Learning to Love Globalization:
Education and Individual Attitudes Toward International Trade

Jens Hainmueller and Michael J. Hiscox

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Supplement I:
Detailed Results from Additional Analysis and Sensitivity Tests

A. Introduction

This supplement to our paper reports the detailed results obtained from additional analysis and from the various tests we performed to check whether our core results were robust to changes in various methodological assumptions and techniques. These results were excluded from the paper itself in order to economize on space. All the data and program files needed to replicate these results are available now from the authors and are posted at: http://www.people.fas.harvard.edu/~jhainm/HainmuellerHiscox_IOa.html

Below we simply present the additional results in the order in which they are referenced in our paper. The idea here is to make it easier to refer to the supplement while reading the paper itself. Section references (provided in parentheses below) indicate the location of the reference to these results in the paper. Since most variables and specifications are discussed in the paper itself, we provide few additional comments here.

B. Results for NES data using age dummies and dichotomous race variable

Table 1 reports the estimations of all our NES models (as reported in the paper Table 1) simply using different versions of the covariates age and race. The motivation here is to mirror as closely as possible the models presented in Scheve and Slaughter (2001b). Instead of the continuous AGE measure use in the paper, we follow Scheve and Slaughter and rely on a full set of age dummies here. For each group of respondents between 18-29, 30-44, and 45-59 years of age, we created indictor variables coded 1 if a respondents falls within a specific age category and 0 otherwise. Note that the reference category is those above 59 years of age. Moreover, instead of the full set of race dummies (BLACK, WHITE, INDIAN, ASIAN) we use in the paper, in this model we follow Scheve and Slaughter and employ only a single RACE dummy variable coded 1 if a respondent is white and 0 if otherwise. Apart from the change in these two covariates the specification is identical to the one in table 1 in the paper.

[Table 1]

As reported in the paper, the results are substantively identical when these age and race covariates are changed as indicated above. All magnitudes of the point estimates as well as levels of significance are very similar to the findings reported in table 1 in the paper.

The same holds true if we replicate our partner split tests respectively. Table 2 displays the re-estimations of our table 2 in the paper, where we break down the labor market groups according to whether respondents currently live with a partner or not for, just replacing age and race as indicated above. Again the findings remain substantively unaffected.

[Table 2]

C. Results of split-sample test for World Values Survey (WVS) data

In this section we present the results for the estimations of our split sample tests using data from the third wave of the WVS survey carried out in 1995-1997. The third wave of the WVS provides information on some 68,500 respondents drawn in stratified samples from 54 countries. Mayda and Rodrik (2004) have briefly examined this data and we closely follow their re-coding and estimation strategy here. Thus, we derive our dependent variable from responses to the following question:

Do you think it is better if:

1. *Goods made in other countries can be imported and sold here if people want to buy them; or that:*
2. *There should be stricter limits on selling foreign goods here, to protect the jobs of people in this country; or*
3. *Don't know.*

Following Mayda and Rodrik we constructed a binary variable, PRO-TRADE DUMMY, set equal to 1 if the individual answered (1), and equal to 0 if the individual answered (2) or (3). Missing values (no answer) were kept as missing values.

We use two measures of education. First, a continuous measure that records each respondent's highest level of educational attainment, SCHOOLING (WVS), coded on a 1-9 scale from (1) no formal education to (9) university level education, with degree. Second, we use a full set of highest educational attainment dummies.

As we note in the paper, the cross-national comparability of the continuous education score seems also highly questionable: the individual country surveys in the WVS included very different educational attainment codes and the survey documentation is unclear about how (and whether) these codes have been merged.[1] Therefore, we think the WVS data does not provide a firm foundation for estimating the effect of education on trade preferences; the results are only shown for reasons of transparency.

Our estimation strategy is identical to that one applied in the paper. We estimate two series of binary probit models in which the PRO-TRADE DUMMY is estimated using either SCHOOLING or the set of education dummy variables and other covariates. We estimated all the models for all sub-samples using two sets of controls. Our baseline specification just includes the covariates AGE, GENDER, and NATIVE BORN and a full set of country fixed effects. Our second

[1] The survey administered in Denmark contained 16 educational categories, for instance, while the Brazil survey accounted for only 4 categories. The final WVS data set includes 9 educational codes for 17 countries (including Brazil!). Precisely how the country-specific codes were converted to the general codes is not explained in the WVS documentation.

set adds a SCHOOLING*GDP multiplicative term that interacts the educational attainment measure with the log of GDP per capita in the respondent's country alongside the main effect of SCHOOLING.[2] This mirrors precisely the "factor endowments model" as presented in Mayda and Rodrik (2004, p. 10, Table 5, column 1). The idea here is to capture potential cross-country heterogeneity with respect to the education effect. Given Mayda and Rodrik's results the SCHOOLING*GDP interaction term should enter positive. In every model we calculate robust standard errors allowing for within-country clustering. (See the paper for descriptions of all variables and summary statistics).

