THE EFFECT OF WITHIN-COUNTRY INEQUALITY ON INTERNATIONAL TRADE AND INVESTMENT AGREEMENTS

ABSTRACT

There is anecdotal evidence suggesting that those losing from globalization influence policy makers to decrease the openness of their countries to globalization, as evidenced by signing international trade and investment agreements. Surprisingly, this influence has never been examined empirically. This study provides novel empirical evidence demonstrating that greater within-country inequality, our proxy for 'perceived losses' from globalization, decreases countries' propensity to sign regional trade and investment agreements. Our findings support the argument that the existence of 'losers' from globalization can be detrimental for continued globalization. To the best of our knowledge, this is the first extensive econometric empirical evidence of the influence of within-country inequality on countries' willingness to sign international trade and investment agreements, as means to increase their global economic integration.

1. INTRODUCTION

International political economy scholars have long argued that globalization increases within-country inequality, which in turn leads to social and political resistance to globalization (Kaplinsky, 2013; Kobrin, 2017; Stiglitz, 2002, 2006). They further contend that such resistance influences policy makers to pursue protective and compensating policies for those losing from globalization, where those losing from globalization are typically more effective in their ability to influence those winning from globalization (Baldwin, 1989; Colantone & Stanig, 2018b; Feigenbaum & Hall, 2015). Typically, losers from globalization are capital owners and workers in domestically oriented, comparatively disadvantaged industries. Winners from globalization are typically end consumers who enjoy the increased efficiency gains of globalization but also entrepreneurs, managers and capital owners that can export their products and services, relocate their operations abroad or work for incoming multinational enterprises (MNEs). These are typically high-skilled individuals active in R&D, marketing and management (Mudambi, 2008; Timmer, Miroudot_& de Vries, 2019).

Rodrik (2007, 2011) provides anecdotal evidence for the existence of import protection for specific sectors (Textile and Clothing, Automotive and Steel are, for instance, sectors that remain highly protected in many countries), subsidies to production (e.g. for infant industries), and social safety nets for labor (e.g. protecting developed country employees from losing jobs). Two recent events in the United States exemplify this phenomenon – the replacement of NAFTA (North America Free Trade Agreements) by the more restrictive USMCA (US Mexico Canada Agreement) and the increase custom duties on imports from China, leading to what many call the "US-China trade war".[1] Brexit, where high within-country inequality was documented (McCann, 2020) is clearly another notable indicator of the same phenomenon.

Yet, to date, we do not have any comprehensive empirical evidence supporting a negative *causal effect* of increased within-country inequality on countries' willingness to engage in international trade and investment agreements. It is arguable that industries such as Textile and Clothing, Automotive and Steel where medium-skilled and low-skilled workers are abundant (Goldberg &

[1] See: https://www.cnbc.com/2018/10/01/us-canada-nafta-trade-talks.html and https://en.wikipedia.org/wiki/China%E2%80%93United_States_trade_war.

Pavcnik, 2005; Timmer, et al., 2019) were historically always protected, that subsidies to infant industries are well accepted within international trade agreements and that social safety nets should do not necessarily reduce the engagement of countries in international trade and investment agreements. Our main research question is therefore: *What is the effect of within-country inequality on country level openness to globalization?*

To answer this question, this study provides novel empirical analyses that allow us to identify to what extent inequality within countries influences their propensity to sign international trade and investment agreements - two key policy measures that countries use to enhance their openness to globalization. International trade agreements are a key mechanism that countries use to enhance their foreign trade, while international investment agreements are a key mechanism to enhance incoming and outgoing foreign investments. An important consideration when conducting such an analysis is to control for the endogeneity between within-country inequality and countries' efforts to enter international trade and investment agreements. This endogeneity stems from theoretical arguments and observations, in the international political economy literature, that greater foreign trade and investments result not only in 'winners' but also in 'losers', and therefore increase within-country inequality (Stolper & Samuelson, 1941; Bhagwati, 2004; Wood, 1995; Krugman, 2007; Autor, Dorn & Hanson, 2014). In this study, we address this concern head on.

Consequently, we run Two Stage Least Squares (2SLS) regression models. Our comprehensive analyses show a consistent negative effect of the within-country GINI Index (a common measure of income inequality) on the propensity of countries to enter new regional trade agreements (RTAs) and international investment agreements (IIAs). This empirical evidence covers all RTAs and IIAs signed in the world for the period 1980-2017. Our findings hold for a wide range of robustness tests, including controlling for country level characteristics that may affect country propensity to sign RTAs and IIAs (such as, standard of living, growth, incoming and outgoing foreign direct investments, international trade level), past levels of RTAs and IIAs, different time lags, the exclusion of EU countries (which are not free to sign their own RTAs and IIAs), and more.

Our findings suggest that in the face of the increased inequality between the losers and winners from globalization and its social implications, policy makers are likely to become subject to

greater pressures to limit the openness of their countries to globalization, by reducing the extent to which their countries enter bilateral and multilateral international trade and international investment agreements. These findings have important implications for policy makers who wish to devise policies to decrease inequality within their country, while also enhancing their countries' openness to globalization. Moreover, the findings further bear key implications for multinational enterprises, which typically are the entities benefiting the most from globalization, in terms of their role in devising strategies to reduce perceived within-country inequality.

2. OPENNESS TO GLOBALIZATION AND COUNTRY WELFARE

The dominant view among economists and business scholars alike is that globalization is welfare enhancing. In other words, this view suggests that by removing barriers to international trade and foreign direct investments (FDI), countries are likely to witness enhanced growth and a subsequently increased standard of living. This view is rooted in foundational theories of comparative advantage. David Ricardo (1817) was the first to show that specialization in the production of goods in which a country is comparatively more efficient, increases world output and hence, once international trade becomes possible, the welfare of all countries increases. Shifting attention to countries' comparative abundance in specific factors of production, such as labor and capital, Heckscher and Ohlin (1933) and later Stolper and Samuelson (1941) and Samuelson (1948) offered a similar argument. They argue that countries should specialize in the production of products that are intensive in comparatively abundant factors of production and export these products in return for imported products that are intensive in factors of production comparatively abundant in other countries. Heckscher, Ohlin and Samuelson show that such an exchange will allow each country's ~~production~~ consumption possibilities curve to expand further away from the origin of the axes and outside this country's production possibilities curve,~~,~~ reflecting greater welfare in all countries.

