NBER WORKING PAPER SERIES

ECONOMIC INTEGRATION AND THE TRANSMISSION OF DEMOCRACY

Giacomo Magistretti
Marco Tabellini

Working Paper 30055
http://www.nber.org/papers/w30055

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
May 2022

We thank Daron Acemoglu, Alberto Alesina, Sam Bazzi, Matteo Camboni, Arnaud Costinot, Leonardo D'Amico, Ben Enke, Jeff Frieden, Oded Galor, Nicola Gennaioli, Francesco Giavazzi, Elhanan Helpman, Benjamin Marx, Ross Mattheis, Mart\'{i} Mestieri, Nathan Nunn, Elias Papaioannou, Luigi Pascali, Torsten Persson, Vincent Pons, Michael Porcellacchia, Dani Rodrik, Jesse Shapiro, Bob Staiger, Guido Tabellini, Andrea Tesei, Nico Voigtlaender, Guglielmo Zappal \`a, and seminar participants at the ASSA 2022 Meetings, Brown University, the EEA-ESEM 2021 Conferences, the Eighth IMF-WB-WTO Trade Research Conference, the 2021 Cambridge Junior Applied Micro Workshop, Sao Paulo School of Economics, Trinity College Dublin, and UPF for useful comments. Angelo Azzolini, Adriano De Ruvo, Silvia Farina, Yuri Filippone, Gabriele Romano, Federico Scabbia, Monia Tomasella, and Guglielmo Zappal\`a provided excellent research assistance. All remaining errors are ours. A previous version of the paper circulated with the title ``Economic Integration and Democracy: An Empirical Investigation." The views expressed in this paper are those of the authors and do not necessarily reflect those of the International Monetary Fund, its Executive Board, or its Management. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

Economic Integration and the Transmission of Democracy
Giacomo Magistretti and Marco Tabellini
NBER Working Paper No. 30055
May 2022
JEL No. F14,F15,P16

ABSTRACT

In this paper, we study if exposure to the institutions of trade partners changes individuals' attitudes towards democracy and favors the process of democratization. We combine survey data with country-level measures of democracy from 1960 to 2015, and exploit the improvement in air, relative to sea, transportation to derive a time-varying instrument for trade. Relying on within-country variation across cohorts, we find that individuals who grew up when their country was more integrated with democracies are, at the time of the survey, more supportive of democracy. In line with the change in citizens' preferences, economic integration with democratic partners has a large, positive effect on a country's democracy score. Instead, economic integration with non-democratic partners has no impact on either individuals' attitudes or countries' institutions. We provide evidence consistent with the transmission of democratic capital from more to less democratic countries.

Giacomo Magistretti
International Monetary Fund
700 19th St NW
Washington, DC 20431
giacomo.magistretti@gmail.com

Marco Tabellini
Harvard Business School
279 Morgan Hall
Soldiers Field
Boston, MA 02163
and CEPR
and also NBER
mtabellini@hbs.edu

An appendix is available at http://www.nber.org/data-appendix/w30055

1 Introduction

The post-1960 surge in globalization coincided with the spread of democracy across the world (Figure 1). As a result, citizens of non-democratic countries might have been increasingly exposed to the institutions and the values of their more democratic partners. Do trade and, more broadly, economic integration with democratic partners favor the transmission of democratic values and the consolidation of democracy across countries? Several papers have documented that longer exposure to domestic democratic institutions improves individuals' attitudes towards democracy and favors the stability of the latter (Besley and Persson, 2019; Fuchs-Schündeln and Schündeln, 2015; Persson and Tabellini, 2009), especially when the country is economically and socially successful (Acemoglu et al., 2021).[1] Yet, less is known about the extent to which democratic institutions and values can travel across countries, through economic integration. This issue is particularly important today, as globalization seems to be on retreat and countries are increasingly trading with partners that share their institutional and geopolitical stance.[2]

In this paper, we study the effects of economic integration with democracies on individuals' support for democracy and on the development of democratic institutions, using a large panel dataset of countries from 1960 to 2015. We begin by exploiting within-country, across-cohort variation in individuals' exposure to democracy of a country's trade partners during their impressionable years (Giuliano and Spilimbergo, 2014; Krosnick and Alwin, 1989). Using data from the Integrated Value Surveys (IVS), we test whether individuals who grew up while their country was trading more with democratic partners were, at the time of the survey, more supportive of democracy. In a nutshell, we compare individuals' attitudes towards democracy between age cohorts that were more (or less) exposed to trade with democratic partners, relative to other cohorts in the same country and to the same cohorts in other countries over time. Then, we examine the effects of economic integration with democratic and non-democratic partners on democracy, measured with the *Polity2* score from the Polity5 project. We leverage within country variation over time, thereby absorbing country-specific, time-invariant differences as well as shocks common to all countries that may be correlated with both democracy and trade openness.

Identifying the causal effect of trade with democratic partners on citizens' democratic values and on a country's level of democracy is challenging for several reasons. First,

[1] A large literature has analyzed the forces that contribute to the development of democracy (Acemoglu and Robinson, 2006; Barro, 1999; Lipset, 1959; Przeworski et al., 2000; Murtin and Wacziarg, 2014).

[2] See, for instance, the *Wall Street Journal* at https://www.wsj.com/articles/economic-blacklist-of-russia-marks-new-blow-for-globalization-11646940040.

political reforms, including democratic transitions, are often followed by economic liberalizations (Giavazzi and Tabellini, 2005; Giuliano et al., 2013). Second, institutions might themselves be important determinants of trade (Costinot, 2009; Nunn, 2007). Finally, broader trends, such as income growth or human capital accumulation, may be simultaneously correlated with individuals' beliefs and regime transition on the one hand, and with economic integration on the other.

To address these and similar concerns, we build on Feyrer (2019), and construct an instrument for trade that exploits the rise in the importance of air, relative to sea, transportation over the last 60 years. Our strategy exploits the fact that, because of their geographic location, different country-pairs were differentially affected by technological change in air transportation, which led to a drastic increase in the share of air freight (Hummels, 2007). To formalize this intuition, we estimate a time-varying gravity equation (Anderson and Van Wincoop, 2003) that allows the elasticity of trade with respect to sea and air distance between countries to change over time. We then use the estimated elasticities to predict bilateral trade flows between 1960 and 2015, which we aggregate at the country level to obtain instruments for trade with democratic and non-democratic partners.

The time-varying instrument for trade, which is likely exogenous to any specific country and, within a country, to any specific age cohort, allows us to control for unobserved country-, time-, and (in the survey analysis) cohort-specific factors potentially correlated with changes in both trade openness and support for democracy. To address the possibility that economic integration predicted by improvements in air transportation coincided with regional democratization trends, our preferred specification further controls for democratization waves occurring in a country's neighbors, similar to Acemoglu et al. (2019).

Starting from the survey-level analysis, we find that individuals who grew up when their country was trading more with democratic partners were, at the time of the survey, more supportive of democracy. Instead, exposure to trade with autocracies has no effect on individuals' attitudes. These results are robust to using alternative versions of the instrument, to measuring support for democracy in different ways, and to including survey-year by country fixed effects (in addition to cohort, survey-year, and country fixed effects), which absorb any country-specific shock across survey years that might change respondents' attitudes towards democracy. They are also robust to including data from the Afrobarometer for the countries not covered by the IVS, and to dropping specific groups of countries (e.g., members of the European Union) or excluding trade with

selected partners (e.g., the US or China).

The magnitude of our estimates is large: according to our preferred specification, doubling economic integration with democracies (a change in exposure equivalent to the inter-quartile range in our sample) increases an individual's support for democracy by .48 points on a 1 to 4 scale. This is similar to the difference in attitudes towards democracy between China and Sweden, or that between Colombia and France.

These findings are consistent with exposure to trade with democracies favoring the flow of democratic capital from more to less democratic countries, improving views about democracy among citizens in autocratic regimes. A related mechanism might be that trade with democratic partners induces countries to switch to democracy first, and then the experience with own democracy—rather than that of trade partners—influences individuals' beliefs. In contrast with this possibility, we document that results are unchanged when controlling for the average democracy score of the country (or the probability of switching to democracy) during both the impressionable years and an individual's life-time. This suggests that our findings capture citizens' exposure to democracy in other countries rather than in their own.

Another possibility is that trade with democratic partners promotes economic development and favors human capital accumulation. These, and not the exposure to trade partners' institutions, may influence individuals' attitudes over the course of their lives, making them more supportive of democracy (Glaeser et al., 2007; Lipset, 1959). We provide evidence against this mechanism in two ways. First, we show that the effect of trade with democracies remains unchanged when controlling for a country's GDP growth or human capital accumulation, both during an individual's impressionable years and during her life-time. Second, and more directly, we find that cohorts more exposed to economic integration with democracies are not more educated or richer at the time of the survey.

In the second part of the paper, we show that the effects of trade with democracies on citizens' beliefs are reflected in changes in countries' institutions. In particular, trade with democratic partners has a positive and large effect on the *Polity2* democracy score. Instead, as for the survey-level analysis, trade with non-democracies has no impact on a country's democracy score. Perhaps not surprisingly, the effects are driven by countries that are non-democratic at baseline. Our estimates indicate that increasing trade with democratic partners over a 5-year period by 80% (approximately its inter-quartile range) raises a country's *Polity2* score by around 4 points. This is equivalent to the difference in the score between Malaysia and Canada in 2010, or that between Turkey and Senegal

in 2015.

As for surveys, results are robust to using different measures of democracy and versions of the instrument. They are also unchanged when: interacting year dummies with several country-specific characteristics to allow for differential trends; dropping specific countries, such as member countries of the European Union or the former Soviet Union bloc; and, considering trade with democratic (resp., non-democratic) countries excluding the US (resp., China).[3]

Our preferred interpretation, consistent with results from the survey-level analysis, is that the trade-induced increase in democracy captures a process of transmission of democratic capital from more to less democratic countries. We corroborate this idea by constructing a measure of trade-induced democratic capital, which is very similar in spirit to that of Persson and Tabellini (2009) for domestic democratic capital. Weighing each democratic partner's *Polity2* score by its trade share (relative to a country's total trade), we document that trade-induced democratic capital improves a country's democracy score.

We then explore the conditions under which trade with democracies promotes institutional change. First, democratization is more likely to take place when trade occurs with (democratic) partners that have a longer experience with democracy themselves, and may thus become "role models" for their less democratic partners. Second, our results are driven by trade with democratic partners that are growing faster and that have higher levels of public spending relative to GDP. These findings resonate with the idea that trade with democracies changes the perceived desirability of democracy among less democratic partners—a process that should happen especially when democracies deliver, in terms of either economic growth or public goods provision, or both (Acemoglu et al., 2021).[4] Third, consistent with cultural similarity facilitating the transmission of ideology and norms, the effects are larger when trade occurs with democracies that are culturally closer.

We also provide different pieces of evidence against alternative channels. First, we replicate the analysis controlling for lagged population, lagged GDP, and lagged or instrumented GDP per capita, and we document that trade with democracies does not lead to human capital accumulation. This weighs against the possibility that trade with democratic partners might promote democracy by spurring growth or increasing educational

[3]Importantly, results are unchanged when accounting for the fact that the sample is unbalanced, and that countries entering later might be on differential trends.

[4]These findings are also consistent with those in Buera et al. (2011), who show that countries learn from the experience of their neighbors, and that policymakers update their beliefs about the desirability of different policies based on other countries' performance.

attainment. Second, we show that the trade-induced increase in democracy is stronger for countries with higher rents from natural resources, and does not depend on the share of GDP accruing to services and manufacturing at baseline. This suggests that trade with democracies did not favor the emergence of democracy by strengthening the middle-class (Acemoglu et al., 2005; Puga and Trefler, 2014). Third, we document that trade with democracies does not increase income inequality, reducing concerns that our results may be driven by poorer citizens pushing for institutional change. Fourth, we allow countries that experienced a CIA intervention during the Cold War to be on differential trends, and verify that economic integration with democracies is uncorrelated with several measures of foreign influence used in the literature. These findings reduce concerns that our estimates may reflect democratic partners' pressure to implement political or economic reforms. Finally, we show that economic integration does not increase the probability of signing Preferential Trade Agreements (PTAs), which may in turn influence a country's democratic trajectory (Liu and Ornelas, 2014).

In the last part of the paper, we seek to isolate the components of economic integration that might drive our results. We show that trade with democracies is uncorrelated with important variables that may foster the process of democratization, such as migration (Barsbai et al., 2017), foreign direct investment (FDI), and the presence of students abroad (Spilimbergo, 2009). We also do not find any relationship between trade with democracies and the number of book translations (overall and by topic), which may proxy for idea flows not embedded in trade in goods (Abramitzky and Sin, 2014). While these patterns suggest that trade in goods is likely to play an important role in the process of democratization, data limitations prevent us from considering additional mechanisms, including business travel, tourism, and, more broadly, ideas flows. For this reason, we interpret the results as the effects of economic integration, although sometimes we refer to "trade" for brevity.

