-seeking opportunities are more widely available in higher GDP countries. Overall, we note the low R^2 values, particularly for the luck/connections question ($R^2 = 0.02$).

⁴We combine “partly” and “not free” into one category. In addition, all data sources for this index and other indices cited in this paper are provided in appendix.

Tables 4a-c provide the main results of our paper; we present regression results on dispersion for each of the three preference questions described above. To measure dispersion we use two simple measures of the spread of opinion on the level of income inequality, the absolute deviation, and the standard deviation.⁵ We employ these standard measures with one minor modification; we measure the deviation from the median choice (in our case its value is 5) offered to respondents as opposed to the mean of each country's responses. In fact, we are asserting that in equilibrium in a perfectly functioning democracy near unanimous agreement would lead a large majority of respondents to select a middle value. We construct each of these measures of dispersion for each country using the underlying micro data.

We begin by examining the goodness of fit for the "equality" regression models (Table 4a) and observe that adjusted R^2 values are uniformly higher using the standard deviation as the dispersion measure. The model with the best goodness of fit (adjusted $R^2=0.40$) is standard deviation regressed on the Heritage Economic Freedom Index. The Economist Democracy Index performs quite well with both dependent variables: adjusted $R^2=0.37$ with the absolute deviation and $R^2=0.39$ with the standard deviation. The lowest R^2 values are found with the Freedom House indices. However, the specification with the poorest fit, the absolute deviation with the Freedom House discrete index (0.22), has an R^2 value that is nearly twice that of the mean response to the equality question (see Table 3). The overall ability of a parsimonious two-parameter model (Gini and Freedom plus time indicators) to explain the concentration of equality preferences is quite impressive.

Comparing the regression fit across questions we find that the state responsibility regressions (Table 4b) have lower R^2 values than the equality question and higher R^2 values than

⁵ We also used several ordinal measures of dispersion (see Lazar and Silber, 2011) to test our hypothesis. We provide results for their "fourth index" in Table 7. The results are very similar to those described below.

the work vs. luck question (Table 4c). The highest R^2 is found with the hard work question using the Heritage Economic Freedom Index and the standard deviation (0.44). As with the equality question the Economist Democracy Index performs relatively well with the state responsibility and hard work questions. The lowest R^2 is for the absolute deviation of the state responsibility question (0.13) using the continuous Freedom House Index. Again, we note that even the lowest R^2 in Table 4c is higher than the R^2 of the mean response to the same question.

Next we examine the impact of the underlying income distribution as measured by the Gini Coefficient on the concentration of preferences. In 28 of the 30 regressions the Gini is positive and significant at 90% level. The parameter estimates are very similar across different Freedom Indices and between the equality and hard work questions. The parameter estimates are slightly smaller for the state responsibility question and the two cases of insignificant coefficients on Gini's are with the state responsibility question. In sum, we find that *the lower the level of income inequality the more concentrated clustering of the responses to these redistributive questions.*

As predicted by our theoretical model we find that *concentration of re-distributional preferences is positively related to democratic voice.* The significance levels well exceed 95 percent in all cases except for the Freedom House continuous index for the state responsibility and hard work questions (here they are still significant at confidence levels of 90 percent). If we examine each Freedom Index separately across all three equations we find that for all five indexes the parameter estimates across questions are within two standard deviations of each other.

Finally, we have conducted several robustness checks for our empirical specifications. First, we examine changes in equality concentration as a function of changes in the Gini

coefficient and changes in the Economic Freedom Index by taking first differences of both the dependent variable and explanatory variables with our panel data. By taking first differences within a country, we may eliminate country specific fixed effects. As a result, our data yields a sample of 65 country specific pairs and the estimates are presented in Table 5. A positive sign on the Gini and a negative sign on freedom index suggest that a falling income inequality and growing freedom is associated with heightened concentration of income equality preferences. Thus, the first differences results are consistent with the major findings of the paper. Secondly, we implement instrumental variables to account for potential endogeneity problems of inequality measures. Specifically, we use respondents' ethnicity, religion and language information to instrument income inequality. As shown by previous studies, these characteristics are strongly associated with social fractionalization of households, which lowers their support for income redistribution (Alesina and Glaeser, 2004; Bergh and Nilsson, 2013). We estimate a parsimonious specification with focus on income inequality measured by Gini and the dependent variable is standard deviation of inequality preferences. The results are presented in Table 6. We find that the parameter estimates on Gini coefficients with instrumental variables are about twice as great as those from OLS. However, signs of all parameters are the same and they are statistically significant at 95 percent level.