Subsequently, many scholars (e.g. Balassa, 1961; Baldwin & Wyplosz, 2006; Dunning, 1977, 1988; Rivera-Batiz & Romer, 1991) have been unequivocal in signalling the advantages of international trade and FDI as routes to increasing global economic growth and welfare. Adopting this point of view, governments have made enormous efforts to reduce barriers for foreign trade and

investments. The surge in regional trade agreements (including both multilateral and bilateral international trade agreements) since the end of World War II reflects this. They typically include a wide range of regional agreements, such as; free trade agreements (for instance, USMCA in North America), customs union agreements (e.g. the agreement between Turkey and Europe), common market agreements (ASEAN in South East Asia) and economic union agreements (the European Union).

Similarly, we have witnessed a rise in international investments agreements, such as bilateral investment treaties (BITs) and treaties with investment provisions (TIPs). International investments agreements typically provide foreign investors with fair and equitable treatment to local investors, protection from expropriation, free transfer of means, and recourse to international arbitration. A Bilateral Investment Treaty (BIT) is an agreement between two countries regarding promotion and protection of investments made by investors from respective countries in each other's territory. Treaties with Investment Provisions (TIPs) bring together various types of investment treaties that are not BITs, including: broad economic treaties that include obligations commonly found in BITs (e.g. a free trade agreement with an investment chapter), treaties with limited investment-related provisions, and treaties that only contain "framework" clauses (such as the ones on cooperation in the area of investment and/or for a mandate for future negotiations on investment issues).

Together, international trade and investment agreements often remove trade barriers almost fully and significantly reduce barriers to FDI by eliminating government-imposed tariff and non-tariff barriers on the free flow of intermediate goods, by securing credible intellectual property protection and by allowing the free flow of capital and labor. The main motivation in signing such agreements is to enhance the economic integration of countries with other countries, that is to create, as much as possible, a 'within-country like' economic environment, thus increasing the benefits of specialization for the participating countries (Balassa, 1961; Rivera-Batiz & Romer, 1991).

3. WITHIN-COUNTRY INEQUALITY AND OPENNESS TO GLOBALIZATION

3.1 Unequal distribution of globalization gains

International trade and comparative advantage theories highlight the positive contribution of international trade to welfare. Importantly such theories also suggest that when there is no complete specialization, absent proper compensation for disadvantaged factors of production (e.g. unskilled labor in developed countries) through the redistribution of the gains from international trade, a comparative decrease in demand for disadvantaged factors increases within-country inequality (Bhagwati, 2004; Wood, 1995; Krugman, 2007). Under competitive conditions, as long as the imported good continues to be produced in a given country (which is typically the case), disadvantaged factors of production in this country are rendered worse off by international trade (Stolper & Samuelson, 1941). In other words, international trade generically produces losers. Recent evidence, supporting this line of argument for US labor in import competing sectors is provided in the works of Autor, Dorn and Hanson (2013) and Autor, Dorn, Hanson and Song (2014) and for the UK in the work of McCann (2020).

Likewise, FDI may intensify the inequality in the distribution of globalization gains within a country. This point, which has been mostly overlooked in the literature, happens because, in addition to consumers, those who own internationally mobile factors of production (typically capital and knowledge owners) are better equipped to avoid market imperfections in such factors by internalizing foreign factors of production (Buckley & Casson, 1976; Rugman, 1981) and, in turn, benefit from increased globalization. Similarly, workers for incoming MNEs can do so. Yet, capital owners trying to protect domestic monopoly positions and workers in domestically oriented, comparatively disadvantaged industries, are less equipped to benefit from globalization.

Taken together, the above effects of international trade and FDI suggest that entrepreneurs, managers and capital owners that can export or relocate their operations to foreign countries as well as those that can work for incoming MNEs are more likely to benefit from increased globalization than are capital owners and workers in domestically oriented, comparatively disadvantaged industries. The former group represents the 'winners' while the latter group represents the 'losers' of globalization (Bradford & Lawrence, 2004; Rodrik, 2007).

Furthermore, the reduced taxation on businesses who lose from globalization, aiming to allow such businesses to be more 'competitive', implies that the taxation on labor increases relatively

(Rodrik, 2011), hence further intensifying within-country inequality. The above issues are consistent with the view of many international political economy scholars that globalization is contributing to within-country inequality, because the gains of globalization are not equally distributed and compensation regimes are inadequate (Bradford & Lawrence, 2004; Kaplinsky, 2013; Kobrin, 2017; Stiglitz, 2002, 2006).

3.2 Resistance to globalization and openness towards it

As noted by Rodrik (1997), international trade policy outcomes concerning the signing of international trade and investment agreements are not taken in a vacuum but are likely to be highly influenced by individual preferences. When such individuals form interest groups, they become able to use these groups for influence governmental policy. Importantly, the international political economy literature predicts that typically it would be those losing from globalization who will be more effective in their efforts to influence international trade and FDI polices (Baldwin, 1989; Colantone & Stanig, 2018b; Feigenbaum & Hall, 2015). There are several reasons for this assertion. First, there are usually more workers that lose from increased globalization than capitalists that benefit from it. For instance, this has been the case for low-skilled and medium-skilled workers in developed countries (Goldberg & Pavcnik, 2005; Timmer, et al., 2019). Second, many of those benefiting from globalization (e,g, end consumers) often cannot organize and form interest groups, whereas those losing from globalization (e.g. blue collar workers) can more easily do so (e.g. through their unions) and hence exert greater influence on policy makers (Baldwin, 1989; Rodrik, 1995). Third, industries that are losing as a result of increased globalization often include a small number of large companies that can be highly influential on governmental policies (Anderson & Baldwin, 1987). This is because large companies can significantly contribute to candidate campaigns and also because they enrol a large number of employees, that politicians do not want to see become unemployed. These effects are intensified because, as predicted by prospect theory (Kahneman & Tversky, 1979, 1984) welfare losses tend to weigh more in policy maker decisions than welfare gains.

Hence, the within-country inequality resulting from globalization is likely to increase the political pressures on policy makers to reduce their countries' openness to globalization, on behalf of

those who perceive that they are losing from globalization. Such pressures may take place via unified interest groups of losers (labor unions, associations or guilds), via contributions of powerful elites trying to protect domestic monopoly positions, or via public opinion pressures through the media, lobbying, demonstrations or voter registration in political parties (Rodrik, 1997). There are two possible outcomes for such pressures. One is that policy makers will respond to the pressures in the desire to win more votes, and the other is that these pressures will translate into the rise of populist parties at the expense of more established parties (Rodrik, 2018; Starr, 2005). In either case, a plausible response of policy makers would be reducing the country's openness to globalization in an attempt to satisfy those that perceive themselves as losing from globalization (Feigenbaum & Hall, 2015; Lechner, 2016).