Again we created sub-samples of the full WVS survey sample, separating those who were in paid work from those not in paid work. Since the WVS variable coding the employment status of respondents also differentiates between those in full-time, part-time, and self employment, we define those in (and not in) paid work using all three possible combinations.[3] And again, we have estimated the models separately for those individuals who are retired. We estimated all models for the full sample first, and then for each particular sub-sample. The results are reported in Table 3, which displays just the estimated marginal effects of education on trade preferences.

[Table 3]

There are slightly larger differences in the effects of education across the sub-samples, with effects appearing somewhat larger among those individuals in paid work than for those who were not working or simply retired, although we cannot reject the hypothesis that these effects were identical (at the 95 percent level of confidence) – all of the 95 percent confidence intervals around the estimated effects of education were overlapping (all of the estimated effects were significant and positive). For example, going from the lowest to the highest level of educational attainment (no formal education to a completed college degree), while holding the other covariates at the respective sample means, increases the probability of favoring free trade by about 0.17 in the full sample, by about 0.22 for those respondent currently in (full-time) work, by about 0.13 for those currently not in (full time) work, and by about 0.13 for the retired. The education effects become even more similar across sub-samples once cross-country heterogeneity is taken into account (lower panel). For example, for the SCHOOLING variable, both the lower order term and the multiplicative term with GDP per capita are almost identical across sub-samples. Moreover, we again find that that the relationship between education and trade preferences largely hinges on college education: only the variables measuring exposure to college and higher education have a robust and significant (positive) effect on support for free trade.

It needs to be noted that the results here lend some support to the hypothesis that the education effect increases with higher levels of GDP per capita, as the multiplicative term SCHOOLING*GDP enters consistently positive and highly significant in the estimations. Given the problems with the education proxy in the WVS data, however, we do not place much confidence in this result. Even if we take these estimates at face value, it is important to keep in mind that the

[2] GDP per capita data is taken from the WDI (1995 current international dollars, adjusted for purchasing power parity). Note that the direct effect of country GDP per capita on the attitudes of respondents is captured by the country dummies and is not estimated separately. See Mayda and Rodrik (2004, 13) for a detailed discussion of the specification.

[3] The sub-samples are determined by answers to a question asking respondents about their current employment status. Answer choices included: full-time employed, part-time employed, less than part-time employed, helping family member, unemployed, student, homemaker, retired, and permanently disabled. Our currently in (not in) paid work sub-sample includes all those (not) answering "employed (either part-time or full time)" to this question.

WVS data actually covers very few skill-scarce economies, so – like the ISSP data examined in the paper – they do not provide especially compelling or critical tests of the Stolper-Samuelson theorem.[4]

We now turn to the PEW data, which we believe provides much more reliable, cross-national measures of education levels among respondents, and also a much broader coverage of skill-abundant and skill-scarce economies.

D. Results for PEW data

In this section we present the results for the estimations of our split sample tests using data from the Global Attitudes Project survey administered by Pew in 2002. In 44 national surveys, based on interviews with more than 38,000 people, this study explores public views about the rapid pace of change in modern life; global interconnectedness through trade, foreign investment and immigration, and people's attitudes toward democracy and governance.[5]

Hitherto, to our knowledge, this data has not been examined in by scholars interested in attitudes toward trade. The PEW data has some key advantages compared to the other datasets that have been used, including the NES, the ISSP, and the WVS data. First, the PEW data provides excellent cross-nationally comparable measures of educational attainment. Second, the PEW survey includes several good questions about respondents' attitudes toward globalization and international trade. Third, the PEW study covers a broader range of economies that are more heterogeneous in terms of their levels of skill endowments.[6]

The latter advantage is critical here, for tests of the Stolper-Samuelson theorem, so it is worth emphasizing. The poorest country in the ISSP dataset is the Philippines (GDP per capita of $3440) and the median (25th percentile) of the GDP per capita distribution of the countries is very close to Ireland with $ 17470 (Hungary with $9175). The poorest country in the WVS dataset is Nigeria ($825) and the median (25th percentile) of the GDP per capita distribution of the countries is very close to Venezuela with $6019 (the Philippines with $3722). In contrast, the poorest country in the PEW dataset is Tanzania ($513) and the median ($25^{th}$ percentile) of the GDP per capita distribution of the countries is very close to the Lebanon with $4211 (Angola with $1955).[7]

In our analysis of the PEW data we have experimented with using responses from of the survey questions about trade and globalization. The results are very similar regardless of which question we used. In order to economize on space here we focus on responses to the question we think is theoretically most appropriate, because it specifically relates the effect of trade to the respondent and his or her family:

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[4] See Baker, Andy (2006). Who Wants to Globalize? Consumer Tastes and Labor Markets in a Theory of Trade Policy Preferences. *American Journal of Political Science.* Forthcoming 2006.

[5] Details can be found at www.people-press.org.