Our paper is related to different strands of the literature. First, it complements works on the importance of experience with own democracy for the stability and the well-functioning of the latter (Acemoglu et al., 2021; Besley and Persson, 2019; Fuchs-Schündeln and Schündeln, 2015; Persson and Tabellini, 2009) by providing evidence that individuals can accumulate democratic capital also through economic integration with other (democratic) countries.[5]

Second, our findings speak to papers studying the effects of trade on institutions. Ace-

[5]Our findings are also consistent with those in Bursztyn and Cantoni (2016) for the effects of information transmission through Western media on consumption patterns in Eastern Germany after 1990.

moglu et al. (2005) and Puga and Trefler (2014) document that, by altering the economic power of different groups in the society, trade can trigger institutional change, and that the direction of the latter depends on the groups that benefit from trade. Levchenko (2007) shows that trade can promote or hinder democratization depending on the similarity of the institutions of trade partners.[6] Liu and Ornelas (2014) find that free trade agreements increase the longevity of democracy by lowering protectionist rents and, in turn, elites' incentives to seek power. We complement these papers by shedding light on a different channel through which trade can lead to institutional change: namely, the transmission of democracy from more to less democratic partners. In this respect, our findings contribute to a vast literature that, since at least Grossman and Helpman (1991), has shown that the trade-induced spread of ideas can foster economic growth (Grossman and Helpman, 2015; Sampson, 2016).

Finally, from a methodological standpoint, our work builds on Feyrer (2019) to derive a time-varying instrument for trade that exploits improvements in air (relative to sea) transportation.[7] A similar approach is used in Pascali (2017), who leverages variation induced by the introduction of steam technology in shipping. Both Feyrer (2019) and Pascali (2017) use the time-varying instrument obtained from a gravity equation to estimate the "gains from trade", as first done by Frankel and Romer (1999) in a cross-sectional, time-invariant setting. We complement these works by focusing on institutional change, rather than economic growth.[8]

The remainder of the paper proceeds as follows. Section 2 presents the data. Section 3 describes the empirical strategy and introduces the instrument for trade. Section 4 and Section 5 present the results on the effects of economic integration with democracies on individuals' attitudes and on countries' democracy, respectively. Section 6 disentangles some of the components of economic integration. Section 7 concludes.

[6]Consistent with the ambiguous (theoretical and empirical) effects of trade on institutions documented in these papers, Rigobon and Rodrik (2005) and López-Córdova and Meissner (2008) find, respectively, a negative and a positive relationship between trade openness and democracy.

[7]Aksoy et al. (2018) use a version of the instrument developed by Feyrer (2019) to estimate the effects of skill composition of trade on political approval across countries.

[8]In related work, Ellingsen (2021) relies on improvements to maritime technology in the nineteenth century to test how the composition of trade influences institutional convergence across countries.

2 Data

This section presents the key variables used in the analysis. Appendix B reports all variables considered in the paper, together with their description and source (Tables B.1, B.2, and B.3).

Actual and predicted trade. Bilateral trade flows come from the IMF Direction of Trade Statistics. For each exporter-importer pair, in each year, there are four measures of trade, namely exports and imports reported by both countries. Following the literature (Baldwin and Taglioni, 2007), we consider the average of these four measures.

We use air and sea distances to derive an instrument for trade. Air distance between each country-pair is the great circle distance between the most important cities in a country, reported by the CEPII (Mayer and Zignago, 2011). We calculate sea distances by first identifying the main commercial port for each country, and then collecting data on the sea-routes between ports of each pair of countries from the website vesseldistance.org.[9] Landlocked countries are not included, since there is no sea distance between them.

Actual and predicted trade data cover the period between 1960 and 2015, although we use 1955 data (when available) to construct pre-determined bilateral trade shares and other lagged variables. To express (actual and predicted) trade relative to the size of a country's economy, we collect GDP data from the Penn World Table, version 9.1.

Attitudes towards democracy. We measure individuals' attitudes towards democracy using data from the Integrated Value Survey (IVS), which harmonizes the European Value Survey (EVS) and the World Value Survey (WVS). The survey was first conducted in 1981, and includes socio-demographic and economic characteristics of respondents, as well as their political preferences and ideology. We restrict attention to waves conducted between 1995 and 2019, when questions on attitudes towards democracy are available. Not all countries were included in the earlier waves, leaving us with an unbalanced sample of 74 countries for a total of around 225,000 individuals. Table B.4 lists the set of countries covered by the survey-level analysis, with the corresponding number of waves as well as the first and the last interview year for which respondents from each country were included.

In measuring attitudes towards democracy, we select questions typically considered

[9]The website vesseldistance.org was last accessed in July 2014. For Canada, we compute sea distances as the shortest sea-route from the main port on either the East or the West coast. We consider three ports for the US (on the East Coast, the West Coast, and the gulf of Mexico), and Russia (on the Baltic Sea, the Black Sea, and the Pacific Ocean). See Table B.1 for more details.

in the literature (Acemoglu et al., 2021; Fuchs-Schündeln and Schündeln, 2015; Persson and Tabellini, 2009). Our main variable, labelled *Democratic system*, is derived from the question: "Would you say having a democratic political system is a very good, fairly good, fairly bad or very bad way of governing this country?" Respondents can answer on a 1 to 4 scale. We consider both the full scale and, for robustness, a dummy version of the variable equal to one if a respondent viewed democracy as a "very good" or "fairly good" system. We also look at the extent to which respondents agree with the statement: "Democracy may have problems but is better than any other form of government," which we label *Democracy better*. As for *Democratic system*, we consider both the full 1-to-4 scale and a dummy equal to one if respondents "strongly agree" or "agree" with the previous statement. Finally, following Acemoglu et al. (2021), we create a *Support democracy index*, which is constructed by taking the average of four separate questions from the IVS that elicit respondents' attitudes towards different political systems. We always code answers so that higher values refer to stronger support for democracy. Table B.2 reports the exact wording, the answer range, and the survey year in which each question is available.

For robustness, we complement the IVS with data from the Afrobarometer, including the 16 African countries that are present in the latter but not in the former (Table B.5). We create a dummy equal to one if a respondent thinks that "Democracy is preferable to any other kind of government", to make it as comparable as possible to the dummy described above for *Democratic system* from the IVS.[10]

Democracy score. To analyze the effects of trade on a country's democracy, we use the *Polity2* score from the Polity5 project. This variable, which is widely used in the literature (Besley and Persson, 2019; Burke and Leigh, 2010; Fuchs-Schündeln and Schündeln, 2015), is an index ranging from -10 to 10, with more positive values capturing stronger democratic institutions. We also define an indicator variable for countries with a *Polity2* score strictly positive, which we use both as an alternative outcome and to define democratic and non-democratic trade partners. The *Polity2* score is available for a larger set of countries and years than survey data from the IVS. In particular, our sample consists of an unbalanced sample of 116 countries for the period from 1960 to 2015 (Table B.6). As a robustness check, we also use the democracy index from Freedom House, available from 1975 onwards.

Table 1 reports summary statistics for the main individual-level (Panel A) and country-level (Panel B) variables used in the analysis. Survey respondents hold relatively positive views towards democracy, as reflected in the average value of the variable *Democratic*

[10] See Table B.2 for more details.

system (3.4 on a 1-to-4 scale). However, there is substantial variation across countries. For instance, the average value of *Democratic system* ranges from 3.23 and 3.25 in China and South Africa to 3.70 and 3.71 in Norway and Sweden. The other proxies for citizens' views towards democracy display similar patterns. Average exposure to trade with democracies (scaled by GDP) during the formative years is more than four times larger than exposure to trade with autocracies (.17 vs .04). There is also more variation in exposure to democratic partners relative to autocratic partners (with standard deviations of .13 and .05 respectively). To account for such differences, when presenting the results, we also report standardized beta coefficients. The *Polity2* score is, on average, 2.06; as for individual attitudes, it exhibits large variation both across countries in a given period and within countries over time. The average trade-to-GDP ratio is .3. Trade with democracies accounts for almost 80% of total trade, though large variation exists across countries and over time. Trade with democracies declines since the 2000s, with the steady integration of China with the rest of the world.

3 Empirical Strategy

3.1 Individual-Level Analysis: Attitudes Towards Democracy

We begin the analysis by estimating the effects of trade with democratic and non-democratic partners on citizens' attitudes towards democracy. We build on a large literature in psychology (Krosnick and Alwin, 1989; Sears, 1975) and, more recently, economics (Carreri and Teso, 2022; Giuliano and Spilimbergo, 2014) that documents that individuals' political preferences are formed during early adulthood. For individuals living in country i, born in year b, and interviewed in year t, we define exposure to trade with partners of institutional type p as:

$$T^p_{ibt} = \frac{1}{N_t} \sum_{r=1}^{N_t} \frac{trade^p_{i,b+15+r}}{GDP_{i,b+15+r}} \tag{1}$$

where $trade^p_i$ is country i's trade with democratic ($p = D$) and non-democratic ($p = A$) partners during the impressionable years (from the age of 16 to the age of 24), scaled by the corresponding GDP.[11] To obtain individuals' average trade exposure, we divide the cumulated exposure during the impressionable age by the number of years of exposure,

[11] We define a trade partner democratic if its *Polity2* score is strictly positive.

N_t, which for some individuals may depend on the year of interview t.[12] Questions on attitudes towards democracy are available in the IVS between 1995 and 2019, but exposure to economic integration can be calculated from 1960 (when trade data becomes systematically available).

We estimate individual-level regressions of the form:

$$y_{kibt} = \lambda_{it} + \zeta_b + \beta^D \log(T_{ibt}^{demo}) + \beta^A \log(T_{ibt}^{auto}) + W_{ib} + X_{kibt} + \epsilon_{kibt} \quad (2)$$

where y_{kibt} is a proxy for attitudes towards democracy of individual k from country i born in year b and interviewed in survey-year t; X_{kibt} is a vector of individual controls (gender, income, and education); and, T_{ibt}^p is trade exposure with partners of type p defined in equation (1).[13] To account for the possibility that exposure to trade with democracies coincided with regional democratization trends, which may influence citizens' attitudes, we include a measure of democratization waves occurring in a country's influence set (Acemoglu et al., 2019) during the impressionable age period of individuals born in year b, W_{ib}.[14] Finally, we include country by survey-year and birth-year fixed effects (λ_{it} and ζ_b). Standard errors are clustered at the country level.

The inclusion of country by survey-year and birth-year fixed effects implies that β^D and β^A are estimated from changes across birth cohorts *within* a country, as compared to changes across the same age groups in other countries, in a given survey-year. Note, also, that country by survey-year fixed effects absorb any country-specific shock occurring in any given survey-year.

3.2 Country-Level Analysis: Democracy

In the second part of the paper, we examine the effects of economic integration with democratic and non-democratic partners on a country's democracy score. We conduct

[12] In most cases, $N_t = 9$, covering the whole 16-to-24 age span. For the subset of individuals who are either too young or too old, we use all available years over the 9-year impressionable age window. Results are robust to dropping these individuals and to using alternative definitions of impressionable years.

[13] Individual controls for income and education are dummies for: income deciles; and, primary, secondary, and higher than secondary level of education attained.

[14] Following Acemoglu et al. (2019), we construct this variable as follows. First, we divide the world in 6 regions; then, within each region and for each country i, we define the share of countries other than i with a *Polity2* score strictly positive during year b and that were in the same institutional group as i at baseline (where an institutional group is either democratic, for *Polity2* > 0, or autocratic, for *Polity2* < 1). In our preferred specification, we lag this measure by one year, to reduce endogeneity concerns. Results are unchanged when using the contemporaneous version or 2, 3, 4, or 5-year lags. As for trade exposure, we calculate the average of this variable over the entire impressionable-year window.

the analysis at the country level using 5-year intervals, to account both for the gradual diffusion of new technologies across countries and over time (the key source of variation behind our instrument) and for the sticky nature of institutions. Specifically, for the period from 1960 to 2015, we estimate:

$$D_{it} = \gamma_i + \lambda_t + \beta^D \log(T_{it}^{demo}) + \beta^A \log(T_{it}^{auto}) + W_{it} + \epsilon_{it} \tag{3}$$

where D_{it} is the democracy score of country i in year t, and T_{it}^{demo} (resp., T_{it}^{auto}) is trade with democracies (resp., autocracies) over GDP. W_{it} refers to democratization waves in country i's influence set during year t, and γ_i and λ_t are country and year fixed effects. Standard errors are clustered at the country level.

3.3 Instrument for Economic Integration

Even when controlling for the fixed effects included in equations (2) and (3), a simple OLS regression of citizens' beliefs or countries' democracy scores on economic integration may be biased for several reasons. First, free trade agreements or broader economic liberalization episodes might lead to political reforms and institutional change (Giavazzi and Tabellini, 2005; Giuliano et al., 2013; Liu and Ornelas, 2014). Second, the pattern of specialization can be influenced by the quality of a country's institutions (Costinot, 2009; Nunn, 2007). Finally, individuals' beliefs and the quality of a country's democracy may be correlated with a host of other factors—such as income or education—that are also related to economic integration.

To address these and related concerns, we construct an instrument for economic integration that exploits the rise in the importance of air, relative to sea, transportation. Our strategy builds on recent work by Feyrer (2019), and rests on the following intuition. Improvements in air shipping occurring since the mid-1960s, especially the adoption of the jet engine, have reshaped the geography of international trade, leading to a dramatic increase in the share of air freight (Hummels, 2007). For instance, the trade costs incurred when shipping goods by air were 10 times lower in 2004 than in 1955. The reduction in sea transportation costs over the same period was instead much more limited. This resulted in an unprecedented surge in the share of goods traveling by air—from less than 10% prior to 1960 to more than 50% by 2004, for the US.[15]

These patterns were not homogeneous across countries, but, rather, affected different

[15]Detailed statistics for most countries other than the US going back in time are not available.

country-pairs differently, depending on their geographic location. Specifically, the trade surge induced by improvements in air transportation is lower for country-pairs for which air and sea distances are fairly similar (e.g., Japan and China) than for countries for which the two distances are very different (e.g., Japan and France).