As another robustness check, we treat numerical responses in survey as strictly ordinal answers and therefore use an ordinal index to measure preference dispersion provided by Lazar and Silber (2013). Table 7 presents the regression results using an ordinal index to measure equality preferences. A positive sign for the Gini index and a negative sign for the freedom index are consistent with our main results.

V. Conclusions

This paper applies Buchanan's notion of a fiscal constitution to income distribution analysis. The fiscal constitution postulates that tax and transfer shares are broadly considered to be equitable and "semi-permanent." A testable hypothesis of the Buchanan model is that in countries with well- functioning democracies most individuals should be "content" with the underlying income distribution.

In a unique dataset, the World Values Survey (WVS), respondents were asked whether "incomes should be more equal..., or do we need larger differences in income as incentives?" We measure the degree of contentment by a clustering of responses near the median response option and a lack of contentment by the degree of concentration. Using four waves of WVS data (140 country-years) we model the concentration of responses to the equality question as a function of democracy/freedom indicators and the degree of income inequality.

We find that we can explain 40 percent of the variation in our concentration (dispersion) index with a simple two-parameter model that includes the Gini coefficient of income inequality and a measure of political/economic freedom. As expected the greater the degree of income inequality the more polarized the responses to these redistributive questions. Most importantly, we find evidence to support the notion of a fiscal constitution—the degree of concentration is positively related to democratic voice. This implies that larger majorities in democratic countries are "content" with the existing income distribution. We note that these findings are robust to alternative survey questions (state responsibility for individual's incomes and the beliefs about payoffs from hard work) and five alternative measures of democratic voice.

A final question can be posed following this analysis: Did the global recession lead to an increase in the dispersion of re-distributional preferences? We anticipate that such shocks to the

fiscal system will lead factions to attempt to renegotiate tax/transfer shares. The emergence in the US of *both* the Tea Party and Occupy Wall Street movements support this contention. We await the release of the 2012 Wave 6 WVS data in order to address this interesting question.

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Table 1
Summary Statistics for WVS Question Responses:
Mean, Mean Absolute Deviation, and Standard Deviation

	Mean	Min	Max	N
Greater Equality vs. Greater Disparities				
Mean Response	5.93 (.09)	3.63	8.23	140
Absolute Deviation	2.67 (.04)	1.68	3.81	140
Standard Deviation	3.04 (.04)	1.99	4.14	140
State Responsibility vs. Individual Responsibility				
Mean Response	6.12 (.08)	3.48	8.07	139
Absolute Deviation	2.74 (.04)	1.73	3.84	139
Standard Deviation	3.17 (.03)	2.19	4.17	139
Hard Work vs. Luck/Connections				
Mean Response	4.44 (.08)	2.37	6.82	109
Absolute Deviation	2.49 (.04)	1.82	3.54	109
Standard Deviation	2.90 (.03)	2.26	3.79	109

Table 2
Summary Statistics for Various Freedom Indices,
Gini Coefficient, and Real GDP

	Mean	Min	Max	N
Heritage Foundation Economic Freedom Index	61.57 (0.87)	35.9	87.8	140
Freedom House (Discrete)	0.59 (0.04)	0	1	140
Freedom House (Continuous)	29.18 (1.63)	2	40	51
World Bank Government Accountability	0.24 (0.08)	-1.65	1.62	127
Economist Democracy Index	6.82 (0.28)	2.53	9.88	51
Gini Coefficient	37.67 (.82)	19.5	63.1	140
Real GDP	12.56 (1.42)	0.26	95.2	140

Note: Standard deviations are in parentheses.