[6] The counries provided in the PEW data are: Angola, Argentina, Bangladesh, Bolivia, Brazil, Bulgaria, Canada, China, Cote d'Ivoire, Czech Republic, Egypt, Arab Rep., France, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Jordan, Kenya, Korea, Rep., Lebanon, Mali, Mexico, Nigeria, Pakistan, Peru, Philippines, Poland, Russian Federation, Senegal, Slovak Republic, South Africa, Tanzania, Turkey, Uganda, Ukraine, United Kingdom, United States, Uzbekistan, Venezuela, and Vietnam.

[7] All GDP data are for the respective year when the survey was administered and given in 1995 international dollars, PPP adjusted.

Now thinking about you and your family – do you think the growing trade and business ties between our country and other countries are very good, somewhat good, somewhat bad or very bad for you and your family? (If face-to-face: SHOW CARD)

1 Very good
2 Somewhat good
3 Somewhat bad
4 Very bad
5 Don't know (DO NOT READ)
6 Refused (DO NOT READ)

In order to allow for an easy summary of the results, we have dichotomized these responses to a binary dependent variable PROTRADE coded 1 if the answer was "very good" or "somewhat good" and 0 if the answer was "somewhat bad" or "very bad." We have discarded the few don't knows and refused answers.

Using this dependent variable we estimated two series of binary probit models. The first series includes a limited set of covariates (age and gender plus country dummies) and either a continuous measure for years of SCHOOLING[8] or a full set of highest educational attainment dummies (PRIMARY, HIGHSCHOOL_INCOMPLETE, HIGHSCHOOL, and COLLEGE).[9] The reference category is those respondents with less than primary education. Our second set adds a SCHOOLING*GDP multiplicative term that interacts the continuous educational attainment measure with the log of GDP per capita in the respondent's country alongside the main effect of SCHOOLING.[10] A similar multiplicative specification was computed for the various educational attainment categories.

Again we created sub-samples of the full PEW survey sample, separating those who were in paid work from those not in paid work. Since the PEW variable coding the employment status of respondents also differentiates between those in full-time, part-time, and self employment, we define those in (and not in) paid work using all three possible combinations.[11] And again, we

[8] The schooling measure is coded from a question that asks "How old were you when you completed your full time education, either at school or at an institution of higher education? Please exclude apprenticeships. (IF STUDENT: How old will you be when you complete your education?)." We installed a cap at 32 (the most appropriate cut-off point given the distribution of the data). We also discarded those respondents that answered less than 6 years of age. We have rerun all analysis including these low education respondents with a dummy variable interacted with schooling and the results are substantively identical.

[9] The college category also includes those with post college education. Only five countries list a separate post college education. Also note that a separate college incomplete category could not be coded for all countries. Thus those with college incomplete are coded in the HIGHSCHOOL category. Results are very similar if we exclude these countries and reran the analysis with a COLLEGE_INCOMPLETE category.

[10] GDP per capita data is for the year 2002 and taken from the WDI (in 1995 current international dollars, adjusted for purchasing power parity). Note that the direct effect of country GDP per capita on the attitudes of respondents is captured by the country dummies and is not estimated separately. See Mayda and Rodrik (2004, 13) for a detailed discussion of the specification.

[11] The sub-samples are determined by answers to a question asking respondents about their current employment status. Answer choices included: Full-time employed, Part-time employed, Pensioner (and employed), Self-employed, Pensioner (not employed) Unemployed (no state benefit), Unemployed (receiving state benefit), No job, Other state income maintenance grant (e.g. invalid, maternity), Not employed (e.g. housewife, houseman, student), Don't know, and Refused. Our currently in (not in) paid work sub-sample includes all those (not) answering "employed (either part-time or full time or self

have estimated the models separately for those individuals who are retired. We estimated all models for the full sample first, and then for each particular sub-sample. The results are reported in Table 4, which displays just the estimated marginal effects of education on trade preferences.

[Table 4]

The findings mirror the results from the NES and the ISSP data. Most importantly, the effects of education across the sub-samples are almost identical. This is true for both the continuous SCHOOLING measure as well as the highest educational attainment dummies. Moreover, we again find that that the relationship between education and trade preferences largely hinges on college education: exposure to COLLEGE is the only dummy that has a robust and significant (positive) effect on support for free trade (compared to those with less than primary education). Again this college plateau effect is almost identical across sub-samples.

The lower panel shows the estimates when country heterogeneity in the education effect is taken into account. There seems to be no clear pattern here that would support the predictions based on the Stolper-Samuelson theorem. Since these coefficients are impossible to interpret directly, we provide a graphical summary of the results in Figure 1 below. For each country, we estimated the marginal effect of an additional year of schooling (evaluated at the sample means) according to the baseline specification. The solid diamonds decode the point estimates and the dashed lines shows the 90 confidence envelopes. The countries are lined up according to their skill endowment as measures by the log of GDP per capital in 2002 (PPP).

