On Line Appendix of "The Cultural Transmission of Environmental Values: a Comparative Approach"

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Appendix A Variable Definitions and Sources

Appendix A.1 EVS Variables

Main definitions and variables of interest

Marginal Willingness to Pay for the Environment. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? I would give part of my income if I were certain that the money would be used to prevent environmental pollution". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

Marginal Willingness to Pay for the Environment (Origin Country). The variable is constructed by computing the mean marginal willingness to pay at the origin country. Migrants are excluded from the sample. Moreover individual weights are taken into account. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? I would give part of my income if I were certain that the money would be used to prevent environmental pollution". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

In our sample there are some migrants that declare as country of origin (or parental origin) countries that do not currently exist in the same format. In these case we have assigned to them the mean value of the marginal willingness to pay (MWP) for the environment of the political successor of the origin country. Migrants coming from Czechoslovakia are assigned the mean MWP of the Czech Republic and Slovakia. Migrants coming from Kosovo are assigned the MWP of Albania. Migrants coming from the Soviet Union are assigned the mean MWP of Russia. Migrants stating that they come from the German Democratic Republic are assigned the mean MWP of Germany. Migrants denoting that they are of Yugoslavian origin are assigned the MWP in Serbian. Return migrants i.e. migrants born in a foreign country but resident in the country of origin of the father are excluded from the sample

First Generation Migrants. First generation migrants are identified using the question "Were you born in [COUNTRY]?". The variable is binary with 1 denoting "yes" and 0 denoting "no".

Second Generation Migrants. Second generation migrants are identified using the questions "Was your father/mother born in [COUNTRY]?". The variable is binary with 1 denoting "yes" and 0 denoting "no"

Origin Country. To identify the origin country of the first and second generation migrants the following questions are used "In which country was your father (mother) born?". The migrant is associated with his father's (mother's) country of origin.

Country of Origin: other controls

Income per Capita. GDP per capita is gross domestic product divided by midyear population. GDP (current 2000%$) is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. The data comes from the 2000 World Development Indicators dataset.

% Extreme left The variable is constructed based on the question "Which political party would you vote for? Left/right scale". The variable is the share of respondents answering values from 1-3

% Extreme right The variable is constructed based on the question "Which political party would you vote for? Left/right scale". The variable is the share of respondents answering values from 8-10

education expenditure, % of GDP: total public expenditure (current and capital) on education expressed as a percentage of GDP in a given year. Public expenditure on education includes government spending on educational institutions (both public and private), education administration, and transfers/subsidies for private entities (students/households and other privates entities) (Source: World Bank, World Development Indicators).

Pupils to Teachers ratio, primary (secondary) school: Number of pupils enrolled in primary (secondary) school divided by the number of primary (secondary) school teachers, computed by the UNESCO Institute for Statistics (Source: World Bank, World Development Indicators).

% Democracy in the origin country These are constructed as binary variables based on the the duration of political system tenure (tensys) in the country of origin provided that democracy guarantees executive electoral competitiveness ($eiec \leq 6$) (Source: World Bank, Database for Political Institutions)

Age of in the origin country These are constructed as binary variables based on the age of parties in the country of origin, *partyage* (Source: World Bank, Database for Political Institutions).

Average trust for environmental organization in the origin country The variable is an average in the country of origin of the answer to the question "Please look at this card and tell me, for each item listed, how much confidence you have in them, is it a great deal, quite a lot, not very much or none at all? Environmental Organizations". The variable takes values from 1-4 with 1 denoting "A great deal", 2-"quite a lot", 3-"not very much" and 4-"None at all".

% volunteering for the environment in the origin country The variable is the % of native respondents that belong to an environmental organization or work unpaid for the environment in the country of origin.

Nitrus Oxide Emissions. Nitrous oxide emissions is measured as thousand metric tons of CO2 equivalent. It measures emissions from agricultural biomass burning, industrial activities, and livestock management. The data comes from the 2000 World Development Indicators dataset.

Individual Controls

Age. The age of the respondent.

Female. A binary variable taking the value of 1 if the individual is a female and 0 if the individual is a man.