Table 3 – Regression Results
WVS “Equality”, “State Responsibility”,
and “Hard Work” Questions

Dependent Variable: Mean Response

	Wide Income Disparities (1)	Individual Responsibility (2)	Luck/Connections (3)
Intercept	5.82	7.15	3.71
Gini	0.007 (.010)	-0.018* (.008)	0.014 (.009)
Real_GDP	-0.016* (.007)	-0.023* (.005)	0.011* (.005)
R ²	0.12	0.14	0.02
N	140	139	109

Notes: 1. Values of response are on a scale from 1 to 10, where the strongest desire for equality/state responsibility/hard work is 1 and the strongest desire for disparity/individual responsibility/luck or connection is 10; 2. “*” denotes results significant at 95 percent level.

Table 4a

Preference Dispersion Regression Results:
 Dependent variable: "Income should be equal"=1, "not so Equal"=10
 By Alternative Measures of Economic/Political Freedom

Functional Form of Dependent Variable: Absolute Deviation					
Constant	Gini	"Free"	Freedom Index	Adj. R ²	N
3.03	0.018 (.004)	-0.017 (.003)	Heritage	0.29	140
2.17	0.016 (.004)	-0.255 (.075)	Freedom Discrete	0.22	140
2.05	0.016 (.004)	-0.191 (.042)	World Bank	0.30	127
2.80	0.015 (.006)	-0.111 (.028)	Economist Democracy	0.37	51
2.20	0.020 (.006)	-0.012 (.005)	Freedom Continuous	0.25	51
Functional Form of Dependent Variable: Standard Deviation					
Constant	Gini	"Free"	Freedom Index	Adj. R ²	N
3.22	0.022 (.003)	-0.016 (.003)	Heritage	0.40	140
2.37	0.020 (.003)	-0.176 (.066)	Freedom Discrete	0.30	140
2.47	0.016 (.004)	-0.181 (.038)	World Bank	0.33	127
3.19	0.015 (.006)	-0.106 (.026)	Economist Democracy	0.39	51
2.61	0.019 (.006)	-0.011 (.005)	Freedom Continuous	0.26	51

Table 4b

Preference Dispersion Regression Results:
 Dependent Variable: “State Takes More Responsibility” = 1, “Individual Takes More
 Responsibility” = 10
 By Alternative Measures of Economic/Political Freedom

Functional Form of Dependent Variable: Absolute Deviation					
Constant	Gini	“Free”	Freedom Index	Adj. R ²	N
3.11	0.014 (.003)	-0.016 (.003)	Heritage	0.27	139
2.28	0.012 (.003)	-0.194 (.069)	Freedom Discrete	0.17	139
2.35	0.009 (.004)	-0.168 (.041)	World Bank	0.22	126
2.93	0.010# (.007)	-0.104 (.031)	Economist Democracy	0.25	51
2.31	0.015 (.007)	-0.009 (.005)	Freedom Continuous	0.13	51
Functional Form of Dependent Variable: Standard Deviation					
Constant	Gini	“Free”	Freedom Index	Adj. R ²	N
3.55	0.013 (.003)	-0.016 (.003)	Heritage	0.28	139
2.74	0.012 (.003)	-0.184 (.066)	Freedom Discrete	0.17	139
2.79	0.009 (.004)	-0.159 (.039)	World Bank	0.22	126
3.38	0.010# (.006)	-0.102 (.030)	Economist Democracy	0.26	51
2.77	0.015 (.007)	-0.009 (.005)	Freedom Continuous	0.14	51

Notes: “#” denotes not significant at 90 percent level; results are significant otherwise.

