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Abstract

This paper investigates the political-economy trilemma: policy makers face a trade-off of choosing two out of three policy goals or governance styles, namely, (hyper-)globalization, national sovereignty, and democracy. We develop a set of indexes that measure the extent of attainment of the three factors for 139 countries in the period of 1975-2016. Using these indexes, we examine the validity of the hypothesis of the political-economy trilemma by testing whether the three trilemma variables are linearly related. We find that, for industrialized countries, there is a linear relationship between globalization and national sovereignty (i.e., a dilemma), and that for developing countries, all three indexes are linearly correlated (i.e., a trilemma). We also investigate whether and how three political-economic factors affect the degree of political and financial stability. The results indicate that more democratic industrialized countries tend to experience more political *in*stability, while developing countries tend to be able to stabilize their politics if they are more democratic. The lower level of national sovereignty an industrialized country attains, the more stable its political situation tends to be, while a higher level of sovereignty helps a developing country to stabilize its politics. Globalization brings about political stability for both groups of countries. Furthermore, more globalized countries, whether industrial or developing, tend to experience more financial stability.

Keywords: Impossible trinity; globalization; financial crisis.
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1. Introduction

In the international macroeconomics literature, the complexity of open macro policy management is viewed through the lens of the "open economy trilemma." This hypothesis, advanced by Mundell and Fleming in the 1960s, states that a country may simultaneously choose any two, but not all, of the three goals of monetary policy independence, exchange rate stability, and financial market openness to the full extent.[1]

Figure 1 (a) is a textbook graphical presentation of the policy trade-offs associated with this trilemma. Each of the three sides – representing monetary independence, exchange rate stability, and financial integration – depicts a potentially desirable goal, yet it is not possible to be simultaneously on all three sides of the triangle. The top vertex – labeled "floating exchange rate regime" – is associated with monetary policy autonomy and open financial markets, but not exchange rate stability, the preferred choice of some industrialized countries such as Australia, Canada, Japan, and New Zealand. This hypothesis has been widely taught, explaining the constraints policymakers face in an open economy setting. These constraints imply policy tradeoffs imposed by arbitrage forces linking the interest rates of nations' bonds in the presence of capital mobility.[2]

Dani Rodrik (2000) postulated the presence of international political-economy trilemma associated with globalization. That is, policy makers face a trade-off of choosing two out of three policy goals or governance -- globalization, national sovereignty, and democracy. A continuous version of the globalization trilemma states that if a country increases its globalization, it has to give up either some democracy or some national sovereignty.[3] The more a country opens up and

[1] See Mundell (1960), Fleming (1961), and Boughton (2000) for an overview of the history of the open economy Trilemma.

[2] See Shambaugh (2004), Obstfeld, et al. (2005), Aizenman, et al. (2013), Obstfeld (2015) for various tests of the open economy Trilemma.

[3] Or, more strictly speaking, the weighted sum of democracy and national sovereignty must fall.

integrates itself to the world, the more directly it faces the impact of market mechanism. Trade and financial liberalization may help private markets to allocate economic resources more efficiently, which may facilitate economic growth and development (a conjecture dubbed as "the Washington consensus" associated with globalization). Such globalization trend constrains domestic economic policy making, shrinking the domestic policy space.[4] This is in line with Friedman (1999), "your economy grows and your politics shrinks." In such a nation state, the process of integration with the globalized world may increase the role of more independent technocrats' taking over the role of policy making, diminishing the role of "mass politics." In Friedman's words, instead of wearing different political "jackets" or "suits," such a country wears the "Golden Straitjacket," a choice depicted by the top vertex of the triangle in Figure 1 (b).

In a Golden Straitjacket state, policy making often does not reflect the political will of the majority of the voters. For example, regulators in a capital-abundant country may try to push forward trade liberalization while their democratic voters oppose to it because they know trade liberalization could make them worse-off. Thus, when globalization and national sovereignty are pursued, democracy will be constrained. A nation state can pursue both hyper-globalization and democracy, though it would have to give up on its state sovereignty, possibly in the context of federalism, delegating external issues dealing with globalization to the federal center. For example, the U.S. states follow democratic decisions in their internal regulations, while delegating external decisions to the federal levels, diluting their own sovereignty. Hence, countries that pursue deeper international economic integration guided by democratic votes may

[4] That means, for example, ruling and opposition parties would barely differ from each other and argue only over minor differences instead of debating grand issues.

converge towards "global federalism," exemplified by the European Union (EU) and the U.S., depicted by the right vertex of the triangle in Figure 1 (b).

Alternatively, a democratic state may decide to curtail globalism and implement protectionist measures if its majority voters prefer so. This policy configuration constrains the domestic impact of global interests. This situation is exemplified by the Bretton Woods system, where member states were allowed to implement capital controls, and various trade barriers existed despite a series of trade liberalization efforts under the regime of the General Agreements on Tariffs and Trade (GATT). Countries give up the opportunity to integrate themselves to the world markets while they pursue full extents of national sovereignty and democracy, exemplified by the right vertex of the triangle in Figure 1 (b).

These tradeoffs were articulated by Rodrik as a political-economy trilemma, where at most only two of the following triplets of policy dimensions can be achieved: globalization, national sovereignty, and democracy. Until recently, the framing of this trilemma was mostly done as a binary choice between the three policy goals. Yes, in practice, one expects the presence more continuous tradeoffs.[5] When it comes to international political-economy trilemma, to our knowledge, no studies have quantitatively tested the validity of the tradeoff among the three political-economic variables. This is one of the primary focus of this paper.

We begin by constructing a set of the indexes, each one of which measures the extent of attainment of the three political-economic factors that represent international policy goals or orientation: globalization, national sovereignty, and democracy.

[5] Aizenman, et al. (2010, 2013), Ito and Kawai (2012, 2014), and Aizenman and Sengupta (2013) create continuous indexes for the three policy goals of the open economy trilemma, testing and overall confirming the validity of a continuous version of Mundell-Fleming's hypothesis. Studies that test a binary choice hypothesis include Shambaugh (2004), Obstfeld, et al. (2005), Obstfeld (2015), Han and Wei (2018).

These indexes, available for 139 countries in the last four decades, show that industrialized and developing countries have gone through different paths of development in the pursuit of three policy choices and orientation. We show countries' international political-economic policy combinations has developed with much variance over the sample time of 1975-2016 and across countries.

Our three indexes suggest that in the last four decades, industrialized countries have faced a *dilemma* between globalization and national sovereignty while these countries maintained overall high and stable levels of democratization. The combination of rising levels of globalization and declining extent of national sovereignty from the 1980s through the 2000s mainly reflect the experience of European industrialized countries. Developing countries, in contrast, experienced convergence of declining sovereignty and rising globalization and democratization around the same period. Emerging market economies experienced rising globalization and democratization earlier than non-emerging market economies.

We also examine the validity of Rodrik's hypothesis by testing whether the three trilemma variables are linearly related. We find that, for industrialized countries, there is a linear negative association between globalization and national sovereignty, while the democratization index is statistically constant during our sample period. Thereby, during 1975-2016, the political economy trilemma for the major industrial countries was mostly a dilemma between globalization and national sovereignty. For developing countries, a weighted average of the three indexes adds up statistically to a constant, with positive and significant weights, indicating they are in a trilemma relationship.

The fact that countries choose different mixtures of the three political-economic factors, in ways correlated with their economic development, suggest that different "doses" of political orientation have different impacts or implications on political and economic situations. To gain

further insight, we also investigate whether and how three political-economic factors affect the degree of political and financial stability.

Our estimation results suggest clear patterns of heterogeneity among the three grouping of countries. On average, democratic industrialized countries experience greater political *instability*. The lower level of national sovereignty an industrialized country embraces, the more stable its political situation tends to be. In contrast, developing countries tend to be able to stabilize their politics if they are more democratic. Globalization brings about more political stability for both groups of countries. Furthermore, more globalized countries, whether industrial or developing, tend to experience more financial stability.

In reading these results, one should keep in mind the sample and data dependence of our results. The GFC, the Eurozone crisis, and demographic transitions put in motion new forces that mostly are not captured by our sample, and probably are not measured properly by our indices. Some observers argue that the diffusion of 'strong man' regimes diluting the power and the independence of the judiciary system, and reducing overtime media independence degrades overtime the quality of democracy. Our finding that industrialized countries have experienced the rising levels of globalization, declining degrees of national sovereignty, and greater political instability may mask a darker story of growing gaps between *de jure* and *de facto* measures of democracy. This possibility and other new trends are not depicted well in our sample, needing more observations, and probably compiling new indices controlling for recent trends dealing with press and media trends. We close our paper with a preliminary discussion of these issues.

The paper is organized as follows. In Section 2, we outline the methodology of constructing the three indexes of the political-economy trilemma. In Section 3, we examine the trend of the indexes for different groups of countries, and also examine whether the indexes entail any structural breaks corresponding to major global political and economic events. Section

4 tests the validity of a linear specification of the political-economy trilemma indexes to examine whether the notion of the trilemma can be considered to be a trade-off and binding. Section 5 we investigate the implications of policy choices based on the political-economy trilemma by examining how the policy choices among the three trilemma policies affect political stability and financial stability. In Section 6, we conclude the paper.

2. Construction of the Measures for the Great Political economy trilemma

As was in the case with the open economy trilemma, empirical explorations on the validity of the political-economy trilemma have been quite limited, simply due to the lack of systematic variables that measure the extent of policy orientation toward globalization, national sovereignty, and democracy. In order to investigate empirically whether or not the trilemma of political-economy is "valid" and "binding," we construct the three variables pertaining to international political economy as follows.