Education. Education is an ordered variable taking values from 1-3 with 1 denoting "tertiary completed", 2 denoting "secondary completed" and 3 denoting"primary completed". The same classification is used for the controls of paternal, maternal and spouse education.

Income. Denotes the monthly household income (x1000), corrected for ppp in euros

Employment Status. The employment status of the respondent is a categorical variable taking values from 1-4 as follows: 1-"full-time", 2–"part-time or self-employed", 3-"not participant (student, hw, retired, other)", 4-"unemployed".

Occupation Status. The occupation status of the respondent is a categorical variable taking values from 1-4 as follows: 1-"managers, professionals, technical wks" 2-"clerks" 3-"service" 4-"skilled manuals" 5-"unskilled". The same classification is used for the controls of paternal, maternal and spouse education.

Marital Status. The marital status of the respondent is categorical variable taking values from 1-3 classified as follows: 3 "married", 2 "divorced/separated/widowed" and 1 "single".

Child. Child is a binary variable taking the value 1 if there is "at least one child in the household" and 0 otherwise.

Employment Status. The employment status of the respondent is an ordered variable taking values from 1-4 as follows: 1 "full-time" 2 "part-time or self-employed" 3 "not participant (student, hw, retired, other)" 4 "unemployed".

Town Size. The variable denotes the town size in thousand inhabitants classified as follows: 1-"below 5", 2-"5-20" , 3-"20-100" ,4 -100-500" ,5-"over 500".

Years Since Migration. Denotes the year since the migrant moved to the host country.

Individual Preferences Controls

Belong to Environmental Organization. The variable is derived from the question "Do you belong to an environmental organization?". The variable is binary and takes the value 1 if the answer is "yes" and 0 otherwise.

Work Unpaid for the Environment. The variable is derived from the question "Do you work unpaid for the environment ". The variable is binary and takes the value 1 if the answer is "yes" and 0 otherwise.

Work Unpaid for any Organization. The variable is derived from the question "Do you work unpaid for any organization? ". The variable is binary and takes the value 1 if the answer is "yes" and 0 otherwise.

Trust. The variable is derived from the question "Do you think most people can be trusted or one can't be too careful? ". The variable is binary and takes the value of 0 if the answer is "most people can be trusted" and 1 if the answer is "cannot be too careful".

Left-Right Orientation. The variable is constructed based on the question "Which political party would you vote for? Left/right scale". The variable takes values from 1-10 with 1 denoting "left" and 10 denoting "right".

Distrust in Environmental Organizations. The variable is derived from the question "Please look at this card and tell me, for each item listed, how much confidence you have in them, is it a great deal, quite a lot, not very much or none at all? Environmental Organizations". The variable takes values from 1-4 with 1 denoting "A great deal", 2-"quite a lot", 3-"not very much" and 4-"None at all".

Volunteering for the environment. The variable is binary and takes the value of 0 if the respondent belongs to an environmental organization or works unpaid for the environment, 0 otherwise.

Human interference is disastrous. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? environment: human interference — produces disastrous consequences". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

Human ingenuity is good. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? Human ingenuity insures earth remaining fit". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

Humans are meant to rule over nature. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? Humans were meant to rule over nature". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

Environmental catastrophe. Respondents are given the statement "I am now going to read out some statements about the environment. For each one read out, can you tell me whether you agree strongly, agree, disagree or strongly disagree? Environment: if things continue like this we will experience a catastrophe". The variable takes values from 1-4 with 1 denoting "Strongly Disagree", 2-"Disagree", 3-"Agree" and 4-"Strongly Agree".

Heterogeneity

Citizenship. A binary variable that takes the value 1 if the individual is a citizen of the host country and 0 otherwise.

More than 20 years in the Host country. A binary variable that takes the value 1 if the individual lived more than 20 years in a country, 0 otherwise.

Importance Attached to Speaking the Host Language. The variable is derived from the question "Some people say the following things are important for being truly [NATIONALITY]. Others say they are not important. How important do you think each of the following is? To be able to speak [THE NATIONAL LANGUAGE]". The variable takes values from 1–4 with 1 denoting "Very Important", 2-"Quite Important", 3-"Not Important", and 4-"Not Important at All".

