



Does policy uncertainty affect economic globalization? An empirical investigation

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ABSTRACT

This paper investigates the role of policy uncertainty on indices of economic globalization from 1996 to 2016 in the panel dataset of 142 countries. For this purpose, we use the nine measures of the Revisited KOF Economic Globalization Indices and two new measures of uncertainty: The World Uncertainty Index (WUI) and the Trade Policy Uncertainty Index (TPUI). The findings indicate that both the WUI and the TPUI are negatively associated with the overall index of economic globalization. The benchmark results remain consistent under various model specifications, econometric estimation techniques, and countries at different income levels.

KEYWORDS

Economic integration; trade globalization; financial globalization; economic uncertainty; trade policy uncertainty

JEL Codes

F15; F14; F36

1. Introduction

One of the most desirable consequences of globalization has been the significant decline in barriers to international trade capital flows and foreign direct investments (FDI), which have contributed to the growth and development of many countries, including a few of the least developed in the world. However, in recent years, uncertainties that have arisen due to the phenomenon such as the Global Financial Crisis (henceforth GFC) of 2008–9, the Brexit process, and the increase in protectionism in the United States have started to affect the level of economic integration negatively. This issue is referred to as the ‘deglobalisation process’ (Van Bergeijk 2019). The issues, including the unequal distribution of income and opportunities resulting from globalization, have meant that the ‘sustainability’ of globalization is being questioned. This is becoming of the most major economic and political challenges of the 2020s.

As uncertainties continue to increase and affect the behaviour of economic agents and their decision making, the academic literature on the issues states that it will potentially affect the process of globalization. Several authors have demonstrated that uncertainty has a significant negative effect

on globalization measured by the volume of trade, portfolio and FDI flows. For instance, according to Bems, Johnson, and Yi (2011, 2013), Carballo, Handley, and Limão (2018), and Kee, Neagu, and Nicita (2013), the GFC of 2008–9 is negatively related to the volume of world trade. Debaere, Glaser, and Willmann (2015) introduce a theoretical model to explain why uncertainty shocks reduce international trade size.¹ Novy and Taylor (2020) also show that a rise in the level of uncertainty shocks leads to a loss of welfare through the decline in the volume of international trade flows.

A rise in uncertainty is expected to reduce consumers’ and producers’ confidence levels and harm the business environment. These issues can also result in irrational economic, financial, and political decisions by policymakers favouring short term gains at the expense of long term ones. An increase in uncertainty can directly affect the degree of economic globalization (globalization outcome) since it also affects the FDI and portfolio flows. It is common knowledge that policy uncertainty is harmful to economic activity, including trade and FDI, thereby de facto globalization measures. However, de jure globalization is negatively correlated to policy uncertainty is vital. Specifically,

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¹There are several theoretical frameworks, both with a macro and a micro perspective, about the main mechanisms through which uncertainty could affect economic globalization (see, e.g. Crowley, Exton, and Han 2019; Dominguez and Shapiro 2013; Douch and Edwards 2021; Graziano, Handley, and Limão 2021; Limão and Maggi 2015; Pierce and Schott 2016).

uncertainty can cause restrictions (globalization policy) on international trade, investments, and capital flows since governments may support protectionism measures (Van Bergeijk 2019). Overall, we expect economic uncertainty to be more substantially correlated with de facto and de jure measures of globalization.

In this paper, a more comprehensive econometric model is developed to assess the role of uncertainty on economic globalization. The paper improves the literature by using the Revisited KOF Economic Globalization dataset from Gygli et al. (2019), which goes beyond three traditional measures (trade, FDI and portfolio flows). Instead, it provides nine indicators of globalization in addition to two new measures of uncertainty, so-called the World Uncertainty Index (henceforth WUI) and the Trade Policy Uncertainty Index (henceforth TPUI) of Ahir, Bloom, and Furceri (2018, 2019).

To the best of our knowledge, there are no empirical findings for analysing the impact of these new measures of uncertainty on the revisited indices of economic globalization in the light of the recent developments in the world economy. This issue improves the current literature, mostly used volumes of trade, portfolio flows, and FDI as the focal point, providing a more comprehensive and complete picture of the effect of uncertainty on globalization. Additionally, our paper aims to enhance the previous findings by using a large panel dataset of 142 countries over 1996–2016. The results are further decomposed to analyse the effect on low-income economies compared to Organization for Economic Co-operation and Development (OECD) countries. We observe that both the WUI and the TPUI are negatively associated with the overall index of economic globalization.

The rest of the paper is organized as follows. Section 2 reviews the previous empirical literature. Section 3 explains the empirical models, data, and estimation procedures. Section 4 provides the empirical findings. Section 5 discusses the robustness of the results. Section 6 concludes the paper.

II. Literature review

From an empirical perspective, Baker, Bloom, and Davis (2016), Bloom (2009), Bloom, Bond, and Van Reenen (2007) and (2018)), Gozgor (2019),

and Novy and Taylor (2020) indicate that a higher level of uncertainty in economic policies reduces the level of economic globalization for through three channels. The first effect is the ‘demand-side effect’, that is, a higher uncertainty leads to a decline in demand for products primarily in the short run, where the demand is elastic. The second effect is the ‘supply-side effect’, which is the ‘wait-and-see’ behaviour of firms concerning their investment decisions during times of higher uncertainty. The third effect is the ‘delaying effect’, when individuals postpone buying or selling durable consumer goods, such as cars, houses and other major consumption items. This issue also affects the buy and sell decisions of firms. The above eventually affect the demand and supply of foreign products and, therefore, the trade volume, leading to ‘remedial’ changes in stakeholders’ policies, including the government.