2.1 Extent of Globalization

In this paper, we assume globalization is composed of the four dimensions: financial globalization, trade globalization, interpersonal globalization, and political globalization. Our index of globalization is the first principle component of de jure and de facto measures of financial globalization, de jure and de facto measures of trade globalization, de jure and de facto measures of political globalization, and de facto measure of interpersonal globalization (See Table 1).

Financial globalization is composed of de jure and de facto financial globalization. We measure de jure financial globalization with the Chinn-Ito index of financial openness (Chinn and Ito, 2006, 2008). We define the degree of de facto financial openness as the sum of the total

external assets and external liabilities divided by GDP. The data on total external assets and liabilities are obtained from the dataset on international investment positions developed by Lane and Milesi-Ferretti (2001, 2007, and 2017). However, the ratio of the sum of total external assets and liabilities to GDP can be very high, especially for economies with global financial centers (e.g., Hong Kong, Ireland, and Singapore). Therefore, we winsorize this ratio at the 5th and 95th percentiles (with both percentiles being calculated from a sample excluding all the financial-center economies),[6] and normalize the ratio so that the ratio would range zero and one.[7]

We also measure trade globalization with de facto and de jure indexes. The former is the sum of exports and imports divided by GDP,[8] and for the latter, we use the de jure measure of trade globalization from the KOF Globalization Index.[9] This measure is composed of the prevalence of regulatory trade barriers from Gwartney, et al. (2017);[10] income from taxes on international trade as percentage of total revenue (inverted) from the World Development Indicators; and unweighted means of tariff rates (Gwartney, et al., 2017).[11]

We consider de facto interpersonal globalization as one of the components of the aggregate measure of globalization and measure it with the KOF Globalization Index's measure of de facto interpersonal globalization.[12] It is composed of *international voice traffic* (the sum of

[6] That means that extremely small values below the 5th percentile and extremely large values above the 95th percentile are replaced by the threshold values instead of being replaced by missing variables so that observations will be kept.

[7] The definition of financial centers follows that of Lane and Milesi-Ferretti (2017). They are: the Bahamas, Bahrain, Belgium, Cyprus, Hong Kong, Ireland, Luxembourg, the Netherlands, Panama, San Marino, Singapore, Switzerland, and the United Kingdom.

[8] We also winsorize the ratio at the 5th and 95th percentiles and normalize the ratio to make it range between zero and one.

[9] https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html

[10] It is the average of two subcomponents: prevalence of non-tariff trade barriers and compliance costs of importing and exporting.

[11] For more details, refer to Gygli, et al. (2018).

[12] Gygli, et al. (2018) also include *de jure* and *de facto informational globalization*, and *cultural globalization.* However, we do not include these subindexes because, from the perspective of materialist approach, we think these items are less relevant to our definition of globalization. We also exclude *de jure interpersonal globalization* because this does not contribute much to the time variation of the aggregate variable.

international incoming and outgoing fixed and mobile telephone traffic in minutes per capita); "*transfer*" which is the sum of gross inflows and outflows of goods, services, income or financial items (without a quid pro quo) per capita; *international tourism* (i.e., the sum of arrivals and departures of international tourists as a share of population); and *migration*, which is defined as the number of foreign or foreign-born residents as percentage of total population.

The extent of political globalization is measured by the KOF Globalization Index's de jure and de facto measures of political globalization. The de jure political globalization index is composed of 1) the number of international inter-governmental organizations in which a country is a member; 2) international treaties signed between two or more states and ratified by the highest legislative body of each country since 1945; and 3) the number of distinct treaty partners of a country with bilateral investment treaties.

The de facto political globalization index is composed of 1) the number of embassies in a country; 2) personnel contributed to U.N. Security Council Missions per capita; and 3) the number of international oriented nongovernmental organizations (NGOs) with members in that country or territory. For the details on how de jure and de facto measures of political globalization constitute the aggregate political globalization index, refer to Gygli, et al. (2018).

For the (aggregate) measure of globalization, we first compute the first principle component of de jure and de facto financial globalization measures; de jure and de facto trade globalization measures; de jure and de facto political globalization measures, and the de facto measure of interpersonal globalization. Then, we winsorize the resultant first principle component at the 5th and 95th percentiles and normalize it to make the index range between zero and one.

2.2 Democratization Index

We measure the extent of democratization with the first principle component of two democracy indexes, *polity2* and *polconv*. *polity2* is the measure of democratization from the Polity IV database (which is developed by the Polity IV Project; see Marshall, et al., 2017). *polity2* is the difference between *DEMOC,* which measures the extent of the existence of institutionalized democracy, *AUTOC,* which measures the extent of the existence of institutionalized autocracy. The higher *polity2* indicates that a higher extent of democracy exists in the country of concern.

Polconv is the index for "political constraint" from the political constraint (*polconv*) database developed by Henisz (2000). This index measures the "the feasibility of policy change (the extent to which a change in the preferences of any one actor may lead to a change in government policy)." If a dictator-like political leader can implement a policy change with no resistance, the level of political constraint would be zero. Hence, the higher the level of political constraint is, the more difficult for a political leader to change a policy discretionally, i.e., the more democratic the country of concern would be.

We winsorize the first principle component of *polity2* and *polconv* at the 5^{th} and 95^{th} percentiles and normalize the resultant figures as well.

2.3 Sovereignty Index

In our context, sovereignty means that a nation state is able to exercise its political power without being subject to or dependent upon other states. Sometimes the interest a country pursues is not the same as the interest pursued by another or other countries. A country with a higher level of sovereignty, we assume, implements a policy or pursue a certain policy goal rather unilaterally, without caring much about the interest of others.

Our sovereignty index measures the extent of sovereignty a country pursues, and we define it to be the first principal component of three variables: *herfgov*, *execnat*, and *allhouse*. *herfgov* is the Herfindahl Index of the government that shows the degree of concentration of political power. If there is only one party (or one ruler), this index takes the value of one. The more parties in the government, the lower this index's values would be. The underlying assumption is that, the more fragmented the ruling government is (i.e., the Herfindahl index is low), the harder it should be to advocate policies that would only benefit the domestic country.

execnat is a dummy variable which takes the value of one if the government of the country of concern is run by nationalists. *allhouse* is a dummy variable that takes the value of one if the government controls both houses of the legislature (or one house if there is no upper house).

After calculating the first principle component of the three variables, we winsorize the first principle at the 5th and 95th percentiles and normalize the resultant figures as well.

With all these variable constructions, we have the indexes of globalization, democracy, and sovereignty for 139 countries in the period of 1975-2016.[13] The data availability is shown in Appendix 1.

3. Summary Statistics

3.1 Developments of the Indexes of the Political-Economy Trilemma

Now with all the indexes at hand, let us compare these indexes to get some insights of how the architecture of international economy and political governance system has evolved over time.

Among the three elements of the political economy trilemma, as of the last few years, the extent of democracy is the highest on average (Figure 2 (a)), though it has been almost caught up

[13] The indexes of globalization and sovereignty are available up to 2017.

rapidly by the extent of globalization. Industrialized countries have been fully democratic throughout the sample period (Figure 2 (b)).[14] Developing countries, whether those with emerging markets or not,[15] have become more democratic in the first half of the 1990s, but since then, their extent of democracy has been stable (Figures 2 (c) and (d)).

Industrialized countries started pursuing globalization in the beginning of the 1980s and steadily increased the extent of globalization through the early 2000s when they became fully globalized. As anecdotally discussed, the speed and timing of globalization makes emerging market countries differ from non-emerging market developing countries. Emerging market countries started pursuing globalization in the early 1990s and proceeded with it until the mid-2000s whereas non-emerging market countries started globalization in the late 1990s and pursued it relatively slowly.

Sovereignty has been on a moderately declining trend during the sample period for all the samples. Generally speaking, when globalization progresses, the level of sovereignty appears to decline.[16] This is consistent with the political science literature that characterizes the rise of globalization and its (negative) impact on sovereignty as an either-or relationship.[17] In terms of the level of sovereignty, it is the lowest among industrialized countries on average. The clear divergence between increasing globalization and decreasing sovereignty among industrialized countries in Figure (b) mainly reflects the efforts among European industrial countries to form the European Union that took place the late 1980s through the end of the 1990s. The member

[14] "Industrialized countries" are traditional OECD countries whose IMF code is mostly less than 200 (except for Turkey and South Africa). For more details on the country compositions of our sample, refer to Appendix 1.

[15] Again, refer to Appendix 1 for the country composition of the subsamples.

[16] However, there can be countries which pursue greater levels of both democracy and national sovereignty while having more closed economies.

[17] See Cable (1995), Evans (1997), Ohmae (1995), Strange (1996), and Van Creveld (1999).

countries integrated their markets and harmonized regulatory systems, while giving up their sovereignty – they moved toward the bottom right corner of the triangle in Figure 1 (b).

In contrast, less developed countries experience convergence of declining sovereignty and rising globalization, rather than divergence of the two. Until the late 1980s for emerging market economies and the mid-1990s for non-emerging market economies, sovereignty had been strongly pursued among less developed countries. This is similar to the development of monetary independence in the framework of the open economy trilemma (Aizenman, et al., 2013). It is not surprising considering that monetary independence refers to a state where monetary authorities are capable of implementing monetary policy autonomously without being subject to foreign monetary authorities.

In the 1980s and 1990s, as developing countries become more democratic and more globalized, they tend to have given up sovereignty. Now, sovereignty is the least pursued policy goal among emerging market economies.

