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# Nationalism and Economic Openness: The cross-country evidence revisited

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## Abstract

In this paper we examine the empirical relationship between economic openness and nationalism. We replicate and extend the cross-country analysis of Lan and Li (2015) using additional measures of nationalism and additional years of data from the World Values Survey. We fail to find the negative relationship between economic openness and nationalism that Lan and Li (2015) find, even when using the same data sources, years and sample of countries. When we expand the sample of countries and years of the data, we find no statistically significant relationship between economic openness and nationalism.

**Keywords**

Nationalism, Economic Openness

**JEL Classification**

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# Nationalism and Economic Openness: The cross-country evidence revisited

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**Abstract**

In this paper we examine the empirical relationship between economic openness and nationalism. We replicate and extend the cross-country analysis of Lan and Li (2015) using additional measures of nationalism and additional years of data from the World Values Survey. We fail to find the negative relationship between economic openness and nationalism that Lan and Li (2015) find, even when using the same data sources, years and sample of countries. When we expand the sample of countries and years of the data, we find no statistically significant relationship between economic openness and nationalism.

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# 1 Introduction

Nationalism has been a powerful force in the world since the nineteenth century. Beginning in Europe and spreading throughout the world, nationalism has had a profound impact on the way human societies organize themselves (Kedourie (1993)). The concept of nationalism has evolved over time, moving from an idea of a single ethnic group with a single language, culture and history to a broader concept that allows racial, ethnic, cultural and linguistic diversity (Gellner (2009)). Nationalism has been exploited to support nation-building, but also to support dictatorship, militarism and aggression.

Lan and Li (2015) develop an economic framework to examine how economic openness of a country or region might affect nationalism. Using the conceptual framework of Alesina, Spolaore and Wacziarg (2000), they build a model that endogenizes national boundaries as functions of the optimal size of a region's domestic and foreign markets. Decreasing costs of trade through globalization lead to a result that increased trade openness should lead to decreased nationalism.

They confront their model with data from the Chinese Political Compass dataset and the 2001 and 2007 World Value Surveys. Using the latter, they show a negative relationship between trade openness and nationalism at the country level. In this paper we replicate and extend their empirical analysis of the cross-country relationship between trade openness and nationalism.

Specifically, we undertake four separate empirical analyses. First, we extend their original sample of fifteen countries to include World Values Survey data through 2014. Second, we extend their sample of countries to encompass all countries for which we have panel data from the World Values Survey between 2001 and 2014 giving us a sample of 33 countries. Third, we investigate the sensitivity of the results to the definition of nationalism by using an additional question about willingness to fight for one's country in the case of war from the World Values Survey. Lastly, we examine whether the share of imports in GDP and the share of exports in GDP have a significant relationship with nationalism.

We find that the negative relationship between nationalism and openness only holds for the 2001-2007 period using the data provided by Lan and Li (2015). When we download the data from the original sources, we find a mild negative relationship between nationalism

and openness that is not statistically significant. When we use a longer time period, a larger sample of countries or an expanded definition of nationalism, we find no evidence for a negative relationship between nationalism and economic openness. We also find no statistically significant relationship when we separately consider imports and exports.

While the idea that economic openness can lead to lower levels of nationalism is appealing and would seem to hold true anecdotally for some countries (e.g. Singapore), the evidence for such a relationship in the cross-country data appears fairly scant.

## 2 Data

We use data from the World Values Survey[1] (WVS) to construct the measures of nationalism and data from the Penn World Tables to construct measures of economic openness and country-level gross domestic product. These are the same sources used by Lan and Li (2015), although we use later versions of these two data sources.

We use data from 33 countries that have data available for at least two years from waves 4, 5 and 6 of the World Values Survey. These waves cover years 1999-2004; 2005-2008; 2010-2014 respectively. Appendix Table A1 details which years/waves are available for which countries. Lan and Li (2015) use a sample of 15 countries from waves 4 and 5. Below, we analyze both their original sample of 15 countries and our extended sample of 33 countries.

The WVS provides individual observations on 118,940 individuals across the 33 countries and three waves that we use. Table A2 provides country/wave specific sample sizes downloaded from the World Values Survey.

We restrict our attention to individuals aged between 20 and 70, inclusive, following Lan and Li (2015). We drop 134 individuals with missing age data; 5,525 individuals who are aged 19 or less; and 8,050 individuals who are aged over 70.

We follow Lan and Li (2015) and construct a measure of nationalism that takes a value between one and three. We adopt their approach by using three questions from the World Values Survey and re-coding them one to three from lower to higher nationalism.

[1] Available at `www.worldvaluessurvey.org`. We use the longitudinal file `WVS_Longitudinal_1981-2014`. Data for Wave 4 for Sweden was not contained in the longitudinal file. We took that data from Wave 4 (1999-2004) v.20140429.

Q1 "How proud are you to be [Chinese/American/etc.]?"
very proud = 3; quite proud = 2; not very or not at all = 1

Q2 "People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important?

- A high level of economic growth
- Making sure this country has strong defense forces
- Seeing that people have more say about how are done at their jobs and in their communities
- Trying to make our cities and countryside more beautiful"

Strong defense forces rank _____ among important goals of the country:
the first choice = 3; the second choice = 2; not chosen = 1

Q3 "I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?"
How much confidence do you have in the armed forces?
a great deal = 3; quite a lot = 2; not very much or none at all = 1

Then, following Lan and Li (2015), we sum these three questions and divide by 3 to create a nationalism score which takes one of seven values in the interval [1,3] for each individual.

For question Q2 above, individuals are asked to provide the most important and the second most important national priority. These are coded as two separate questions in the data but we combine them into one score ranging from one to three.

We drop any individuals who are coded as having one of the missing value codes (Inapplicable; Inappropriate Response; Missing (Inappropriate); Not asked in survey; Not applicable; No answer; Don't know) for question one or question three. For question two, we drop individuals who have missing values in either of the two sub-questions unless they have chosen nationalism as either their first or second most important national priority. For example, if an individual has left the first priority question blank but indicated that defense is the second most important priority, we code that individual as '2' for question two. These exclusions lead us to drop another 12,025 observations leaving us with a final sample of 93,206 observations across the three waves. Appendix Table A3 provides country/wave specific sample sizes after the age restriction and dropping missing values to the nationalism questions.