Hence, pressures to reduce a country's openness to globalization by those that perceive themselves as losing from globalization are likely to make policy makers reluctant to sign new international trade and investment agreements in the future as mean for limiting their countries' openness to globalization. While, in principle, policy makers can also reduce their countries' openness to globalization by cancelling existing international trade and investment agreements, in practice such cancellations are complicated to implement as they require the consent of other party countries and thus may involve broader international diplomacy considerations - such as not jeopardizing foreign relationships. The complexities faced by the United Kingdom in executing Brexit, nicely demonstrate this point.

Overall, as depicted in Figure 1, the perception that globalization increases inequality and the resulting social and political resistance to globalization (Kaplinsky, 2013; Kobrin, 2017; Stiglitz, 2002, 2006) are likely to have profound implications for the propensity of countries to enter international trade and investment agreements. The emergence of winners and losers from globalization is expected to increase within-country inequality and subsequently result in individual preferences of those losing globalization against it. These individuals are expected to form interest groups that oppose the signup of RTAs and IIAs and push governments to devise policies that oppose signing such agreements. Since it takes time for countries to negotiate and sign international trade and investment agreements, we expect some lag to exist between a country's inequality and the signing of future RTAs and IIAs.

[Insert Figure 1 about here]

Specifically, in the case of international trade, we expect the main losers from RTAs to be owners and workers in import competing industries. These will form interest groups, such as unions and dominant groups in manufacturer associations, that will oppose the future signup of further RTAs, leading us to hypothesize that:

Hypothesis 1 – *Within-country inequality decreases the future propensity of countries to sign RTAs.*

In the case of foreign investments, we expect that the main losers from IIAs will be workers in industries relocated abroad. These will likely form union-based interest groups that will oppose the future signup of further IIAs, leading to:

Hypothesis 2 – *Within-country inequality decreases the future propensity of countries to sign IIAs.*

Next, we provide empirical evidence on the effect of inequality within countries on these countries' propensity to sign RTAs and IIAs - two key policy measure reflecting the openness of countries to globalization and their economic integration with other countries.

4. EMPIRICAL ANALYSIS

4.1 Data and Measures

Our empirical analysis builds on the entire World Bank data of country level GINI indices for the period 1980-2017. We have matched this data with complete records of country level regional trade agreements (RTAs) for the same period as reported by the World Trade Organization. and with complete records of country level international investment agreements (IIAs) a reported by UNCTAD. This IIA data allows us to distinguish between two types of IIAs - bilateral investment treaties and treaties with investment provisions. This has resulted with a sample of 3355 country-year observations covering 134 countries. We have further controlled for a wide range of country level macro factors taken from the World Bank database. Appendix Table 1 describes our full list of measures and their source. Appendix Table 2 lists the countries covered in our analyses.

Our two main dependent variables are the number of distinct RTAs signed by a country in a given year (*RTA*) and the number of distinct IIAs signed by a country in a given year (*IIA*). Our main independent variable is the GINI index of a given country in a given year (*GINI*). In essence, the measure captures disposable income, which is what matters for public perception of inequality (Smeeding & Latner, 2015). In that respect, the GINI index already captures tax and other redistribution effects, to the extent that such redistribution measures exist in a country. This measure, therefore, fits nicely to test our hypothesis.

Further, we control for a wide range of macro-economic influences at the country level on the propensity of countries to sign RTAs and IIAs, including: the number of past RTAs (IIAs) that a country has signed (*Past RTAs*/*Past IIAs*), the share of international trade (exports + imports) out of gross domestic product (*TRADE*), share of inward and outward FDI out of gross domestic product (*FDI IN, FDI OUT*), gross domestic product (*GDP*) per capita, and *GDP growth*. Controlling for the past number of RTAs (IIAs) is important since the larger the number of RTAs (IIAs) a country has signed, the lower the potential number of future RTAs (IIAs) it can potentially sign. Controlling for the share of international trade and the share of inward and outward FDI is important, because one may claim that firms that engage in international trade and MNEs (i.e. those winning from increased globalization) actually try to influence public policy makers in the opposite direction to entities that perceive themselves as losing from globalization. This implies that higher levels of international trade and FDI will lead to increased pressures to sign RTAs and IIAs. Controlling for GDP per capita and GDP growth is important because country level GDP and its changes are likely be correlated with the openness of countries to globalization.

In addition, we include the *Checks* measure indicating the difficulty of policy change in countries. This measure captures the checks and balances existing in a country through the number of veto players existing in the economy, with a greater weight given to the number of veto players that are closer to the opposition. As such, low values of the checks measure indicate a low difficulty to change policy within a country, whereas the higher the measure, the more difficult it is to change policy (Cruz, Keefer, Scartascini, 2018: 18-19). The Checks measure is a complex measure that starts from a value of one and is then incremented by one the political structure within a country makes it

more difficult for the government to make policy changes. For instance, the *Checks* measure is incremented by one if the chief executive is elected competitively. It is further incremented by one if the opposition controls the legislature. In parliamentary systems, *Checks* is incremented by one for every party in the government coalition needed to maintain a majority, and for every party in the government coalition that has a position on economic issues (right-left-center) closer to the largest opposition party than to the party of the executive (see more details in Cruz et al., 2018:18-19). Controlling for this measure, allows us to address differences in the ability of policy makers to change international trade and investment policies, as such changes are also subject to the opposition policy makers may face.

Finally, we further include country fixed effects to capture unobservable country specific factors that may affect the signing of RTAs and IIAs and year fixed effects capturing exogenous temporal shocks (such as the 2008-9 recession) that may affect the propensity of countries to sign RTAs and IIAs.

4.2 Methods

Since we expect a time lag between a country's decision to enter an international trade and investment agreement and the actual signing of agreements, we account for a five years lag between countries' inequality level (as measured by the GINI index) and the signing of RTAs (IIAs).[2] Hence, we will be using the following regression structure in our analysis:

$$RTA_{i,t}\ (IIA_{i,t}) = \alpha_1 CONSTANT + \alpha_2 GINI_{i,t-5} + \ + \beta(country\text{-}level\ controls)_{i,\,t-5} + \eta_i + \eta_t + \varepsilon_{i,t}$$

where *i* denotes countries, *t* denotes year, β reflects the vector of country-level controls, η_i indicates country fixed effects, η_t indicates year fixed effects and $\varepsilon_{i,t}$ reflects the error term.

An important consideration in the analysis is to control for the endogeneity between within-country inequality and countries' openness to globalization as reflected by their entry into international trade and investment agreements (proxied by the propensity to sign of RTAs or IIAs). Such

[2] In robustness tests we have experimented with 2-6 years lags and received results that are consistent with our main results.

endogeneity results from the fact that openness to globalization is likely to increase globalization and, therefore, influence within country inequality, as discussed in the theoretical section.