Table 4c

Preference Dispersion Regression Results:
 Dependent Variable: “Hard Work Bring Success” = 1, “Luck is More Important” = 10
 By Alternative Measures of Economic/Political Freedom

Functional Form of Dependent Variable: Absolute Deviation					
Constant	Gini	“Free”	Freedom Index	Adj. R ²	N
2.68	0.019 (.003)	-0.015 (.003)	Heritage	0.39	109
1.85	0.018 (.003)	-0.156 (.067)	Freedom Discrete	0.28	109
1.91	0.015 (.004)	-0.154 (.040)	World Bank	0.33	96
2.60	0.012 (.005)	-0.090 (.024)	Economist Demo_Index	0.34	50
2.06	0.016 (.006)	-0.008 (.004)	Freedom Continuous	0.20	50
Functional Form of Dependent Variable: Standard Deviation					
Constant	Gini	“Free”	Index	Adj. R ²	N
3.07	0.019 (.003)	-0.015 (.003)	Heritage	0.44	109
2.27	0.018 (.003)	-0.132 (.07)	Freedom Discrete	0.31	109
2.32	0.015 (.003)	-0.135 (.036)	World Bank	0.35	96
2.96	0.012 (.005)	-0.083 (.020)	Economist Democracy	0.37	50
2.44	0.016 (.005)	-0.007 (.003)	Freedom Continuous	0.23	50

Table 5
Change in Equality Preference Dispersion

Dependent Variable: Change in Standard Deviation of Equality Preferences				
Constant	Change in Gini	Change in Heritage Freedom Index	Adj. R ²	N
0.039	0.045 (.012)	-0.015 (.006)	0.24	65

Table 6
Using Fractionalization Variables to Instrument Inequality
Dependent Variable: Standard Deviation of Equality Preferences
Instruments for Gini: Ethnicity, Religion, and Language

	Wide Income Disparities (1)		Individual Responsibility (2)		Luck/Connections (3)	
	OLS	IV	OLS	IV	OLS	IV
Intercept	2.21	1.56	2.76	2.82	2.17	1.49
Gini	0.02* (0.004)	0.04* (0.009)	0.01* (0.002)	0.02* (0.003)	0.02* (0.004)	0.04* (0.008)
R ²	0.25	0.09	0.15	0.15	0.24	0.01
N	96		123		93	

Table 7
Ordinal Measure of Equality Preference Dispersion

Dependent Variable: Ordinal Measure of Equality Preference Dispersion ¹				
Constant	Gini	Heritage Freedom Index	Adj. R ²	N
0.7896	0.0034 (0.0006)	-0.0019 (.0006)	0.29	96

¹See Lazar and Silber (2013); the “fourth index” is implemented for regressions in this table.

Figure 1

World Values Survey Questions

Please give me your opinion on the following items.
 1 means that you completely agree with the point of view list on the left.
 10 means that you completely agree with the point of view list on the right.
 Where does your opinion lie on this scale?

Question 1:									
Income should be equal as far as possible					Wide income disparities incentivize hard workers				
1	2	3	4	5	6	7	8	9	10
Question 2:									
State should take more responsibility for individual livelihoods					Individuals should take more responsibility for their own livelihood				
1	2	3	4	5	6	7	8	9	10
Question 3:									
Long-term, hard work usually brings a better life					Hard work doesn't generally bring success, luck and connections are more important				
1	2	3	4	5	6	7	8	9	10