Among the emerging market economies in Asia, policy makers pursued state sovereignty the most until the early 1990s (Figure 3 (a)). However, while sovereignty was in a moderately declining trend, countries in the region made efforts to become more democratic and open their doors to the rest of the world. Since the millennium, all three policy goals have been hovering around the middle levels. Interestingly, this resembles the development of monetary independence, exchange rate stability, and financial openness of emerging market economies (especially those in Asia) in the framework of the open economy trilemma as Aizenman, et al. (2013) showed. Like in the case of the open economy trilemma, emerging market economies in Asia may have been trying to hedge against not just economic but also political instability.

Latin American countries have been more democratic than other less developing countries (Figure 3 (b)). These countries have maintained relatively stable levels of sovereignty, which has

been the most pursued policy orientation among the three in most of the sample period. However, their sovereignty has still declined somewhat while these economies started marching steadily toward globalization in the 1990s.

3.2 Structural Breaks

Figures 2 and 3 show that while there is heterogeneity across countries and over time, there is some discernable trend in different income or regional groups of countries. Now, we shed more light on the evolution of the index values by investigating whether major international economic or political events have been associated with structural breaks in the index series.

We examine whether the following economic and political events have significantly impacted the development of the three policy choices, namely, the Latin American debt crisis of 1982, the demise of the Soviet Union and the Eastern bloc in 1991; the Asian (and other emerging markets') Financial Crisis of 1997-98; and the Global Financial Crisis of 2007-08.

Treating the years of 1982, 1991, 1997-98, and 2007-08 as potential candidates for structural break points, we test the equality of the group mean of the indexes over the candidate break points for each of the subsample groups.[18] Table 2 (a) reports the results of the equality tests.

Consistent with Figure 2, while industrialized countries steadily increased the extent of globalization over the major events, they significantly reduced the level of sovereignty in the aftermath of the 1982 debt crisis and the Financial Crisis of 2007-08. While industrialized countries have scored very high levels of democracy, the index has a structural break in 1991, the collapse of the Soviet Union and its bloc.

[18] The data for the candidate structural break years are not included in the group means either for pre- or post-structural break years. For the Asian crisis, for example, we remove observations for the years of 1997 and 1998.

Table 2 (b) lists the most statistically significant structural breaks for each of the indexes and each country group. Interestingly, for all the samples, the Asian Financial Crisis of 1997-98 is the most significant structural break for globalization, and the demise of the Soviet empire in 1991 is for the level of democracy. It also exerted influence on the sovereignty of developing countries and a significant structural break in that year as well.

4. Theoretical validity of the three indexes: Are they linearly related?

In this section we examine whether the trilemma relationship portrayed in Figure 1 (b) is supported by the data. As we already discussed, a strict trilemma relationship implies choosing one of the vertexes of the trilemma triangle, embracing two out of the three policy choices. If countries do not implement the two policies fully, and if there is a substitutability between the trilemma goals, a country may trade off the drop in the two polices with partial achievement of the third goal. Heuristically, it means a policy combination of a country that lies inside the triangle. We test this possibility by verifying the fit of a linear version of trilemma trade-offs, where the weighted sum of the three trilemma policy variables adds up to a constant.

Specifically, we test this conjecture by estimating the fit of a linear regression, where the weighted sum of the three trilemma policy variables equals a constant.

$$1 = (a_0 + a_1 LDC_i)GL_{i,t} + (b_0 + b_1 LDC_i)DM_{i,t} + (c_0 + c_1 LDC_i)SV_{i,t} \quad (1)$$

where *GL* stands for the index of globalization, *DM* for democracy, and *SV* for sovereignty. *LDC* is a dummy variable that takes the value of one for non-industrialized countries.

Because we have shown that different subsample groups of countries have experienced different development paths in terms of international political economy, we allow the

coefficients on all the variables to differ between industrialized and developing countries by interacting the dummy for developing countries with each of the three political-economy trilemma variables. The regression is run for the full sample period as well as the subsample periods identified in the preceding subsection. We report the results in Table 3.

The goodness of fit is high for the whole sample period as well as for the subsample periods. The adjusted R-squared is 94% or above, in line with the conjuncture that the three policy goals are linearly related to each other, and that policy makers face a trade-off of the three policy goals. The sign and significance of the weights provides pertinent information on the trade-offs between the trilemma variables during the sample period.

Figure 2 (b) illustrates that the level of democracy for the industrialized countries (IDC) group has been consistently at high levels (> 0.95) throughout the sample period, and overall stable. As long as the level of democracy is time-invariant, the estimated model reduces to a linear combination of the other two variables, i.e., globalization and sovereignty. Table 4 reports the linearity test, where the variable for democracy is not included in the estimation for the IDC group, but included for the LDC group. It improves the statistical significance for many of the estimates while the adjusted R-squared is barely affect.

The estimation results for the IDC group that the estimates on both globalization and sovereignty are consistently significantly positive indicate that these countries face a dilemma between globalization and sovereignty; increasing the level of one of the two variables would surely lead to a fall in the level of the other. For developing countries, the linear relationship exists for all three indexes, which means these countries face a trilemma of globalization, sovereignty, and democracy. Consistently positive estimated coefficients imply that increasing the level of one of the three indexes would lower the weighted sum of the other two, as Aizenman, et al. (2013) found for the open macroeconomic trilemma.

The table also indicates that the impact of globalization is significantly greater for IDCs than for LDCs. The impact of sovereignty levels is greater for LDCs than for IDCs. Consistent with Figure 2, while developing countries have tried to maintain relatively high levels of sovereignty, they have been cautious in globalizing themselves. However, the gaps between the two groups in terms of the impacts of globalization and sovereignty has narrowed in the last decade or so (Columns (2) through (6)).

Over the subsample periods, for the group of industrialized countries, the estimated weights of both globalization and sovereignty are in a declining trend toward the end of the sample period. In contrast, for the group of developing countries, while the impacts of globalization and sovereignty have been in a moderately declining trend, the impact of democracy has been rising.

Figure 7 illustrates the goodness of fit from a different angle. In the top panels, the solid lines show the means of the predicted values (i.e., $\hat{a}GL + \hat{b}DM + \hat{c}SV$) based on the estimation results of equation (1) for the full sample (i.e., first column of Table 4) for the groups of industrial countries (top) and developing countries (bottom). To incorporate the time variation of the predictions, the subsample means of the prediction values as well as their 95% confidence intervals (that are shown as the shaded areas) are calculated using five-year rolling windows.[19] This exercise should allow us to get some inferences about how "binding" the dilemma or trilemma is. If the linear relationship is to be constraint, the predicted values should hover around the value of one.

[19] Both the mean and the standard errors of the predicted values are calculated using the rolling five-year windows. The formula for the mean and the standard errors can be shown as $\bar{x}_{t|t-4} = \sum_{t}^{t-4}\sum_{i=1}^{n}\hat{x}_{it} \Big/ n\times 5$ and $SE(\hat{x}) = \sqrt{\sum_{t}^{t-4}\sum_{i=1}^{n}\left(\hat{x}_{it} - \bar{x}_{t|t-4}\right)^2 \Big/ n\times 5 - 1} \Big/ \sqrt{n\times 5}$, respectively, where *n* refers to the number of countries in a subsample (i.e., IDC and LDC), $\hat{x}_{it}$ to the prediction values, and $\bar{x}_{t|t-4}$ to the mean of $\hat{x}_{it}$ in the rolling five-year window. Because of the use of rolling five-year windows, the lines in the figures only start in 1979.

The panels also illustrate the product of the estimated coefficient and the actual values for each of the explanatory variables – i.e., $\hat{a}GL, \hat{b}DM,$ and $\hat{c}SV$ though the industrial country group does not have $\hat{b}DM$. Considering that the estimated coefficients in this regression exercise yield approximate estimates of the weights countries put on the three policy goals, $\hat{a}GL, \hat{b}DM,$ and $\hat{c}SV$ provide sufficient information about "how much of" the policy choices countries have actually implemented.

From the top panel of Figure 4, we can see that for the group of industrialized countries, the average predictions of the weighted sum of globalization and sovereignty expressed as the linear model (equation (1)) are statistically below the value of one through the millennium. Since then, however, the predicted weighted sum has been significantly greater than the value of one. That is mainly driven by the rising trend of globalization among these countries, that was especially rapid since 1990 through the mid-2000s. When we redraw the figure using the estimates from Table 3, the average of the predicted sum of the *three* variables is constantly around the value of one (not reported), in line with the hypothesis.

In the case of developing countries (bottom of Figure 4), the average of the predicted sum of globalization, democracy, and sovereignty are below the value of one until the mid-2000s, since which it has been more or less at the value of one. In the mid-1990s, the level of sovereignty pursued by developing countries declined and stabilized around the early 2000s, and the level of adoption of democracy went up and stabilized around the same time. For this group of countries, globalization has been the least pursued policy goal, thought its prevalence inched up since the mid-1980s.

In sum, during most of our sample period, industrialized countries have constantly achieved the highest level of democracy. Thereby these countries face a dilemma between globalization and national sovereignty. As these countries have steadily increased the extent of

integration with the rest of the world since the early 1980s, their national sovereignty levels have declined in tandem. Developing countries, in contrast, increased the level of democracy and decreased the level of sovereignty in the mid-1990s. In the last decade or two, these countries steadily globalized.