We also test an alternative data construction where we drop missing items for those respondents who have responded to at least one question and re-scale the answers so that

they are in the [1,3] interval.[2] For example, if someone only answers the first and third questions, we would sum her re-coded answers and divide by two. This results in dropping only 264 observations rather than 12,025 observations and provides a final sample of 104,967 individual observations. Appendix Table A4 provides country/wave specific sample sizes for this approach to sample construction.

## 2.1 Extended definition of nationalism

The World Values Survey also asks people about their willingness to fight for their country. This can be interpreted as an additional measure of nationalism. We add this question to the three questions above, coding it in a similar manner:

> Q4 Of course, we all hope that there will not be another war, but if it were to come to that, would you be willing to fight for your country?
> yes = 3; it depends = 2; no = 1

We then construct a measure of nationalism that is the sum of questions 1 through 4 divided by four.[3] This gives a second measure of nationalism that also ranges between 1 and 3.

Again, we have two choices in dealing with missing values. We can drop all observations for which any of the four questions are missing. This results in dropping 26,500 observations and a final analysis sample of 78,731.[4] If we only drop those observations where all four questions are missing and we re-scale the remaining answers so that our measure of nationalism remains in the [1,3] interval, we lose 180 observations resulting in a final analysis sample of 105,051 observations. Appendix Tables A5 and A6 provide country/wave specific sample sizes for our extended definition of nationalism and these two approaches to dealing with missing values.[5]

## 2.2 Macro-economic variables

As mentioned above, we use the Penn World Tables Version 9.0; see Feenstra, Inklaar and Timmer (2015).[6]

[2] As will become clear below, we are unable to reproduce the results of Lan and Li (2015) from the original data sources. As Lan and Li (2015) are silent on how they deal with missing values, we try a variety of different permutations in constructing the data.

[3] Curiously, there are no observations coded 2 for Q4 in the sample of countries and years that we use.

[4] One of the reasons that so many observations are dropped is that there were a number of countries for which this question was not asked in Wave 4: Indonesia, Jordan, Sweden and Turkey.

[5] The STATA .do file that produces all of these samples from the World Values Survey data is available upon request from the authors.

[6] Downloaded from `www.ggdc.net/pwt`.

We use the following variables:

- `rgdpo`: Output-side real GDP at chained PPPs (in mil. 2011US$)
- `pop`: Population (in millions)
- `csh_x`: Share of merchandise exports at current PPPs
- `csh_m`: Share of merchandise imports at current PPPs

We create macroeconomic variables for each year for each country, matching the year in which the WVS was carried out (see Appendix Tables A1 and A2). We create GDP per capita by dividing `rgdpo` by population. Economic openness in our dataset is calculated as `csh_x` + `csh_m` as these are already provided in shares.

Table 1 provides descriptive statistics for the original Lan and Li (2015) data and our data built from the original data sources. In the top half of Table 1, we produce descriptive statistics from the publicly available data from Lan and Li (2015) that we download from the *American Economic Journal: Economic Policy* webpage.[7] The descriptive statistics match those provided in Panel C of Table 2 in Lan and Li (2015) except for the sample sizes. When we downloaded the data, we realized that the data appeared to contain duplicates of every observation. If we drop all the duplicates, we have 39,489 observations. This approximately matches the available sample size from the World Values Survey for these fifteen countries and two years. We believe that the reported sample size of 78,978 from their paper should be 39,489 after the duplicates are removed. This does not affect the point estimates presented in Lan and Li (2015) nor does it substantively affect the conclusions, though some of the standard errors reported in their paper are smaller than they should be given this artificial inflation of the sample size.

In the second part of Table 1, we provide descriptive statistics for our four alternative definitions of nationalism. In the table, these are labeled:

`nation1` : Q1 - Q3 dropping observations where any of Q1 - Q3 are missing;
`nation2` : Q1 - Q3 dropping only missing items and re-scaling by number of questions answered;
`nation3` : Q1 - Q4 dropping observations where any of Q1 - Q4 are missing;
`nation4` : Q1 - Q4 dropping only missing items and re-scaling by number of questions answered.

[7] `https://www.aeaweb.org/articles?id=10.1257/pol.20130020`

We also provide, in Table 1, descriptive statistics for the other variables coming from the World Values Survey and the Penn World Tables. Education and income are categorical variables and we report the average value less missing observations. In some of the regression models, we include observations that have missing values for education, income, gender or marital status by by creating an additional category for missing for each of those variables.

We can see from Table 1 that our data match that of Lan and Li (2015) pretty closely, particularly when we take the approach of only dropping those observations where all three nationalism questions Q1 to Q3 are missing. When we use the expanded definition of nationalism, we find a higher value for this variable as the majority of people in most countries indicate that they would be willing to fight in a war for their country.

For the other variables, we use the sample that matches our measure of `nation2`. The small differences may be explained by data revisions to the World Values Survey or to slightly different sample exclusion rules based on treatment of missing values.

Table 1: Descriptive Statistics: waves 4 and 5
for 15 countries considered by Lan and Li (2015)

| **Variable** | | **Observations** | **Mean** | **Standard Deviation** |
|---|---|---|---|---|
| *Descriptive statistics from publicly available data of Lan and Li (2015)*[a] | | | | |
| Nationalism | | 39,489 | 1.954 | 0.466 |
| Economic Openness ($EconOpen$) | | 39,489 | 0.536 | 0.167 |
| $ln(GDP)$ | | 39,489 | 9.211 | 0.921 |
| Age | | 39,489 | 40.4 | 13.5 |
| Female | | 39,485 | 0.499 | 0.500 |
| Education[c] | | 38,345 | 1.864 | 0.739 |
| Income[d] | | 35,396 | 4.731 | 2.393 |
| Married | | 39,429 | 0.767 | 0.423 |
| *Individual-level data from World Values Survey* | | | | |
| Nationalism | `nation1`[b] | 36,817 | 1.964 | 0.466 |
| | `nation2` | 41,843 | 1.968 | 0.489 |
| | `nation3` | 29,076 | 2.083 | 0.463 |
| | `nation4` | 41,886 | 2.058 | 0.487 |
| Age | | 41,843 | 40.7 | 13.5 |
| Female | | 41,838 | 0.512 | 0.500 |
| Education[c] | | 37,695 | 1.935 | 0.725 |
| Income[d] | | 37,560 | 4.687 | 2.412 |
| Married | | 41,772 | 0.688 | 0.463 |
| *Country-level data*: from Penn World Tables V9.0 | | | | |
| EconOpen | | 30 | 0.433 | 0.253 |
| $ln(GDP)$ | | 30 | 9.539 | 0.910 |