Figure 2a

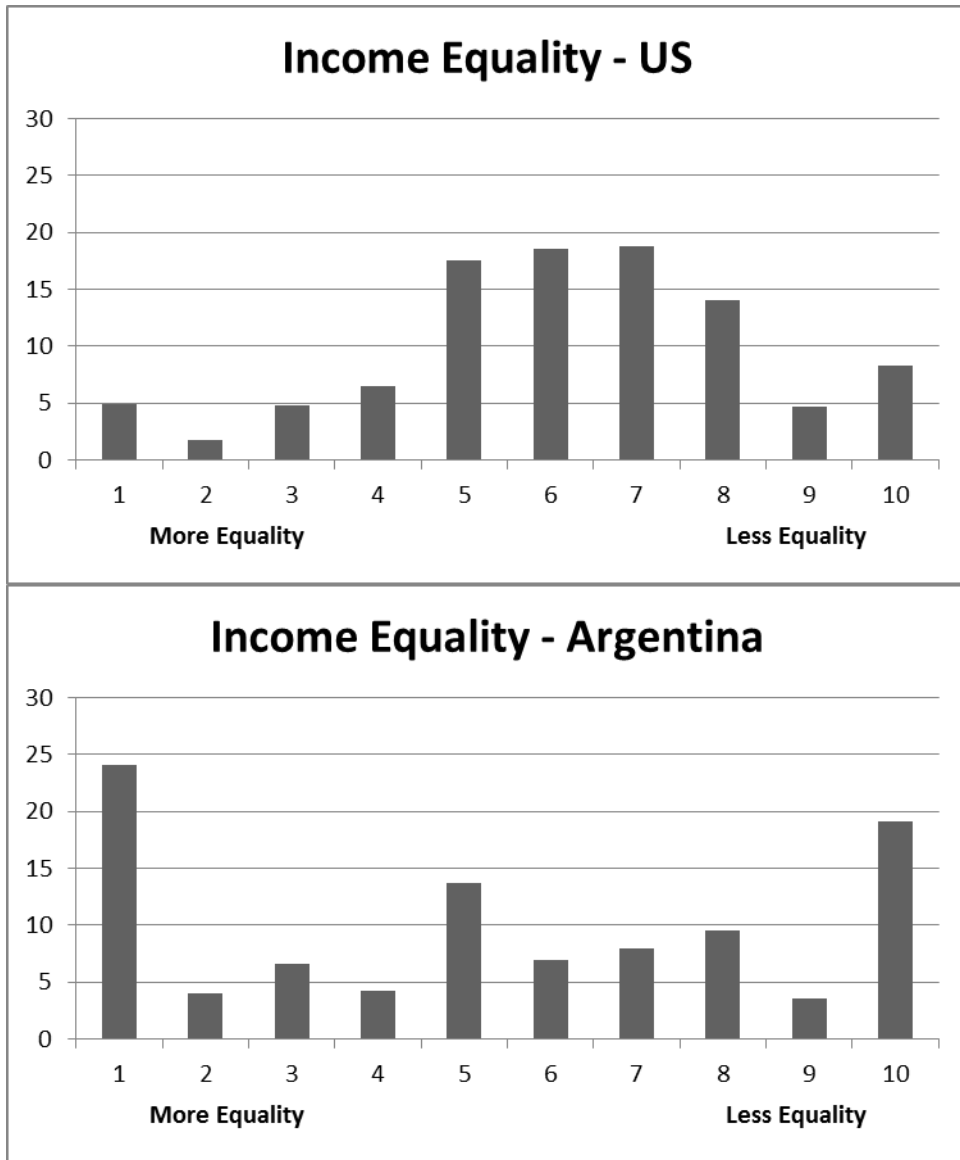


Figure 2b