Among these countries, emerging market economies are characterized as countries that have pursued high levels of democracy and globalization whereas non-emerging market ones tend to put priorities on sovereignty and democracy. This finding may indicate that sovereignty and democracy are viewed as ingredients for political and economic stability. In the section below, we examine whether and how each or mixture of the political-economy trilemma policy goals affect political and economic stability.

5. Impacts of the political-economy trilemma indexes

In this section, we examine whether and to what extent the three factors of the political-economy trilemma affect the degree of political stability and economic stability in terms of the probability of financial crisis.

5.1 Estimations on political stability

Different combinations of globalization, democracy, and sovereignty might affect the degree of political stability differently. A nation state with a high level of sovereignty may be better able to stabilize its political situation. However, if the state is governed by a dictator-like leader (who can full exercise national sovereignty with much ease), it can experience political instability.

It is also hard to generalize the impact of the extent of democracy. A more democratic country may be able to better bring out stability in its politics especially when the transparency of elections and policy making is warranted. However, history has also shown cases where democratic societies have experienced frequent, and fraudulent, elections, which eventually led to unstable politics. Globalization may also have ambiguous impacts on domestic politics. Being more open to the outside world may make domestic politics face more foreign pressure that tends to prefer transparency of power transitions and policy implementations. However, being more open to the rest of the world may make the country of concern more subject to external shocks, which may cause economic or financial instability and political instability.

Identifying the effects of different political-economy factors based on the trilemma may also help us identify and understand countries' motivations for changes in policies and governance forms. Hence, we empirically examine how various choices of the three policies affect the degree of political stability.

We measure the degree of political stability by using the data on "political stability and absence of violence/terrorism" from the World Bank's *Worldwide Governance Indicators.* The higher values it takes, the better conditions it represents. It ranges from zero to one. This data, however, is only available from 1996 through 2017.

Using this variable as the dependent variable, we estimate the following candidate explanatory variables.

Economic development (relative income) – The higher levels of economic development a country has achieved, the more stable its political situation can be. We measure the level of economic development by using the per capita income data from Penn World Table 9.1 and normalizing it as a ratio to the U.S. per capita income level.

Income inequality – The more unequal the income distribution is, the more political instability the country of concern may experience. We use the Gini index of inequality in household per capita disposable income from the Standardized World Income Inequality Database (SWIID).[20]

Financial crisis – As de Bromhead, et al. (2012) and Funke, et al. (2015) show, financial crises can lead to a rise of political extremism, which can destabilize politics. We try to capture the impact of financial crisis on political stability by including in the estimation the dummy for financial crisis. We construct the crisis dummy by using Laeven and Valencia's (2018) database on the occurrences of currency, banking and sovereign crises. The dummy takes the value of one if any of currency, banking, and sovereign crisis happens.

Expenditure on social protection – If the country of concern provides more social safety net or protection, that country may be able to embrace more political stability. We measure the size of social protection as the sum of general government's expenditures on social benefit programs, education, and health (all as shares of total government expenditure). Because the variable for social protection is quite limited, we test its impact separately from the baseline model.

Along with these variables, we also test the impacts of the political-economy trilemma indexes. Each estimation will include any two of the three trilemma indexes (instead of all three variables collectively) because we have shown that these three measures of the trilemma are linearly related.[21]

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[20] See Solt (2019) and https://fsolt.org/swiid/ .

[21] One can question whether it is appropriate to regress the variable for political instability on the democratic index because the variables for political instability and democracy may include some overlapping variables as components. According to the website for the *Worldwide Governance Indicators* https://info.worldbank.org/governance/wgi/Home/Documents, the "political stability and absence of violence/terrorism" does not contain any variables used to construct our democracy index. We thank the audience at the Discussion Paper seminar at the RIETI for raising this issue.

Furthermore, given that industrialized countries and developing countries have different development paths for the three policy combinations (Figure 2), it is reasonable to expect the impacts of the political-economy trilemma indexes differ between the group of industrialized countries and that of developing countries. Hence, we not only include the dummy for developing countries (LDC) but also allow the estimates of the trilemma indexes to differ between the two groups of countries by interacting the dummy with each of the trilemma indexes.

All the explanatory variables are lagged by one year to mitigate the impact of endogeneity. Because the variable for political stability is only available from 1996 on, the estimation is done for the period of 1996-2016.

The estimations yield interesting results, which we report in Table 5.

First, the configuration of the political-economy trilemma policies has different impacts on the level of political stability between industrialized countries and developing countries. Among industrialized countries, more democratic countries tend to experience more political *in*stability, whereas among developing countries, more democratic countries tend to experience more political stability (columns (1) and (3)).

The extent of state sovereignty also has different effects on the level of political stability. The lower level of state sovereignty an industrialized country has, the more stable its political situation tends to be, while the opposite is true for a developing country. Globalization contributes to greater political stability for both industrialized and developing countries. The results from models (2) and (3) suggest that its impact seems to be greater on developing countries.

The other variables affect the level of political stability as we expect. Developing countries in general are more likely to have lower level of political stability. In addition to that, more

economically developed countries, whether industrial or developing countries, tend to have greater political stability. The more equal income distribution a country achieves, the more political stability it can also achieve. Countries that experience financial crisis (either banking, currency, or sovereign) tend to experience political instability. Countries whose governments spend more on social protection and benefits tends to experience greater political stability.

5.2 Estimations on financial stability

Now, let us investigate whether configurations of political-economy trilemma policies have any impact on economic or financial stability. More specifically, we estimate the effect of trilemma policies on the likelihood of financial crisis. Here, financial crisis means either banking, currency, or debt crisis – we use the same dummy variable as we used in the estimation of political stability.

We hypothesize the probability that a crisis will occur, $\Pr(y_t = 1)$, is a function of a vector of characteristics associated with observations in year t, or X_t, and the parameter vector β, with the control variables in X lagged one year to avoid endogeneity issues. The log of the following function is maximized with respect to the unknown parameters through nonlinear maximum likelihood.

$$ln\, L\,(\beta) = \sum_{i=1}^{m}\left[y_t\, ln\, F\,(\beta' X_t) + (1 - y_t)\, ln\left(1 - F(\beta' X_t)\right)\right] \qquad (2)$$

where m indicates the number of countries times the number of observations for each country and the function $F(.)$ is the standardized normal distribution.

The following variables are included in the vector of characteristics, X_t.

Economic development (Relative income to the US) – More economically developed countries tend to have better legal systems and institutions that can help reduce the likelihood of experiencing financial crisis.

International reserves (IR) – Countries with ample IR holdings should be able to fight against speculative attacks on their currencies and also both internal and external drain of capital. Hence, countries with more IR holdings should face lower likelihood of financial crisis. We use IR, excluding gold, as a ratio to GDP (from the *World Development Indicator* database).

Real output growth – A country experiencing high real output growth may be less likely to face financial instability or able to prevent financial instability from turning into a financial crisis. We use the growth rate of real GDP in local currency (available from the *World Development Indicator* database).

Private credit growth – As most exemplified by Kaminsky and Reinhart (1999), a number of studies have shown that credit grows fast before experiencing a financial crisis. We use the (first-difference) change in the ratio of private credit creation to GDP as the measure of credit growth.

Real exchange rate overvaluation – If a country has its currency overvalued, it tends to experience financial crisis.[22] Chinn (2000) shows East Asian emerging market economies experienced currency overvaluation prior to the Asian Financial Crisis of 1997-98. We define real exchange rate overvaluation from the Hodrick-Prescott (HP)-filtered series of the real exchange rate. The real exchange rate is calculated using the exchange rate between country *i* and its base country (in the sense of Aizenman et al. 2013) and the CPI of the two countries. Higher values of this variable indicate the real exchange rate value is lower (i.e., appreciated) than its time trend.

[22] Overvaluation of the exchange rate can lead not just to currency crisis but also to banking and debt crisis. Currency mismatch can be caused by currency overvaluation, and it can make the debt burden greater in terms of domestic currency. That would put stress on banks and increases risk premium for government bonds.

Along with these explanatory variables, we test the impacts of the political-economy trilemma variables. Furthermore, in contrast to the estimation on political stability, we do not find in a preliminary analysis any different impacts between industrial and developing countries. Hence, we do not include the interaction terms between the trilemma indexes and the dummy for developing countries. We apply the estimation model to the data from 1976 to 2016 and report the results in Table 6.[23]

Countries with higher credit growth, lower levels of IR holding, and their currencies overvalued tend to experience a financial crisis.

Among the trilemma variables, only the variable for globalization enters the estimation with a significantly negative sign. That is, the more globalized a country is, the less likely it is to experience a financial crisis.

A possible explanation for the significant effect of globalization is that, if a country is more open to the rest of the world, it tends to have higher degrees of transparency in its policy making and to be more subject to market dynamics. That can alleviate potential effects of corrections or punishments by the markets, such as capital flight, because more globalized economies are more constantly subject to scrutiny by investors and other countries' policy makers.

6. Concluding remarks

The ongoing political and economic events and changes in the global arena make observers wonder if there is any patterns or rules across countries or over time. We follow the view of Rodrik (2000) and reckon that countries face a trade-off of choosing two out of the three policy choices or directions of policy orientation, namely, globalization, national sovereignty, and democracy.

[23] The estimates reported in the table are marginal effects.

Like the open economy trilemma where policy makers face a trade-off of choosing two policies out of full extents of monetary autonomy, exchange rate stability, or financial openness, we assume countries face the political-economy trilemma.

In this paper, we explored the empirical validity of Rodrik's theorem of the political-economy trilemma – policy makers face a trade-off of choosing two out of three policy goals of governance orientation, namely, (hyper-)globalization, national sovereignty, and democracy. We also observed the historical and geographical development of the three factors, and investigated the impacts of these trilemma factors on political and financial stability.