[Figure 1]

Two main findings emerge here. First there is no clear relationship between the marginal effect of education on support for trade among respondents and their countries' skill endowments. The pattern more resembles that of a drawing by expressionist painter Jackson Pollack than that of a clear upwards sloping line (what one would predict based upon a simple application of Stolper-Samuelson). Second, in <u>all</u> countries increased schooling has either a positive or zero effect on the probability of supporting free trade. This includes the Philippines which is the only case of a country abundant in low-skills for which Mayda Rodrik and found a negative relationship. These results thus refutes their central piece of evidence. Moreover, even most of the point estimates are positive, except for Canada, Ivory Coast, Mali, and Nigeria; not quite a cluster of countries with common skill endowments!

Overall these results strongly suggest that the impact of education levels on support for trade among individuals is not driven by differences in skill endowments across countries (and individual concerns about wage levels and job security) as suggested by a simple application of the Stolper-Samuelson theorem.

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employed)" to this question. Again, as above, we re-estimated all models, including the pensioners that say they are employed in the currently in paid work sub-samples and the results are very similar to the ones reported here.

Table 1: The Effect of Education on Trade Preferences across Sub-Samples – NES Data (with age dummies and dichotomous race variable)

Survey	NES 1992								NES 1996							
DV	*Trade_Opinion (1=Favor Protectionism, 0=Otherwise)*								*Trade_Opinion (1=Favor Protectionism, 0=Otherwise)*							
Mean DV	0.67								0.52							
SD DV	0.46								0.49							
Sub-sample	*Full Sample*	*Currently in Paid-Work*	*Currently not in Paid-Work*	*Retired*	*Full Sample*	*Currently in Paid-Work*	*Currently not in Paid-Work*	*Retired*	*Full Sample*	*Currently in Paid-Work*	*Currently not in Paid-Work*	*Retired*	*Full Sample*	*Currently in Paid-Work*	*Currently not in Paid-Work*	*Retired*
Model No.[1]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PANEL A: Limited Set of Covariates[2]																
Schooling	-0.047***	-0.057***	-0.031***	-0.028**					-0.058***	-0.059***	-0.043***	-0.040**				
	(0.006)	(0.008)	(0.008)	(0.011)					(0.010)	(0.012)	(0.015)	(0.016)				
Junior High					-0.033	0.024	-0.064	-0.049					0.117	0.076	0.098	0.191*
					(0.088)	(0.160)	(0.101)	(0.134)					(0.138)	(0.220)	(0.141)	(0.106)
High School					0.024	0.049	0.013	0.063					0.044	0.001	0.053	0.057
					(0.047)	(0.070)	(0.058)	(0.090)					(0.083)	(0.130)	(0.099)	(0.107)
Higher Education					-0.113**	-0.116	-0.079	-0.065					-0.030	-0.031	-0.101	-0.021
					(0.051)	(0.074)	(0.068)	(0.121)					(0.086)	(0.129)	(0.112)	(0.128)
College					-0.320***	-0.294***	-0.356***	-0.419***					-0.302***	-0.291***	-0.351***	-0.348**
					(0.053)	(0.073)	(0.097)	(0.134)					(0.079)	(0.113)	(0.121)	(0.149)
Graduate					-0.314***	-0.306***	-0.260**	-0.142					-0.342***	-0.321***	-0.370**	-0.260
					(0.061)	(0.081)	(0.114)	(0.150)					(0.075)	(0.101)	(0.165)	(0.202)
Observations	1604	1048	556	227	1563	1021	542	217	843	560	283	167	843	560	283	167
Log likelihood	-963.17	-646.36	-309.06	-130.44	-922.93	-621.49	-294.22	-117.13	-532.73	-360.94	-160.88	-89.77	-519.37	-353.81	-155.51	-86.74
Pseudo R-squared	0.05	0.06	0.03	0.04	0.07	0.07	0.05	0.09	0.09	0.07	0.11	0.13	0.11	0.09	0.14	0.16
PANEL B: Extensive Set of Covariates[3]																
Schooling	-0.049***	-0.056***	-0.032***	-0.025**					-0.057***	-0.055***	-0.044***	-0.051***				
	(0.006)	(0.008)	(0.008)	(0.012)					(0.010)	(0.012)	(0.016)	(0.016)				
Junior High					-0.031	0.008	-0.064	-0.027					0.111	-0.012	0.120	0.184*
					(0.099)	(0.169)	(0.119)	(0.140)					(0.150)	(0.242)	(0.133)	(0.106)
High School					0.035	0.071	0.021	0.088					0.058	-0.009	0.074	0.044
					(0.051)	(0.077)	(0.062)	(0.090)					(0.086)	(0.131)	(0.102)	(0.114)
Higher Education					-0.102*	-0.099	-0.060	-0.063					-0.006	-0.038	-0.048	-0.025
					(0.055)	(0.083)	(0.069)	(0.122)					(0.089)	(0.129)	(0.117)	(0.135)
College					-0.299***	-0.261***	-0.338***	-0.361**					-0.267***	-0.280**	-0.294**	-0.348**
					(0.058)	(0.083)	(0.102)	(0.146)					(0.085)	(0.114)	(0.134)	(0.162)
Graduate					-0.295***	-0.284***	-0.232**	-0.077					-0.318***	-0.319***	-0.300	-0.229
					(0.066)	(0.090)	(0.116)	(0.148)					(0.082)	(0.103)	(0.186)	(0.217)
Observations	1501	989	512	213	1463	964	499	203	815	537	278	166	815	537	278	166
Log likelihood	-891.41	-604.61	-276.87	-118.38	-856.19	-581.48	-264.52	-106.59	-507.73	-342.12	-154.21	-85.89	-497.52	-336.15	-150.82	-85.09
Pseudo R-squared	0.07	0.07	0.06	0.08	0.08	0.09	0.07	0.12	0.10	0.08	0.13	0.16	0.12	0.09	0.15	0.17