[a] Dropping duplicates from publicly available data of Lan and Li (2015)

[b] See definitions of `nation1` to `nation4` in text
[c] Education is a categorical variable that takes three levels
[d] Income is a categorical variable that takes ten levels

For our measure of openness, we find substantially less economic openness than Lan and Li (2015) report. We are not sure why this is. Version 7 of the Penn World Tables, which they use, provided a measure of openness that aggregated imports and exports in one variable. In Version 9, which we use, imports and exports are provided separately as indicated above. This could be what generates the difference.

In Table 2, we provide descriptive statistics for our full sample of 33 countries for waves 4, 5 and 6. For the variables such as income and education, we use the sample that corresponds to our definition of `nation4`, which uses all possible information on nationalism and discards the smallest number of observations. In Table 2, we separate out those who are legally married from those who are in de facto partnerships. These two groups are pooled together in Table 1.

We can see that the values for most variables are relatively similar in this expanded sample to the sample of 15 countries and two waves of Table 1. There have not been dramatic changes in nationalism over time nor do the additional countries, on average, have vastly different levels of nationalism or values for the other variables. The expanded sample includes some relatively poorer countries, so average $ln(GDP)$ is slightly lower, but the expanded sample has higher economic openness based on Version 9 of the Penn World Tables.

Table 2: Descriptive Statistics: waves 4 through 6
for full sample of 33 countries

| **Variable** | | **Observations** | **Mean** | **Standard Deviation** |
|---|---|---|---|---|
| *Individual-level data from World Values Survey* | | | | |
| Nationalism | `nation1`[a] | 93,206 | 1.957 | 0.468 |
| | `nation2` | 104,967 | 1.954 | 0.487 |
| | `nation3` | 78,731 | 2.071 | 0.465 |
| | `nation4` | 105,051 | 2.043 | 0.487 |
| Age | | 105,051 | 40.7 | 13.9 |
| Female | | 105,011 | 0.522 | 0.500 |
| Education[b] | | 97,950 | 1.970 | 0.729 |
| Income[c] | | 97,609 | 4.756 | 2.291 |
| Married | | 104,749 | 0.587 | 0.492 |
| Partnered | | 104,749 | 0.086 | 0.281 |
| *Country-level data from Penn World Tables V9.0* | | | | |
| EconOpen | | 80 | 0.585 | 0.360 |
| $ln(GDP)$ | | 80 | 9.323 | 0.967 |

[a] See definitions of `nation1` to `nation4` in text
[b] Education is a categorical variable that takes three levels
[c] Income is a categorical variable that takes ten levels

Next, we turn to an examination of the relationship between nationalism and economic openness.

# 3 Nationalism and Economic Openness

In this section, we examine the relationship between nationalism and economic openness. We estimate regression models at the individual level which allows us to control for respondent characteristics. We also estimate regressions at the country level, using the within-country average of all respondents in the country.

Table 3: Nationalism and Economic Openness: Individual-level regressions
OLS estimates 2001 and 2007
Replication of Lan and Li (2015) using their data

| | Data from Lan and Li (2015) | | |
|---|---|---|---|
| | Country level | Individual level[a] | Individual level[b] |
| | (1) | (2) | (3) |
| *EconOpen* | −0.648** | −0.715*** | −0.642** |
| | (0.274) | (0.203) | (0.237) |
| *ln* (GDP per capita) | | −0.169 | −0.103 |
| | | (0.123) | (0.144) |
| Age | | 0.0025*** | −0.0059*** |
| | | (0.00055) | (0.0018) |
| Age$^2$ | | | 0.000096*** |
| | | | (0.000023) |
| Female | | −0.026*** | −0.023*** |
| | | (0.0076) | (0.0076) |
| Marital status (=1 if ever married) | | 0.030** | 0.041** |
| | | (0.012) | (0.014) |
| Marital status missing | | | 0.062 |
| | | | (0.075) |
| Education and income dummies | N | Y | Y |
| Time dummies | Y | Y | Y |
| Country fixed effects | Y | Y | Y |
| Countries | 15 | 15 | 15 |
| Number of years | 2 | 2 | 2 |
| Observations | 30 | 34,482 | 39,489 |

First column reproduces Lan and Li (2015) with duplicates from their data removed.
Standard errors, presented in parentheses, are clustered at the country-year level.
[a] Specification of Lan and Li (2015).
[b] Our preferred specification with controls for missing values in marital status, education and income.

Table 3 presents a replication of the results from Lan and Li (2015) using their data downloaded from the webpage mentioned above. Columns two and three match the results

presented in columns (1) and (3) of Table 8 of their paper.[8] The last column presents a slightly augmented specification that Lan and Li (2015) do not consider in their paper. We add a quadratic in age and we also add dummy variables for missing marital status, missing education information and missing income information. By not deleting these missing values, this allows us to include an additional 5,000 observations. This is our preferred specification for the model–the substantive conclusions from columns three and four are the same. Economic Openness has a negative and statistically significant relationship with nationalism.