We first developed a set of the indexes that measure the extent of attainment of the three political-economic factors for 139 countries in the period of 1975 – 2016. The trend of the three indexes suggest that industrialized countries have faced a *dilemma* between globalization and national sovereignty. This is mainly because these countries have consistently achieved the highest levels of democratization throughout the sample period. While these countries started becoming more integrated with the world in the 1980s and completed the integration efforts by the 2000s, they have been on a moderately declining trend in their national sovereignty, consistent with anecdotal arguments that advanced countries face a trade-off of pursuing national sovereignty or living with globalization. Developing countries, in contrast, experienced convergence of declining sovereignty and rising globalization since the early 2000s, while many countries have also become more democratized. In recent years, these countries having been experiencing of a convergence of the three factors of political-economy policy orientation around middle to mid-high ranges.

We also examined the validity of the hypothesis of the political-economy trilemma by testing whether the three trilemma variables are linearly related. Consistent with the graph observation, for industrialized countries, there is a linear relationship between globalization and national sovereignty. For developing countries, all three indexes are linearly correlated.

Different paths of development in terms of the political-economy trilemma configuration have made us interested in investigating the impact of the three political-economic factors on political and financial stability.

Our estimation results suggest that more democratic industrialized countries tend to experience more political *in*stability while developing countries tend to be able to stabilize their politics if they are more democratic. The lower level of national sovereignty an industrialized country embraces, the more stable its political situation tends to be. Globalization brings about political stability for both groups of countries.

When we estimated the impact of the three political-economy variables on financial stability, we found that only globalization matters, but for both industrialized and developing countries; more globalized countries tend to face more stable politics. This result, along with the result that globalization can bring about more political stability, casts a stark contrast with the anecdotal arguments on the streets that globalization is one of the contributing factors to economic instability or uncertainties we observe in the globalized world.

As a last note, we must share a potential caveat on our political-economy trilemma index. Recently, organizations that publish democratization indexes such as the Economist Intelligence Unit (EIU) and Freedom House report declines the level of democracy in major economies such as Turkey, Argentina, Brazil, Hungary, and most importantly the United States. The EIU has downgraded the U.S. democracy index from the "full democracy" category (the most democratic category out of four groups) to "flawed democracy" (the second most democratic) since 2016.[24] Another democracy index, the Freedom House index, also depicts a decline in the level of

[24] The EIU's democracy index is the composition index of the subindexes that measure five aspects of democracy: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Based on the total score, countries are classified into four categories: "full democracy," "flawed democracy," "hybrid regime," and "authoritarian regime."

democracy for the U.S. – the aggregate free index has been on a gradual decline in the total U.S. score since 2010.[25]

Since the mid-2010s, several industrialized countries (e.g., Austria, Germany, Iceland, Italy) have experienced a decline in their democracy indexes. Given that these democracy indexes report many countries are experiencing a decline in the level of democracy on a relatively large scale lately, our democracy index, which is constructed with the intent of covering as many years as possible, may not capture well the possible new shift in international political trend, which may be too subtle and recent to measure with our rather coarse index. To identify or test a new paradigm shift, we may have to wait for a few more years of observations. That may affect the relationship of the trilemma variables.

[25] The aggregate score of the U.S. as of 2018 is 86 out of 100, which is lower than the scores of major advanced countries such as Canada (99), Australia (98), Japan (96), Germany (94), U.K. (93), and France (90). However, the U.S. is still categorized as a "Free" country, the highest group category above "Partly Free" and "Not Free." The countries whose total scores are close to that of the U.S. are Belize, Croatia, Greece, Latvia, and Mongolia.

Appendix 1: Country list

	ISO	Country name	Data availability
1	914	Albania	1995 - 2016
2	612	Algeria	1978 - 2016
3	614	Angola	1993 - 2016
4	213	Argentina (e)	1984 - 2016
5	911	Armenia	1996 - 2016
6	193	Australia (i)	1976 - 2016
7	122	Austria (i)	1976 - 2016
8	912	Azerbaijan	1996 - 2015
9	513	Bangladesh (e)	1980 - 2016
10	913	Belarus	1996 - 2016
11	124	Belgium (i)	1975 - 2016
12	514	Bhutan	2009 - 2016
13	218	Bolivia	1980 - 2016
14	616	Botswana (e)	1975 - 2016
15	223	Brazil (e)	1975 - 2016
16	918	Bulgaria (e)	1994 - 2014
17	748	Burkina Faso	1993 - 2016
18	618	Burundi	1983 - 2016
19	522	Cambodia	1995 - 2016
20	622	Cameroon	1975 - 2015
21	156	Canada (i)	1975 - 2016
22	626	Central African Rep.	1988 - 2003
23	628	Chad	1998 - 2015
24	228	Chile (e)	1990 - 2016
25	924	China (e)	1984 - 2016
26	233	Colombia (e)	1975 - 2016
27	636	Congo, Dem. Rep.	1975 - 1992
28	634	Congo, Rep.	1975 - 1995
29	238	Costa Rica	1975 - 2016
30	662	Côte d'Ivoire (e)	1984 - 2016
31	960	Croatia	1996 - 2016
32	423	Cyprus	1977 - 2016
33	935	Czech Republic (e)	1996 - 2009
34	128	Denmark (i)	1975 - 2016
35	243	Dominican Republic	1984 - 2016
36	248	Ecuador (e)	1980 - 2016
37	469	Egypt, Arab Rep. (e)	1977 - 2016
38	253	El Salvador	1975 - 2016
39	939	Estonia	1996 - 2016
40	644	Ethiopia	2011 - 2015
41	819	Fiji	1977 - 2006
42	172	Finland (i)	1976 - 2016
43	132	France (i)	1975 - 2016
44	646	Gabon	1975 - 2015
45	648	Gambia, The	1975 - 2015
46	915	Georgia	1996 - 2016
47	134	Germany (i)	1990 - 2016
48	652	Ghana (e)	1980 - 2016
49	174	Greece (i)	1975 - 2011
50	258	Guatemala	1975 - 2016
51	656	Guinea	1996 - 2016
52	654	Guinea-Bissau	1985 - 2015
53	336	Guyana	1975 - 2015
54	263	Haiti	1992 - 2016
55	268	Honduras	1982 - 2016
56	944	Hungary (e)	1991 - 2016
57	534	India (e)	1975 - 2016
58	536	Indonesia (e)	1975 - 2016
59	429	Iran, Islamic Rep.	1979 - 2015
60	178	Ireland (i)	1975 - 2016
61	436	Israel (e)	1975 - 2016
62	136	Italy (i)	1977 - 2016
63	343	Jamaica (e)	1977 - 2016
64	158	Japan (i)	1977 - 2016
65	439	Jordan (e)	1990 - 2016
66	664	Kenya (e)	1975 - 2015
67	542	Korea, Rep. (e)	1975 - 2016
68	917	Kyrgyz Republic	2001 - 2016
69	544	Lao PDR	1984 - 2015
70	941	Latvia	1996 - 2016
71	446	Lebanon	2005 - 2015
72	666	Lesotho	1975 - 2016
73	668	Liberia	1976 - 2016
74	946	Lithuania (e)	1996 - 2016
75	962	Macedonia, FYR	2003 - 2016
76	674	Madagascar	1978 - 2015
77	676	Malawi	1975 - 2016
78	548	Malaysia (e)	1975 - 2016
79	678	Mali	1980 - 2002
80	682	Mauritania	1975 - 1978
81	684	Mauritius (e)	1977 - 2016
82	273	Mexico (e)	1977 - 2016
83	921	Moldova	1996 - 2016
84	948	Mongolia	1995 - 2016
85	686	Morocco (e)	1978 - 2016
86	688	Mozambique	1988 - 2016
87	518	Myanmar	2012 - 2016

88	728	Namibia	1994	-	2016
89	558	Nepal	1992	-	2016
90	138	Netherlands (i)	1981	-	2016
91	196	New Zealand (i)	1976	-	2016
92	278	Nicaragua	1989	-	2016
93	692	Niger	1990	-	2016
94	694	Nigeria (e)	1980	-	2016
95	142	Norway (i)	1975	-	2016
96	564	Pakistan (e)	1989	-	2016
97	283	Panama	1985	-	2016
98	853	Papua New Guinea	1983	-	2015
99	288	Paraguay	1991	-	2016
100	293	Peru (e)	1979	-	2016
101	566	Philippines (e)	1979	-	2016
102	964	Poland (e)	1990	-	2016
103	182	Portugal (i)	1977	-	2016
104	968	Romania	1990	-	2016
105	922	Russian Federation (e)	1996	-	2016
106	714	Rwanda	1982	-	2016
107	456	Saudi Arabia	1994	-	2016
108	722	Senegal	1975	-	2012
109	724	Sierra Leone	1975	-	2016
110	576	Singapore (e)	1975	-	2016
111	936	Slovak Republic (e)	1996	-	2016
112	961	Slovenia (e)	1996	-	2016
113	199	South Africa (e)	1975	-	2016
114	184	Spain (i)	1978	-	2016
115	524	Sri Lanka (e)	1975	-	2016
116	732	Sudan	1975	-	1989
117	366	Suriname	1988	-	2016
118	734	Swaziland	2009	-	2015
119	144	Sweden (i)	1975	-	2016
120	146	Switzerland (i)	1980	-	2016
121	463	Syrian Arab Republic	1975	-	2007
122	923	Tajikistan	2006	-	2010
123	738	Tanzania	1990	-	2016
124	578	Thailand (e)	1977	-	2014
125	742	Togo	1980	-	2015
126	744	Tunisia (e)	1975	-	2016
127	186	Turkey (e)	1975	-	2016
128	746	Uganda	1981	-	2016
129	926	Ukraine	1996	-	2016
130	466	United Arab Emirates	2007	-	2015
131	112	United Kingdom (i)	1975	-	2016
132	111	United States (i)	1977	-	2016
133	298	Uruguay	1975	-	2015
134	927	Uzbekistan	1996	-	2007
135	299	Venezuela, RB (e)	1975	-	2014
136	582	Vietnam	1995	-	2015
137	474	Yemen, Rep.	1995	-	2007
138	754	Zambia	1994	-	2015
139	698	Zimbabwe (e)	1984	-	2015

Notes: “(i)” stands for “advanced economies” which are traditional OECD countries (whose IMF code is less than 200). “(e)” stands for emerging market economies.