1. Probit estimations: coefficients are estimated marginal effects ($\partial F/\partial x_k$), i.e. the marginal effect on Pr(y=1), given a unit increase in the value of the relevant (continuous) regressor (x_k), holding all other regressors at their respective sample means. The discrete change in the probability is reported for binary regressors. Robust standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01. Each model includes a full set of controls of the respective covariates set (coefficients not shown here). Cases weighted by the respective NES sample weight (v923008 or v960003).
2. Limited Set of Covariates includes age dummies, gender, and race dummy.
3. Extensive Set of Covariates includes age dummies, gender, race dummy, union membership, party identification, and ideology. For details of variables see Scheve and Slaughter 2001a/b.

Table 2: The Effect of Education on Trade Preferences across Labor Market and Partner Sub-Samples (with age dummies and dichotomous race variable)

Survey	*NES 1992*											
DV	*Trade_Opinion (1=Favor Protectionism, 0=Otherwise)*											
Mean DV	*0.67*											
SD DV	*0.46*											
Sub-sample 1	*Full Sample*			*Currently in Paid-Work*			*Currently not in Paid-Work*			*Retired*		
Sub-sample 2	*All*	*Partner*	*No Partner*	*All*	*Partner*	*No Partner*	*All*	*Partner*	*No Partner*	*All*	*Partner*	*No Partner*
Model No.[1]	1	2	3	4	5	6	7	8	9	10	11	12
Panel A: Limited Set of Covariates plus Schooling[2]												
Schooling	-0.047***	-0.053***	-0.039***	-0.057***	-0.059***	-0.050***	-0.031***	-0.037***	-0.027**	-0.028**	-0.032**	-0.027*
	(0.006)	(0.007)	(0.009)	(0.008)	(0.009)	(0.013)	(0.008)	(0.011)	(0.011)	(0.011)	(0.015)	(0.016)
Observations	1604	981	623	1048	690	358	556	291	265	227	118	108
Log likelihood	-963.17	-582.12	-373.74	-646.36	-426.61	-215.14	-309.06	-154.38	-151.58	-130.44	-63.01	-66.06
Pseudo R-squared	0.05	0.07	0.04	0.06	0.06	0.07	0.03	0.05	0.05	0.04	0.08	0.03
Panel B: Limited Set of Covariates plus Educational Attainment Dummies[2]												
High School	0.037	0.103*	-0.098	0.054	0.108	-0.086	0.029	0.107	-0.093	0.067	0.209**	-0.045
	(0.041)	(0.053)	(0.071)	(0.062)	(0.076)	(0.135)	(0.051)	(0.067)	(0.086)	(0.080)	(0.083)	(0.129)
Higher Education	-0.100**	-0.100	-0.132*	-0.107	-0.100	-0.174	-0.067	-0.067	-0.074	-0.068	-0.035	-0.094
	(0.045)	(0.061)	(0.075)	(0.066)	(0.083)	(0.138)	(0.061)	(0.082)	(0.097)	(0.109)	(0.127)	(0.185)
College	-0.304***	-0.296***	-0.331***	-0.288***	-0.279***	-0.313**	-0.315***	-0.325***	-0.428***	-0.422***	-0.300*	-0.660***
	(0.048)	(0.063)	(0.083)	(0.066)	(0.081)	(0.141)	(0.089)	(0.125)	(0.125)	(0.123)	(0.174)	(0.100)
Graduate	-0.292***	-0.284***	-0.346***	-0.289***	-0.276***	-0.393***	-0.242**	-0.264**	-0.105	-0.172	-0.157	0.164
	(0.057)	(0.073)	(0.100)	(0.075)	(0.093)	(0.142)	(0.106)	(0.129)	(0.224)	(0.138)	(0.175)	(0.170)
Observations	1672	949	614	1101	666	355	571	283	259	227	112	104
Log likelihood	-981.94	-546.06	-367.62	-666.77	-401.98	-213.38	-308.77	-142.77	-145.84	-123.20	-53.64	-54.90
Pseudo R-squared	0.07	0.10	0.05	0.07	0.09	0.07	0.05	0.09	0.06	0.10	0.16	0.16

1. Probit estimations: coefficients are estimated marginal effects ($\partial F/\partial x_k$), i.e. the marginal effect on Pr(y=1), given a unit increase in the value of the relevant (continuous) regressor (x_k), holding all other regressors at their respective sample means. The discrete change in the probability is reported for binary regressors. Robust standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01. Each model includes a full set of controls of the respective covariates set (coefficients not shown here). Cases weighted by the NES sample weight (v923008).