Importance Attached to Having a Country's Ancestry. The variable is derived from the question "Some people say the following things are important for being truly [NATIONALITY]. Others say they are not important. How important do you think each of the following is? To have been born in [COUNTRY]". The variable takes values from 1–4 with 1 denoting "Very Important", 2-"Quite Important", 3-"Not Important", and 4-"Not Important at All".

Importance Attached to Having Lived Long in a Country. The variable is derived from the question "Some people say the following things are important for being truly [NATIONALITY]. Others say they are not important. How important do you think each of the following is? To have lived for a long time in [COUNTRY]". The variable takes values from 1–4 with 1 denoting "Very Important", 2-"Quite Important", 3-"Not Important", and 4-"Not Important at All".

Importance Attached to Respecting a Host Country's Law. The variable is derived from the question "Some people say the following things are important for being truly [NATIONALITY]. Others say they are not important. How important do you think each of the following is? To respect [COUNTRY]'s political institutions and laws". The variable takes values from 1–4 with 1 denoting "Very Important", 2-"Quite Important", 3-"Not Important", and 4-"Not Important at All".

Importance Attached to Friends. The variable is constructed based on the question "Please say, for each of the following, how important it is in your life. Friends and Acquaintances". The variable is classified as follows: 1-"very important", 2-"quite important", 3-"not important", 4-"not important at all".

Importance Attached to Family. The variable is constructed based on the question "Please say, for each of the following, how important it is in your life. Family". The variable is classified as follows: 1-"very important", 2-"quite important", 3-"not important", 4-"not important at all".

Father Reading Books. The variable is constructed based on the question "When you think about your parents when you were about 14 years old, could you say whether these statements correctly describe your parents? My father liked to read books". The variable is classified as follows: 1-"yes", 2-"to some extend", 3-"don't know", 4-"no".

Occurrence of Political Discussions with Father. The variable is constructed based on the question "When you think about your parents when you were about 14 years old, could you say whether these statements correctly describe your parents? I discussed politics at home with my father". The variable is classified as follows: 1-"yes", 2-"to some extend", 3-"don't know", 4-"no".

Father's Pleasure about Following the News. The variable is constructed based on the question "When you think about your parents when you were about 14 years old, could you say whether these statements correctly describe your parents? My father liked to follow the news". The variable is classified as follows: 1-"yes", 2-"to some extend", 3-"don't know", 4-"no".

Experience a Parent's Divorce. The variable is derived from the question "Did you even experience a parent's divorce? ". The variable is binary and takes the value 1 if the answer is "yes" and 0 otherwise.

Experience a Father's Death. The variable is derived from the question "Did you even experience a father's death? ". The variable is binary and takes the value the value 1 if the answer is "yes" and 0 otherwise.

Alternative Environmental Quality Measures

Organic Water Pollutant (BOD) Emissions (kg per day). Emissions of organic water pollutants are measured by biochemical oxygen demand, which refers to the amount of oxygen that bacteria in water will consume in breaking down waste. This is a standard water-treatment test for the presence of organic pollutants. Source: World Bank Indicators (2000).

Agricultural methane emissions. Agricultural methane emissions are emissions from animals, animal waste, rice production, agricultural waste burning (nonenergy, on-site), and savannah burning. Source: World Bank Indicators (2000).

CO2 Emissions (kt). Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring. Source: World Bank Indicators (2000).

PM10-Particulate Matter Concentrations Particulate matter concentrations refer to fine suspended particulates less than 10 microns in diameter (PM10) that are capable of penetrating deep

into the respiratory tract and causing significant health damage. Data for countries and aggregates for regions and income groups are urban-population weighted PM10 levels in residential areas of cities with more than 100,000 residents. The estimates represent the average annual exposure level of the average urban resident to outdoor particulate matter. The state of a country's technology and pollution controls is an important determinant of particulate matter concentrations. Source: World Bank Indicators (2000).

EPI Index It is a composite index of environmental quality reflecting environmental health, ecosystem vitality and climate and energy. We use the 2002 index which is the earliest available index. Source: http://epi.yale.edu.

Low-High Income Dummy. To construct this measure we used the World Bank classification (http://data.worldbank.org/news/new-country-classifications accessed on 17/09/2015). We construct a binary variable that takes the value of 0 if per capita GNI is lower than $12.615 and the value of 1 otherwise.