Several studies have explored the relationship between uncertainty and measures of economic globalization. However, most of the papers have used the index of economic policy uncertainty (EPU) introduced by Baker, Bloom, and Davis (2016) and have focused on one primary indicator of economic globalization (e.g. the trade, FDI, and portfolio flows). For instance, using the data over the period 1962–2012, Novy and Taylor (2020) use the stock market volatility in the United States as a benchmark indicator of uncertainty to examine the impact of uncertainty on the trade flows. The authors find that uncertainty shocks significantly reduce the volume of international trade. Handley (2014) illustrates the negative effects of trade policy uncertainty on the Australian imports (measured by the product level) over 1993–2001. Another novel evidence from Handley (2014) is that the trade policy uncertainty has declined since 1996 due to the World Trade Organization establishment this year. According to Handley and Limão (2015), a higher number of trade agreements, which indicate a lower level of uncertainties, boosted the firms’ export performance in Portugal and Spain over 1981–1990. In a further study, Handley and Limão (2017) used the data for the Chinese exports to the United States over 2000–2005. The authors show that the adverse effects of the policy uncertainty and trade policy uncertainty on export performance are economically and statistically significant.

There are also several papers to use the EPU indices as potential drivers of international trade indicators. For example, using the fixed-effects estimations, Constantinescu, Mattoo, and Ruta (2017) investigate the impact of the EPU on the growth of international trade volume in the panel data of 16 countries over 1995–2015. The authors observe that a higher level of the EPU leads to a significant decline in the volume of international trade. Similarly, Tam (2018) finds that the rises in both the EPU and the TPUI in the United States significantly decrease the global trade flows. Graziano, Handley, and Limão (2021) indicate that uncertainty due to the probability of Brexit as an indicator of trade policy uncertainty reduces the European Union (EU)–the United Kingdom (UK) bilateral export values. The adverse impact of an uncertainty shock is higher in the EU exporters than the UK exporters.

Our study differs from the ones above in that it uses a comprehensive panel dataset, which includes trade policy uncertainty and policy uncertainty in 142 countries. Our paper covers the period from 1996 to 2016, and the starting date is in line with most of the previous studies. The paper's novelty is to use the Revisited KOF Economic Globalization dataset (nine indicators), which captures trade, portfolio, and FDI flows. Multiple policy dimensions of economic globalization, making the study more comprehensive and result more reliable. These indicators represent 'outcome' and 'policy' measures of trade and financial globalization since the indicators have been divided into *de jure* and *de facto* measures of economic globalization.² Finally, various model specifications, econometric techniques, and the countries at different income levels are considered. Potential endogeneity issues and omitted variable bias are also addressed, excluding the outliers to ensure the robustness of the findings. The findings support those of the literature, which show a significant negative impact of uncertainty shocks on the level of economic globalization.

III. Models, methodology, and data

Empirical models and estimation procedures

The following equations are estimated to examine the effects of economic policy uncertainty on the indices of economic globalization:

$$\begin{aligned} \text{Economic Globalisation}_{i,t} = & \gamma_0 \\ & + \gamma_1 \text{Economic Globalisation}_{i,t-1} \\ & + \gamma_2 \Delta \text{Uncertainty}_{i,t-1} \\ & + \gamma_3 X_{i,t} + \vartheta_t + \vartheta_i \\ & + \varepsilon_{i,t} \end{aligned} \quad (1)$$

$$\begin{aligned} \text{Economic Globalisation}_{i,t} = & \beta_0 \\ & + \beta_1 \text{Economic Globalisation}_{i,t-1} \\ & + \beta_2 \Delta \text{Trade Uncertainty}_{i,t-1} \\ & + \beta_3 X_{i,t} + \vartheta_t + \vartheta_i \\ & + \varepsilon_{i,t} \end{aligned} \quad (2)$$

where, $\text{Economic Globalisation}_{i,t}$ and $\text{Economic Globalisation}_{i,t-1}$ are the current and the lagged indices (both are defined as levels) of economic globalization (*de facto* and *de jure* measures of overall economic globalization, trade globalization, and financial globalization) in the country i in times of t and $t-1$. $\Delta \text{Uncertainty}_{i,t-1}$ and $\Delta \text{Trade Uncertainty}_{i,t-1}$ are the lagged measures of uncertainty and trade uncertainty in the country i at time $t-1$. $X_{i,t}$ denotes the 'vector of controls'. Finally, ϑ_t , ϑ_i , and $\varepsilon_{i,t}$ indicate the 'time fixed-effects', the 'country fixed-effects', and the 'error terms', respectively.

Following previous papers and satisfy the persistence in globalization and stationarity characteristics of uncertainty and globalization indicators are measured in index levels (Gozgor 2018). Uncertainty indices are measured in the first differences (Tam 2018). At this stage, following previous papers (e.g. Gozgor 2018), the per capita gross domestic product (GDP) and the age dependency ratio as the main controls in the estimations of Eq. (1) and Eq. (2) are included. Additional controls, such as macroeconomic indicators, measures or

²For more information, visit <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalization-index.html>

institutional quality and income inequality, are used in the sensitivity analyses to be consistent with the existing literature.

The benchmark regressions in Eq. (1) and Eq. (2) are estimated by the system generalized method of moments (GMM) estimations proposed by Arellano and Bover (1995) and Blundell and Bond (1998) to avoid possible problems of autocorrelation and the existence of different orders of integration in the variables. The two-stage estimation method in the System GMM estimations solves potential multicollinearity problems among the explanatory variables used. Following Roodman (2009) technique, the instruments are collapsed, and robust standard errors are considered.³

The system GMM estimations are utilized to solve potential ‘endogeneity bias’ problems and a ‘reverse causality problem’ among controls and indices of economic globalization by instrumenting them with their particular lagged variables. The instruments must be uncorrelated with the error terms; however, they must be correlated with the instrumented variables. Therefore, we must find a significant ‘first-order autocorrelation’ in the residuals, but there must be no ‘second-order autocorrelation’. To check the validity of the potential ‘over-identification problem’, the Sargan test also runs. The ‘time fixed-effects’ and the ‘country fixed-effects’ are also included in the system GMM estimations to model remaining possible heterogeneities, which can affect the indices of economic globalization.