2. Limited Set of Covariates includes age dummies, gender, and race dummies.

Table 3: The Effect of Education on Trade Preferences across Labor Market and Sub-Samples – WVS data

Survey	*WVS 1995-1997*							
DV	*Pro-Trade-Dummy WVS (1= Pro-trade 0 otherwise)*							
Mean DV	*0.33*							
SD DV	*0.47*							
Sub-sample	*Full Sample*	*Currently in Paid-Work (FT)*	*Currently not in Paid-Work (FT)*	*Currently in Paid-Work (FT+PT)*	*Currently not in Paid-Work (FT+PT)*	*Currently in Paid-Work (FT+PT+SE)*	*Currently not in Paid-Work (FT+PT+SE)*	*Retired*
Model No.[1]	1	2	3	4	5	6	7	8
PANEL A: Baseline Specification[2]								
Schooling	0.021***	0.029***	0.016***	0.026***	0.016***	0.025***	0.014***	0.015***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Observations	49930	18247	29300	22372	25175	26581	20966	7321
Log likelihood	-28829.62	-10953.52	-16376.46	-13401.25	-13937.56	-15758.17	-11583.66	-3891.01
Pseudo R-squared	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.06
Primary completed	-0.028	-0.015	-0.032*	-0.009	-0.034*	-0.012	-0.037**	-0.021
	(0.018)	(0.029)	(0.018)	(0.025)	(0.018)	(0.022)	(0.018)	(0.018)
High School Incomplete (Technical)	0.011	-0.004	0.022	-0.002	0.026	0.006	0.020	0.064**
	(0.017)	(0.033)	(0.017)	(0.029)	(0.018)	(0.021)	(0.018)	(0.029)
High School Complete (Technical)	0.038*	0.057	0.031	0.054*	0.033	0.047*	0.028	0.052*
	(0.022)	(0.039)	(0.022)	(0.032)	(0.023)	(0.026)	(0.025)	(0.027)
High School Incomplete (College Preparatory)	0.040	0.065	0.031	0.070*	0.027	0.066**	0.020	0.070**
	(0.024)	(0.043)	(0.025)	(0.039)	(0.027)	(0.031)	(0.028)	(0.028)
High School Complete (College Preparatory)	0.062**	0.064	0.065**	0.069*	0.064**	0.066**	0.058*	0.072*
	(0.028)	(0.045)	(0.029)	(0.039)	(0.029)	(0.033)	(0.030)	(0.039)
Higher Education	0.097***	0.148***	0.066***	0.145***	0.059**	0.137***	0.043	0.065**
	(0.026)	(0.042)	(0.025)	(0.037)	(0.026)	(0.032)	(0.027)	(0.033)
College	0.142***	0.192***	0.104***	0.177***	0.111***	0.169***	0.092***	0.096***
	(0.030)	(0.043)	(0.032)	(0.039)	(0.032)	(0.034)	(0.034)	(0.032)
Observations	49930	18247	29300	22372	25175	26581	20966	7321
Log likelihood	-28800.03	-10932.38	-16360.19	-13383.27	-13919.53	-15740.41	-11566.89	-3884.00
Pseudo R-squared	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.06
PANEL B: The Factor Endowments Model[3]								
Schooling	-0.110***	-0.119***	-0.109***	-0.120***	-0.104***	-0.115***	-0.112***	-0.120***
	(0.022)	(0.025)	(0.030)	(0.020)	(0.033)	(0.018)	(0.035)	(0.025)
Schooling*GDPcap	0.015***	0.017***	0.014***	0.017***	0.014***	0.016***	0.014***	0.015***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.004)	(0.002)	(0.004)	(0.003)
Observations	49508	18093	29032	22180	24945	26304	20821	7297