Our main strategy for addressing this concern is taking a Two Stage Least Squares (2SLS) approach where we instrument inequality in the first stage and in the second stage predict the effect of inequality on future RTA (IIA) signing. Following the reasoning of the extant literature (Cutler, Glaeser & Vigdor, 1999; Leigh, 2006; Yamamura, 2008) we use three alternative instruments for inequality: the share of age cohort 15-64 of a country's population (age 15-64), the log of this cohort, and the share of industry employment (rather than employment in other sectors) within a country (Industry Employment). These measures also originate from the World Bank dataset (http://databank.worldbank.org/data/home.aspx) and are expected to be negatively correlated with country level GINI indices, because the larger the share of employment across ages or within industrial business enterprises the lower is the expected inequality within a country (Cutler et al., 1999; Leigh, 2006). Yet, there is no strong reasoning connecting the level of employment across ages or within the industrial sector and the propensity of countries to sign RTAs or IIAs in the future, other than through their effect on within-country inequality.

4.3 Results

Table 1 below details our measures and their correlations. The average number of RTAs signed in every year is 0.66, while the average number of IIAs is higher, reaching 2.73. The GINI index averages at 37.4%. The Table reveals that the correlations between our dependent, independent and control measures are generally low, thus reducing the likelihood of multicollinearity in our regression analyses. Indeed, when running our regressions the maximum Variance Inflation Factor (VIF) that we get is well below the accepted thresholds (Hair, Black, Babin, & Anderson, 2010).

[Insert Table 1 about here]

Next, Figure 2 plots the trends of the averages of our main variables of interest – RTA, IIA and the Gini index for the sample period. Figure 2 shows that the average GINI index has been witnessed a moderate decrease as of the early 1990s. Figure 2 further shows that the average number

of RTAs has increased as of the early 1980s, while the average number of IIAs has peaked in the mid-1990s but has been generally declining ever since.

[Insert Figure 2 about here]

Table 2 below details our first and second stage regression results for a five year lag in signing RTAs and IIAs. The first stage F-statistics are all considerably larger than the critical value of 10 (Staiger & Stock, 1997), thus supporting the strength of our three instruments. Moving forward to the second stage regressions, Table 2 shows a consistent negative association between countries' GINI index and the number of RTAs that these countries sign (models 1,3,5), and the same pattern is observed for the number of IIAs signed (models 2,4,6). These results lend support to our Hypotheses 1 and 2. Other than model 2 all models are highly significant. On average, our results show that a one-point increase in the GINI index (ranging between 0 and 63 percent in our data) decreases the number of RTAs signed (in a given year) in about 0.036-0.077 and the number of IIAs signed in about 0.113-0.237. Given that the mean number of RTAs signed in a year is 0.66, this means that any one point increase in the GINI index reduces the expected number of RTAs to be signed by about 5.5% to 11.6%. The number of IIAs signed is expected to decrease by 4%-8.7%. As for the control variables, Table 2 reveals that the number of past RTA agreements, GDP per capita, GDP growth and Trade are generally negatively correlated with the number of RTAs and IIAs signed,

[Insert Table 2 about here]

4.4 Robustness tests and post hoc analyses

Our results hold across a wide range of robustness tests (available upon request). The results hold when we use two to six years lags between the GINI index and the signing of RTAs and IIAs agreements. Results further remain consistent when Logit or Probit procedures capturing the probability of countries to sign RTAs or IIAs.

We get results that are consistent to our main results when we replace our dependent variable with a measure capturing the propensity of countries to sign specific types of international investments, such as bilateral investment treaties (BITs) and treaties with investment provisions (TIPs).

We have further tested whether the negative effect we observe for the GINI index on the number of RTAs and IIAs that countries sign, is influenced by differences to change policies within countries. Importantly, countries differ in the extent to which polices in general and polices pertaining to international trade and foreign investment in particular, can be changed. Some countries possess stronger checks and balances on the ability of policy makers to change policies (Henisz, 2002; La Porta, et al., 2004). Such checks and balances reflect the capability 'veto players' existing in the economy, and specifically veto players that are closer to the opposition, to resist policy change within a country. Table 2 reveals that our measure of checks and balances in a country (Checks) does not significantly affect the number of RTAs and IIAs that countries sign. We have further interacted this measure with the GINI index, and found no significant effect. We therefore conclude that our results are robust to differences between policy makers' ability to make policy changes, such as signing RTAs and IIAs.

We also controlled for the fact that some countries are not independent in their ability to sign RTAs and IIAs since they are part of binding agreements such as economic unions, common markets of custom unions. Our results do not change when we add a dummy indicating whether a country is not independent in its decision to sign an RTA (for instance, European Union member states cannot sign independent RTAs). We have further removed all EU countries from our sample and then re-ran our regression models. Our results remain robust when running this sub-sample of firms. To test the effect of changes in the GINI index on the number of RTAs and IIAs that countries sign, we have further replaced the GINI index with a measure of delta GINI capturing the two years difference in the GINI index (that is between t-5 and t-7). Our results for RTA and IIA as dependent variables remain consistent.

While our GINI index reflects the disposable income in a country, thus taking into account possible redistribution policy efforts, we have further tested whether there is a difference in the effects we get for liberal market economies and coordinated market economies (Fainshmidt, Judge, Aguilera & Smith, 2018). The idea is that coordinated market economies are more concerned about redistribution because they coordinate economic activities with labor unions. Using Fainshmidt et al.'s (2018) classification of 68 countries into high and low coordinated market economies we did not find

any effect for this measure. In a similar vein, our results do not change when controlling for high share of unionized labor in the economy (for which we had data only for OECD countries). Also in this case, the share of unionized labor measure does not correlate with the lagged propensity of countries to sign RTAs and IIAs.

We have further controlled for the possible effect that a larger share of the informal economy might influence our findings. When this share is high one may argue that the GINI index does not fully capture inequality within a country. We have added a control for the share of the global economy taken from the World Bank dataset, as well as its interaction with the GINI and got insignificant results in both cases. Finally, our results further hold when controlling for the share of the agricultural sector in GDP. The agriculture sector has traditionally been removed from RTAs and IIAs, hence a higher proportion of this sector is likely to result in less RTA (IIA) signing. As expected, this measure is negatively correlated the propensity of countries to sign RTAs (IIAs), but the effects we identify in Table 2, remain consistent.

4.5 Limitations and future research avenues

Naturally, the current study has several limitations to be addressed in future research. First, it is clear that within-country inequality captures only one facet of the factors influencing the openness of countries to globalization and is not the only factor influencing the propensity of countries to sign RTAs and IIAs. Such additional factors include the desire of countries to switch between one set of RTAs (IIAs) to another set (possibly with other countries) or other political and economic consideration, including political motivations to form and strengthen international relations between countries, and responses to crises and pandemics (such as the 2009 Great Recession and Covid-19).