Table 4: Nationalism and Economic Openness: OLS estimates 2001 and 2007
Data from original sources (15 countries)
Table reports coefficient estimates on `Economic Openness`

| | Definition of nationalism/sample | | | |
|---|---|---|---|---|
| Specification | `nation1` | `nation2` | `nation3`[a] | `nation4`[a] |
| S1 | −0.0037 | −0.066 | −0.030 | −0.036 |
| | (0.126) | (0.094) | (0.093) | (0.189) |
| S2 | −0.060 | −0.118 | −0.409 | −0.445 |
| | (0.152) | (0.125) | (0.334) | (0.354) |
| S3 (Country level) | −0.193 | −0.215 | −0.565 | −0.632 |
| | (0.270) | (0.256) | (0.392) | (0.408) |
| Observations[b] | 30,787 | 33,870 | 21,313 | 26,062 |
| | 36,817 | 41,843 | 25,850 | 32,904 |
| Observations (country - year) | 30 | 30 | 24 | 24 |

Standard errors, presented in parentheses, are clustered at the country-year level.
All regressions include dummy variables for income and education categories; time dummies; and country fixed effects.
[a] Observations for Indonesia, Sweden and Turkey are dropped as the survey for these countries did not include Q4 in wave 4.
[b] First number of observations is for S1; 2nd number for S2.

Tables 4 through 6 present only the estimated coefficient on economic openness, and its standard error, from a variety of regression models. In all of these models, we control for $ln(GDP)$, age, gender, marital status, education, income, time dummies and country fixed effects.[9] Tables 4 through 6 present estimates from the data that we downloaded from the original data sources–the World Values Survey and the Penn World Tables V9.0. Specification S1 refers to the original specification of Lan and Li (2015) as in column (3) of Table 3 (in this paper). S2 refers to our preferred specification which includes a quadratic in age and dummy variables for missing marital status, missing education information and missing income information. S3 refers to the country level regressions. Standard errors are clustered at

[8] They also consider a model without log of GDP but the results are quite similar.
[9] Detailed coefficient estimates are available from the authors.

the country-year level throughout. The definitions of nationalism and corresponding sample selection criteria are as described above.

Table 4 presents estimates using waves 4 and 5 and the original sample of 15 countries considered by Lan and Li (2015). Table 5 presents these 15 countries considered across three waves to 2014. Table 6 presents our expanded sample of 33 countries across all three waves.

In Table 4, we find a negative relationship between nationalism and economic openness for the measure considered by Lan and Li (2015) and our alternative measure. However, the relationship is no longer statistically significant. We are unable to replicate their results from the original data sources. As we previously mentioned, the economic openness variable appears to have changed somewhat between versions 7.0 and 9.0 of the Penn World Tables and this may be the explanation.

[Figures 1 and 2 about here]

Figures 1 and 2 graph the cross-country relationship between economic openness and nationalism. Comparing the data of Lan and Li (2015) presented in Figure 1 to that which we accessed from the original sources in Figure 2, we can see that the relationship between economic openness and nationalism is still negative, but quite attenuated. This leads to the insignificant coefficient in the regressions.

Table 5: Nationalism and Economic Openness: OLS estimates 2001, 2007 and 2014
Data from original sources (15 countries)
Table reports coefficient estimates on `Economic Openness`

| | Definition of nationalism/sample | | | |
|---|---|---|---|---|
| Specification | `nation1` | `nation2` | `nation3`[a] | `nation4`[a] |
| S1 | 0.031 | −0.00012 | 0.156 | 0.100 |
| | (0.102) | (0.088) | (0.134) | (0.129) |
| S2 | −0.019 | −0.055 | 0.024 | −0.070 |
| | (0.115) | (0.102) | (0.178) | (0.183) |
| S3 (Country level) | −0.064 | −0.067 | −0.122 | −0.167 |
| | (0.185) | (0.181) | (0.272) | (0.271) |
| Observations[b] | 46,595 | 51,502 | 37,339 | 45,639 |
| | 54,514 | 62,000 | 43,619 | 55,176 |
| Observations (country - year) | 43 | 43 | 39 | 39 |

Standard errors, presented in parentheses, are clustered at the country-year level.
All regressions include dummy variables for income and education categories; time dummies; and country fixed effects.
[a] All observations for Indonesia are dropped; Wave 4 observations for Sweden and Turkey are dropped as the survey for these countries did not include Q4 in wave 4.
[b] First number of observations is for S1, 2nd number for S2.

In Table 5, we extend the estimation for the Lan and Li (2015) sample of 15 countries to

cover all three available waves from the WVS. Now there seems to be no relationship between nationalism and economic openness. The coefficients are all very small, some positive and some negative, and none of them are anywhere near being statistically significant.

Figure 3 shows the spread of changes in openness and nationalism across the three waves for this sample of 15 countries. There is only a faint negative relationship.

[Figures 3 and 4 about here]

In Table 6, we examine the relationship for our expanded sample of 33 countries over 3 waves. Again, across all specifications, sample selection rules and definitions of nationalism, we find no statistically significant relationship between nationalism and economic openness. Figure 4 shows the scatter plot of changes in openness and nationalism; again there is no evidence of any relationship.

Table 6: Nationalism and Economic Openness: OLS estimates 2001, 2007 and 2014
Data from original sources (33 countries)
Table reports coefficient estimates on `Economic Openness`

| | Definition of nationalism/sample | | | |
|---|---|---|---|---|
| Specification | `nation1` | `nation2` | `nation3`[a] | `nation4`[a] |
| S1 | −0.038 | −0.044 | −0.017 | 0.017 |
| | (0.065) | (0.066) | (0.057) | (0.055) |
| S2 | −0.041 | −0.049 | −0.022 | 0.010 |
| | (0.068) | (0.070) | (0.063) | (0.065) |
| S3 (Country level) | −0.026 | −0.022 | −0.041 | 0.0095 |
| | (0.093) | (0.093) | (0.119) | (0.122) |
| Observations[b] | 82,549 | 91,048 | 68,850 | 84,272 |
| | 93,206 | 104,967 | 77,323 | 97,074 |
| Observations (country - year) | 80 | 80 | 75 | 75 |

Standard errors, presented in parentheses, are clustered at the country-year level.
All regressions include dummy variables for income and education categories; time dummies; and country fixed effects.
[a] All observations for Indonesia are dropped; Wave 4 observations for Sweden and Turkey are dropped as the survey for these countries did not include Q4 in wave 4.
[b] First number of observations is for S1, 2nd number for S2.