Log likelihood	-28474.59	-10823.51	-16156.23	-13237.78	-13753.58	-15531.41	-11457.55	-3863.19
Primary	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.06
Primary completed	-0.130	-0.362***	0.023	-0.293***	0.028	-0.114	-0.051	-0.276***
	(0.136)	(0.048)	(0.162)	(0.073)	(0.165)	(0.154)	(0.165)	(0.104)
Primary completed*GDPcap	0.014	0.061***	-0.005	0.043***	-0.006	0.014	0.002	0.035**
	(0.018)	(0.017)	(0.018)	(0.017)	(0.018)	(0.020)	(0.019)	(0.018)
High School Incomplete (Technical)	-0.201**	-0.263**	-0.188*	-0.272**	-0.157	-0.119	-0.216***	-0.149
	(0.094)	(0.127)	(0.101)	(0.118)	(0.121)	(0.141)	(0.079)	(0.165)
High School Incomplete (Technical)*GDPcap	0.029*	0.037	0.030	0.040	0.025	0.017	0.035**	0.027
	(0.016)	(0.025)	(0.018)	(0.025)	(0.019)	(0.019)	(0.017)	(0.029)
High School Complete (Technical)	-0.274***	-0.431***	-0.236**	-0.391***	-0.214*	-0.233**	-0.280***	-0.324***
	(0.105)	(0.127)	(0.094)	(0.108)	(0.111)	(0.118)	(0.100)	(0.061)
High School Complete (Technical)*GDPcap	0.041**	0.065***	0.037**	0.058***	0.033*	0.035**	0.045**	0.071***
	(0.017)	(0.024)	(0.016)	(0.019)	(0.018)	(0.017)	(0.021)	(0.027)
High School Incomplete (College Preparatory)	-0.228*	-0.369***	-0.132	-0.274**	-0.163	-0.171	-0.197	-0.250***
	(0.119)	(0.043)	(0.182)	(0.122)	(0.163)	(0.159)	(0.138)	(0.030)
High School Incomplete (College Preparatory)*GDPcap	0.038	0.082***	0.021	0.049*	0.025	0.030	0.031	0.063***
	(0.025)	(0.030)	(0.028)	(0.029)	(0.028)	(0.026)	(0.029)	(0.024)
High School Complete (College Preparatory)	-0.346***	-0.443***	-0.314***	-0.424***	-0.302***	-0.340***	-0.321***	-0.309***
	(0.075)	(0.056)	(0.078)	(0.058)	(0.081)	(0.088)	(0.069)	(0.028)
High School Complete (College Preparatory)*GDPcap	0.066***	0.089***	0.064**	0.083***	0.062**	0.060***	0.069**	0.113***
	(0.024)	(0.024)	(0.027)	(0.022)	(0.028)	(0.022)	(0.029)	(0.037)
Higher Education	-0.313***	-0.406***	-0.261***	-0.387***	-0.247***	-0.338***	-0.266***	-0.216***
	(0.046)	(0.021)	(0.067)	(0.029)	(0.075)	(0.051)	(0.062)	(0.083)
Higher Education*GDPcap	0.068***	0.110***	0.052**	0.095***	0.049**	0.075***	0.054**	0.048
	(0.019)	(0.019)	(0.021)	(0.019)	(0.022)	(0.020)	(0.024)	(0.035)
College	-0.432***	-0.553***	-0.378***	-0.542***	-0.356***	-0.484***	-0.358***	-0.324***
	(0.032)	(0.044)	(0.025)	(0.035)	(0.025)	(0.037)	(0.025)	(0.018)
College*GDPcap	0.114***	0.138***	0.113***	0.134***	0.109***	0.116***	0.117***	0.127***
	(0.019)	(0.022)	(0.021)	(0.017)	(0.023)	(0.017)	(0.025)	(0.022)
Observations	49508	18093	29032	22180	24945	26304	20821	7297
Log likelihood	-28445.39	-10800.67	-16133.50	-13218.12	-13730.94	-15512.98	-11437.00	-3852.53
Primary	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.06