Data

The dataset covers the period from 1996 to 2016, and the starting date and the number of countries are due to the availability of data. The frequency of the data is annual,⁴ and the dataset includes 142 countries.⁵ The list of countries is provided in Data Appendix I.

Economic globalization indices

Nine indices of economic globalization (overall, *de facto*, and *de jure* measures of economic globalization, trade globalization, and financial globalization) are the dependent variable in the estimations of Eq. (1) and Eq. (2). These revisited *Konjunkturforschungsstelle* (KOF) indices of economic globalization are developed by Gygli et al. (2019). The related to the database of the ETH Zurich are obtained. Compared to previous datasets,⁶ the revisited version of the KOF globalization dataset represents the most comprehensive outlook for trade globalization and financial globalization (Gygli et al. 2019). The *de jure* measures of ‘financial globalisation’ include capital account openness, investment agreements, and investment regulations, while *de jure* measures of ‘trade globalisation’ consider tariffs, trade regulations, trade agreements, and trade taxes. Besides, the *de facto* financial globalization measures consist of the FDI and portfolio investments, international debt, international reserves, and global income payments.

In contrast, the *de facto* measures of ‘trade globalisation’ measure is trade openness (calculated by both goods and services) and the trade market diversification. To the best of our knowledge, our paper is the first study in the literature investigating the determinants of the revisited KOF indices of economic globalization. The details of the revisited measures of KOF indices of economic globalization are retrieved from the KOF website.⁷

Policy uncertainty measures

The main variables of interest are the world uncertainty index (WUI) and the trade policy uncertainty index (TPUI), which are provided by Ahir, Bloom, and Furceri (2018, 2019), respectively. Ahir, Bloom, and Furceri (2018, 2019) construct the uncertainty indices, the WUI and the TPUI for 143 countries from 1996 to 2020, by using the frequencies of the words ‘uncertainty’ and ‘trade

³See xtabond2 Stata package for more details.

⁴Since the globalization measures are defined annually, we use data at the highest frequency. We do not purify the business cycles using the annual frequency data instead of four-year or five-year average data.

⁵We also report the results of low-income economies, whose Gross National Income (GNI) per capita is less than \$4,095 in the fiscal year of 2021.

⁶For the details of the original KOF indices of globalization, refer to Dreher (2006) and Gozgor (2018).

⁷<https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalization-index.html>.

policy uncertainty' (and their variants) in the Economist Intelligence Unit (EIU) country reports. The reports of the EIU comment on major economic and political issues in each state and analysis and forecasts on political and economic conditions, created by domestic analysts and the editorial board of the Economist. The values in the WUI and the TPUI are comparable across the countries since the raw counts are adjusted for each report's total number of words (Ahir, Bloom, and Furceri 2018, 2019). The WUI is superior to other policy uncertainty measures since it firstly constructs an uncertainty index for a panel dataset of advanced and developing countries. Moreover, the WUI and the TPUI are the first uncertainty indices, which are comparable across countries. These characteristics make the WUI and the TPUI perfect measures to investigate their effects on economic globalization indicators (Ahir, Bloom, and Furceri 2018, 2019).

Control variables

In this study, several control variables are used. Log per capita GDP and age dependency ratio are the main controls. Population and urban population are added in the estimations. External balance, inflation, and unemployment are included to capture the macroeconomic stance. These indicators are obtained from the World Development Indicators (WDI) database of the World Bank (2020). The government consumption and transfers and subsidies (share of GDP) are used to control the government's role in the economy since government size affects international trade (Rodrik 1998). The related data are obtained from the Penn World Table (PWT) (version 9.1) of Feenstra, Inklaar, and Timmer (2015) and the Economic Freedom in the World (EFW) dataset of Gwartney, Lawson, and Hall (2020), respectively.

Besides, the institutional quality and political variables are included. According to Acemoglu et al. (2019), higher-quality institutions can decrease uncertainty on economic globalization indicators, and formal institutions can be relevant to economic globalization (Potrafke 2015). Following Acemoglu et al. (2019), levels of executive constraints concept (index from 1 to 7) and the institutionalized democracy (index from 0 to 10) are included in the benchmark estimations to analyse whether the

baseline results vary with these indicators. The related data are obtained from the Polity IV Annual Time Series of Marshall, Gurr, and Jaggers (2019). The index of Economic Freedom is used, and the data are provided by the EFW dataset of Gwartney, Lawson, and Hall (2020). Note that the index of Economic Freedom contains values from 0 to 10, and a higher value demonstrates greater market deregulation, thus higher economic freedom.

The index of total summed magnitudes of conflicts (index from 0 to 10) is added. The data is obtained from the Major Episodes of Political Violence Database of Marshall (2019). Following Jha and Gozgor (2019), the indices of the absolute redistribution and the market income inequality of Solt (2020) are included because a higher level of income inequality can increase uncertainty transmission to economic globalization indicators. Finally, following Meinhard and Potrafke (2012), the role of human capital (the index is based on the PWT data) is controlled in the baseline regressions.

Preliminary analysis

The descriptive statistics of the variables used are reported in Appendix Table I. The correlation matrix for the main variables in the empirical estimations is also given in Appendix Table II. All correlations among the indicators of economic globalization are positive. Also, the correlations between economic globalization indicators and uncertainty measures are generally positive (except the *de jure* measure of financial globalization). Appendix Table 2 also suggests that the unconditional correlation between uncertainty and economic globalization is almost zero. There is also a positive correlation between economic globalization and per capita GDP and a negative correlation between economic globalization and the age-dependency ratio.