As our data provides disaggregated information about the share of imports and exports in GDP, we can also ask whether imports and/or exports affect nationalism.[10] Perhaps countries with large earnings from exports are more likely to be less nationalistic. Or, perhaps countries with large import shares value the additional consumption possibilities from importing and are less nationalistic?

[10] Thanks to Andy Kennedy for suggesting this.

In Table 7, we present results from individual- and country-level regressions using the share of exports (in the top panel) and the share of imports (in the bottom panel) as the key explanatory variable rather than overall trade openness. These are estimated as separate regressions with the specifications and sample selection rules as described above.[11]

We find very similar results for both export and import share. In all cases, there appears to be a small negative relationship between export and import shares and nationalism. However, these coefficients are never statistically significant and the p-values are between 0.3 and 0.6 for most estimates.

Table 7: Nationalism and Import and Export Shares: OLS estimates 2001, 2007 and 2014
Data from original sources (33 countries)
Table reports coefficient estimates on `Share of Exports/Imports in GDP`

| | Definition of nationalism/sample | | | |
|---|---|---|---|---|
| Specification | `nation1` | `nation2` | `nation3`[a] | `nation4`[a] |
| | Impact of Export share on nationalism | | | |
| S2 | −0.018 | −0.027 | −0.026 | −0.033 |
| | (0.034) | (0.036) | (0.039) | (0.043) |
| S3 (Country level) | −0.061 | −0.072 | −0.071 | −0.091 |
| | (0.070) | (0.069) | (0.076) | (0.077) |
| | Impact of Import share on nationalism | | | |
| S2 | −0.022 | −0.029 | −0.024 | −0.022 |
| | (0.036) | (0.039) | (0.042) | (0.044) |
| S3 (Country level) | −0.067 | −0.079 | −0.070 | −0.083 |
| | (0.069) | (0.068) | (0.075) | (0.076) |
| Observations | 93,206 | 104,967 | 77,323 | 97,074 |
| Observations (country - year) | 80 | 80 | 75 | 75 |

Standard errors, presented in parentheses, are clustered at the country-year level.
All regressions include dummy variables for income and education categories; time dummies; and country fixed effects.
[a] All observations for Indonesia are dropped; Wave 4 observations for Sweden and Turkey are dropped as the survey for these countries did not include Q4 in wave 4.

In conclusion, neither trade openness generally, nor imports or exports considered separately, have a statistically significant relationship with nationalism.

# 4 Concluding comments

In the run-up to World War I, many individuals posited that conflict was unlikely given the strong trade relationships between the potential adversaries. Trade relations, unfortunately, couldn't save Europe from two devastating conflicts. Are things any different today?

The evidence that we present here would suggest that trade openness and nationalism are

[11] Full regression results and graphs are available from the authors.

unrelated to one another. This is somewhat surprising from a purely economic point of view. But, identity is multi-dimensional and stretches well beyond economics. National pride and even zealous chauvinism can co-exist with trade openness. At least there is some comfort in that we don't find that trade openness leads to greater nationalistic sentiment.

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## Figures

Figure 1: Changes in nationalism and changes in economic openness reported by Lan and Li (2015). 15 countries; 2001 and 2007

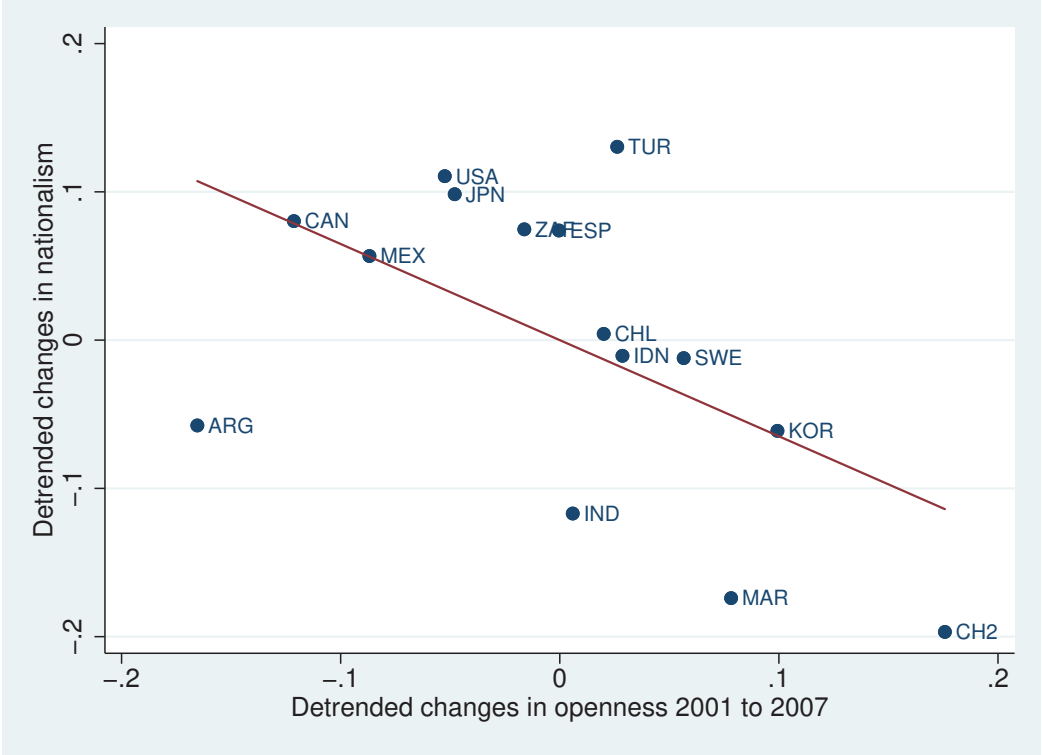


Figure 2: Changes in nationalism (`nation2`) and changes in economic openness from original data. 15 countries; 2001 and 2007