1. Probit estimations: coefficients are estimated marginal effects ($\partial F/\partial x_k$), i.e. the marginal effect on Pr(y=1), given a unit increase in the value of the relevant (continuous) regressor (x_k), holding all other regressors at their respective sample means. The discrete change in the probability is reported for binary regressors. Robust standard errors in parentheses. * p<0.10 ** p<0.05 *** p<0.01. Each model includes a full set of controls of the respective covariates set (coefficients not shown here). Cases weighted by WVS sample weight.

2. Baseline Specification: Covariates includes age, gender, native born, and country dummies (this set of covariates is equal to Mayda and Rodrik 2004 Table 5).

3. The Factor Endowment Model Specification: Covariates includes age, gender, native born, a multiplicative term Ln(GDP per capita 1995, PPP)*attainment, and country dummies (this set of covariates is equal to Mayda and Rodrik 2004 Table 5, column 1). Note that the country dummies pick up the main effect of Ln(GDP).

Table 4: The Effect of Education on Trade Preferences across Labor Market and Sub-Samples – PEW data

Survey	2002 PEW Global Attitudes							
DV	Pro Free Trade Dummy (1 = Pro Free Trade, 0 against)							
Mean	0.87							
SD	0.37							
Sub Sample	Full Sample	Currently in Paid Work FT	Currently not in FT Paid Work	Currently in Paid Work FT+PT	Currently not in FT or PT Paid Work	Currently in Paid Work FT+PT+SE	Currently not in FT or PT or SE Paid Work	Retiered
Model No[1]	1	2	3	4	5	6	7	8
PANEL A: Baseline[2]								
schooling	0.004***	0.003***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004**
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Observations	26334	6933	16698	9353	14626	12993	10986	1730
Log likelihood	-8439.43	-2051.63	-5548.08	-2785.93	-4805.35	-3922.25	-3678.74	-636.97
Pseudo R-squared	0.12	0.12	0.14	0.13	0.14	0.14	0.14	0.06
PRIMARY	-0.016**	-0.014	-0.008	-0.025	-0.002	-0.023**	0.002	0.010
	(0.006)	(0.017)	(0.008)	(0.016)	(0.008)	(0.011)	(0.009)	(0.021)
HSCHOOLINCLP	0.003	-0.016	0.010	-0.009	0.011	-0.015	0.022**	0.057**
	(0.006)	(0.015)	(0.009)	(0.012)	(0.009)	(0.011)	(0.010)	(0.026)
HSCHOOL	0.022***	0.007	0.033***	0.009	0.035***	0.016**	0.036***	0.055**
	(0.004)	(0.010)	(0.006)	(0.008)	(0.007)	(0.007)	(0.009)	(0.022)
COLLEGE	0.055***	0.040***	0.059***	0.040***	0.060***	0.047***	0.056***	0.059**
	(0.006)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.009)	(0.025)
Observations	32939	7113	18974	9608	16838	13955	12491	1594
Log likelihood	-10928.22	-2215.39	-6582.51	-3005.68	-5782.00	-4403.50	-4395.10	-632.28
Pseudo R-squared	0.12	0.12	0.14	0.13	0.14	0.14	0.13	0.06
PANEL B: The Factor Endowment model[3]								
schooling	0.000	-0.007	0.002	-0.002	0.001	-0.004	0.006	0.008
	(0.004)	(0.007)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.017)
Lngdpcap*schooling	0.000	0.001*	0.000	0.001	0.000	0.001	-0.000	-0.000
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Observations	26334	6933	16698	9353	14626	12993	10986	1730
Log likelihood	-8438.87	-2050.26	-5548.00	-2785.44	-4805.18	-3920.71	-3678.68	-636.93
Pseudo R-squared	0.12	0.12	0.14	0.13	0.14	0.14	0.14	0.06
PRIMARY	0.088***	0.081*	0.079*	0.059	0.083**	0.064	0.089**	0.013
	(0.025)	(0.048)	(0.040)	(0.054)	(0.038)	(0.043)	(0.042)	(0.218)
Lngdpcap*PRIMARY	-0.017***	-0.016	-0.013	-0.012	-0.013*	-0.013	-0.014	-0.001
	(0.007)	(0.015)	(0.008)	(0.012)	(0.008)	(0.009)	(0.009)	(0.026)
HSCHOOLINCLP	0.047	0.100**	0.009	0.097***	-0.001	0.064	0.015	0.229***
	(0.046)	(0.041)	(0.085)	(0.037)	(0.088)	(0.052)	(0.088)	(0.073)
Lngdpcap*HSCHOOLINCLP	-0.006	-0.021	0.000	-0.019	0.001	-0.012	0.001	-0.062
	(0.007)	(0.015)	(0.011)	(0.012)	(0.010)	(0.011)	(0.011)	(0.044)
HSCHOOL	0.047	0.026	-0.026	-0.004	-0.002	0.039	-0.053	0.082
	(0.034)	(0.086)	(0.074)	(0.079)	(0.075)	(0.053)	(0.107)	(0.219)
Lngdpcap* HSCHOOL	-0.004	-0.002	0.007	0.001	0.005	-0.003	0.010	-0.004
	(0.005)	(0.011)	(0.008)	(0.009)	(0.009)	(0.008)	(0.011)	(0.032)
COLLEGE	-0.004	-0.144	0.087*	-0.020	0.042	0.005	0.010	0.162*
	(0.061)	(0.147)	(0.050)	(0.099)	(0.084)	(0.089)	(0.117)	(0.089)
Lngdpcap* COLLEGE	0.008	0.019*	-0.006	0.007	0.003	0.006	0.007	-0.024
	(0.007)	(0.011)	(0.013)	(0.011)	(0.013)	(0.011)	(0.014)	(0.034)
Observations	32939	7113	18974	9608	16838	13955	12491	1594
Log likelihood	-10921.67	-2211.06	-6579.77	-3003.07	-5779.82	-4401.23	-4392.94	-630.83
Pseudo R-squared	0.12	0.12	0.14	0.13	0.14	0.14	0.13	0.06

1. Probit estimations: coefficients are estimated marginal effects ($\partial F/\partial x_k$), i.e. the marginal effect on Pr(y=1), given a unit increase in the value of the relevant (continuous) regressor (x_k), holding all other regressors at their respective sample means. The discrete change in the probability is reported for binary regressors. Robust standard errors (adjusted for potential regional clustering) in parentheses. * p<0.10 ** p<0.05 *** p<0.01. Each model includes a full set of controls of the respective covariates set (coefficients not shown here). Cases weighted by PEW sample weight.

2. Baseline Specification: Covariates includes age, gender and country dummies.

3. The Factor Endowment Model Specification: Covariates includes age, gender multiplicative term Ln(GDP per capita 1995, PPP)*attainment, and country dummies. Note that the country dummies pick up the main effect of Ln(GDP).

Figure 1: The Marginal Effect of Schooling by Country Skill Endowment (PEW Data)
(evaluated at the respective sample means, diamonds signify point estimates, dashed lines are 90 confidence envelopes)