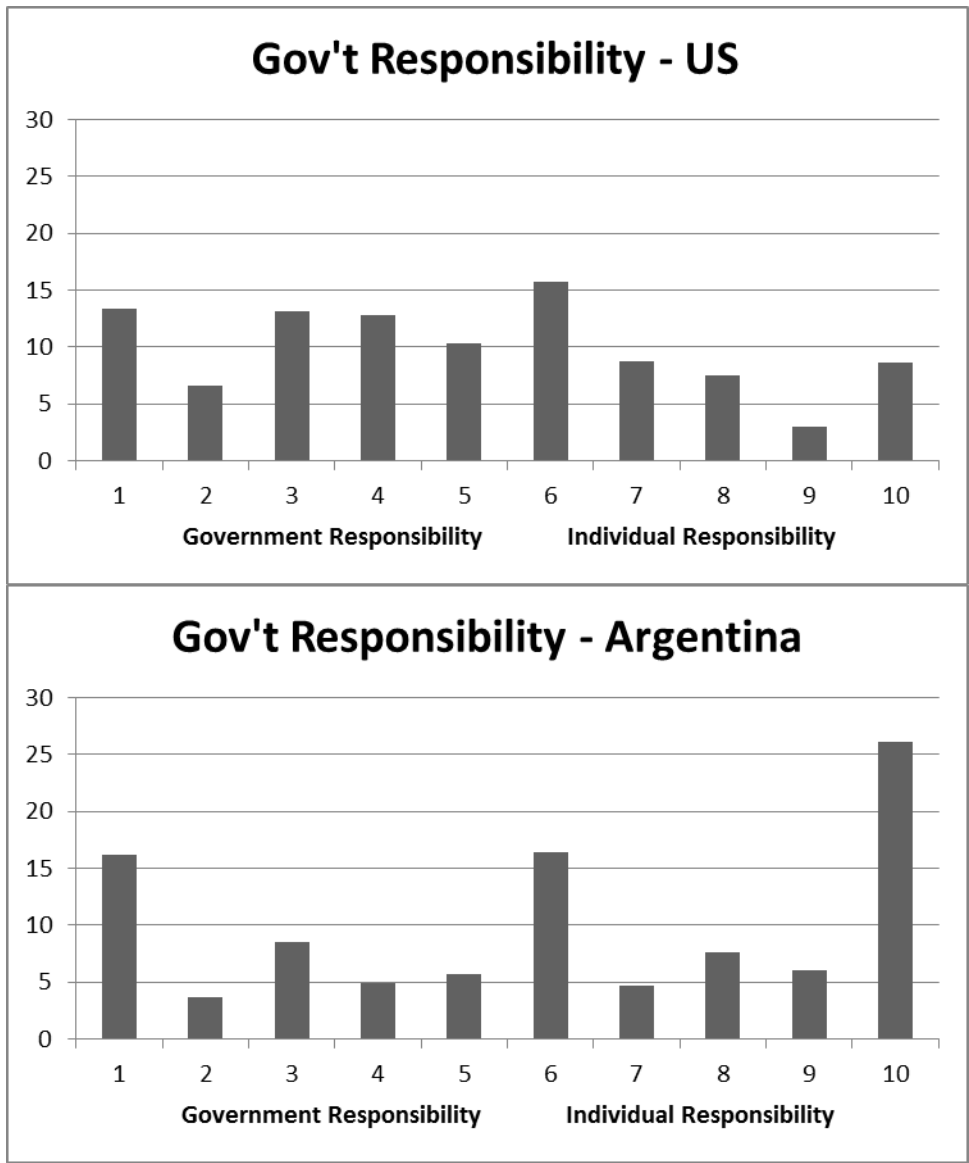
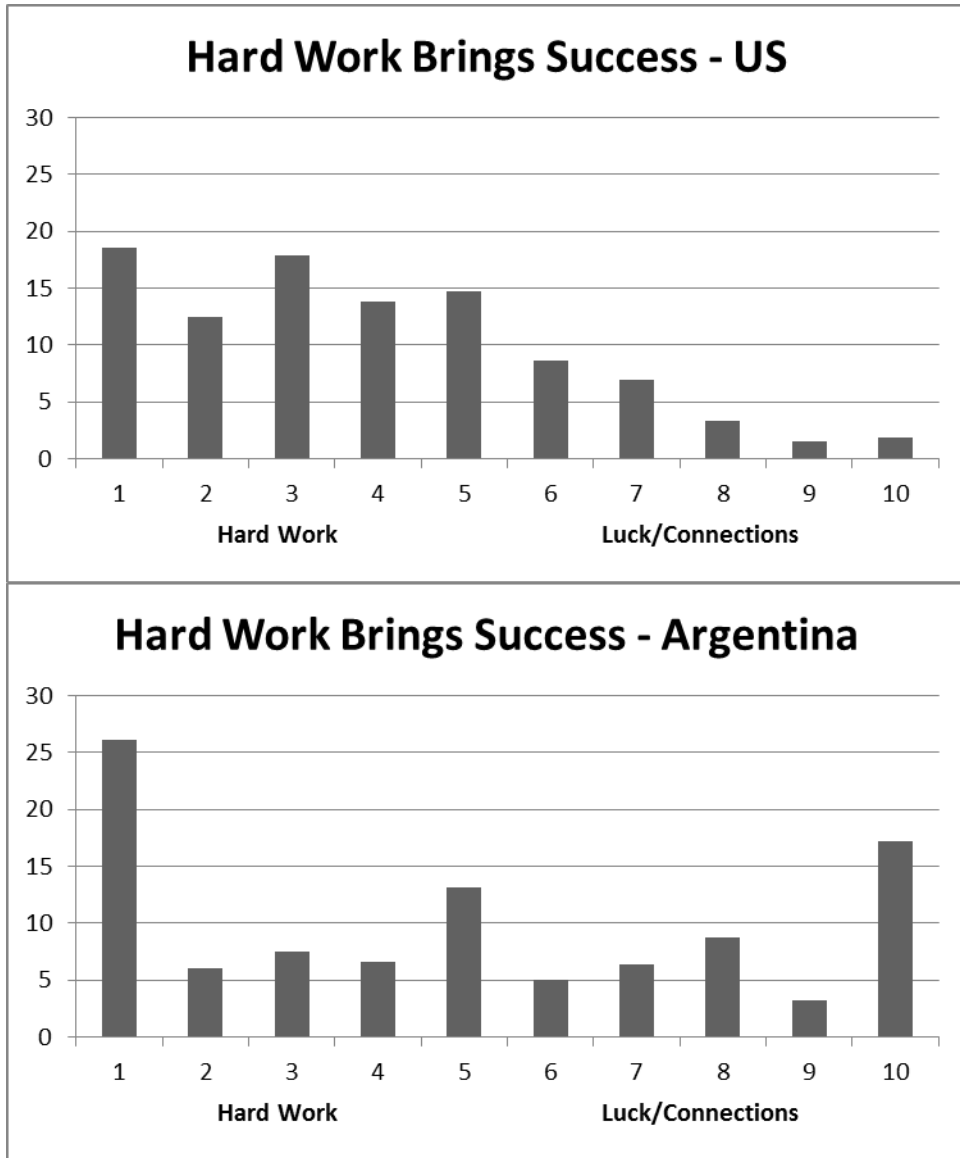