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Table 1: Great Political Economy Trilemma Indexes and Their Components

	Components	Sub-component	Original data
Globalization index (= First principle component of de jure and de facto financial globalization measures, de jure and de facto trade globalization measures, political globalization measure, and de facto measure of interpersonal globalization)	**Financial globalization**	De jure financial openness	Chinn-Ito index
		De facto financial openness	Lane and Milesi-Ferretti database (External assets+liabilities)/GDP
	Trade globalization	De jure trade openness	Prevalence of regulatory trade barriers (Gwartney, et al., 2017)
		De facto trade openness	(exports+imports)/GDP
	Political globalization (extracted from the KOF Globalization Index (Gygli, et al., 2018)	De jure political globalization	Number of NGOs in which a country is a member
			International treaties signed between two or more states and ratified by the highest legislative body of each country since 1945
			number of distinct treaty partners of a country with bilateral investment treaties
		De facto political globalization	Number of embassies
			Personnel contributed to U.N. Security Council Missions per capita
			Number of international oriented NGOs with members in that country or territory
	De facto interpersonal globalization (Gygli, et al., 2018)		International voice traffic, min./capita
			Sum of gross inflows and outflows of goods, services, income or financial items, World Development Indicator
			International tourism, WDI
			Migration (% of population)
Democracy index (= First principle component of *polity2* and *polconv*)	**Democratization index**		*polity2* (Marshall, et al., 2017)
	Political constraint		*Polconv* (Henisz, 2000)
Sovereignty index (= First principle component of *herfgov*, *execnat*, and *allhouse*)	**Herfindahl index of the government (*herfgov)***		*herfgov* from the Database of Political Institutions (DPI)
	Nationalist executive branch (*execnat)*		*execnat* from DPI
	Government controlling both houses of legislature *(allhourse)*		*allhouse* from DPI

Table 2 (a): Tests for Structural Breaks in the Trilemma Indexes

			1975-81	1983-90	1992-96	1999-2006	2009-2016
Industrial Countries	Globalization	Mean	0.518	0.620	0.746	0.896	0.945
		Change		+0.102	+0.126	+0.150	+0.049
		t-stats (p-value)		5.34 (0.00)***	6.21 (0.00)***	8.76 (0.00)***	4.01 (0.00)***
	Democracy	Mean	0.914	0.930	0.945	0.936	0.943
		Change		+0.015	+0.015	-0.009	+0.007
		t-stats (p-value)		1.83 (0.07)*	2.30 (0.02)**	1.47 (0.14)	1.45 (0.15)
	Sovereignty	Mean	0.405	0.316	0.309	0.353	0.288
		Change		-0.088	-0.007	+0.044	-0.065
		t-stats (p-value)		2.87 (0.04)***	2.22 (0.82)	1.30 (0.20)	2.22 (0.03)**
			1975-81	**1983-90**	**1992-96**	**1999-2006**	**2009-2016**
Non-Emerging Developing Countries	Globalization	Mean	0.160	0.159	0.231	0.365	0.476
		Change		-0.001	+0.072	+0.134	+0.111
		t-stats (p-value)		0.09 (0.93)	5.12 (0.00)***	8.41 (0.00)***	7.50 (0.00)***
	Democracy	Mean	0.242	0.292	0.492	0.534	0.558
		Change		+0.051	+0.199	+0.042	+0.025
		t-stats (p-value)		1.63 (0.10)*	7.29 (0.00)***	1.83 (0.07)*	1.41 (0.16)
	Sovereignty	Mean	0.703	0.699	0.603	0.551	0.509
		Change		-0.003	-0.097	_-0.052	-0.042
		t-stats (p-value)		0.12 (0.90)	3.76 (0.00)***	2.06 (0.04)**	2.08 (0.04)**
			1975-81	**1983-90**	**1992-96**	**1999-2006**	**2009-2016**
Emerging Market Countries	Globalization	Mean	0.196	0.194	0.286	0.448	0.522
		Change		-0.001	+0.091	+0.162	+0.074
		t-stats (p-value)		0.07 (0.94)	4.75 (0.00)***	8.13 (0.00)***	3.88 (0.00)***
	Democracy	Mean	0.457	0.476	0.607	0.640	0.678
		Change		+0.019	+0.132	+0.033	+0.037
		t-stats (p-value)		0.58 (0.56)	4.45 (0.00)***	1.29 (0.20)	2.00 (0.05)**
	Sovereignty	Mean	0.654	0.625	0.519	0.450	0.455
		Change		-0.029	-0.106	-0.069	+0.005
		t-stats (p-value)		0.97 (0.33)	3.54 (0.00)***	2.42 (0.02)**	0.20 (0.84)

Note: * significant at 10%; ** significant at 5%; *** significant at 1%

Table 2 (b): Summary of the Structural Breaks Tests

		Structural Breaks
Industrial Countries (IDC)	Globalization	1997-98
	Democracy	1991
	Sovereignty	1982
Non-Emerging Developing Countries (NOEMG)	Globalization	1997-98
	Democracy	1991
	Sovereignty	1991
Emerging Market Countries (EMG)	Globalization	1997-98
	Democracy	1991
	Sovereignty	1991

Table 3: Testing the linearity of political economy trilemma indexes

	1975-2016 (1)	1975-1981 (2)	1983-1990 (3)	1992-1996 (4)	1999-2006 (5)	2009-2016 (6)
Globalization	0.014	-0.009	0.041	0.022	0.194	0.119
	(0.043)	(0.175)	(0.107)	(0.154)	(0.149)	(0.213)
Democracy	1.027	1.019	1.002	1.026	0.842	0.931
	(0.040)***	(0.114)***	(0.081)***	(0.136)***	(0.151)***	(0.227)***
Sovereignty	0.081	0.168	0.125	0.042	0.099	0.029
	(0.032)**	(0.087)*	(0.065)*	(0.090)	(0.069)	(0.079)
LDC x Globalization	0.332	0.556	0.343	0.490	0.209	0.263
	(0.046)***	(0.198)***	(0.120)***	(0.166)***	(0.155)	(0.216)
LDC x Democracy	-0.325	-0.545	-0.346	-0.315	-0.108	-0.174
	(0.042)***	(0.121)***	(0.085)***	(0.139)**	(0.153)	(0.229)
LDC x Sovereignty	0.714	0.801	0.820	0.694	0.569	0.572
	(0.033)***	(0.091)***	(0.068)***	(0.093)***	(0.072)***	(0.082)***
N	4,113	402	646	504	961	955
Adj. R2	0.94	0.94	0.96	0.95	0.94	0.95

Note: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table 4: Testing the linearity of political economy trilemma indexes, w/out democracy index for IDC

	1975-2016 (1)	1975-1981 (2)	1983-1990 (3)	1992-1996 (4)	1999-2006 (5)	2009-2016 (6)
Globalization	1.037	1.435	1.283	1.146	1.007	0.987
	(0.016)***	(0.075)***	(0.040)***	(0.044)***	(0.033)***	(0.027)***
Democracy						
Sovereignty	0.471	0.518	0.503	0.371	0.235	0.215
	(0.030)***	(0.085)***	(0.064)***	(0.083)***	(0.066)***	(0.066)***
LDC x Globalization	-0.692	-0.888	-0.899	-0.634	-0.604	-0.604
	(0.025)***	(0.126)***	(0.073)***	(0.079)***	(0.053)***	(0.041)***
LDC x Democracy	0.702	0.474	0.656	0.712	0.734	0.758
	(0.013)***	(0.045)***	(0.028)***	(0.031)***	(0.028)***	(0.027)***
LDC x Sovereignty	0.325	0.451	0.442	0.365	0.434	0.386
	(0.032)***	(0.090)***	(0.067)***	(0.087)***	(0.069)***	(0.069)***
N	4,113	402	646	504	961	955
Adj. R2	0.93	0.93	0.95	0.94	0.94	0.95

Table 5: Factors that affect the level of political stability, 1996 – 2016

Dependent Variable: Level of political stability and absence of violence/terrorism	(1)	(2)	(3)	(4)
Relative income	0.264	0.168	0.167	0.072
	(0.017)***	(0.019)***	(0.019)***	(0.024)***
Gini index (SWIID)	-0.142	-0.103	-0.127	-0.807
	(0.063)**	(0.061)*	(0.058)**	(0.075)***
Financial crisis	-0.043	-0.032	-0.033	-0.066
	(0.015)***	(0.015)**	(0.015)**	(0.021)***
LDC	-0.718	-0.354	-0.405	-0.265
	(0.111)***	(0.036)***	(0.099)***	(0.050)***
Democracy index (DEM)	-0.489		-0.215	
	(0.115)***		(0.109)**	
LDC x DEM	0.642		0.303	
	(0.116)***		(0.110)***	
Sovereignty index (SVT)	-0.113	-0.121		-0.081
	(0.016)***	(0.015)***		(0.017)***
LDC x SVT	0.192	0.167		0.094
	(0.020)***	(0.019)***		(0.024)***
Globalization index (GBL)		-0.032	0.122	-0.020
		(0.037)	(0.037)***	(0.048)
LDC x GBL		0.271	0.081	0.242
		(0.038)***	(0.038)**	(0.050)***
Social protection expenditure (% of Govt expenditure)				0.115
				(0.054)**
N	1,891	1,878	1,904	736
Adj. R2	0.53	0.55	0.55	0.70
# of countries	131	131	131	58

Notes: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Regional specific dummies and the constant term are included in the estimation, but omitted from presentation. All the right-hand side variables are lagged by one year. The dependent variable is political stability and absence of violence/terrorism from the World Bank's *Worldwide Governance Indicators*. LDC is the dummy for developing countries (See Appendix 1).