IV. Empirical findings

System GMM Estimations

Table 1 provides the System GMM estimations results for the baseline regressions for the WUI in Eq. (1), where nine indices of economic globalization are the dependent variables.

Table 1. System-GMM estimations: world uncertainty index and economic globalization.

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.870*** (0.010)	0.909*** (0.008)	0.944*** (0.005)	0.903*** (0.011)	0.921*** (0.008)	0.902*** (0.009)	0.845*** (0.010)	0.860*** (0.006)	0.906*** (0.007)
Lagged Δ World Uncertainty Index	-2.087*** (0.320)	-0.306 (0.410)	-3.284*** (0.420)	-1.847*** (0.390)	-1.345*** (0.320)	-2.267*** (0.417)	-2.595*** (0.495)	-0.278 (0.398)	-5.117*** (0.611)
Log Real GDP per Capita	1.185*** (0.109)	0.738*** (0.091)	0.558*** (0.069)	0.658*** (0.097)	0.351*** (0.102)	1.028*** (0.110)	1.750*** (0.144)	1.728*** (0.117)	0.966*** (0.088)
Age Dependency Ratio	0.018*** (0.005)	0.004 (0.004)	0.018*** (0.002)	0.033*** (0.008)	0.012 (0.008)	0.050*** (0.006)	0.004 (0.006)	0.021*** (0.005)	0.012** (0.005)
Constant	-1.081 (0.876)	-0.450 (0.784)	-0.045 (0.425)	2.221** (1.002)	2.247 (1.411)	0.750 (0.720)	-5.578*** (1.132)	-6.989*** (1.101)	-1.881** (0.750)
Observations	2,547	2,547	2,514	2,528	2,547	2,490	2,547	2,547	2,547
Number of Countries	140	140	138	139	140	136	140	140	140
Sargan Test	0.45 [0.503]	1.21 [0.271]	0.27 [0.607]	0.09 [0.764]	1.08 [0.299]	0.19 [0.663]	0.06 [0.813]	0.32 [0.572]	2.83 [0.152]
AR(1)	-8.96 [0.000]	-7.52 [0.000]	-8.63 [0.000]	-8.12 [0.000]	-7.62 [0.000]	-7.37 [0.000]	-8.43 [0.000]	-6.65 [0.000]	-8.04 [0.000]
AR(2)	0.39 [0.694]	-0.49 [0.622]	0.40 [0.692]	0.83 [0.409]	-0.99 [0.320]	-0.40 [0.689]	2.79 [0.124]	2.76 [0.118]	0.90 [0.369]

Notes: The dependent variables are nine different measures of economic globalization. The Sargan test shows the results of the over-identifying restrictions (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the LM statistics for the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, * and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 2. System-GMM estimations: trade policy uncertainty index and economic globalization.

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.889*** (0.002)	0.881*** (0.004)	0.963*** (0.003)	0.901*** (0.009)	0.894*** (0.007)	0.906*** (0.006)	0.855*** (0.003)	0.847*** (0.008)	0.913*** (0.002)
Lagged Δ Trade Policy Uncertainty Index	-0.121*** (0.029)	-0.275*** (0.041)	-0.027 (0.020)	-0.329*** (0.038)	-0.473*** (0.041)	-0.130*** (0.023)	-0.045 (0.028)	-0.064* (0.035)	-0.163 (0.310)
Log Real GDP per Capita	1.036*** (0.054)	0.938*** (0.072)	0.346*** (0.044)	0.666*** (0.079)	0.304*** (0.094)	0.981*** (0.084)	1.718*** (0.087)	1.976*** (0.105)	0.889*** (0.058)
Age Dependency Ratio	0.009* (0.005)	0.007 (0.006)	0.014*** (0.002)	0.037*** (0.007)	0.016** (0.007)	0.050*** (0.005)	0.018*** (0.005)	0.040*** (0.006)	0.002 (0.004)
Constant	-1.531** (0.749)	-1.291 (0.931)	0.427 (0.450)	2.592** (1.135)	4.298*** (1.373)	0.909 (0.670)	-6.796*** (0.989)	-9.485*** (1.007)	-2.321*** (0.671)
Observations	2,547	2,547	2,514	2,528	2,547	2,490	2,547	2,547	2,547
Number of Countries	140	140	138	139	140	136	140	140	140
Sargan Test	0.05 [0.829]	0.36 [0.548]	0.31 [0.576]	0.02 [0.875]	2.83 [0.127]	1.60 [0.254]	0.38 [0.539]	0.26 [0.610]	0.92 [0.356]
AR(1)	-9.02 [0.000]	-7.52 [0.000]	-8.73 [0.000]	-8.07 [0.000]	-7.65 [0.000]	-7.51 [0.000]	-8.57 [0.000]	-6.66 [0.000]	-7.96 [0.000]
AR(2)	0.28 [0.779]	-0.48 [0.634]	0.61 [0.539]	0.95 [0.340]	-1.07 [0.285]	-0.13 [0.895]	1.82 [0.108]	1.88 [0.104]	0.11 [0.745]

Notes: The dependent variables are nine different measures of economic globalization. The Sargan test shows the results of the over-identifying restrictions (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 3. System-GMM estimations: world uncertainty index and sub-indices of economic globalization (Low-Income Economies).