3.3.1 The Gravity Step: Deriving Predicted Trade

To operationalize the previous intuition, we estimate a time-varying gravity equation (Anderson and Van Wincoop, 2003) with both air and sea distances, allowing the elasticity of trade with respect to each distance to change every five years between 1960 and 2015. We then use the estimated elasticities to predict bilateral trade flows, which we aggregate at the country level, to obtain instruments for economic integration with democratic and non-democratic partners, respectively.

The general gravity model can be expressed as:

$$\ln\left(trade_{ijt}\right) = \ln\left(y_{it}\right) + \ln\left(y_{jt}\right) - \ln\left(y_{wt}\right) + (1-\sigma)[\ln\left(\tau_{ijt}\right) + \ln\left(P_{it}\right) + \ln\left(P_{jt}\right)] + \epsilon_{ijt} \quad (4)$$

where $trade_{ijt}$ is bilateral trade between country i and country j at time t; y_{it}, y_{jt}, and y_{wt} are the GDP of countries i and j and of the world; P_{it} and P_{jt} are country-specific multilateral resistance terms that capture a weighed average of trade barriers of any given country; and, τ_{ijt} is the bilateral resistance term, which captures all pair-specific trade barriers (e.g., distance, common language, shared border, and colonial ties).

We depart from the canonical gravity equation by modeling the bilateral resistance term as a function of sea and air distances, while absorbing all other factors in a large set of fixed effects. As in Feyrer (2019), we assume the following functional form for τ_{ijt}:

$$\ln\left(\tau_{ijt}\right) = \beta_q^{sea} \ln\left(seadist_{ij}\right) + \beta_q^{air} \ln\left(airdist_{ij}\right) \quad (5)$$

where $seadist_{ij}$ and $airdist_{ij}$ are sea and air distances between countries i and j. Coefficients on distances in expression (5) are allowed to vary across time-periods q, capturing the differential effect over time of technological change in air relative to sea transportation discussed above. We allow q to have a frequency lower than t (in particular, 5 years), since improvements in technology take time to be developed and diffuse.[16]

Replacing expression (5) in equation (4), we predict bilateral trade flows between

[16]Pascali (2017) uses a similar strategy to estimate the elasticity of trade with respect to sail versus steamship distances.

countries i and j at time t by estimating:

$$\ln\left(trade_{ijt}\right) = \chi_{ij} + \varphi_{it} + \psi_{jt} + \beta_q^{sea} \ln\left(seadist_{ij}\right) + \beta_q^{air} \ln\left(airdist_{ij}\right) + u_{ijt} \qquad (6)$$

where χ_{ij}, φ_{it}, and ψ_{jt} are country-pair and country by year fixed effects, respectively. Country-pair fixed effects absorb any bilateral (time invariant) characteristic between countries, such as common language, colonial relationship, and common border. The inclusion of country-year fixed effects instead controls for any country-time specific variation that may affect bilateral trade and confound the effect of geographic distance, such as the construction of a new port or a cargo airport.[17] Our preferred instrument is obtained by estimating equation (6) with OLS. However, results are similar when using the Poisson Pseudo Maximum Likelihood (PPML) estimator, which reduces concerns of potential inconsistency in the estimation of multiplicative models in log-linearized form, and addresses the issue that OLS estimates may be biased due to many zeros in bilateral trade flows (Silva and Tenreyro, 2006).

After estimating equation (6), we take the exponential of predicted bilateral log trade, and sum it over all partners j of country i. In formulas:

$$\begin{aligned} \widehat{trade}_{it} &= \sum_{j \neq i} \omega_{ij} \exp\left(\ln \widehat{trade}_{ijt}\right) \\ &= \sum_{j \neq i} \omega_{ij} \left[e^{\hat{\beta}_q^{sea}(\ln seadist_{ij}) + \hat{\beta}_q^{air}(\ln airdist_{ij})} \right] \end{aligned} \qquad (7)$$

To predict economic integration with democratic and non-democratic partners, we sum bilateral trade flows in equation (7) separately for partners of either institutional type. In the baseline specification, we define a partner as democratic if its 5-year lagged *Polity2* score is strictly positive. In Appendix C, we also replicate the analysis using the *Polity2* score at baseline to classify the institutions of trade partners.

By omitting the estimated fixed effects from equation (6) in the summation in (7), we increase confidence that the instrument only captures the variation in economic integration induced by changes in the importance of air relative to sea transportation. Yet, this comes at the cost of potentially reducing the predictive power of the instrument. To tackle this

[17] Controlling for this battery of fixed effects is consistent with the suggestions in Baldwin and Taglioni (2007) and Head and Mayer (2014). We follow Baldwin and Taglioni (2007) also in calculating $\log(trade_{ijt})$ as the average of the log of the two flows between i and j (instead of the log of the mean), and by expressing trade in current US dollars, while controlling for time fixed-effects (instead of deflating by the US CPI).

trade-off, when aggregating bilateral predicted trade flows in (7), we weigh by the average trade share between countries i and j, relative to total trade of country i during the first 5-years for which trade data are available.[18] As documented below, results are robust to using other weights that depend only on country j's baseline characteristics—such as trade over GDP, population, and share of trade relative to world trade—and to aggregating bilateral predicted flows without weights.

Figure 2 plots OLS coefficients (with 95% confidence intervals) obtained from the estimation of gravity equation (6). The elasticity of trade with respect to sea distance (red, dashed line) remains flat throughout the entire 1960 to 2015 period. Instead, the elasticity of trade with respect to air distance (blue, solid line) becomes more negative over time, in line with the trends described above and documented in Feyrer (2019) and Hummels (2007). That is, as technological progress makes air transportation cheaper and more available, the importance of air distance (relative to sea distance) rises. Table A.1, column 1, reports the corresponding formal estimates. In column 2, we present results obtained by estimating equation (6) with PPML. Reassuringly, the patterns of the estimated elasticities are similar across models. As anticipated above, in our baseline specification, we use the instrument derived from OLS estimates, but we document that our findings are robust to using that constructed from PPML.[19]

3.3.2 Actual and Predicted Trade: First Stage

In Table A.2, we present the relationship between actual and predicted trade to test the strength of the first stage. In columns 1 and 2, we regress the log of trade with democracies over GDP against the log of predicted trade with democratic and non-democratic partners, again scaled by GDP. In columns 3 and 4, we consider the log of trade with non-democratic partners. As explained before, the instruments for trade are scaled by 5-year lagged GDP, and democratic partners are defined using a 5-year lag in the *Polity2* score. Columns 1 and 3 only include country and year fixed effects, while columns 2 and 4 further control

[18] We use the first 5-years to limit concerns of endogeneity, and take the average over them to smooth out any possible noise in yearly trade data.

[19] Standard errors in 2SLS regressions are adjusted to take into account the estimation procedure involved in building the instruments for economic integration. We use the numerical procedure described in footnote 15 in Frankel and Romer (1999) and footnote 18 in Pascali (2017). Specifically, we add the term $\left(\frac{\partial \hat{\beta}^{demo}}{\partial \hat{\beta}^{gravity}}\right) \hat{\Omega} \left(\frac{\partial \hat{\beta}^{demo}}{\partial \hat{\beta}^{gravity}}\right)'$ to the variance-covariance matrix of the 2SLS regressions, where $\hat{\beta}^{demo}$ is the vector of estimated coefficients of the various regressions of interest (equations (2), (3), and their variations), $\hat{\beta}^{gravity}$ is the vector of the estimated coefficients of the gravity regression (equation (6)), and $\hat{\Omega}$ is the estimated variance-covariance matrix of the gravity regression.

for democratization waves.[20]

Trade with democracies is strongly and positively correlated with its predicted counterpart. Instead, the coefficient on predicted trade with autocracies is very close to zero, unstable, and imprecisely estimated. A similar picture holds for trade with autocracies, which is strongly correlated with predicted trade with non-democratic partners and weakly (and negatively) correlated with the instrument for trade with democracies. Figure A.1 displays the graphical analogue of columns 2 and 4 in a residualized binscatterplot that partials out country and year fixed effects, democratization waves, and predicted trade with autocratic (resp., democratic) partners in Panel A (resp., Panel B).

3.3.3 Identifying Assumption and Instrument Validity

The variation underlying the instrument, namely relative improvements in air transportation technology, is likely exogenous to any single country and, within countries, to any specific age cohort. Possible exceptions might be countries that play an important role in the aerospace industry, such as the US and France, but we show that results are unchanged when predicting trade omitting these (and other) partners. Moreover, since the instrument rests on variation that is solely induced by geography, it is free from reverse causation. Finally, the time-varying nature of the instrument allows us to absorb any country-specific, time-invariant factor and any shock common to all countries that might be correlated with both trade openness and democracy. In the individual-level analysis, country by survey-year fixed effects additionally control for country-specific shocks that may influence support for democracy among citizens interviewed in the same year (in the same country) and may also be correlated with the history of trade exposure.

One remaining concern may be that, relative to other cohorts in their country, and relative to individuals in the same cohort in other countries, cohorts more exposed to economic integration with democracies because of improvements in air transportation also experienced shocks that influenced their attitudes towards democracy. We address this possibility in different ways. First, we replicate the individual-level analysis controlling for factors specific to each cohort (within each country) that might be correlated with the instrument and may also shape attitudes through channels other than trade, such as GDP growth, educational attainment, and democracy. Second, we include different sets of fixed effects (e.g., country by survey-year and age by survey-year fixed effects).

A second potential concern, specific to the country-level analysis, is that countries for

[20]Standard errors are adjusted as explained in footnote 19.

which bilateral distances predict larger economic integration with democracies because of technological progress in air shipping were already on differential trends for institutional change. For instance, one may be worried that less democratic or more peripheral countries were more likely to get connected to democracies because of improvements in air transportation, and that these countries were already undergoing a process of democratization. Moreover, due to the unbalanced nature of the sample, one may be concerned that countries entering later in our analysis did so precisely when becoming more democratic, and that they are also predicted to experience faster integration because of their geography.

We tackle these and similar concerns by interacting year dummies with the number of years a country is in the sample as well as with baseline country characteristics—such as democracy, economic structure (including the share of GDP accruing to different sectors), measures of geographic remoteness, and trade exposure—to allow for differential trends. We also verify that results are robust to dropping specific groups of countries that underwent particularly fast episodes of political and economic liberalizations (e.g., member countries of the European Union), and to constructing trade excluding partners like the US and China. In addition, we show that neither the initial democracy score nor the baseline democratic capital of a country predicts economic integration with democracies in subsequent years.[21] We provide more details about these and additional robustness checks below, after presenting the results.

Finally, note that, by exploiting variation driven by changes in air transportation technologies (interacted with geography), the instrument might capture not only trade in goods, but also the movement of other factors. In Section 6 below, we seek to unbundle the components of integration that might drive our results. Our findings are not explained by migration, FDI, the presence of students abroad, and the number of book translations. However, we cannot rule out that other forces—including tourism, the formation of business linkages, and the flow of ideas—might be at play. For this reason, we interpret our results as the effects of economic integration broadly defined, rather than trade specifically, although we often refer to trade for brevity.

[21] The unbalanced nature of our sample and the fact that many variables become available for countries when the latter enter the sample prevent us from conducting formal "pre-trends" exercises.

4 Economic Integration and Citizens' Attitudes

4.1 Main Results

Table 2 presents our main results for the effects of exposure to economic integration with democratic and non-democratic partners during individuals' impressionable years. The dependent variable, which is multiplied by 100 for readability, captures individuals' agreement with the idea that democracy is a good political system (on a 1 to 4 scale, with higher values reflecting more positive views). We report OLS and 2SLS estimates in columns 1 and 2 and 3 to 6, respectively, presenting standardized beta coefficients in square brackets to ease comparisons. In columns 1 and 3, we only control for individual characteristics and for country, survey-year, and birth-year fixed effects. All remaining columns further include the measure of democratization waves described in Section 3.1.

OLS estimates reveal a positive and statistically significant correlation between economic integration with democratic partners during an individual's impressionable age and her attitudes towards democracy at the time of the survey. The opposite relationship holds for exposure to economic integration with non-democratic countries. Turning to 2SLS estimates, the F-stats for each separate first stage (reported at the bottom of the table) confirm the strength of each instrument already shown in Table A.2.[22] Consistent with OLS estimates, 2SLS coefficients indicate that economic integration with democratic partners has a strong, positive effect on individuals' attitudes towards democracy (column 3). 2SLS estimates become somewhat smaller in magnitude, relative to column 3, when controlling for democratization waves (column 4) and when adding region by survey-year (column 5) and country by survey-year (column 6) fixed effects.[23] However, they remain quantitatively large and, in our most stringent specification (column 6), statistically significant at the 5% level. Instead, and in contrast with their OLS counterparts, 2SLS estimates for economic integration with non-democracies are no longer statistically significant, and become positive and quantitatively small.

According to the coefficient of our preferred specification (column 6), doubling ex-

[22]For completeness, we also report the Kleibergen-Paap (KP) F-stat for the joint significance of all instruments. However, the threshold values used for 2SLS regressions with one instrument do not apply to the case of multiple endogenous regressors and, in fact, no critical values exist for the KP F-stat in the case of multiple instruments and non-homoskedastic errors (Andrews et al., 2019).