Figure 2c



Data Appendix I: Sources of Various Economic Indicators

Indicator Name	Creator	Data source
Gini for OECD countries	OECD	http://stats.oecd.org
Gini for Non-OECD countries	World Bank	http://data.worldbank.org/indicator/SI.POV.GINI
Political Rights Index	Freedom House	http://www.freedomhouse.org
Economic Freedom Index	Heritage Foundation	http://www.heritage.org/index
Government Accountability Index	World Bank	http://info.worldbank.org/governance/wgi/index.aspx
Index of Democracy	<i>The Economist</i> Magazine	http://www.economist.com/topics/economist-intelligence-unit

Data Appendix II: WVS Country – Waves Included in this Study

Albania (3); Argentina (2,3,5); Armenia (3); Australia (3,5); Azerbaijan (3); Bangladesh (3); Belarus (2,3); Brazil (2,3,5); Bulgaria (3,5); Burkina Faso (5); Canada (4,5); Chile (2,3,4,5); China (2,3,4,5); Columbia (3,5); Croatia (3); Cyprus (5); Czech Republic (2,3); Dominican Republic (3); Egypt (4,5); El Salvador (4); Estonia (3) Finland (3,5); Georgia (3,5); Germany (5); Ghana (5); Great Britain (3,5); Guatemala (5); Ethiopia (5); France (5); Hungary (3); India (2,3,4,5); Indonesia (4,5); Iran (4,5); Israel (4); Italy (5); Japan (2,3,4,5); Jordan (4,5); Kyrgyzstan (4); Latvia (3); Lithuania (3); Malaysia (5); Mali (5); Mexico (3,4,5); Moldova (3,4,5); Morocco (4,5); Netherlands (5); New Zealand (3,5); Nigeria (3,4); Norway (3,5); Pakistan (3,4); Peru (3,4,5); Philippines (3,4); Poland (2,3,5); Romania (3,5); Russia (2,3,5); Rwanda (5); Singapore (4); Slovakia(2,3);Slovenia (3,5); South Africa (3,4,5); South Korea (3,4,5); Spain (2,3,4,5); Sweden (3,5); Switzerland (3,5); Taiwan (3,5); Tanzania (4); Thailand (5);Turkey (2,3,4,5); Uganda (4); Ukraine (3,5); United States (3,4,5); Uruguay (3,5); Venezuela ((4); Vietnam (4,5).