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.964*** (0.003)	0.931*** (0.003)	0.972*** (0.005)	0.999*** (0.006)	0.966*** (0.002)	0.995*** (0.003)	0.925*** (0.004)	0.889*** (0.002)	0.932*** (0.003)
Lagged Δ World Uncertainty Index	-1.944*** (0.181)	-0.597*** (0.159)	-2.707*** (0.286)	-0.812*** (0.291)	-1.336*** (0.325)	-0.503** (0.249)	-2.961*** (0.169)	-0.256 (0.178)	-5.532*** (0.264)
Log Real GDP per Capita	0.365*** (0.040)	0.780*** (0.020)	0.052 (0.084)	0.021 (0.055)	0.542*** (0.047)	0.424*** (0.075)	0.950*** (0.064)	1.618*** (0.059)	0.698*** (0.034)
Age Dependency Ratio	0.041*** (0.002)	0.005* (0.003)	0.061*** (0.003)	0.070*** (0.003)	0.018*** (0.004)	0.105*** (0.003)	0.035*** (0.002)	0.020*** (0.002)	0.048*** (0.002)
Observations	1,417	1,417	1,398	1,398	2,417	1,386	1,417	1,417	1,417
Number of Countries	76	76	75	75	76	74	76	76	76
Sargan Test	0.80 [0.371]	1.17 [0.279]	-0.57 [0.999]	-0.18 [0.999]	0.08 [0.780]	0.62 [0.431]	-0.51 [0.999]	0.47 [0.492]	1.19 [0.275]
AR(1)	-6.59 [0.000]	-5.65 [0.000]	-6.49 [0.000]	-6.27 [0.000]	-5.98 [0.000]	-5.16 [0.000]	-6.54 [0.000]	-5.92 [0.000]	-5.91 [0.000]
AR(2)	-0.31 [0.760]	-1.02 [0.307]	0.54 [0.586]	0.36 [0.716]	-1.03 [0.304]	0.41 [0.693]	0.80 [0.425]	-0.12 [0.907]	0.59 [0.558]

Notes: The Sargan test shows the over-identifying restrictions' results (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the LM statistics for the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 4. System-GMM estimations: world uncertainty index and sub-indices of economic globalization (OECD Countries).

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.907*** (0.018)	0.943*** (0.006)	0.830*** (0.011)	0.943*** (0.012)	0.949*** (0.011)	0.857*** (0.013)	0.844*** (0.023)	0.884*** (0.012)	0.795*** (0.008)
Lagged Δ World Uncertainty Index	-5.394*** (0.182)	-3.534*** (0.258)	-7.133*** (0.664)	-2.911*** (0.412)	-4.043*** (0.487)	-2.268*** (0.255)	-7.330*** (0.441)	-2.849*** (0.386)	-11.21*** (0.861)
Log Real GDP per Capita	0.121 (0.397)	0.007 (0.237)	0.125 (0.202)	0.223 (0.201)	0.054 (0.160)	0.076 (0.067)	1.092** (0.491)	1.354*** (0.482)	0.221 (0.337)
Age Dependency Ratio	-0.001 (0.011)	-0.044*** (0.012)	0.025** (0.012)	-0.005 (0.012)	-0.061*** (0.018)	0.048*** (0.016)	-0.019 (0.018)	-0.038*** (0.010)	0.001 (0.028)
Observations	627	627	627	627	627	627	627	627	627
Number of Countries	33	33	33	33	33	33	33	33	33
Sargan Test	0.01 [0.999]	0.00 [0.949]	-0.13 [0.999]	0.00 [0.966]	0.00 [0.967]	0.03 [0.868]	0.63 [0.428]	-0.01 [0.999]	0.00 [0.979]
AR(1)	-4.10 [0.000]	-4.30 [0.000]	-4.27 [0.000]	-4.44 [0.000]	-4.15 [0.000]	-3.81 [0.000]	-4.14 [0.000]	-3.57 [0.000]	-4.36 [0.000]
AR(2)	-1.84 [0.066]	-0.77 [0.441]	-1.53 [0.127]	-1.84 [0.066]	-1.22 [0.224]	-1.51 [0.132]	-0.81 [0.417]	-0.78 [0.436]	-0.98 [0.329]

Notes: The Sargan test shows the over-identifying restrictions' results (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the LM statistics for the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 2 displays the findings of the System GMM estimations for the baseline regressions for the TPUI in Eq. (2), where nine indices of economic globalization are the dependent variables.

In so doing, possible endogeneity bias and reverse causality issues, decreasing the level of economic globalization can increase uncertainty (e.g. it can lead to tax-regime change, thus increasing policy uncertainty). The System GMM estimators solve this potential problem if the conditions for diagnostics are fulfilled. According to the results of the Sargan test, there is no ‘over-identification’ issue. There is a significant first-order autocorrelation, but there is no second-order autocorrelation, according to the Arellano-Bond autocorrelation tests’ findings. In short, the exclusion restriction of the internal instruments is valid in the system GMM estimations in Tables 1 and 2.

It is also observed that there is a statistically significant and high-level persistence in the dependent variables. It is found that a higher level of uncertainty leads to a lower level of economic globalization. The main controls (per capita GDP and age-dependency ratio) are positively related to economic globalization indices. In short, uncertainty negatively affects economic globalization even after addressing the potential issues of endogeneity and reverse causality.

Countries at the different stages of economic development

The paper also investigates whether the system GMM estimations’ benchmark results vary according to countries’ income levels. Therefore, the paper assesses the effect on low-income economies, defined as countries where per capita GNI is less than \$4,095 in the fiscal year of 2021, following the spirit of Jha and Gozgor (2019). Low-income economies are expected to be more vulnerable to economic policy uncertainty shocks than middle-income and high-income countries. We also consider OECD countries since most countries are developed economies (Potrafke 2017).

Tables 3 and 4 provide the results for low-income economies and OECD countries, respectively.

The results show that the WUI is negatively related to nine economic globalization indices in low-income and OECD countries. Besides, most of the coefficients are statistically significant at the 5% level, except the de facto financial globalization index for the results in low-income economies.

We also report the baseline regressions for the TPUI in low-income economies in Table 5 and OECD countries in Table 6, respectively.

Tables 5 and 6 indicate that the TPUI is negatively associated with nine indices of economic globalization both in the low-income economies and OECD countries. Besides, most of the coefficients are statistically significant at the 10% level, except the de jure financial globalization index in low-income economies.