[23]Regions are defined following the IMF World Economic Outlook Database as: Emerging and Developing Europe; Emerging and Developing Asia; Latin America and the Caribbean; Middle East and Central Asia; Sub-Saharan Africa; Advanced Europe; North America (USA and Canada); and, Advanced Asia.

posure to economic integration with democracies (about the inter-quartile range in our sample) increases an individual's attitudes towards democracy by .48 points on a 1 to 4 scale. This is similar to the difference in support for democracy between China and Sweden, or between Colombia and France. Figure A.2 plots the graphical analogue of results in column 6, reporting the 2SLS coefficient on exposure to economic integration with democracy, after partialling out all other controls and fixed effects.[24]

It should be noted that the magnitude of 2SLS coefficients for the effects of exposure to economic integration with democracies is substantially larger than that of OLS ones. One potential explanation, besides measurement error in trade, is that we may be identifying a local average treatment effect (LATE) for countries that benefited more from improvements in air shipping, and whose citizens were more likely to update their beliefs about democracy. Another possibility is that the instrument might capture not only trade in goods, but also the flow of other factors. We return to this point in Section 6.

Summary of robustness checks. In Appendix C.1, we perform several robustness checks, which we briefly summarize here. First, we document that results are robust to measuring citizens' attitudes towards democracy in different ways (Table C.1), such as: defining a dummy equal to one if an individual views democracy as a very good or a fairly good political system; considering the extent to which individuals agree with democracy being better than other political arrangements; and, using the support for democracy index constructed in Acemoglu et al. (2021). Second, we verify that our findings are unchanged when including African countries that are not present in the IVS but for which citizens' preferences can be measured in Afrobarometer (Table C.2). Third, we replicate the analysis excluding potential outliers as well as individuals that: *i*) were either too young or too old to be fully exposed to trade during their formative years; and, *ii*) were living in countries that underwent swift episodes of integration and political liberalization (Table C.3). Fourth, we document that results are robust to excluding trade with particularly influential countries, such as the US and China, or with countries involved in the development of air transportation technologies, such as France and the UK (Table C.4). Fifth, we replicate the analysis with versions of the instrument that: *i*) aggregate predicted bilateral trade with baseline partners' characteristics (e.g., population, and trade over GDP or world trade), or without any weights; *ii*) estimate the gravity equation (4) with PPML; and, *iii*) use baseline *Polity2* score to define democratic and autocratic partners (Table C.5).[25] Finally, we show that results are unchanged when using different age

[24]Table A.3 replicates Table 2 reporting coefficients on all individual controls.

[25]Table C.5 also replicates results including a more stringent set of fixed effects.

windows to define the impressionable years (Table C.6).

4.2 Mechanisms

Our interpretation of results is that exposure to economic integration with democracies during the impressionable years favors the transmission of democratic capital (Persson and Tabellini, 2009) from more to less democratic countries. This may in turn shape citizens' views about democracy through a process similar to that documented in the literature for exposure to own country's institutions (Acemoglu et al., 2021; Fuchs-Schündeln and Schündeln, 2015).

Another channel might be that economic integration with democracies leads to faster democratic transitions, either because of stronger demand for democracy among citizens (Acemoglu and Robinson, 2006) or because autocratic leaders perceive democracy as growth enhancing (Buera et al., 2011), or both. In turn, a longer experience with democracy in their own country—and not that acquired through trade exposure—might influence citizens' attitudes towards democracy. To test this possibility, in column 2 of Table 3, we replicate our preferred specification (reported in column 1 to ease comparisons) by controlling for the average *Polity2* score of a country during an individual's impressionable age. The coefficient on exposure to economic integration with democracies remains quantitatively similar to that in column 1, albeit somewhat less precisely estimated. In column 3, we replace the average democracy score during the formative years with that between the age of 16 and the year of the interview. Even though the precision and the size of the coefficient falls, the effect of economic integration with democracies remains positive, large, and statistically significant at the 10% level (with a p-value of .08).[26]

Our baseline specification already includes the set of democratization waves occurring in a country's neighbors during respondents' impressionable years. This rules out the possibility that individuals may change their beliefs because of changes in their neighbors' institutions (which may be correlated with trade exposure with democracies). In column 4, we check that democratization waves occurring in neighboring countries after an individual's impressionable years are not responsible for changes in her beliefs. Specifically, we control for the average democratization waves (in a country's neighbors) experienced by an individual from the age of 16 until the time of the interview. Results remain similar to those in the baseline specification.

[26]Results are unchanged when using a dummy equal to one if the *Polity2* score is strictly positive.

A third possible mechanism is that economic integration with democratic partners fosters growth (Donaldson, 2015), and this—rather than the exposure to partners' institutions—improves citizens' views of democracy. This idea resonates with the branch of the literature that posits a causal nexus from economic growth to democracy (Barro, 1999; Lipset, 1959); moreover, it would be consistent with the positive correlation between income and attitudes towards democracy that we observe in our sample (Table A.3).[27] To test this channel, we augment the preferred specification by controlling for average income growth of the country during: an individual's impressionable years (column 5); and the period between the time she was 16 and the year of the interview (column 6). Also in this case, the coefficient on exposure to trade with democracies remains positive, large, and statistically significant.

Yet another possibility is that trade with democratic partners increases citizens' level of education, which, in turn, ameliorates their attitudes towards democracy (Glaeser et al., 2007). Even though it is *ex-ante* unclear whether economic integration with democracies fosters the accumulation of human capital, we nonetheless consider this potential mechanism.[28] In columns 7 and 8 of Table 3, we replicate the previous analysis controlling for the average years of schooling in the country both for the impressionable years and for the period between the year in which an individual was 16 and the year of the interview. Once again, the point estimate on exposure to economic integration with democracies remains positive and statistically significant.

In Table A.4, we provide more direct evidence against the possibility that trade with democracies increased income or human capital of cohorts that were more exposed during their impressionable years. In column 1, we replicate the baseline specification (Table 2, column 6), omitting controls for income and education, and using as dependent variable a dummy equal to one if an individual's income is above the sample median at the time of the survey. The coefficient on exposure to trade with democracies is positive, but quantitatively small and not statistically significant, suggesting that cohorts that grew up while their country was trading more with democracies did not experience faster income growth during their lifetime.[29] In columns 2 to 4, we replace the above-median income

[27] A related mechanism is that income growth favors the transition to democracy, which in turn makes individuals more supportive of democratic institutions. Columns 2 and 3 in Table 3 weigh against this possibility.

[28] In fact, results in Atkin (2016) and Blanchard and Olney (2017) as well as our own evidence below (Table 7) suggest the opposite. A negative effect of trade with democracies on human capital accumulation for less democratic countries is consistent with the latter specializing in the production of low-skilled intensive goods.

[29] Results are similar when using as dependent variable dummies for income quintiles (Table A.5).

dummy with dummies for having, respectively, primary, secondary, or tertiary education. If anything, cohort that were more exposed to economic integration with democracies during their impressionable years have lower education, relative to less exposed cohorts.[30]

Finally, changes in citizens' beliefs may be influenced by democratic partners' pressure on less-democratic ones to democratize, once they start to trade with each other. Indeed, a long-standing idea in American foreign policy is that "democracy can be exported" (Eichengreen and Leblang, 2008).[31] Pressure from trade partners may, in turn, induce citizens of non-democratic countries to change their perceptions about democracy not because they observe their partners' institutions, but rather because they are exposed to campaigns that are designed to change their attitudes. To test this possibility, we create cohort-specific variables that count the number of years (relative to the impressionable age period) in which the country was subject to an intervention by the CIA or by the KGB during the Cold War. This exercise is motivated by evidence in Berger et al. (2013b) that the US used its influence to increase the size of its export markets during the Cold War. One may thus imagine a similar scenario where, following an (exogenous) increase in trade, the US exerted pressure on its partners to change their institutions.[32]

In Table A.6, we augment the baseline specification (reported in column 1 to ease comparisons) by controlling for the number of years, during the impressionable age window, that a country was exposed to an intervention by the CIA (column 2), by the KGB (column 3), or by either organization (column 4). The coefficient on exposure to trade with democracies remains positive and statistically significant. It is possible that democratic countries exert pressure on their less-democratic partners in ways that we cannot capture. Yet, given the importance of foreign policy during the Cold War, we interpret these trends as suggestive evidence that pressure from trade partners is unlikely to explain our main results. We provide additional evidence against this specific channel in Section 5.3 below.

[30]This result is consistent with the country-level analysis presented below (Section 5.3), which shows that trade with democracies reduces educational attainment.

[31]For example, in May 2001, George W. Bush claimed that when "we [the US] promote open trade, we are promoting political freedom", and that "societies that open to commerce across their borders will open to democracy within their borders." See https://georgewbush-whitehouse.archives.gov/news/releases/2001/05/20010507-6.html.

[32]Yet, Berger et al. (2013a) have documented that CIA and KGB interventions had a negative effect on democracy during the Cold War.

5 Economic Integration and Democracy

5.1 Main Results

Having documented that economic integration with democracies influences citizens' beliefs, we now examine whether it also leads to changes in countries' institutions. In Table 4, we report OLS (columns 1 and 2) and 2SLS (columns 3 and 4) results for equation (3), where we estimate country-level panel regressions that control for country and period fixed effects.[33] Both OLS and 2SLS coefficients on trade with democracies are positive and statistically significant, and remain stable when controlling for democratization waves (columns 2 and 4).[34] Figure A.3 displays the graphical analogue of column 4, plotting the relationship between economic integration with democracies and the *Polity2* score, after partialling out democratization waves, trade with non-democracies, and country and year fixed effects. Instead, the OLS coefficient on trade with non-democracies is negative and statistically significant, while the 2SLS one is positive and imprecisely estimated (and smaller relative to that on trade with democracies).

The estimated effects of economic integration with democracies are quantitatively large. According to our preferred specification (column 4), an 80% increase in economic integration with democracies (about the inter-quantile range in our sample) raises the *Polity2* score of a country by 4 points. This corresponds to the difference in the democracy score between Malaysia and Canada in 2010, or that between Turkey and Senegal in 2015.

In columns 5 and 6 of Table 4, we split the sample in baseline non-democracies and democracies, respectively, defining a country democratic if its *Polity2* score is strictly positive. Due to the smaller sample sizes, the SW F-stats become lower than in our preferred specification, suggesting that results should be interpreted with some caution. However, the picture that emerges is clear: trade with democratic partners has a large and positive effect only among countries that are non-democratic at baseline. Instead, the coefficient on trade with democracies is negative and very imprecisely estimated for democratic countries.

An interesting pattern emerging from both the individual-level and the country-level analyses is the asymmetric effect of economic integration by trade partners' institutions. Specifically, economic integration with democracies fosters individuals' democratic values

[33] As explained in Section 3.2, this analysis is conducted using 5-year periods. We report standardized beta coefficients in square brackets to ease comparisons, and present SW and KP F-stats at the bottom of the table.

[34] Also in this case, 2SLS estimates are an order of magnitude larger than OLS ones.

and favors the process of democratization across countries. Instead, economic integration with autocratic partners does not lead either to lower attitudes towards democracy or to less democratic institutions. One possible explanation is that citizens of less democratic countries are not fully aware of the defining features of democracy. When exposed to the institutions of another autocratic regime, citizens of non-democratic countries may thus not update their beliefs about the (perceived or actual) desirability of democracy. This is likely to occur only when individuals living in autocratic regimes are exposed for the first time to democratic institutions.

Summary of robustness checks. Results are robust to a large number of checks, which are presented in detail in Appendix C.2 and are briefly summarized here. First, we replicate the analysis using alternative measures of democracy (Table C.7). Second, we verify that results are robust to interacting period dummies with several baseline or time-invariant country characteristics (Table C.8), and that baseline levels of democracy are uncorrelated with subsequent changes in predicted economic integration with democracies (Figures C.1, C.2, and C.3).[35] Third, we check that results are unchanged when dropping members of the European Union or former members of the Soviet Union, and when defining trade excluding the US, China, or countries involved in the development and the production of air transportation technologies (Tables C.9 and C.10). Finally, we document that results are robust to using different versions of the instrument, to defining trade partners' institutions using baseline (rather than 5-year lag) *Polity2* score, and to estimating regressions at yearly (rather than 5-year) frequency (Table C.11).

5.2 Evidence on the Transmission of Democracy

Trade-induced democratic capital. Results in Table 4 are consistent with the patterns documented in Section 4. There, we argued that exposure to trade with democratic partners raises support for democracy among citizens of less democratic countries through the transmission of democratic capital. This may, in turn, increase demand for democracy and lead to institutional change.

In Table 5, we provide additional evidence consistent with this mechanism using a measure of "trade-induced" democratic capital similar in spirit to that defined in Persson and Tabellini (2009) for exposure to own democracy. For each country, we construct

[35] Among other controls, we include interactions between year dummies and the number of years that a country is in the sample. This is particularly important to rule out the possibility that our findings may be driven by countries that are on differential trends for democratization and that entered the sample in a way that is spuriously correlated with predicted economic integration.

a weighed average of their partners' democracy scores, with weights equal to the trade shares. Formally, we define:

$$TD_{it} = \sum_{j \neq i} \omega_{ijt} D_{jt} \tag{8}$$

where ω_{ijt} is the trade share of countries i and j in period t, relative to total trade of country i; and D_{jt} is the 5-year lagged *Polity2* score of country j (set equal to zero when negative).