Then, we use the GINI index of countries as our measure of 'perceived' within-country inequality. This measure represents actual income inequality but not perceived wealth inequality. Future studies may well use cross-country surveys to develop a more direct measure of 'perceived' within-country inequality. Furthermore, our analysis relates to signed RTAs and IIAs and not to confirmed ones. It might well be the case that the pressures of those perceiving themselves as losing

from globalization will be translated into agreements that are signed but not confirmed. In the current paper, we could not obtain reliable data on signed vs. confirmed RTAs (IIAs). Likewise, we could not obtain data on the cancelation of RTAs or IIAs as an alternative measure for the limitation of countries openness to globalization. In addition, our measures of RTAs and IIAs are simple count measure and can not capture the depth or coverage of different agreements (e.g, free trade agreement vs. custom union).

Finally, the current study builds on a single measure of within-country inequality – the GINI index. In order to test further the robustness of our findings it would be advisable to include alternative measures for inequality, such as the Theil and Atkinson indices. Unfortunately, we could not find sufficiently fine-grained data on these indices (in terms of year- and country coverage), and therefore suggest studying the effects of these measures in future studies as means to test the robustness of our findings concerning the effect of the GINI index on RTAs and IIAs.

5. ~~INTERNATIONAL BUSINESS THEORY AND ANTI-GLOBALIZATION~~DISCUSSION AND CONCLUSION

International trade theories acknowledge that, absent redistribution of international trade gains to owners and workers in comparatively disadvantaged industries, there will be losers from globalization. Likewise, FDI may also lead to the emergence of losers from globalization – those who are losing their jobs in industries that migrate abroad. Both effects contribute to within-country inequality, and provoke the perception that globalization increases within-country inequality.

Indeed, globalization is not the only factor leading to within-country inequality. Within-country inequality has many causes, largely related to deep-seated cultural and institutional factors such as colonial and religious heritage or ethnic fractionalization and the unequal distribution of property that they create. Technological advancements and higher returns to capital than to labor also contribute to within-country inequality (Helpman, 2018). Yet, given that such factors are very difficult to overcome in the short- to medium-term by public policies, globalization is likely to become the 'usual suspect' for causing inequality. The perception that globalization invokes within-country

inequality, we contend, leads to pressures on policy makers to limit the openness of their countries to globalization by reducing the number of trade and investment agreements they sign. Surprisingly, to the best of our knowledge, there are virtually no studies empirically showing a causal effect of within-country inequality on the openness of countries to globalization. In this paper, we provide novel econometric empirical evidence showing that within-country inequality indeed reduces the propensity of countries to sign RTAs and IIAs.

Largely the thesis proposed in this paper explains that recent anti-globalization movements can be divided into two: rhetoric and policy changes. Anti-globalization rhetoric has been responsible (in part, at least) for the 'Brexit' vote in 2016 (Colantone & Stanig, 2018a; Los, McCann, Springford, & Thissen, 2017) and the increases in US tariffs promoted by former President Trump in 2018. The perception that there have been significant losers from globalization – and the fact that a segment of the population has lost from globalization (Bradford & Lawrence, 2004; Rodrik, 2007), have been significant factors not only in the USA, but also across Europe (Colantone & Stanig, 2018b). The opposition to globalization that inequality provokes explains the revealed preference of many legislators in favor of their national sovereignty over the liberalization of global product, capital and labor markets (Bradford, Quinn & Weymouth, 2017; Feigenbaum & Hall, 2015).

International trade and investment agreements have long been conceived to be key enablers of the expansion of international business on its various forms. Yet, as we show empirically, at least in the last 40 years, the seemingly one-way trajectory of national economies' integration, can be significantly slowed down where increased within-country inequality, fuelled by nationalistic rhetoric, leads to reductions in the efforts of countries to enter regional trade and investment agreements. This reduction in the openness of countries to globalization challenges the existence of tariff free and non-tariff free access to markets, the integration of markets for goods and services, the free flow of foreign capital, labor flows, and the harmonization of regulations across nations, regions and economic blocks. As these are all fundamental to the operations of MNEs, the decrease in the openness of countries to globalization requires MNEs to introduce new strategies in a world where they confront potential losers from their global operations.

A straightforward implication of our study is that decreasing inequality within a focal country and enhancing this country's openness to globalization are largely substitutes. Increasing the openness to globalization is likely to result in increased within country inequality, which in turn will fuel pressures for anti-globalization. This calls for deliberate government policies for reducing the triggers for such pressures, discussed in our theoretical section. Such policies should likely include more aggressive redistribution strategies (e.g. more progressive taxes), but also more dynamic retraining programs, to make individuals more mobile across occupations and industries (Timmer, et al., 2019), as means to increase salaries and reduce income inequality.

While some of the pitfalls of the increase in inequality can be resolved through redistribution strategies and training programs, we contend that another important avenue of approaching the resistance to globalization is for MNEs to consider a wider range of strategies where they collaborate with governments to confront the discontent from globalization and its implications to countries' openness to globalization. One strategy that MNEs may choose is to maintain overlaps between the responsibilities of subsidiaries located in different countries. This strategy is costly, but it allows MNEs to reduce their level of global capital, labor and product flows. In fact, this model of operation might be closer to models of MNEs operating before World War II, characterized by a 'multi-domestic' rather than 'global' strategy and structure (Bartlett & Ghoshal, 1989; Doz, 1987).

Another strategy might be relying on greater automation to allow MNEs to bring back to developed countries much of their manufacturing, thus moderating the losses of domestic unskilled labor from globalization. This strategy, called in the popular press industry 4.0,[3] is becoming popular even in industries that have been dominated by developing country unskilled labor for many years, such as Textiles and Clothing. While MNEs are likely to be the ones that lead the adoption of grater automation, host country policies may support such efforts by offering all sort of tax relives and other incentives for increased automation.

Yet, another strategy to reduce the resentment of potential losers from globalization might be to upgrade of skills required from labor replaced by foreign labor, or the direct involvement of MNEs

[3] https://en.wikipedia.org/wiki/Industry_4.0.

in finding replacement jobs for such labor. In fact, there is evidence that MNE human resource departments do undertake such endeavours. For instance, Teva Pharmaceutical Industries, a leading generic drug producer, is famous for finding replacement jobs for employees it needs to lay off when it makes acquisitions (Almor, Tarba & Benjamini, 2009). While engaging in finding replacement jobs for labor laid off, seems beyond the responsibility of individual MNEs, it might well be the case that such efforts will prove beneficial if they mitigate the perceived loss from globalization and hence the rhetoric and political reaction against it. Indeed, it seems to be also in the best interest of host governments to support MNEs in such efforts by sharing with them data on prospected new employers or by offering relevant training programs for skill upgrade.