Eastern-Western Dummy. The dummy takes the value of 1 if the country belonged to the Western Block and 0 otherwise.

Appendix B Summary Statistics

Table Appendix B.1: Classification of Migrants

	(1)	(2)	(3)
Country of Origin	All Migrants	First Gen. Migrants	Second Gen. Migrants
Albania	32	28	4
Armenia	35	20	14
Austria	17	8	8
Azerbaijan	50	36	14
Belarus	98	60	38
Belgium	74	53	21
Bosnia-Herzegovina	153	95	56
Bulgaria	21	14	6
Croatia	67	42	24
Cyprus	2	2	15
Czech Republic	33	17	3
Czechoslovakia	6	3	9
Denmark	20	11	6
Estonia	9	3	14
Finland	33	19	30
France	93	63	12
Georgia	30	18	56
Germany	168	107	61
Great Britain	54	14	9
Greece	29	14	15
Hungary	46	15	31
Iceland	4	3	1
Ireland	7	7	0

Summary: The table presents the number of migrants coming from each EVS country.

TABLE APPENDIX B.2: Heterogeneity: Alternative Migration cohorts

	All Migrants			
	MWP coef. (Origin)	(SE)	R sq.	Obs
(i) $\lessgtr$ 10 years spent in the Host country				
More than 10 years in the Host country	0.21***	(0.06)	0.12	2855
Less than 10 years in the Host Country	0.14	(0.48)		
p-value on test of equal coefficients		0.75		
(ii) $\lessgtr$ 30 years spent in the Host country				
More than 30 years in the Host country	0.25***	(0.062)	0.124	2855
Less than 30 years in the Host country	0.11	(0.085)		
p-value on test of equal coefficients		0.19		
(iii) $\lessgtr$ 40 years spent in the Host country				
More than 40 years in the Host country	0.26***	(0.065)	0.125	2855
Less than 40 years in the Host country	0.11	(0.08)		
p-value on test of equal coefficients		0.12		

Notes: All specifications include the usual set of controls. Standard errors clustered at the country of origin level in parentheses. ***: 1% **:5% *:10%

TABLE APPENDIX B.3: Migrants coming from Eastern-Western BLock/ Rich-Poor Countries

	All Migrants			
	MWP coef. (Origin)	(SE)	R sq.	Obs
(1) Eastern-Western Country				
Country belonged to the Western Block	0.220***	(0.056)	0.123	2855
Country belonged to the Eastern Block	0.224***	(0.060)		
(2) Rich-Poor Country				
Poor *country (per capita GNI* $\leq$12.615 \$)	0.212***	(0.061)	0.123	2833
Rich country (per capita GNI $\leq$12.615 \$)	0.198***	(0.067)		
(3) Eastern-Western/Rich-Poor Country				
Western-Poor	0.205***	(0.063)	0.123	2833
Western-Rich	0.201***	(0.065)		
Eastern-Poor	0.221***	(0.064)		
Eastern-Rich	0.199***	(0.342)		

Notes: All specifications include the usual set of controls. Standard errors clustered at the country of origin level in parentheses. ***: 1% **:5% *:10%

Table Appendix B.4: Cohort Analysis

	(1)	(2)	(3)	(4)
	Cohort Marginal Willingness to Pay for the Environment			
	1916-1970 Cohort	1971-2008 Cohort	All Immigrants	
Mean WTP (Origin Country)	0.278***	0.197*	0.273***	
	(0.100)	(0.103)	(0.082)	
Mean WTP (Origin Country) X 1916-1970 Cohort				0.245***
				(0.085)
Mean WTP (Origin Country) X 1971-2008 Cohort				0.279***
				(0.082)
Host Country FE	Yes	Yes	Yes	Yes
Full Set of Controls	Yes	Yes	Yes	Yes
R-Squared	0.415	0.658	0.484	0.504
Observations	1111	469	1580	1580

Notes: The table establishes that current MWP at the origin country is a good proxy of the culture of immigrants belonging either to the 1916-1970 cohort, or to the 1971-2008 cohort. All specifications include the usual set of controls. Standard errors clustered at the country of origin level in parentheses. ***: 1% **:5% *:10%