In column 1, we estimate equation (3) with OLS, controlling for democratization waves and for country and year fixed effects, and replacing trade with democratic and non-democratic partners with TD_{it} defined in (8). In column 2, we turn to 2SLS estimation, instrumenting the trade shares in TD_{it} with their analogues derived from predicted trade constructed in Section 3.3. In both columns, the coefficient on TD_{it} is positive and statistically significant, indicating that a more democratic pool of partners is associated with a higher increase in a country's *Polity2* score. According to the coefficient in column 2, one standard deviation increase in trade-induced democratic capital (.14) raises a country's *Polity2* score by about 1.5 points.

In column 3, we add interactions between year dummies and baseline (domestic) democratic capital to allow countries to be on differential trends depending on their historical exposure to own democracy. Results are virtually unchanged. Finally, in column 4, we replace the 5-year lagged *Polity2* score of a country's partners with baseline democratic capital from Persson and Tabellini (2009).[36] If anything, the 2SLS coefficient becomes larger, consistent with democratic capital capturing the history of democracy in a country's partners more precisely than the more recent democracy score.

Heterogeneity by partners' characteristics. Next, we examine the conditions under which trade with democracies is more likely to promote democratization. We begin by building on the analysis presented in Table 4, splitting democratic partners between those with baseline domestic democratic capital above and below the median. We expect the trade-induced transmission of democracy to be stronger when countries interact with partners with a longer history of democracy. In column 1 of Table 6, we test this prediction, and replicate our preferred 2SLS specification (Table 4, column 4), considering separately the two groups of democratic partners (while also controlling for trade with autocratic partners).[37] Consistent with our conjecture, the effects of trade with democracies are driven by democratic partners with higher democratic capital.

[36]Democratic capital is not available for Belgium and Serbia.

[37]In each period, we lag the set of democratic partners considered by 5-years.

If democracy is transmitted from more to less democratic countries, one may expect this process to be stronger when democratic partners are economically successful. Indeed, both citizens and elites of non-democracies may update their beliefs about the desirability of democracy upwards especially when they observe that democratic countries grow faster.[38] In columns 2 and 3, we split democratic partners of each country into "good" and "bad". We define a country as a "good" democratic partner if it records a growth rate of real GDP per capita that is higher than the median growth rate of all democratic partners of a given country in a given year (column 2) or up to a given year (column 3). Our estimates indicate that trade with democracies favors democratization only when it happens with partners that do relatively well economically.[39] As noted in Acemoglu et al. (2021), democracies may be perceived as successful not only when they deliver economic growth, but also when they provide public goods and services to their citizens. In column 4, we thus define "good" those democratic partners with government spending over GDP above the median of the set of democratic partners in a given year.[40] Also in this case, the increase in the *Polity2* score is driven by trade with "good" democracies. Results in columns 2 to 4 resonate with those obtained by Acemoglu et al. (2021) for exposure to own democracy, and suggest that successful economic performance and public goods provision (within a country and among its partners) are important factors in driving support for democracy.

Finally, we test the role of cultural similarity. The existing literature has documented that lack of trust and higher cultural distance hinder economic exchange (Guiso et al., 2009). If our findings were due to a process of (cultural or institutional) transmission, one would expect democracy to increase more when trade occurs with democratic partners that are culturally closer. In column 5, we split democratic partners as culturally close and far, using the measure of genetic distance from Spolaore and Wacziarg (2009) as proxy for cultural distance. In line with our prediction, the coefficient on trade with democracies is quantitatively large and statistically significant only for democratic partners with cultural similarity above the median computed within the set of democratic partners (in a given

[38] Buera et al. (2011) provide evidence for a similar learning mechanism, where countries observe the policies implemented by other countries, and update beliefs about the desirability of such policies.

[39] The number of observations in columns 2 and 3 is lower than in the baseline specification, since for a handful of countries actual or predicted trade with good or bad partners is equal to zero. In unreported results, we estimated regressions similar to those in columns 2 and 3, also splitting autocratic partners in "good" and "bad". Consistent with our main results, the (null) effect of trade with autocracies was very similar for either group of partners.

[40] Data on government spending, taken from the IMF, is not available for all countries in all years.

year).[41]

5.3 Alternative Channels

Economic growth and human capital accumulation. As discussed in Section 4.2, an alternative mechanism for our results is a version of the "modernization hypothesis" (Lipset, 1959): economic integration with democracies might lead to faster income growth or human capital accumulation, and these forces—rather than the direct exposure to partners' institutions—might foster democratization. We already showed above that our findings for citizens' attitudes are unchanged when controlling for exposure to their country's GDP growth or human capital accumulation (Table 3), and that cohorts more exposed to trade with democracies are not richer or more educated (Table A.4).

In Table 7, we provide additional evidence against the modernization hypothesis in our context. First, in columns 2 to 4, we replicate the baseline specification by controlling for 5-year lagged (log of) GDP, population, and GDP per capita, respectively. 2SLS coefficients on economic integration with democratic and non-democratic partners remain very similar to those in our preferred specification, reported in column 1 to ease comparisons.[42] Columns 5 and 6 confirm these patterns instrumenting the level and the growth rate of GDP per capita with the measure of commodity prices from Burke and Leigh (2010).

In column 7, we test whether economic integration favors human capital accumulation, replacing the *Polity2* score with the average number of years of schooling as dependent variable.[43] If anything, economic integration with democracies is associated with lower educational attainment. This pattern is in line with results in Atkin (2016) and Blanchard and Olney (2017), and suggests that economic integration may induce (especially less developed) countries to specialize in the production of unskilled-intensive goods.

Redistribution of resources and the middle class. A second channel for our findings may be that trade with democracies benefits groups that are more supportive of democracy, which, in turn, mobilize resources to promote democratization (Acemoglu et al., 2005; Puga and Trefler, 2014). Note that this mechanism would be consistent with the effects of trade on citizens' attitudes documented in Section 4.1. For example, the

[41] We use genetic distance computed with the plurality method. Results are similar when using weighed genetic distance. Data on genetic distance is missing for Belgium and Luxembourg (which constitutes a single country-entity before 2000 in the rest of our analysis), Serbia, and Yemen.

[42] We refrain from interpreting the coefficients on GDP and population since, even when using a 5-year lag, they may not be exogenous to changes in democracy (Acemoglu et al., 2019).

[43] Data for years of schooling is from Barro and Lee (2013) and is not available consistently for all countries in the main analysis. See Table B.1 for more details.

groups benefiting from economic integration (and more supportive of democracy) may coordinate their efforts to influence the attitudes of the population at large, through information campaigns. If redistribution of resources were a key mechanism, one would expect results to be stronger for countries with lower rents from natural resources, and with a higher share of GDP accruing to services and manufacturing. This is because, there, the elites should be less likely to benefit from trade, while the middle-class may be better positioned to gain economic and political clout as the economy becomes more integrated with the rest of the (democratic) world.

To test this idea, in Figure 3, we split the sample in countries with baseline rents from natural resources and value added from manufacturing and services (all expressed as a share of GDP) above (orange bars) and below (blue bars) the median, respectively.[44] The effects of economic integration with democracies are quantitatively larger in countries with rents from natural resources above the median (first set of bars). They are instead similar in countries with higher and lower GDP share in manufacturing (second set of bars). Economic integration has a larger effect in countries with a higher service share at baseline, but estimates are imprecisely estimated in both samples (third set of bars). These findings are not consistent with trade making groups that are more likely to benefit from democratization stronger.

A related possibility is that trade with democracies increases income inequality, leading to democratization as citizens demand redistribution. To examine this possibility, we replicate our preferred specification using different proxies for the distribution of income as dependent variables. Relying on data from World Inequality Database and following the literature (Autor et al., 2008), we calculate the ratio of the log of income at different percentiles of the (pre-tax) income distribution (see Table B.1 for more details). We report results in Table A.8, considering the ratio of the (log of the) following income percentiles: *i*) 5th to 90th (column 1); *ii*) 5th to 50th (column 2); *iii*) 10th to 90th (column 3); *iv*) 10th to 50th (column 4); and, *v*) 50th to 90th (columnn 5). In all cases, the coefficient on trade with democracies is small and imprecisely estimated, suggesting that the trade-induced democratization documented above is unlikely to be explained by changes in income inequality.[45]

[44]Formal estimates are reported in Table A.7. Especially for manufacturing and services as a share of GDP, the SW F-stats are lower than in the baseline specification, suggesting that results should be interpreted with caution.

[45]Results, not reported for brevity, are very similar when considering the ratio of other income percentiles, and when measuring inequality using the share of income accruing to the top 1, 5, or 10% of the distribution.

Pressure from trade partners. A third mechanism through which economic integration with democracies may promote democratization is that more democratic countries push their less-democratic partners to implement political liberalizations, once they trade with each other. Weighing against this channel, we already showed that results are unchanged when controlling for individuals' exposure to CIA or KGB interventions during their impressionable years (see Section 4.2). In what follows, we provide additional evidence against this mechanism.

First, we allow countries that experienced CIA or KGB interventions during the Cold War to be on differential trends. Panel A of Table A.9 shows that results are unchanged when interacting year dummies with a dummy equal to one if, during the Cold War, the country had at least one: *i*) CIA intervention (column 2); *ii*) KGB intervention (column 3); and, *iii*) CIA or KGB intervention (column 4). Our findings remain similar when controlling for a time varying indicator equal to one if an intervention took place in a given 5-year period (Panel B).

Second, we rely on data from Bailey et al. (2017) to measure countries' voting behavior in the United Nations General Assembly (UNGA)—a proxy for countries' political alignment (Kleinman et al., 2020). We construct the absolute value of the difference between the vote of any country and that of full democracies (defined as in Besley and Persson, 2019) on UN resolutions. For robustness, we construct the same measure using only the US as a "reference point".[46] Table A.10 documents that trade with democracies has no effect on the similarity of voting patterns, either contemporaneously (column 1) or with a 5-year lag (column 2). Results are unchanged when considering separately baseline democracies and non-democracies (columns 3 and 4), and when defining the distance of a country's voting behavior from that of the US (Panel B).[47]

Third, as in Camboni and Porcellacchia (2021), we rely on GDELT data to proxy for a country's political alignment, which may directly or indirectly capture pressure exerted from its partners.[48] For each country, we measure the number of economic, military, and diplomatic offers received or made in a given year. These can be interpreted, respectively, as attempts made by other countries to influence a country's policies, and as a country's

[46] See Table B.1 for more details. Results are identical when defining democracies as countries with a *Polity2* score strictly positive at baseline. Since multiple resolutions may occur within a 5-year period, we take the closest to the beginning of each period. Results are unchanged when selecting the closest to the last year of a 5-year period.

[47] In Panel B, the US is excluded from the regression sample.

[48] GDELT records the number of interactions between country pairs between 1979 and 2012. See Table B.1 and Leetaru and Schrodt (2013) for more details.

alignment with other countries. Table A.11 replicates our baseline specification using the log of (one plus) the number of offers received (columns 1 to 4) and sent (columns 5 to 8) for the period 1980-2010 as dependent variable. In most cases, the coefficient on trade with democracies is negative and imprecisely estimated.[49]

Finally, we use the Formal Bilateral Influence Capacity (FBIC) index, which measures bilateral influence of a source country on a target country (Moyer et al., 2021) and is described in detail in Table B.1. We collapse the bilateral index to derive a measure of total and average influence received by any given country in each 5-year period between 1960 and 2015. In Panel A of Table A.12, we consider the overall influence received by a country from all countries (column 1) and from democratic countries (column 2). Coefficients on trade with democracies are negative, small, and imprecisely estimated. Similar patterns hold when: *i*) considering the FBIC sub-component index that captures a country's dependence on others (columns 3 and 4); *ii*) using the average FBIC index (columns 5 to 8); and, *iii*) measuring foreign influence using Camboni and Porcellacchia (2021)'s Weaker Power Index (Panel B).

Preferential trade agreements. Finally, we consider the possibility that the (exogenous) increase in economic integration with democracies makes it more appealing for countries to sign preferential trade agreements (PTAs). If this were to be the case, our estimates may, at least in part, capture the "pro-democracy" effect of PTAs (Liu and Ornelas, 2014), rather than our proposed transmission channel. To address this possibility, we use data from Facchini et al. (2021) and study whether economic integration with democracies is associated with a larger number of PTAs signed by a country.[50] We report 2SLS estimates from our preferred specification in Table A.13, replacing the *Polity2* score with proxies for the presence of PTAs. In columns 1 to 3 (resp., 4 to 6), we define the dependent variable as PTAs that a country has in place with any partner (resp., with democratic partners only). In columns 1 and 4, we consider the full sample, while in columns 2−5 and 3−6, we focus on baseline democracies and autocracies, respectively. The coefficient on economic integration with democracies is never statistically significant and, except for column 6, negative.[51] This evidence weighs against the idea that eco-

[49]Regressions include 115 (rather than 116) countries, because there is no data on offers for Belgium and Luxembourg. Very similar results, not reported for brevity, hold when considering aid and agreements (political, economic, military, diplomatic, and judiciary) recorded in the GDELT dataset.

[50]PTAs data is not available for Serbia and for Belgium and Luxembourg. Namibia also drops from our regressions with country fixed effects, since PTA data is reported for a single time period.

[51]Results (not reported for brevity) remain very similar when considering PTAs in place in the following 5-year period, and when defining the dependent variable as the number of PTAs signed in a given 5-year

nomic integration with democracies might lead to democratic transitions as a result of trade agreements.