~~5.1 Limitations and future research avenues~~

~~Naturally, the current study has several limitations to be addressed in future research. First, it is clear that within country inequality captures only one facet of the factors influencing the openness of countries to globalization and is not the only factor influencing the propensity of countries to sign RTAs and IIAs. Such additional factors include the desire of countries to switch between one set of RTAs (IIAs) to another set (possibly with other countries) or other political and economic consideration, including political motivations to form and strengthen international relations between countries, and responses to crises and pandemics (such as the 2009 Great Recession and Covid 19).~~

~~Then, we use the GINI index of countries as our measure of 'perceived' within country inequality. This measure represents actual income inequality but not perceived wealth inequality. Future studies may well use cross-country surveys to develop a more direct measure of 'perceived' within country inequality. Furthermore, our analysis relates to signed RTAs and IIAs and not to confirmed ones. It might well be the case that the pressures of those perceiving themselves as losing from globalization will be translated into agreements that are signed but not confirmed. In the current paper, we could not obtain reliable data on signed vs. confirmed RTAs (IIAs). Likewise, we could not obtain data on the cancelation of RTAs or IIAs as an alternative measure for the limitation of countries~~

~~openness to globalization. In addition, our measures of RTAs and IIAs are simple count measure and can not capture the depth or coverage of different agreements (e.g, free trade agreement vs. custom union).~~

~~Finally, the current study builds on a single measure of within-country inequality – the GINI index. In order to test further the robustness of our findings it would be advisable to include alternative measures for inequality, such as the Theil and Atkinson indices. Unfortunately, we could not find sufficiently fine-grained data on these indices (in terms of year- and country coverage), and therefore suggest studying the effects of these measures in future studies as means to test the robustness of our findings concerning the effect of the GINI index on RTAs and IIAs.~~

~~-~~Overall, the current study is novel in empirically establishing the negative relationship between within-country inequality and the openness of countries to globalization. Nevertheless, there are many additional routes to expand the study of the boundaries of the negative relationship between within-country inequality and individual countries' openness to globalization. This paper is a contribution to widening the debate on the role of MNEs in the world economy, their impact on nation states and particularly the within-country impacts of MNEs. Within-country inequality is a neglected variable in international business research and our findings are a beginning in demonstrating the links between inequality and globalization.

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Figure 1- Globalization, within-country inequality and openness to globalization

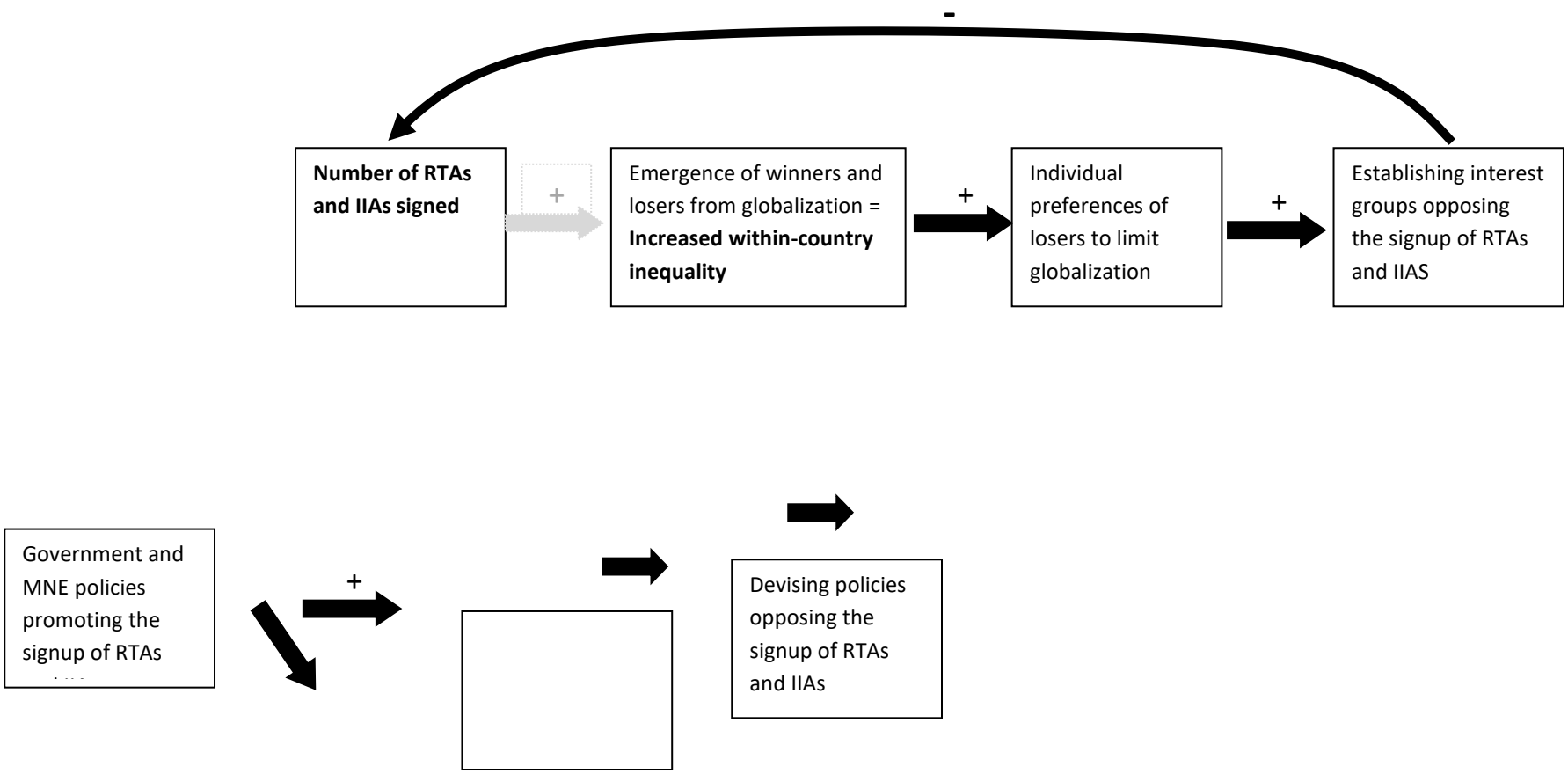
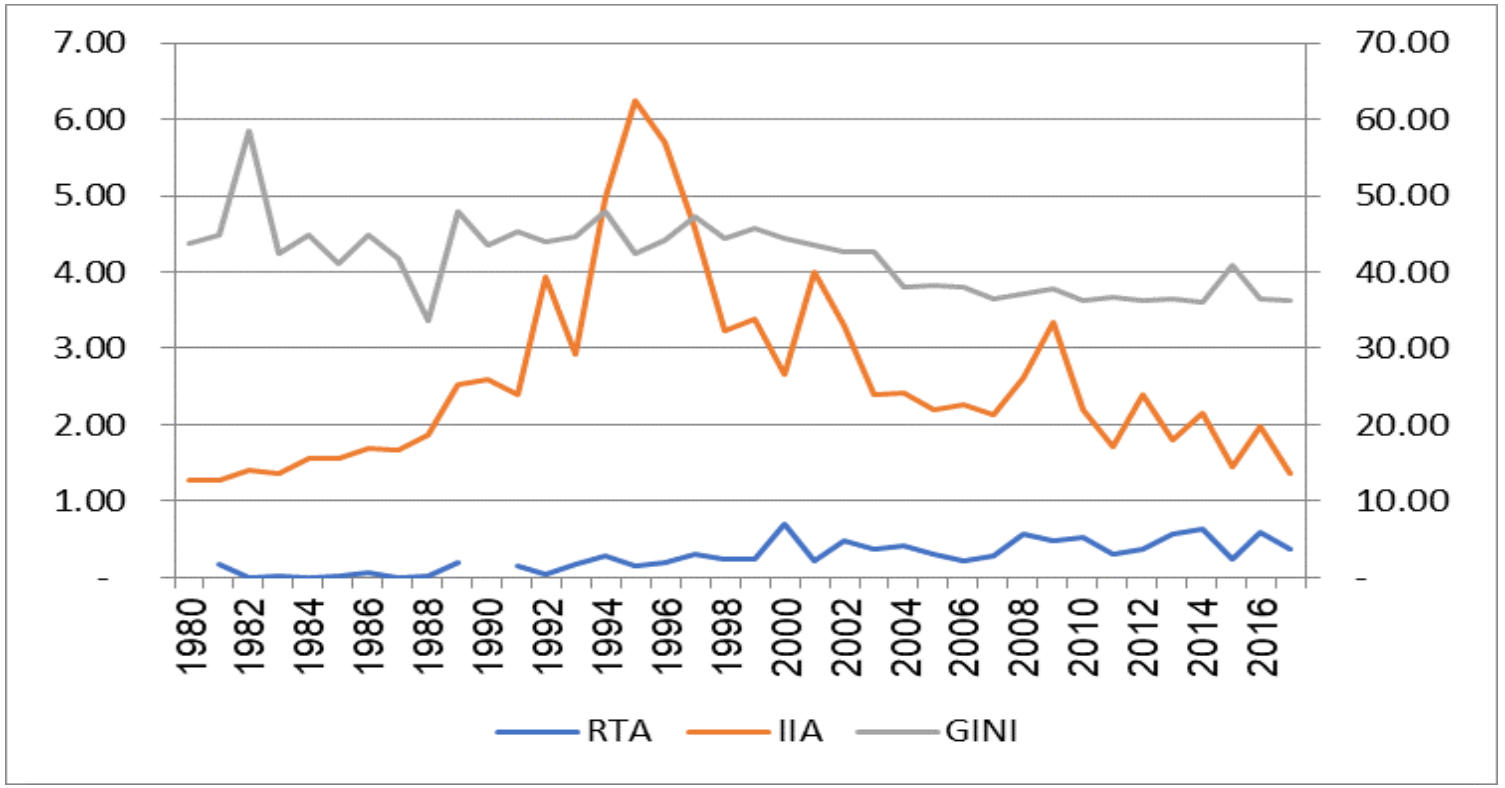