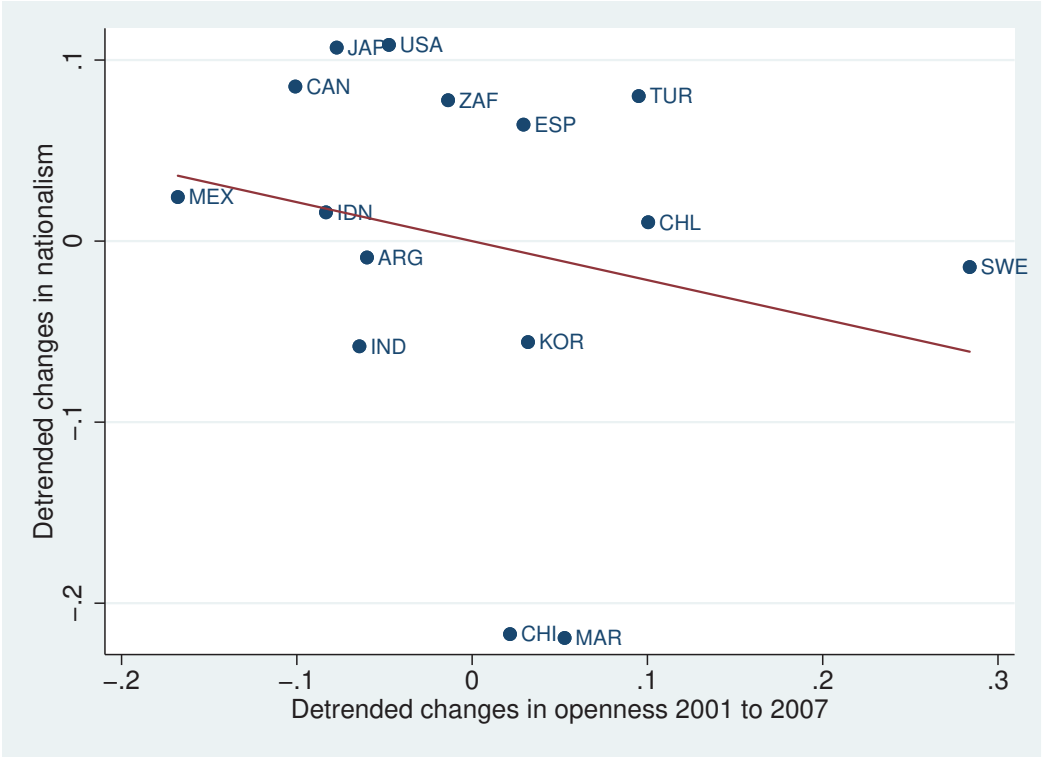


Figure 3: Changes in nationalism (`nation2`) and changes in economic openness from original data. 15 countries; 2001, 2007 and 2014

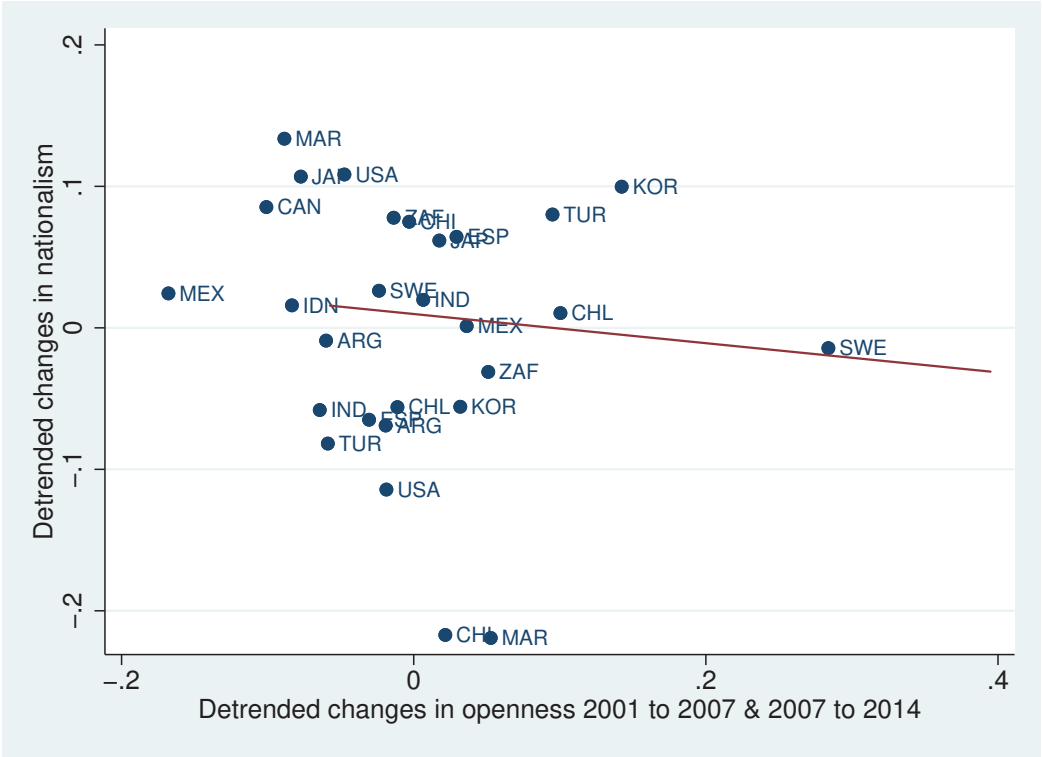
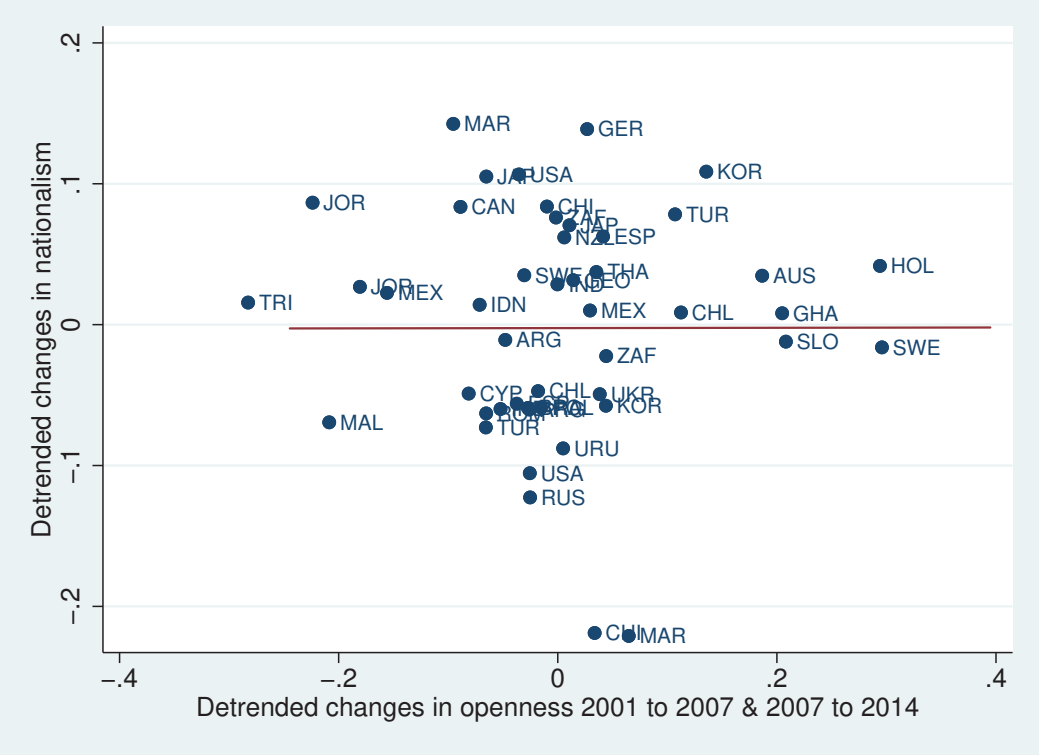