6 Unbundling Economic Integration

As already noted, since the instrument exploits variation driven by changes in air transportation, it might capture not only trade in goods, but also the movement of other factors. These, in turn, may independently influence attitudes towards democracy and lead to institutional change. Moreover, it is possible that the connections created by trade spill over into other forms of economic (and non-economic) exchange, such as migration or FDIs, which may reinforce the direct effects of trade on democracy. In this section, we seek to unbundle some of the components of economic integration. We report results in Table 8, where we replicate our preferred country-level specification using different outcomes.

We begin from migration, which has been shown to favor the transmission of democracy, and more broadly culture and ideology, across countries (Barsbai et al., 2017; Giuliano and Tabellini, 2020; Rapoport et al., 2020). In column 1, the dependent variable is the number of in- and out-migrants to and from a country, scaled by population, in each 5-year period from 1965 to 2015 (see Table B.1 for more details). In columns 2 and 3, we consider migration separately to (or from) democratic and non-democratic countries. In all cases, the coefficient on trade with democracies is imprecisely estimated and quantitatively small.[52]

Next, we turn to the flow of students from less to more democratic countries, which might be conducive to the process of democratization (Spilimbergo, 2009). Using data from Spilimbergo (2009), we estimate the effects of trade with democracies on the number of students (relative to sending country population) abroad, regardless of their destination (column 4) and separately to democratic (column 5) and non-democratic (column 6) countries. Again, the coefficient on trade with democracies is small and imprecisely estimated, suggesting that the trade-induced democratization estimated above is not accompanied by higher flows of students across countries.[53]

period and separately controlling for PTAs in place in the previous period.

[52]Migration data is not available for all years and countries in our sample. Results (not reported for brevity) are similar when using the log number of migrants, and when considering separately in- and out-migration.

[53]Data on the number of students abroad is always missing for Belgium and Luxembourg, Myanmar, and Serbia. It is also present with gaps for other countries.

In column 7, we use data from the World Bank World Development Indicators to examine the relationship between trade with democracies and the (log of) FDI to GDP ratio. Differently from migration and the number of students abroad, for most countries FDI data exist only at the country, rather than at the country-pair, level. For this reason, we cannot consider FDIs to or from democracies and non-democracies separately. As before, the coefficient on trade with democracies is imprecisely estimated and quantitatively small.

Finally, in column 8, we consider the (log of) the number of foreign book translations—a proxy used in Abramitzky and Sin (2014) to capture the flow of ideas across countries. Once again, the coefficient on trade with democracies is small and imprecisely estimated (and, if anything, negative). In Table A.14, we consider separately translations of books that were written: *i*) in English; *ii*) in languages spoken in democratic countries; and, *iii*) on different topics. In all cases, results are unchanged.[54]

Taken together, Table 8 suggests that migration, people studying abroad, FDIs, and book translations are not driving our results. However, data limitation prevents us from examining additional forces. Business travel represents one specific example. Campante and Yanagizawa-Drott (2018) document that international long-distance flights have a positive effect on local economic activity, and promote the formation of business linkages. It is thus conceivable that our instrument partly captures changes in business travel, which may in turn favor the transmission of ideas and, possibly, democratic capital across countries.[55] A similar process may be at play for tourism and other non-permanent movements of people, which would not be recorded in migration statistics. More broadly, improvements in air transportation are likely to foster the flow of ideas across countries. While some of these flows are embedded in the goods exchanged by countries, others are likely to occur through means we are unable to measure.

Therefore, even though we are able to narrow down the number of potential integration-related drivers of democratization, we acknowledge that some of our findings might be explained by forces that we cannot measure in the data. Thus, as already noted above, our

[54]To classify book translations in groups *i*) to *iii*), we follow Abramitzky and Sin (2014). The number of observations for humanistic and scientific books is lower than in other columns because, for some countries and years, no translations were reported for these categories.

[55]However, in unreported results we verified that the effects of economic integration with democracies are driven by partners that are more than 6,000 miles away. This is the cut-off exploited in Campante and Yanagizawa-Drott (2018) above which direct flights can no longer take place, and which thus creates a discontinuity in air (and business) linkages across countries. While only suggestive, the fact that our results are driven by far-away partners is inconsistent with business linkages being the primary mechanism in our setting.

results should be interpreted as the effects of economic integration—including tourism, the formation of business linkages, and the flow of ideas.

7 Conclusions

Between 1960 and 2010, the world witnessed a dramatic increase in globalization and the simultaneous spread of democracy across countries. Over the last decade, however, both economic integration and democracy have been on retreat. Is this relationship causal? In this paper, we tackle this question, and study the effects of economic integration with democratic partners on individuals' attitudes towards democracy and on countries' institutions between 1960 and 2015. Building on work by Feyrer (2019), we exploit improvements in air (relative to sea) transportation to derive instruments for economic integration with democratic and non-democratic partners.

We find that individuals who grew up when their country was more integrated with democracies (relative to other cohorts in their own country, and relative to the same cohorts in other countries) are, at the time of the survey, more supportive of democracy. Mirroring the changes in citizens' beliefs, economic integration favors the adoption of more democratic institutions in initially less-democratic countries. Instead, economic integration with non-democratic partners has no effect on either citizens' beliefs or countries' institutions. We provide evidence that these effects are driven by the transmission of democratic values from more to less democratic countries.

Our findings might have important implications for the future of democracy, especially at a time when economic integration is slowing down and trade is becoming increasingly fragmented along institutional and geopolitical blocs. They also open the door to several fascinating questions. First, a deeper analysis of the channels through which economic integration favors the transmission of political preferences and institutions may be particularly relevant at a time when the rise of China into the global economy is providing less democratic countries with an alternative role model to the democratic, Western-based one. Second, future work might examine whether the exchange of specific goods (e.g., "institutionally intensive" products, Nunn, 2007) is more conducive to the transmission of democratic values. We leave these, and more, questions for future research.

References

Abel, G. J. (2018). Estimates of Global Bilateral Migration Flows by Gender between 1960 and 2015. *International Migration Review 52*(3), 809–852.

Abramitzky, R. and I. Sin (2014). Book Translations as Idea Flows: The Effects of the Collapse of Communism on the Diffusion of Knowledge. *Journal of the European Economic Association 12*(6), 1453–1520.

Acemoglu, D., N. Ajzenman, C. G. Aksoy, M. Fiszbein, and C. A. Molina (2021). (Successful) Democracies Breed Their Own Support. Working Paper 29167, National Bureau of Economic Research.

Acemoglu, D., S. Johnson, and J. Robinson (2005). The Rise of Europe: Atlantic trade, Institutional Change, and Economic Growth. *American Economic Review 95*(3), 546–579.

Acemoglu, D., S. Naidu, P. Restrepo, and J. A. Robinson (2019). Democracy Does Cause Growth. *Journal of Political Economy 127*(1), 47–100.

Acemoglu, D. and J. A. Robinson (2006). *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.

Aksoy, C. G., S. Guriev, and D. S. Treisman (2018). Globalization, Government Popularity, and the Great Skill Divide. Working Paper 25062, National Bureau of Economic Research.

Anderson, J. E. and E. Van Wincoop (2003). Gravity with Gravitas: A Solution to the Border Puzzle. *American Economic Review 93*(1), 170–192.

Andrews, I., J. Stock, and L. Sun (2019). Weak Instruments in IV Regression: Theory and Practice. *Annual Review of Economics 11*, 727–753.

Atkin, D. (2016). Endogenous Skill Acquisition and Export Manufacturing in Mexico. *American Economic Review 106*(8), 2046–2085.

Autor, D. H., L. F. Katz, and M. S. Kearney (2008). Trends in U.S. Wage Inequality: Revising the Revisionists. *The Review of Economics and Statistics 90*(2), 300–323.

Bailey, M. A., A. Strezhnev, and E. Voeten (2017). Estimating Dynamic State Preferences from United Nations Voting Data. *Journal of Conflict Resolution 61*(2), 430–456.

Baldwin, R. and D. Taglioni (2007). Trade Effects of the Euro: a Comparison of Estimators. *Journal of Economic Integration 22*(4), 780–818.

Barro, R. J. (1999). Determinants of Democracy. *Journal of Political Economy 107*(S6), S158–S183.

Barro, R. J. and J. W. Lee (2013). A New Data Set of Educational Attainment in the World, 1950–2010. *Journal of Development Economics 104*, 184–198.

Barsbai, T., H. Rapoport, A. Steinmayr, and C. Trebesch (2017). The Effect of Labor Migration on the Diffusion of Democracy: Evidence from a Former Soviet Republic. *American Economic Journal: Applied Economics 9*(3), 36–69.

Berger, D., A. Corvalan, W. Easterly, and S. Satyanath (2013). Do Superpower Interventions have Short and Long Consequences for Democracy? *Journal of Comparative Economics 41*(1), 22–34.

Berger, D., W. Easterly, N. Nunn, and S. Satyanath (2013). Commercial Imperialism? Political Influence and Trade during the Cold War. *American Economic Review 103*(2), 863–896.

Besley, T. and T. Persson (2019). Democratic Values and Institutions. *American Economic Review: Insights 1*(1), 59–76.

Blanchard, E. and W. Olney (2017). Globalization and Human Capital Investment: Export Composition Drives Educational Attainment. *Journal of International Economics 106*, 165–183.

Buera, F. J., A. Monge-Naranjo, and G. E. Primiceri (2011). Learning the Wealth of Nations. *Econometrica 79*(1), 1–45.

Burke, P. J. and A. Leigh (2010). Do Output Contractions Trigger Democratic Change? *American Economic Journal: Macroeconomics 2*(4), 124–157.

Bursztyn, L. and D. Cantoni (2016). A Tear in the Iron Curtain: The Impact of Western Television on Consumption Behavior. *Review of Economics and Statistics 98*(1), 25–41.

Camboni, M. and M. Porcellacchia (2021). International Power Rankings: Theory and Evidence from International Cooperation. Working paper.

Campante, F. and D. Yanagizawa-Drott (2018). Long-Range Growth: Economic Development in the Global Network of Air Links. *The Quarterly Journal of Economics 133*(3), 1395–1458.

Carreri, M. and E. Teso (2022). Economic Recessions and Congressional Preferences for Redistribution. *The Review of Economics and Statistics Forthcoming*.

Costinot, A. (2009). An Elementary Theory of Comparative Advantage. *Econometrica 77*(4), 1165–1192.

Donaldson, D. (2015). The Gains from Market Integration. *Annual Review of Economics 7*(1), 619–647.

Eichengreen, B. and D. Leblang (2008). Democracy and Globalization. *Economics & Politics 20*(3), 289–334.

Ellingsen, S. (2021). Trade and Institutional Convergence. Working paper.

Facchini, G., P. Silva, and G. Willmann (2021). The Political Economy of Preferential Trade Arrangements: An Empirical Investigation. *Economic Journal 131*, 3207–3240.

Feyrer, J. (2019). Trade and Income—Exploiting Time Series in Geography. *American Economic Journal: Applied Economics 11*(4), 1–35.

Frankel, J. A. and D. Romer (1999). Does Trade Cause Growth? *American Economic Review 89*(3), 379–399.

Fuchs-Schündeln, N. and M. Schündeln (2015). On the Endogeneity of Political Preferences: Evidence from Individual Experience with Democracy. *Science 347*(6226), 1145–1148.

Giavazzi, F. and G. Tabellini (2005). Economic and Political Liberalizations. *Journal of Monetary Economics 52*(7), 1297–1330.

Giuliano, P., P. Mishra, and A. Spilimbergo (2013). Democracy and Reforms: Evidence from a New Dataset. *American Economic Journal: Macroeconomics 5*(4), 179–204.

Giuliano, P. and A. Spilimbergo (2014). Growing up in a Recession. *Review of Economic Studies 81*(2), 787–817.

Giuliano, P. and M. Tabellini (2020). The Seeds of Ideology: Historical Immigration and Political Preferences in the United States. Working Paper 27238, National Bureau of Economic Research.

Glaeser, E. L., G. A. M. Ponzetto, and A. Shleifer (2007). Why Does Democracy Need Education? *Journal of Economic Growth 12*(2), 77–99.

Grossman, G. M. and E. Helpman (1991). Trade, Knowledge Spillovers and Growth. *European Economic Review 35*(2), 517 – 526.

Grossman, G. M. and E. Helpman (2015). Globalization and Growth. *American Economic Review 105*(5), 100–104.

Guiso, L., P. Sapienza, L. Zingales, et al. (2009). Cultural Biases in Economic Exchange? *The Quarterly Journal of Economics 124*(3), 1095–1131.

Head, K. and T. Mayer (2014). Chapter 3 - Gravity Equations: Workhorse, Toolkit, and Cookbook. In E. H. Gita Gopinath and K. Rogoff (Eds.), *Handbook of International Economics*, Volume 4, pp. 131 – 195.

Hummels, D. (2007). Transportation Costs and International Trade in the Second Era of Globalization. *The Journal of Economic Perspectives 21*(3), 131–154.

Kleinman, B., E. Liu, and S. J. Redding (2020). International Friends and Enemies. Working Paper 27587, National Bureau of Economic Research.

Krosnick, J. A. and D. F. Alwin (1989). Aging and Susceptibility to Attitude Change. *Journal of Personality and Social Psychology 57*(3), 416–425.

Leetaru, K. and P. A. Schrodt (2013). GDELT: Global Data on Events, Location and Tone, 1979–2012. In *ISA annual convention*, Volume 2, pp. 1–49. Citeseer.