Figure 2- Trends in the GINI index, RTAs and IIAs 1980-2017

Average Number of RTAs/IIAs



Average GINI index

Table 1- Descriptive Statistics and Correlations (Standard errors in parentheses)

Variable	Mean	Std. Dev.	RTA	IIA	GINI	Trade	FDI IN	FDI OUT	GDP per Capita	GDP growth	Industry Employment	AGE 15-64	Checks
RTA	0.663	1.021	1										
IIA	2.732	2.649	0.206 (0.000)	1									
GINI	37.433	12.436	-0.091 (0.000)	0.048 (0.145)	1								
Trade (Percentage)	82.964	47.121	0.110 (0.000)	0.011 (0.526)	0.352 (0.000)	1							
FDI IN (Percentage)	4.852	12.001	0.056 (0.000)	-0.019 (0.292)	0.057 (0.029)	0.336 (0.000)	1						
FDI OUT (Percentage)	2.656	11.937	0.071 (0.000)	0.011 (0.564)	-0.011 (0.697)	0.224 (0.000)	0.438 (0.000)	1					
GDP per Capita (Thousand USD)	12.503	19.423	0.290 (0.000)	0.165 (0.000)	-0.027 (0.298)	0.283 (0.000)	0.123 (0.000)	0.226 (0.000)	1				
GDP growth (Percentage)	3.800	6.364	-0.053 (0.000)	-0.044 (0.009)	0.278 (0.000)	0.098 (0.000)	0.085 (0.000)	0.412 (0.003)	-0.066 (0.000)	1			
Industry Employment (Percentage)	20.659	8.185	0.223 (0.000)	0.348 (0.000)	0.510 (0.000)	0.229 (0.000)	0.021 (0.157)	0.024 (0.139)	0.298 (0.000)	0.010 (0.507)	1		
AGE 15-64 (Percentage)	61.764	11.092	0.166 (0.000)	0.236 (0.000)	0.745 (0.000)	0.342 (0.000)	0.107 (0.000)	0.078 (0.000)	0.408 (0.000)	0.052 (0.000)	0.633 (0.000)	1	
Checks	2.988	1.796	0.110 (0.000)	0.099 (0.000)	-0.029 (0.293)	0.036 (0.006)	0.030 (0.022)	0.013 (0.413)	0.138 (0.000)	-0.028 (0.031)	0.128 (0.000)	0.118 (0.000)	1

Table 2- 2SLS regressions of the relationships between Inequality, RTA and IIA signing