Figure 4: Changes in nationalism (`nation2`) and changes in economic openness from original data. 33 countries; 2001, 2007 and 2014



## Appendix

Table A1: Countries included in sample and survey years

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 1999 | 2006 | 2013 |
| Canada | 2000 | 2005 | x |
| Chile | 2000 | 2006 | 2011 |
| China | 2001 | 2007 | 2012 |
| India | 2001 | 2006 | 2012 |
| Indonesia | 2001 | 2006 | x |
| Japan | 2000 | 2005 | 2010 |
| Mexico | 2000 | 2005 | 2012 |
| Morocco | 2001 | 2007 | 2011 |
| South Africa | 2001 | 2006 | 2013 |
| South Korea | 2001 | 2005 | 2010 |
| Spain | 2000 | 2007 | 2011 |
| Sweden | 1999 | 2006 | 2011 |
| Turkey | 2001 | 2007 | 2011 |
| United States | 1999 | 2006 | 2011 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 2005 | 2012 |
| Brazil | x | 2006 | 2014 |
| Cyprus | x | 2006 | 2011 |
| Georgia | x | 2008 | 2014 |
| Germany | x | 2006 | 2013 |
| Ghana | x | 2007 | 2011 |
| Jordan | 2001 | 2007 | 2014 |
| Malaysia | x | 2006 | 2011 |
| Netherlands | x | 2005 | 2012 |
| New Zealand | x | 2004 | 2011 |
| Poland | x | 2005 | 2012 |
| Romania | x | 2005 | 2012 |
| Russia | x | 2006 | 2011 |
| Slovenia | x | 2005 | 2011 |
| Thailand | x | 2007 | 2013 |
| Trinidad & Tobago | x | 2006 | 2010 |
| Ukraine | x | 2006 | 2011 |
| Uruguay | x | 2006 | 2011 |

Table A2: Country-specific sample sizes downloaded from WVS

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 1280 | 1002 | 1030 |
| Canada | 1931 | 2164 | x |
| Chile | 1200 | 1000 | 1000 |
| China | 1000 | 1991 | 2300 |
| India | 2002 | 2001 | 1581 |
| Indonesia | 1000 | 2015 | x |
| Japan | 1362 | 1096 | 2443 |
| Mexico | 1535 | 1560 | 2000 |
| Morocco | 1251 | 1200 | 1200 |
| South Africa | 3000 | 2988 | 3531 |
| South Korea | 1200 | 1200 | 1200 |
| Spain | 1209 | 1200 | 1189 |
| Sweden | 1015 | 1003 | 1206 |
| Turkey | 3401 | 1346 | 1605 |
| United States | 1200 | 1249 | 2232 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 1421 | 1477 |
| Brazil | x | 1500 | 1486 |
| Cyprus | x | 1050 | 1000 |
| Georgia | x | 1500 | 1202 |
| Germany | x | 2064 | 2046 |
| Ghana | x | 1534 | 1552 |
| Jordan | 1223 | 1200 | 1200 |
| Malaysia | x | 1201 | 1300 |
| Netherlands | x | 1050 | 1902 |
| New Zealand | x | 954 | 841 |
| Poland | x | 1000 | 966 |
| Romania | x | 1776 | 1503 |
| Russia | x | 2033 | 2500 |
| Slovenia | x | 1037 | 1069 |
| Thailand | x | 1534 | 1200 |
| Trinidad & Tobago | x | 1002 | 999 |
| Ukraine | x | 1000 | 1500 |
| Uruguay | x | 1000 | 1000 |

Table A3: Country-specific sample sizes after imposing age restrictions and dropping observations with any missing value in nationalism questions (`nation1`; $N = 93,206$)

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 960 | 708 | 790 |
| Canada | 1564 | 1649 | x |
| Chile | 1058 | 818 | 855 |
| China | 844 | 1348 | 1640 |
| India | 1470 | 1254 | 1333 |
| Indonesia | 869 | 1531 | x |
| Japan | 952 | 758 | 1502 |
| Mexico | 1008 | 1334 | 1743 |
| Morocco | 991 | 1048 | 884 |
| South Africa | 2320 | 2310 | 3028 |
| South Korea | 1140 | 1184 | 1092 |
| Spain | 936 | 904 | 879 |
| Sweden | 795 | 774 | 821 |
| Turkey | 2961 | 1113 | 1315 |
| United States | 1019 | 1009 | 1816 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 1144 | 1171 |
| Brazil | x | 1263 | 1146 |
| Cyprus | x | 930 | 855 |
| Georgia | x | 1184 | 1009 |
| Germany | x | 1409 | 1488 |
| Ghana | x | 1325 | 1339 |
| Jordan | 1008 | 1034 | 1035 |
| Malaysia | x | 957 | 1181 |
| Netherlands | x | 746 | 1301 |
| New Zealand | x | 562 | 387 |
| Poland | x | 774 | 745 |
| Romania | x | 1328 | 1199 |
| Russia | x | 1574 | 1859 |
| Slovenia | x | 781 | 705 |
| Thailand | x | 1331 | 1080 |
| Trinidad & Tobago | x | 843 | 813 |
| Ukraine | x | 707 | 1165 |
| Uruguay | x | 648 | 666 |