Levchenko, A. A. (2007). Institutional Quality and International Trade. *The Review of Economic Studies 74*(3), 791–819.

Lipset, S. M. (1959). Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *American Political Science Review 53*(1), 69–105.

Liu, X. and E. Ornelas (2014). Free Trade Agreements and the Consolidation of Democracy. *American Economic Journal: Macroeconomics 6*(2), 29–70.

López-Córdova, J. E. and C. M. Meissner (2008). The Impact of International Trade on Democracy: A Long-Run Perspective. *World Politics 60*(4), 539–575.

Mauro, P., R. Romeu, A. Binder, and A. Zaman (2015). A Modern History of Fiscal Prudence and Profligacy. *Journal of Monetary Economics 76*, 55–70.

Mayer, T. and S. Zignago (2011). Notes on CEPII's Distances Measures: The GeoDist Database. Working Papers 2011-25, CEPII research center.

Moyer, J. D., C. J. Meisel, A. S. Matthews, D. Bohl, and M. J. Burrows (2021). China-US Competition: Measuring Global Influence. *Available at SSRN 3941475*.

Murtin, F. and R. Wacziarg (2014). The Democratic Transition. *Journal of Economic Growth 19*(2), 141–181.

Nunn, N. (2007). Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade. *The Quarterly Journal of Economics 122*(2), 569–600.

Özden, Ç., C. R. Parsons, M. Schiff, and T. L. Walmsley (2011). Where on Earth is Everybody? The Evolution of Global Bilateral Migration 1960–2000. *The World Bank Economic Review 25*(1), 12–56.

Pascali, L. (2017). The Wind of Change: Maritime Technology, Trade, and Economic Development. *American Economic Review 107*(9), 2821–54.

Persson, T. and G. Tabellini (2009). Democratic Capital: The Nexus of Political and Economic Change. *American Economic Journal: Macroeconomics 1*(2), 88–126.

Przeworski, A., E. M. Alvarez, J. A. Cheibub, and F. Limongi (2000). *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Number 3. Cambridge University Press.

Puga, D. and D. Trefler (2014). International Trade and Institutional Change: Medieval Venice's Response to Globalization. *The Quarterly Journal of Economics 129*(2), 753–821.

Rapoport, H., S. Sardoschau, and A. Silve (2020). Migration and Cultural Change. CESifo Working Paper No. 8547.

Rigobon, R. and D. Rodrik (2005). Rule of Law, Democracy, Openness, and Income. *Economics of Transition 13*(3), 533–564.

Sampson, T. (2016). Dynamic Selection: An Idea Flows Theory of Entry, Trade, and Growth. *The Quarterly Journal of Economics 131*(1), 315–380.

Sears, D. O. (1975). Political Socialization. In F. I. Greenstein and N. W. Polsby (Eds.), *Handbook of Political Science*, Volume 2, pp. 93–153.

Silva, J. S. and S. Tenreyro (2006). The Log of Gravity. *The Review of Economics and Statistics 88*(4), 641–658.

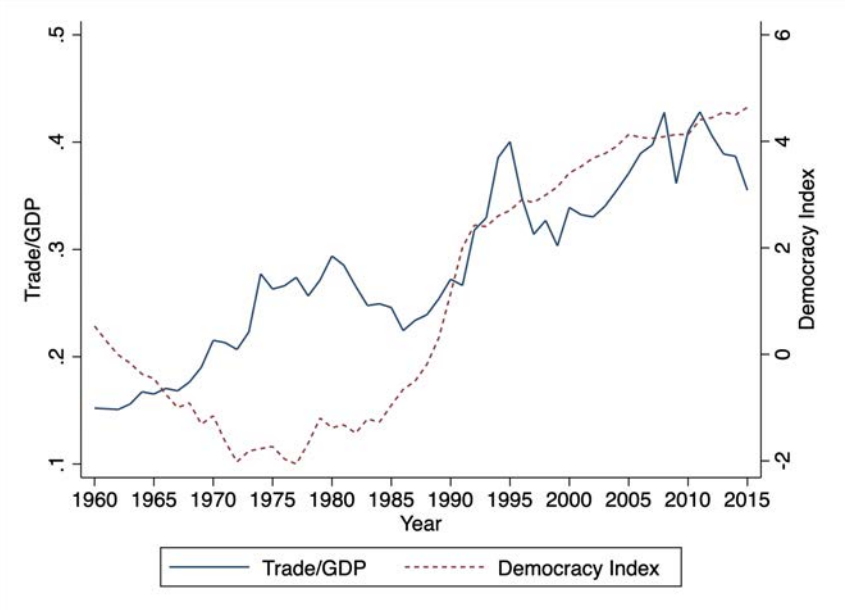
Spilimbergo, A. (2009). Democracy and Foreign Education. *American Economic Review 99*(1), 528–43.

Spolaore, E. and R. Wacziarg (2009). The Diffusion of Development. *The Quarterly Journal of Economics 124*(2), 469–529.

Spolaore, E. and R. Wacziarg (2016). Ancestry, Language and Culture. In *The Palgrave Handbook of Economics and Language*, pp. 174–211. Springer.

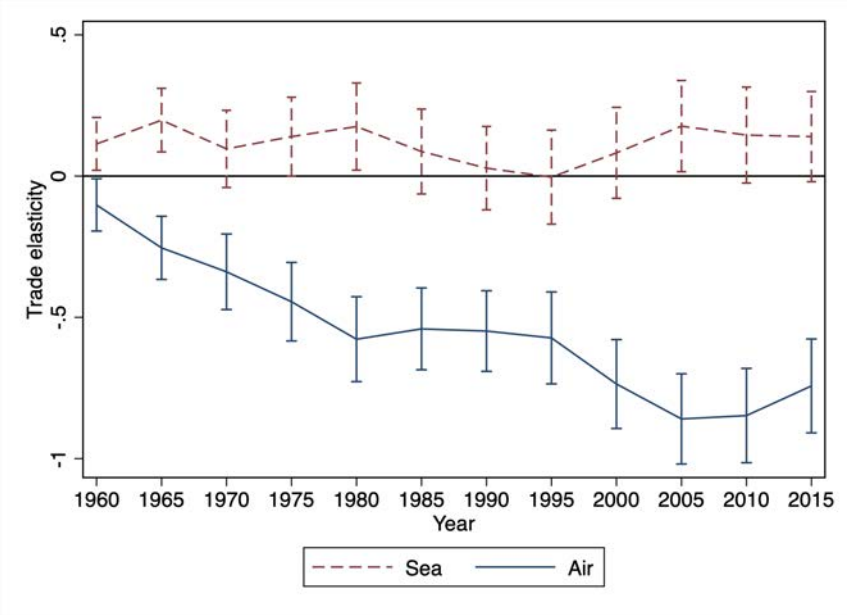
Figures and Tables

Figure 1. Economic Integration and Democracy: Aggregate Trends



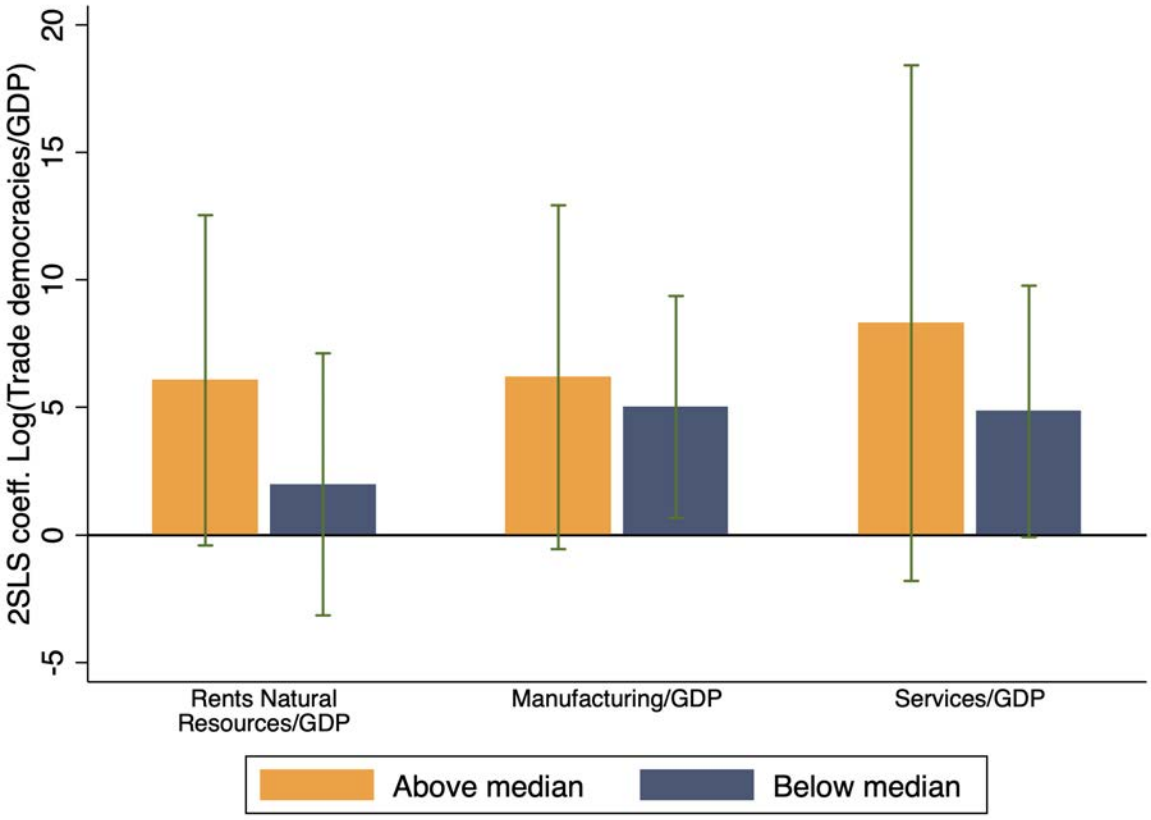
Notes: The figure plots the average trade-to-GDP ratio (blue solid line) and *Polity2* democracy score (red dotted line, secondary y-axis) across countries between 1960 and 2015. See Table B.1 for more details on the variables plotted.

Figure 2. Gravity Equation Coefficients



Notes: The figure shows OLS coefficients (with corresponding 95% confidence intervals) on the log of sea (red, dotted line) and air (blue, solid line) distances interacted with 5-year period dummies from the gravity equation (4). Regressions are estimated at the calendar-year, country-pair level from 1955 to 2015. The 1955 coefficients are not estimated because of collinearity with fixed effects. Standard errors are clustered at the country-pair, calendar-year level. See Table A.1 for formal estimates.

Figure 3. Heterogeneity by Baseline Country Characteristics



Notes: The figure plots 2SLS coefficients (with corresponding 95% confidence intervals) for the effects of the log of trade with democracies over GDP on the *Polity2* democracy score, after partialling out the log of trade with autocracies over GDP, democratization waves, and country and time fixed effects. Orange (resp., blue) bars refer to regressions estimated on the sample of countries with baseline values of each variable reported on the x-axis above (resp., below) the sample median. Standard errors, adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19), are clustered at the country level.

Table 1. Summary Statistics

Variables	Mean	Median	St. Dev.	Min	Max	Obs
Panel A: Individual level analysis						
Democratic system	339.3	400	72.64	100	400	225,811
Dummy democratic system	90.51	100	29.31	0	100	225,811
Democracy better	329.4	300	73.22	100	400	93,629
Dummy democracy better	43.33	0	49.55	0	100	93,629
Support democracy index	296.1	300	61.09	100	400	234,455
Average democratization waves	0.597	0.674	0.365	0	1	225,811
Average trade democracies	0.167	0.141	0.133	0.003	0.983	225,811
Average trade autocracies	0.036	0.021	0.048	0.000	0.485	225811
Gender	0.497	0	0.500	0	1	225,811
Education class	2.074	2	0.673	1	3	225,811
Income quintile	2.719	3	1.190	1	5	225,811
Panel B: Country level analysis						
Polity2	2.060	5	7.281	-10	10	1,192
Dummy *Polity2*	0.589	1	0.492	0	1	1,192
Trade/GDP	0.301	0.216	0.676	0.010	18.625	1,192
Trade with democracies/GDP	0.238	0.178	0.575	0.007	16.863	1,192
Trade with autocracies/GDP	0.057	0.028	0.143	0	3.627	1,192
Democratization waves	0.510	0.467	0.362	0	1	1,192
Trade democratic capital	0.721	0.747	0.143	0.166	0.966	1,192

Notes: All survey answers are multiplied by 100 for presentation purposes.