In short, there are significant adverse effects of uncertainty measures on the indices of economic globalization. Additional robustness checks are performed in the next section by including additional controls and excluding outliers from the sample.

V. Robustness checks

Additional controls

Table 7 reports the system GMM estimations’ results by adding a representative of regressions, including the controls one at a time. Here, three economic globalization measures are used (indices of the overall economic globalization, de facto economic globalization, and de jure economic globalization) as the dependent variables.

Given that the baseline estimations include the per capita GDP and the age-dependency ratio, the paper addresses a potential ‘omitted variable bias’ by adding additional controls. Firstly, subsidies and transfers are considered to account for the possibility that governments may increase their transfer expenditures as long as the level of globalization increases (Rodrik 1998). Similarly, the roles of macroeconomic stability and savings by using the inflation rate, unemployment rate, the external balance and the level of human capital, respectively, are assessed. Secondly, the institutional quality and political variables (i.e. economic freedom and democracy index) and the intrastate and interstate conflicts index are added. Thirdly, the income

Table 5. System-GMM estimations: trade policy uncertainty index and sub-indices of economic globalization (Low-Income Economies).

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.970*** (0.001)	0.941*** (0.003)	0.977*** (0.002)	0.995*** (0.002)	0.974*** (0.002)	0.979*** (0.003)	0.939*** (0.002)	0.892*** (0.005)	0.943*** (0.002)
Lagged Δ Trade Policy Uncertainty Index	-0.177*** (0.011)	-0.340*** (0.017)	-0.027* (0.014)	-0.374*** (0.008)	-0.533*** (0.024)	-0.201*** (0.018)	-0.016 (0.022)	-0.150*** (0.029)	-0.152 (0.223)
Log Real GDP per Capita	0.347*** (0.036)	0.806*** (0.032)	0.041 (0.042)	0.059* (0.031)	0.660*** (0.052)	0.094 (0.074)	0.785*** (0.035)	1.639*** (0.138)	0.537*** (0.062)
Age Dependency Ratio	0.050*** (0.002)	0.028*** (0.003)	0.059*** (0.003)	0.070*** (0.002)	0.048*** (0.003)	0.091*** (0.002)	0.039*** (0.001)	0.037*** (0.003)	0.043*** (0.002)
Observations	1,417	1,417	1,398	1,398	1,417	1,386	1,417	1,417	1,417
Number of Countries	76	76	75	75	76	74	76	76	76
Sargan Test	0.73 [0.394]	-0.32 [0.999]	0.12 [0.729]	0.34 [0.558]	0.02 [0.879]	-0.39 [0.999]	-0.08 [0.999]	0.25 [0.619]	-0.32 [0.999]
AR(1)	-6.60 [0.000]	-5.62 [0.000]	-6.59 [0.000]	-6.33 [0.000]	-5.99 [0.000]	-5.19 [0.000]	-6.58 [0.000]	-5.90 [0.000]	-5.87 [0.000]
AR(2)	-0.09 [0.929]	-0.90 [0.369]	0.74 [0.461]	0.57 [0.567]	-0.89 [0.371]	0.44 [0.659]	0.90 [0.366]	-0.07 [0.940]	0.69 [0.487]

Notes: The Sargan test shows the over-identifying restrictions' results (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the LM statistics for the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 6. System-GMM estimations: trade policy uncertainty index and sub-indices of economic globalization (OECD Countries).

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)
Lagged Measures of Economic Globalization	0.911*** (0.012)	0.928*** (0.008)	0.822*** (0.013)	0.939*** (0.010)	0.941*** (0.010)	0.858*** (0.008)	0.846*** (0.009)	0.878*** (0.006)	0.803*** (0.012)
Lagged Δ Trade Policy Uncertainty Index	-0.190** (0.093)	-0.218* (0.119)	-0.265*** (0.051)	-0.323*** (0.113)	-0.213* (0.108)	-0.396*** (0.079)	-0.129* (0.071)	-0.148** (0.075)	-0.181*** (0.047)
Log Real GDP per Capita	0.019 (0.325)	0.260 (0.199)	0.209 (0.174)	0.177 (0.212)	0.177 (0.299)	0.185* (0.109)	0.994*** (0.109)	1.308*** (0.343)	0.372* (0.207)
Age Dependency Ratio	0.001 (0.012)	-0.069*** (0.020)	0.034** (0.017)	0.003 (0.013)	-0.074*** (0.022)	0.021* (0.012)	0.002 (0.016)	-0.062*** (0.013)	0.065*** (0.019)
Observations	627	627	627	627	627	627	627	627	627
Number of Countries	33	33	33	33	33	33	33	33	33
Sargan Test	0.00 [0.999]	-0.02 [0.999]	-0.02 [0.999]	0.00 [0.999]	0.41 [0.523]	0.00 [0.999]	0.01 [0.923]	0.03 [0.852]	0.01 [0.922]
AR(1)	-3.87 [0.000]	-4.04 [0.000]	-4.49 [0.000]	-4.44 [0.000]	-4.04 [0.000]	-3.92 [0.000]	-3.97 [0.000]	-3.56 [0.000]	-4.30 [0.000]
AR(2)	-1.24 [0.214]	-1.52 [0.129]	-0.62 [0.535]	-2.60 [0.107]	-2.78 [0.105]	-1.29 [0.198]	-0.32 [0.747]	-0.95 [0.342]	-0.29 [0.770]

Notes: The Sargan test shows the over-identifying restrictions' results (null hypothesis: the over-identifying restrictions are valid). AR(1) and AR(2) show the results of the LM statistics for the Arellano-Bond autocorrelation test (null hypothesis: no first-order autocorrelation and no second-order autocorrelation, respectively). The robust standard errors are in the parentheses, and the p-values are in the brackets. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

Table 7. Including Additional Controls.