Table A4: Country-specific sample sizes after imposing age restrictions and only dropping observations with missing values in all nationalism questions (`nation2`; $N = 104,967$)

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 1108 | 858 | 902 |
| Canada | 1667 | 1773 | x |
| Chile | 1118 | 876 | 898 |
| China | 985 | 1942 | 2162 |
| India | 1875 | 1838 | 1504 |
| Indonesia | 957 | 1835 | x |
| Japan | 1246 | 976 | 2067 |
| Mexico | 1356 | 1398 | 1777 |
| Morocco | 1137 | 1157 | 1157 |
| South Africa | 2550 | 2501 | 3200 |
| South Korea | 1177 | 1188 | 1137 |
| Spain | 1023 | 993 | 993 |
| Sweden | 925 | 867 | 945 |
| Turkey | 3167 | 1227 | 1472 |
| United States | 1067 | 1056 | 1943 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 1199 | 1212 |
| Brazil | x | 1342 | 1325 |
| Cyprus | x | 959 | 899 |
| Georgia | x | 1294 | 1039 |
| Germany | x | 1719 | 1707 |
| Ghana | x | 1349 | 1341 |
| Jordan | 1089 | 1094 | 1055 |
| Malaysia | x | 980 | 1199 |
| Netherlands | x | 878 | 1577 |
| New Zealand | x | 795 | 679 |
| Poland | x | 841 | 829 |
| Romania | x | 1521 | 1289 |
| Russia | x | 1751 | 2148 |
| Slovenia | x | 895 | 891 |
| Thailand | x | 1386 | 1174 |
| Trinidad & Tobago | x | 866 | 867 |
| Ukraine | x | 881 | 1244 |
| Uruguay | x | 814 | 839 |

Table A5: Country-specific sample sizes. Expanded definition of nationalism using 4 items after imposing age restrictions and dropping observations with any missing value in nationalism questions (`nation3`; $N = 78,731$)

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 818 | 629 | 704 |
| Canada | 1429 | 1471 | x |
| Chile | 962 | 755 | 750 |
| China | 807 | 1244 | 1618 |
| India | 1400 | 1177 | 1331 |
| Indonesia | 0 | 1408 | x |
| Japan | 603 | 481 | 873 |
| Mexico | 1087 | 1244 | 1713 |
| Morocco | 937 | 996 | 829 |
| South Africa | 2007 | 1963 | 2547 |
| South Korea | 1138 | 1177 | 1039 |
| Spain | 819 | 806 | 761 |
| Sweden | 0 | 732 | 757 |
| Turkey | 0 | 1086 | 1222 |
| United States | 904 | 996 | 1807 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 1115 | 1164 |
| Brazil | x | 1189 | 1085 |
| Cyprus | x | 929 | 764 |
| Georgia | x | 976 | 983 |
| Germany | x | 1170 | 1415 |
| Ghana | x | 1244 | 1339 |
| Jordan | 0 | 945 | 961 |
| Malaysia | x | 948 | 1168 |
| Netherlands | x | 569 | 1169 |
| New Zealand | x | 434 | 278 |
| Poland | x | 690 | 689 |
| Romania | x | 1154 | 1060 |
| Russia | x | 1158 | 1429 |
| Slovenia | x | 638 | 658 |
| Thailand | x | 1302 | 998 |
| Trinidad & Tobago | x | 798 | 793 |
| Ukraine | x | 577 | 810 |
| Uruguay | x | 515 | 590 |

Table A6: Country-specific sample sizes. Expanded definition of nationalism using 4 items after imposing age restrictions and only dropping observations with missing values in all nationalism questions (`nation4`; $N = 105,051$)

| **Country** | **Wave 4** | **Wave 5** | **Wave 6** |
|---|---|---|---|
| *Countries in Lan and Li (2015)* | | | |
| Argentina | 1108 | 858 | 902 |
| Canada | 1667 | 1774 | x |
| Chile | 1118 | 876 | 898 |
| China | 986 | 1946 | 2166 |
| India | 1890 | 1852 | 1504 |
| Indonesia | 957 | 1839 | x |
| Japan | 1247 | 977 | 2080 |
| Mexico | 1356 | 1398 | 1777 |
| Morocco | 1137 | 1157 | 1157 |
| South Africa | 2550 | 2501 | 3200 |
| South Korea | 1178 | 1188 | 1137 |
| Spain | 1023 | 993 | 993 |
| Sweden | 925 | 867 | 947 |
| Turkey | 3167 | 1227 | 1472 |
| United States | 1068 | 1056 | 1945 |
| *Additional countries in our extended sample* | | | |
| Australia | x | 1199 | 1212 |
| Brazil | x | 1342 | 1326 |
| Cyprus | x | 959 | 899 |
| Georgia | x | 1296 | 1039 |
| Germany | x | 1720 | 1711 |
| Ghana | x | 1349 | 1341 |
| Jordan | 1089 | 1095 | 1055 |
| Malaysia | x | 980 | 1199 |
| Netherlands | x | 879 | 1579 |
| New Zealand | x | 796 | 681 |
| Poland | x | 841 | 830 |
| Romania | x | 1523 | 1289 |
| Russia | x | 1751 | 2149 |
| Slovenia | x | 895 | 891 |
| Thailand | x | 1386 | 1174 |
| Trinidad & Tobago | x | 866 | 867 |
| Ukraine | x | 881 | 1244 |
| Uruguay | x | 815 | 839 |