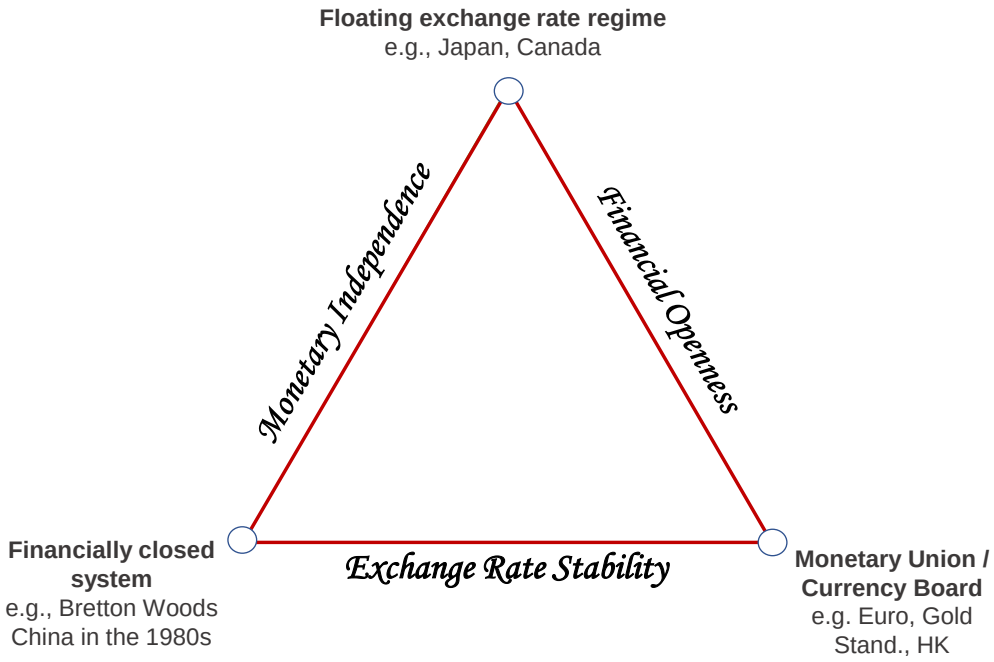
Table 6: Factors that affect the likelihood of financial crisis, 1976 – 2016

Dep. Var.: Dummy for financial crisis	(1)	(2)	(3)
Relative income	-0.066	-0.024	-0.020
	(0.017)***	(0.022)	(0.023)
Credit growth	0.251	0.258	0.260
	(0.042)***	(0.043)***	(0.043)***
IR holding	-0.352	-0.297	-0.297
	(0.041)***	(0.046)***	(0.047)***
GDP growth rate	-0.141	-0.168	-0.159
	(0.074)*	(0.077)**	(0.076)**
Real appreciation above the trend	0.022	0.024	0.028
	(0.011)**	(0.011)**	(0.011)**
Democracy index	-0.004		0.002
	(0.015)		(0.014)
Sovereignty index	-0.007	-0.008	
	(0.013)	(0.012)	
Globalization index		-0.053	-0.059
		(0.021)**	(0.021)***
N	2,823	2,816	2,882
# of countries	120	120	120

Notes* $p<0.1$; ** $p<0.05$; *** $p<0.01$. We estimate the likelihood of financial crisis using the probit model. The estimates reported in the above table are marginal effects. The constant term is included in the estimation but omitted from presentation. All the RHS variables are lagged by one year. The dependent variable is the dummy for financial crisis, that is constructed by using Laeven and Valencia's (2018) database on the occurrences of currency, banking and sovereign crises. The dummy takes the value of one if any one of the three types of financial crisis happens.