Sensitivity Analysis:		Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)
Results of the Benchmark Regressions		Lagged Δ World Uncertainty Index	-2.087*** (0.320)	-0.306 (0.410)	-3.284*** (0.420)
Results of the Benchmark Regressions		Lagged Δ Trade Policy Uncertainty Index	-0.121*** (0.029)	-0.275*** (0.041)	-0.027 (0.020)
Including Subsidies and Transfers		Lagged Δ World Uncertainty Index	-2.310*** (0.327)	-0.128 (0.381)	-3.857*** (0.525)
Including Subsidies and Transfers		Lagged Δ Trade Policy Uncertainty Index	-0.085*** (0.020)	-0.276*** (0.043)	-0.065*** (0.021)
Including Index of Economic Freedom		Lagged Δ World Uncertainty Index	-2.143*** (0.341)	-0.584 (0.486)	-3.806*** (0.469)
Including Index of Economic Freedom		Lagged Δ Trade Policy Uncertainty Index	-0.094*** (0.026)	-0.260*** (0.042)	-0.017 (0.026)
Including Index of Democracy		Lagged Δ World Uncertainty Index	-2.079*** (0.315)	-0.362 (0.427)	-3.675*** (0.403)
Including Index of Democracy		Lagged Δ Trade Policy Uncertainty Index	-0.122*** (0.030)	-0.255*** (0.043)	-0.027 (0.022)
Including Intra and Interstate Conflicts		Lagged Δ World Uncertainty Index	-2.116*** (0.376)	-0.381 (0.428)	-3.494*** (0.436)
Including Intra and Interstate Conflicts		Lagged Δ Trade Policy Uncertainty Index	-0.122*** (0.030)	-0.275*** (0.040)	-0.029 (0.023)
Including Human Capital Level		Lagged Δ World Uncertainty Index	-2.773*** (0.347)	-0.289 (0.445)	-5.733*** (0.428)
Including Human Capital Level		Lagged Δ Trade Policy Uncertainty Index	-0.153*** (0.031)	-0.351*** (0.050)	-0.064** (0.025)
Including Unemployment Rate		Lagged Δ World Uncertainty Index	-2.183*** (0.301)	-0.400 (0.407)	-3.640*** (0.546)
Including Unemployment Rate		Lagged Δ Trade Policy Uncertainty Index	-0.087*** (0.032)	-0.258*** (0.045)	-0.033 (0.027)
Including Inflation Rate		Lagged Δ World Uncertainty Index	-2.274*** (0.297)	-0.976** (0.394)	-3.208*** (0.432)
Including Inflation Rate		Lagged Δ Trade Policy Uncertainty Index	-0.144*** (0.033)	-0.272*** (0.025)	-0.082*** (0.020)
Including External Trade Balance		Lagged Δ World Uncertainty Index	-2.231*** (0.361)	-0.160 (0.416)	-3.156*** (0.438)
Including External Trade Balance		Lagged Δ Trade Policy Uncertainty Index	-0.124*** (0.030)	-0.290*** (0.049)	-0.064*** (0.018)
Including Index of Redistribution		Lagged Δ World Uncertainty Index	-1.877*** (0.336)	-0.086 (0.364)	-3.488*** (0.413)
Including Index of Redistribution		Lagged Δ Trade Policy Uncertainty Index	-0.077*** (0.020)	-0.271*** (0.026)	-0.067*** (0.024)
Including Index of Income Inequality		Lagged Δ World Uncertainty Index	-2.438*** (0.306)	-0.423 (0.303)	-3.735*** (0.341)
Including Index of Income Inequality		Lagged Δ Trade Policy Uncertainty Index	-0.130*** (0.021)	-0.343*** (0.023)	-0.027 (0.021)

Notes: The robust standard errors are in the parentheses. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

inequality index and the absolute redistribution are added because they can significantly influence the impact of uncertainty on globalization due to the economic conditions and the political sphere (Dreher and Gaston 2008).

All results from the related robustness checks confirm the benchmark findings, which are the harmful effects of uncertainty on all economic globalization indices, are robust, including additional controls. The coefficients of economic globalization have negative signs as and they hold (even increase) the levels of statistical significance in each case.

Sensitivity analyses

Table 8 provides the sensitivity analysis results, which exclude the outliers and the countries from the specific regions and groups. The detailed results are based on the benchmark regressions in Eq. (1) and Eq. (2) using system GMM estimations for three economic globalization indicators as the dependent variables.

Here outliers are excluded from the measures of uncertainty and the indices of economic globalization. Outliers are characterized by ‘observations which are more than two standard deviations away’ from the average following Fang, Gozgor, and Yan (2021) and Jha and Gozgor (2019). The findings in Table 8, the baseline results are robust when outliers are excluded.

This part of the analysis excludes the countries in Sub-Saharan Africa, Latin America and the Caribbean and developing East Asia and Pacific and the EU, in turn, to check the sensitivity of the baseline results. In so doing, Eq. (1) and Eq. (2) are re-estimated by excluding the observations from these countries one group at a time. The baseline results are robust to the exclusion of each group. It is observed that the baseline results are not determined by the presence of outliers or specific countries from these country groups.

The various sensitivity analyses indicate that the effects of uncertainty measures on the indices of economic globalization are adverse, and the evidence is in line with the baseline results. The three channels discussed in the paper explain the negative coefficients of uncertainty on economic globalization.

VI. Conclusion

This paper analyses the role of policy uncertainty on various measures of economic globalization over 1996–2016 in the panel dataset of 142 countries. Nine economic globalization indices and two new uncertainty measures (the WUI and the TPUI) are considered to achieve the research objectives. It is observed that both the WUI and the TPUI are negatively associated with the overall index of economic globalization. The *de jure* and the *de facto* measures of economic globalization are considered. It is found that the TPUI has a significant negative impact on the *de facto* measures of economic globalization. However, the WUI index is negatively related to the *de jure* measures of economic globalization.