Table 2. Economic Integration and Citizens' Attitudes

Dep. variable:	Democratic System *(Mean: 339.3)*					
	OLS	OLS	2SLS	2SLS	2SLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure democracies	2.171**	2.580**	5.243*	4.625*	4.531*	4.755**
	(0.966)	(1.112)	(2.732)	(2.433)	(2.305)	(2.277)
	[0.021]	[0.025]	[0.051]	[0.045]	[0.044]	[0.046]
Exposure autocracies	-1.546**	-1.536**	-0.839	-0.917	0.184	0.257
	(0.653)	(0.652)	(1.497)	(1.426)	(1.507)	(1.495)
	[-0.022]	[-0.022]	[-0.012]	[-0.013]	[0.003]	[0.004]
Observations	225,811	225,811	225,811	225,811	225,811	225,811
Clusters	74	74	74	74	74	74
Democratization waves		X		X	X	X
Country FE	X	X	X	X	X	
Survey year FE	X	X	X	X		
Birth year FE	X	X	X	X	X	X
Survey year X Region FE					X	
Country X Survey year FE						X
K-P F-stat			6.148	8.676	8.862	8.705
F-stat (Demo Trade)			15.72	24.22	23.99	22.93
F-stat (Auto Trade)			19.49	21.74	21.75	21.02

Notes: The table reports OLS (columns 1 and 2) and 2SLS (columns 3 to 6) coefficients on exposure to economic integration with democratic and non-democratic partners estimated in equation (2), measuring support for democracy using the variable *Democratic System* defined in Table B.2. The variable ranges from 1 to 4 (with higher values reflecting more support for democracy, and is multiplied by 100 to improve readability of coefficients). Exposure to economic integration with democratic and non-democratic partners (*Exposure democracies* and *Exposure autocracies*) is the log of the average trade-to-GDP ratio with either type of partner during the formative years (16-24), as defined in equation (1). All columns control for individual characteristics (gender, three categories for education, and dummies for income deciles), and country, survey year, and birth year fixed effects. All columns except columns 1 and 3 also add exposure to democratization waves during formative years. Columns 5 and 6 add, respectively, survey year by region and survey year by country fixed effects. Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). Standardized beta coefficients are reported in square brackets. KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Demo Trade) and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the two separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 3. Citizens' Attitudes: Controlling for Exposure to Other Forces

Dep. variable:	Democratic System *(Mean: 339.3)*							
	2SLS (1)	2SLS (2)	2SLS (3)	2SLS (4)	2SLS (5)	2SLS (6)	2SLS (7)	2SLS (8)
Exposure democracies	4.755**	4.340*	4.087*	5.272*	4.886*	5.096**	5.140*	5.910**
	(2.277)	(2.365)	(2.369)	(2.809)	(2.505)	(2.438)	(2.667)	(2.643)
	[0.046]	[0.042]	[0.039]	[0.051]	[0.047]	[0.049]	[0.050]	[0.058]
Exposure autocracies	0.257	0.188	0.109	0.395	0.275	0.428	-0.298	-0.612
	(1.495)	(1.620)	(1.589)	(1.682)	(1.551)	(1.521)	(1.821)	(1.757)
	[0.004]	[0.003]	[0.002]	[0.006]	[0.004]	[0.006]	[-0.004]	[-0.009]
Observations	225,811	224,468	224,591	225,811	225,811	225,811	212,999	212,999
Clusters	74	74	74	74	74	74	70	70
Democratization waves	X	X	X		X	X	X	X
Birth Year FE	X	X	X	X	X	X	X	X
Country X Survey Year	X	X	X	X	X	X	X	X
Exposure		*Polity2*	*Polity2*	Democratization waves	GDP growth	GDP growth	Education	Education
Years		Formative	16+	16+	Formative	16+	Formative	16+
K-P F-stat	8.705	9.065	8.689	6.668	8.759	7.060	6.045	5.926
F-stat (Demo Trade)	22.93	26.44	25.23	15.59	21.64	17.74	14.19	14.03
F-stat (Auto Trade)	21.02	19.85	19.63	16.88	20.86	19.50	18.67	18.17

Notes: The table replicates column 6 of Table 2 in column 1. Columns 2 and 3 control for average *Polity2* of the country during the formative years and from the age of 15 until the year of the interview of the respondent. Column 4 controls for average democratization waves experienced from the age of 15 until the year of the interview. Columns 5 and 6 replicate columns 2 and 3 replacing average *Polity2* with average per capita GDP growth. Columns 7 and 8 replicate columns 2 and 3 replacing *Polity2* with the average number of years of schooling. Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). Standardized beta coefficients are reported in square brackets. KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Demo Trade) and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the two separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 4. Economic Integration and Democracy

Dep. variable:	Polity2 (Mean: 2.060)					
	OLS (1)	OLS (2)	2SLS (3)	2SLS (4)	2SLS (5)	2SLS (6)
Log(Trade democracy/GDP)	1.743***	1.249**	4.576**	4.977**	6.522**	-3.241
	(0.558)	(0.551)	(2.158)	(2.111)	(2.756)	(5.948)
	[0.183]	[0.148]	[0.480]	[0.504]	[0.689]	[-0.281]
Log(Trade autocracy/GDP)	-0.574**	-0.451*	0.163	0.933	0.793	-0.053
	(0.278)	(0.261)	(1.135)	(1.051)	(1.204)	(2.037)
	[-0.101]	[-0.099]	[0.029]	[0.161]	[0.042]	[0.081]
Sample	Full	Full	Full	Full	Baseline autocracy	Baseline democracy
Observations	1,192	1,192	1,192	1,192	602	590
Clusters	116	116	116	116	60	56
Democratization waves		X		X	X	X
Country FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
K-P F-stat			5.312	6.249	3.940	2.406
F-stat (Demo Trade)			12.19	13.78	8.919	5.665
F-stat (Auto Trade)			16.76	19.35	13.85	6.163

Notes: The table reports OLS (columns 1 and 2) and 2SLS (columns 3 to 6) coefficients on the log of trade-to-GDP ratio with democratic and non-democratic partners estimated in equation (3). The dependent variable is the *Polity2* democracy score, which ranges from -10 (full autocracy) to 10 (full democracy). Regressions are estimated on 5-year periods, from 1960 to 2015, and always control for country and period fixed effects. All columns except for columns 1 and 3 also control for democratization waves. Columns 5 and 6 restrict the sample to countries with *Polity2* score at baseline strictly lower than 1 and strictly greater than zero, respectively. Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). Standardized beta coefficients are reported in square brackets. KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Demo Trade) and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the two separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 5. Trade-Induced Democratic Capital and Democracy

Dep. variable:	Polity2 (Mean: 2.060)			
	OLS	2SLS	2SLS	2SLS
	(1)	(2)	(3)	(4)
Trade democratic capital	4.985**	10.67***	11.18***	16.57**
	(2.193)	(3.959)	(4.065)	(7.324)
	[0.252]	[0.464]	[0.503]	[0.615]
Observations	1,192	1,192	1,179	1,179
Clusters	116	116	114	114
Democratization waves	X	X	X	X
Country FE	X	X	X	X
Year FE	X	X	X	X
Year X Democratic capital			X	X
K-P F-stat		23.49	21.89	12.99

Notes: The table reports OLS (column 1) and 2SLS (columns 2 to 4) coefficients on the trade-induced democratic capital (*Trade democratic capital* constructed in equation (8). The dependent variable is the *Polity2* democracy score, which ranges from -10 (full autocracy) to 10 (full democracy). Regressions are estimated on 5-year periods, from 1960 to 2015, and always control for country and period fixed effects, and for democratization waves. Columns 3 and 4 also include interactions between period dummies and baseline domestic democratic capital from Persson and Tabellini (2009). Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). Standardized beta coefficients are reported in square brackets. KP F-stat is the Kleibergen-Paap F stat for weak instruments. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 6. Trade with Democracies, Split by Partners' Characteristics

Dep. variable:	Polity2				
	2SLS (1)	2SLS (2)	2SLS (3)	2SLS (4)	2SLS (5)
Log(Above the median trade democracy/GDP)	5.217***	4.327**	3.889**	4.737**	3.876*
	(1.622)	(1.778)	(1.580)	(2.047)	(1.903)
Log(Below the median trade democracy/GDP)	-0.334	-1.956	0.598	1.374	0.833
	(2.117)	(3.651)	(2.527)	(1.241)	(0.933)
Log(Trade autocracy/GDP)	-0.432	0.595	0.120	-0.238	0.446
	(1.208)	(1.146)	(1.282)	(1.417)	(1.214)
Split variable	1960 democratic capital	Current year growth	Up to current year growth	Government expenditure	Genetic proximity
Observations	1,130	1,175	1,175	1,010	1,099
Clusters	116	116	116	116	113
Democratization waves	X	X	X	X	X
Country FE	X	X	X	X	X
Year FE	X	X	X	X	X
K-P F-stat	1.786	1.414	2.211	3.244	2.880
F-stat (Above Median Demo Trade)	12.27	26.15	10.92	13.76	9.050
F-stat (Below Median Demo Trade)	6.782	4.989	7.462	23.10	16.31
F-stat (Auto Trade)	5.741	12.69	12.80	10.35	13.35

Notes: The table replicates column 4 of Table 4 by splitting democratic partners as above-below the median of: *i*) baseline domestic democratic capital (Persson and Tabellini, 2009) in column 1; *ii*) growth rate of GDP per capita in the current year (resp., up to the current year, from 1960) in column 2 (resp., column 3); *iii*) government spending over GDP in column 4; *iv*) the index of weighed genetic proximity from Spolaore and Wacziarg (2009) in column 5. In all cases, the split is performed over the sample of democratic partners 5 years ago (consistent with the timing used to define democratic and non-democratic partners in each period). All regressions control for country and year fixed effects and for democratization waves. Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Above Median Demo Trade), F-stat (Below Median Demo Trade), and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the three separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 7. Controlling for Income Effects and Human Capital Accumulation

Dep. variable:	Polity2						Avg. years of schooling
	2SLS (1)	2SLS (2)	2SLS (3)	2SLS (4)	2SLS (5)	2SLS (6)	2SLS (7)
Log(Trade democracy/GDP)	4.977**	5.330**	5.399**	4.855**	6.905**	4.579**	-1.638*
	(2.111)	(2.311)	(2.341)	(2.038)	(3.332)	(2.134)	(0.830)
Log(Trade autocracy/GDP)	0.933	0.964	0.773	0.909	0.666	0.308	-0.146
	(1.051)	(1.116)	(1.333)	(1.184)	(1.396)	(0.997)	(0.247)
Log(GDP_{t-5})		0.132	0.045				
		(0.574)	(0.623)				
Log($Population_{t-5}$)			0.824				
			(1.877)				
Log(GDP per $capita_{t-5}$)				-0.053			
				(0.659)			
Log(GDP per $capita_t$)					1.852		
					(2.192)		
GDP growth per $capita_t$						-5.084	
						(5.569)	
Observations	1,192	1,192	1,192	1,192	881	881	1,067
Clusters	116	116	116	116	113	113	102
Democratization waves	X	X	X	X	X	X	X
Country FE	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X
K-P F-stat	6.249	5.069	4.701	4.438	2.107	3.802	3.295
F-stat (Demo Trade)	13.78	13.17	13.97	13.47	9.526	16.24	6.878
F-stat (Auto Trade)	19.35	13.87	11.81	10.33	6.517	18.45	14.71
F-stat (GDP per capita)					14.56		
F-stat (GDP growth per capita)						16.74	
Dep. variable mean	2.060	2.060	2.060	2.060	2.060	2.060	6.652

Notes: The table replicates column 4 of Table 4 in column 1. Columns 2 to 4 add, respectively, the log of the 5-year lagged: *i*) GDP; *ii*) population; *iii*) GDP per capita. Columns 5 and 6 control for the log of GDP per capita and GDP per capita growth rate, respectively. Both variables are instrumented using the Commodity Export Price Index as defined in Burke and Leigh (2010). See Table B.1 for more details on the latter variable. Column 7 replicates column 1 using as dependent variable the average years of schooling from Barro and Lee (2013). Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Demo Trade) and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the two separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.

Table 8. Unbundling Economic Integration

Dep. variable:	Migration/Pop.			Students abroad/Pop.			Log(FDI/GDP)	Log(book translations)
	All	Demo	Auto	All	Demo	Auto	All	All
	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log(Trade demo/GDP)	0.001	-0.004	0.006	-0.021	-0.073	0.058	0.001	-0.843
	(0.005)	(0.005)	(0.004)	(0.050)	(0.051)	(0.039)	(0.022)	(1.444)
Log(Trade auto/GDP)	-0.000	0.000	-0.001	-0.025	-0.006	-0.019	-0.003	-0.496
	(0.002)	(0.002)	(0.001)	(0.021)	(0.016)	(0.014)	(0.005)	(0.598)
Observations	1,118	1,118	1,118	825	826	826	648	495
Clusters	113	113	113	112	112	112	109	86
Democratization waves	X	X	X	X	X	X	X	X
Country FE	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X
K-P F-stat	6.781	6.781	6.781	7.248	7.505	7.505	2.343	3.024
F-stat (Demo Trade)	13.75	13.75	13.75	15.31	15.99	15.99	4.703	7.164
F-stat (Auto Trade)	21.07	21.07	21.07	25.61	24.99	24.99	22.55	6.656

Notes: The table replicates column 4 of Table 4 using different outcomes. In column 1, the dependent variable is the number of in- and out-migrants over country population in each 5-year period from 1965 to 2015. Columns 2 and 3 separate migration from or to democratic and non-democratic countries, respectively. The dependent variable is: the number of students abroad over (sending) country population from Spilimbergo (2009) between 1960 and 2015 to any country, to democracies, and to autocracies (columns 4 to 6); the log of FDIs over GDP (column 7); and, the log of the number of book translations (column 8). See Table B.1 for more details on variables' definitions. Standard errors, clustered at the country level, in parentheses. 2SLS standard errors are adjusted to account for the estimation procedure entailed in building the instruments (see footnote 19). KP F-stat is the Kleibergen-Paap F stat for joint significance of instruments. F-stat (Demo Trade) and F-stat (Auto Trade) refer to the Sanderson-Windmeijer F-stats for joint significance of the instruments in the two separate first-stage regressions. Significance levels: *** p< 0.01, ** p< 0.05, * p< 0.1.