Figure 1: Open economy trilemma and political-economy trilemma

(a) Open economy trilemma



(b) Political-Economy Trilemma

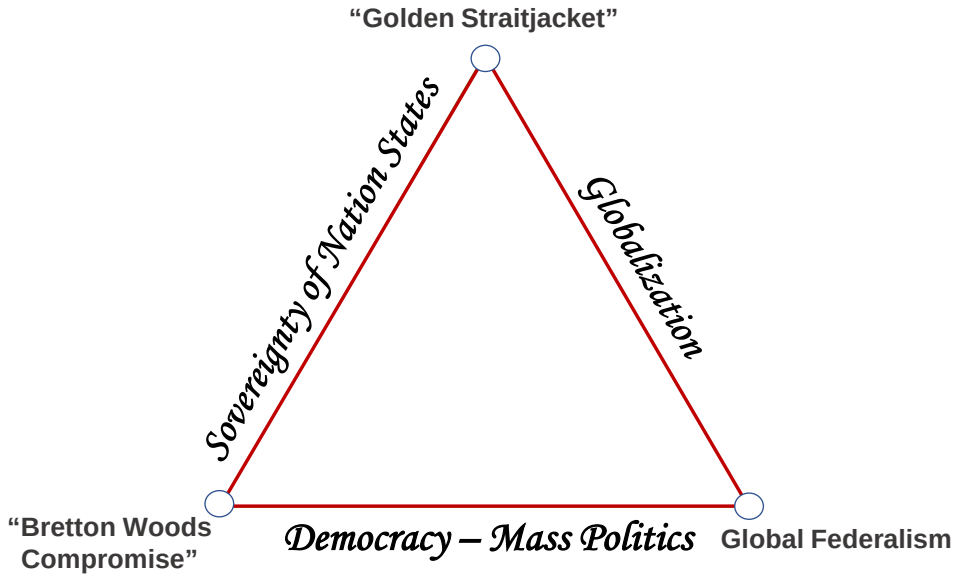


Figure 2: Development of political economy trilemma Indexes – income groups

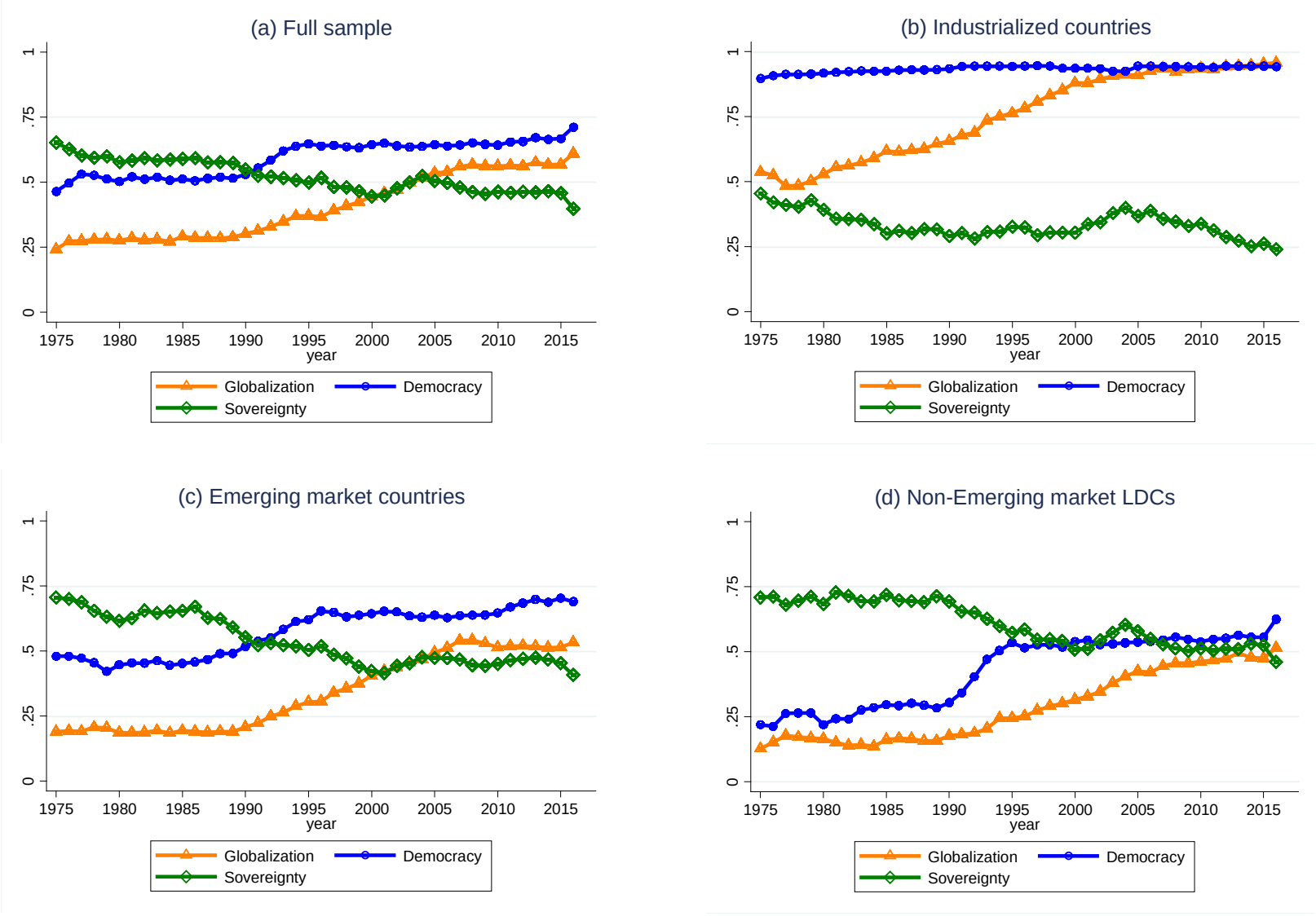


Figure 3: Development of political economy trilemma indexes – regional groups

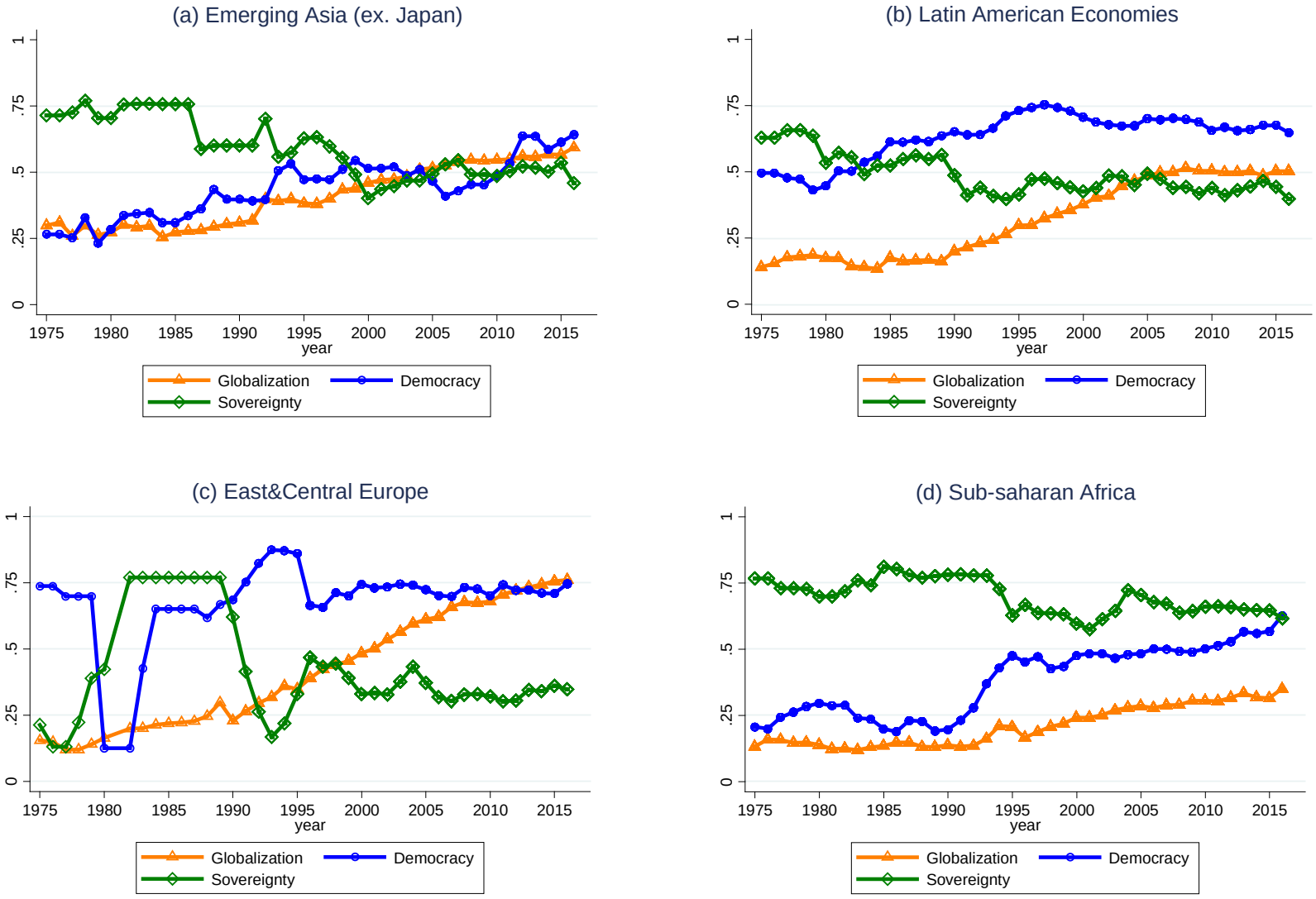
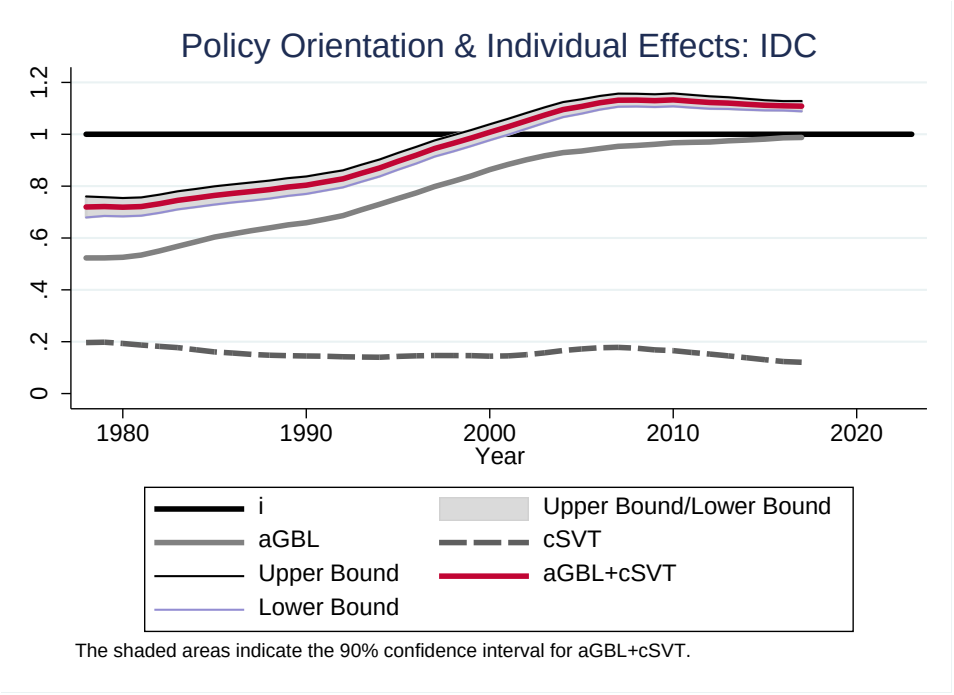
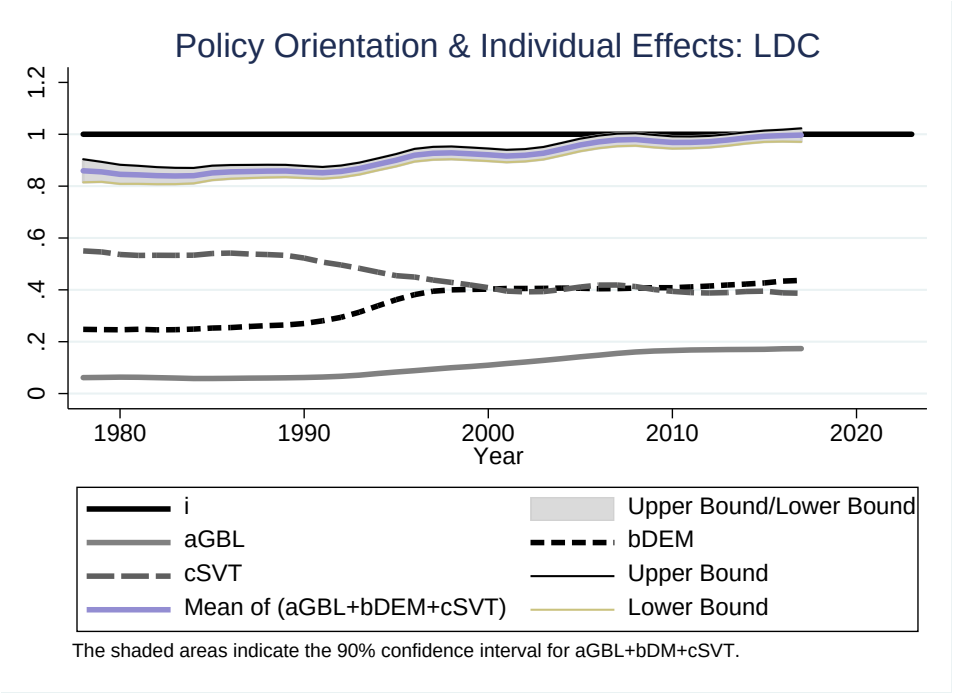


Figure 4: Political Orientation for Industrial and Developing Countries



The shaded areas indicate the 90% confidence interval for aGBL+cSVT.



The shaded areas indicate the 90% confidence interval for aGBL+bDM+cSVT.