		Model 1 DV=RTA	**Model 2 DV=IIA**		**Model 3 DV=RTA**	**Model 4 DV=IIA**		**Model 5 DV=RTA**	**Model 6 DV=IIA**
	IV=Industry Employment			IV=%_Cohort 15-64			IV=log (cohort 15-64)		
Independent variables	Stage 1	Stage 2		Stage 1	Stage 2		Stage 1	Stage 2	
GINI (t-5)		-0.077***	-0.113		-0.036***	-0.223***		-0.041***	-0.237***
		(0.006)	(0.071)		(0.010)	(0.043)		(0.010)	(0.046)
		[0.000]	[0.110]		[0.000]	[0.000]		[0.000]	[0.000]
IV=% Industry Employment	-0.326***								
	(0.043)								
	[0.000]								
IV=%_Cohort 15-64				-0.643***					
				(0.053)					
				[0.000]					
IV=log (cohort 15-64)							-37.541***		
							(3.256)		
							[0.000]		
Past RTAs		-0.357***			-0.365***			-0.370***	
		(0.074)			(0.131)			(0.131)	
		[0.000]			[0.005]			[0.005]	
Past IIAs			-0.054			-0.057			0.013
			(0.048)			(0.048)			(0.038)
			[0.262]			[0.232]			[0.732]
GDPperCap (t-5)	-0.219***	0.001	-0.032**	-0.176***	0.022***	-0.037***	-0.178***	0.023***	-0.039***
	(0.018)	(0.002)	(0.016)	(0.018)	(0.002)	(0.009)	(0.018)	(0.002)	(0.009)
	[0.000]	[0.639]	[0.050]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
GDPgrowth (t-5)	-0.129*	-0.022***	-0.028	-0.130**	-0.001	-0.043***	-0.130**	-0.000	-0.044***
	(0.069)	(0.003)	(0.017)	(0.064)	(0.003)	(0.014)	(0.065)	(0.003)	(0.014)
	[0.062]	[0.000]	[0.105]	[0.042]	[0.728]	[0.002]	[0.044]	[0.918]	[0.002]
FDI_OUT (t-5)	-0.005	0.002	-0.000	-0.019	0.002	-0.002	-0.019	0.002	-0.002
	(0.035)	(0.002)	(0.006)	(0.034)	(0.001)	(0.006)	(0.034)	(0.001)	(0.006)
	[0.881]	[0.269]	[0.953]	[0.572]	[0.202]	[0.736]	[0.585]	[0.191]	[0.737]
Trade (t-5)	-0.035***	-0.002***	-0.007	-0.030***	0.003***	-0.009**	-0.031***	0.003***	-0.009**
	(0.007)	(0.000)	(0.004)	(0.007)	(0.001)	(0.004)	(0.007)	(0.001)	(0.004)
	[0.000]	[0.000]	[0.127]	[0.000]	[0.000]	[0.020]	[0.000]	[0.000]	[0.014]

FDI_IN (t-5)	-0.038	0.001	-0.008	0.007	-0.001	-0.004	0.006	-0.001	-0.004
	(0.032)	(0.002)	(0.006)	(0.031)	(0.002)	(0.006)	(0.031)	(0.002)	(0.006)
	[0.238]	[0.539]	[0.192]	[0.823]	[0.533]	[0.563]	[0.841]	[0.525]	[0.556]
Checks (t-5)	0.009	0.014	0.016	0.054	0.002	-0.048	0.043	0.003	-0.051
	(0.154)	(0.009)	(0.044)	(0.142)	(0.009)	(0.040)	(0.143)	(0.009)	(0.040)
	[0.956]	[0.136]	[0.716]	[0.702]	[0.821]	[0.229]	[0.766]	[0.771]	[0.196]
Country fixed effects		+	+		+	+		+	+
Year fixed effects		+	+		+	+		+	+
Constant	53.555***	3.571***	10.962***	86.089***	-2.789***	14.189***	201.119***	-3.099***	14.963***
	(1.159)	(0.313)	(4.079)	(3.247)	(0.641)	(3.365)	(13.317)	(0.666)	(3.502)
	[0.000]	[0.000]	[0.007]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	812	2,485	1,575	873	3,355	1,974	873	3,355	1,974
R-squared	0.296	0.242	0.421	0.359	0.466	0.446	0.350	0.466	0.446
F test model	59.42	27.99	5.845	80.87	13.97	7.483	78.03	13.99	7.478

Standard errors in parentheses. P values in square brackets.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 1- Detailed description of measures

Measure	Data description	Country coverage	Institution/database	Data source
RTA	Number of RTAs signed in a given year	134	World Trade Organization	http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx
IIA	Number of IAAs signed in a given year	134	UNCTAD	https://investmentpolicy.unctad.org/international-investment-agreements/by-economy
GINI index		134	World Bank Database	http://databank.worldbank.org/data/home.aspx
GDP per Capita	Percentage	134	World Bank Database	http://databank.worldbank.org/data/home.aspx
GDP growth	Percentage (over last year)	134	World Bank Database	http://databank.worldbank.org/data/home.aspx
FDI OUT	Percentage (out of GDP)	134	World Bank Database	http://databank.worldbank.org/data/home.aspx
TRADE	Percentage (out of GDP)	134	World Bank Database	http://databank.worldbank.org/data/home.aspx
FDI IN	Percentage (out of GDP)	134	World Bank Database	http://databank.worldbank.org/data/home.aspx
Checks	See Cruz, et al., 2018: 18-19 for details on the calculation of Checks	125	World Bank's Database of Political Institutions	https://datacatalog.worldbank.org/dataset/wps2283-database-political-institutions

Appendix Table 2- List of covered countries

Albania	Croatia	Israel
Algeria	Cyprus	Italy
Angola	Czech Republic	Ivory Coast
Argentina	Democratic Republic of the Congo	Jamaica
Armenia	Denmark	Japan
Australia	Dominican Republic	Jordan
Austria	Ecuador	Kazakhstan
Azerbaijan	Egypt	Kenya
Bangladesh	El Salvador	Kiribati
Belarus	Estonia	Kyrgyzstan
Belgium	Fiji	Laos
Belize	Finland	Latvia
Benin	France	Lebanon
Bolivia	Gabon	Liberia
Bosnia and Herzegovina	Georgia	Lithuania
Botswana	Germany	Luxembourg
Brazil	Ghana	Madagascar
Bulgaria	Greece	Malawi
Burkina Faso	Guatemala	Malaysia
Burundi	Guinea-Bissau	Mali
Cameroon	Honduras	Mauritania
Canada	Hungary	Mauritius
Cape Verde	Iceland	Mexico
Central African Republic	India	Moldova
Chile	Indonesia	Mongolia
China	Iran	Montenegro
Colombia	Iraq	Morocco
Costa Rica	Ireland	Mozambique

Namibia
Netherlands
Nicaragua
Nigeria
Norway
Pakistan
Palestinian Territory
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
Republic of the Congo
Romania
Russia
Rwanda
Senegal
Serbia
Seychelles
Slovakia
Slovenia
Solomon Islands
South Africa
South Korea
Spain
Sri Lanka
Swaziland
Sweden
Sweden
Switzerland
Syria
Tajikistan
Thailand
Togo
Tonga
Tunisia
Turkey
Uganda
Ukraine
United Kingdom
United States
Uruguay
Vanuatu
Venezuela
Vietnam
Yemen
Zambia
Zimbabwe