Furthermore, various robustness checks are used to verify that the effects of uncertainty on economic globalization indicators are robust. Here, the analysis uses various alternative economic globalization indicators and goes one step further and considers different uncertainty sources. The results for the countries at different income levels are also reported. Furthermore, various estimation procedures are applied to address potential ‘endogeneity bias’ and ‘reverse causality issues’. Different sets of controls are added to address potential ‘omitted variable bias’. Finally, outliers are excluded. The findings of these robustness tests confirm those of the baseline estimations, thus demonstrating that the results are reliable. It is hence concluded that uncertainty is disadvantageous to sustainable globalization.

Future papers on this subject can carry out comparative studies to assess where different countries are affected in the same way. Therefore, future papers can use the quarterly data and time-series estimation techniques to investigate the impact of policy uncertainty on globalization indicators in large developing economies, such as Brazil, China, or India.

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Table 8. Sensitivity analyses.

Sensitivity Analysis:		Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)
Results of the Benchmark Regressions		Lagged Δ World Uncertainty Index	-2.087*** (0.320)	-0.306 (0.410)	-3.284*** (0.420)
Results of the Benchmark Regressions		Lagged Δ Trade Policy Uncertainty Index	-0.121*** (0.029)	-0.275*** (0.041)	-0.027 (0.020)
Excluding Extreme Units of Globalization Measures		Lagged Δ World Uncertainty Index	-2.009*** (0.336)	-0.376 (0.455)	-4.430*** (0.439)
Excluding Extreme Units of Globalization Measures		Lagged Δ Trade Policy Uncertainty Index	-0.127*** (0.029)	-0.370*** (0.041)	-0.068 (0.160)
Excluding Extreme Units of Uncertainty Measures		Lagged Δ World Uncertainty Index	-3.055*** (0.327)	-1.028* (0.549)	-4.814*** (0.612)
Excluding Extreme Units of Uncertainty Measures		Lagged Δ Trade Policy Uncertainty Index	-0.173*** (0.035)	-0.168*** (0.021)	-0.294*** (0.026)
Excluding European Union Countries		Lagged Δ World Uncertainty Index	-1.066*** (0.351)	-1.284*** (0.352)	-2.669*** (0.207)
Excluding European Union Countries		Lagged Δ Trade Policy Uncertainty Index	-0.041** (0.018)	-0.142*** (0.024)	-0.008 (0.019)
Excluding Sub-Saharan African Countries		Lagged Δ World Uncertainty Index	-2.038*** (0.162)	-0.953*** (0.116)	-3.155*** (0.115)
Excluding Sub-Saharan African Countries		Lagged Δ Trade Policy Uncertainty Index	-0.113*** (0.006)	-0.354*** (0.011)	-0.130 (0.110)
Excluding Latin American and Caribbean Countries		Lagged Δ World Uncertainty Index	-3.532*** (0.274)	-1.503*** (0.270)	-4.970*** (0.356)
Excluding Latin American and Caribbean Countries		Lagged Δ Trade Policy Uncertainty Index	-0.240*** (0.024)	-0.208*** (0.025)	-0.232*** (0.029)
Excluding Developing East Asian Countries		Lagged Δ World Uncertainty Index	-1.426*** (0.294)	-0.158 (0.397)	-3.021*** (0.348)
Excluding Developing East Asian Countries		Lagged Δ Trade Policy Uncertainty Index	-0.085*** (0.019)	-0.294*** (0.028)	-0.109 (0.144)

Notes: The robust standard errors are in the parentheses. ***, **, and * indicate the statistical significance at 1%, 5%, and 10% levels, respectively.

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Table 1. Summary of the descriptive statistics.

Variables	Definition	Data Source	Mean	Standard Deviation	Minimum	Maximum	Observations
Economic Globalization (Overall)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	55.53	16.21	17.44	95.43	2,982
Economic Globalization (De Facto)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	55.10	16.75	16.70	98.62	2,982
Economic Globalization (De Jure)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	56.16	19.94	14.62	94.86	2,940
Trade Globalization (Overall)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	53.86	17.79	12.30	96.98	2,961
Trade Globalization (De Facto)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	52.48	18.97	8.387	99.55	2,982
Trade Globalization (De Jure)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	55.51	24.53	9.253	97.75	2,901
Financial Globalization (Overall)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	57.17	17.17	10.99	94.23	2,982
Financial Globalization (De Facto)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	57.75	19.26	12.43	98.18	2,982
Financial Globalization (De Jure)	Index	KOF, ETH Zurich: Dreher (2006), Gygli et al. (2019)	56.57	19.30	2.003	93.16	2,982
World Uncertainty Index	Change of Index	www.policyuncertainty.com: Ahir, Bloom, and Furceri (2018 and 2019)	0.008	0.130	-0.651	0.696	2,840
Trade Policy Uncertainty Index	Change of Index	www.policyuncertainty.com: Ahir, Bloom, and Furceri (2018 and 2019)	0.008	0.894	-10.23	7.594	2,840
Real GDP per Capita (Constant 2010 USD Prices)	Logarithmic Form	World Development Indicators: World Bank (2020)	8.280	1.576	5.229	11.42	2,958
Age Dependency Ratio (% of Working-age Population)	Percentage	World Development Indicators: World Bank (2020)	64.01	19.70	16.45	113.2	2,977
Total Population	Logarithmic Form	World Development Indicators: World Bank (2020)	16.42	1.348	13.16	21.04	2,977
Urban Population (% of Total Population)	Percentage	World Development Indicators: World Bank (2020)	55.84	22.96	7.412	100.0	2,977
Share of Government Consumption at Current PPP GDPs	Percentage	Penn World Table (Version 9.1): Feenstra, Inklaar, and Timmer (2015)	0.180	0.090	0.016	0.954	2,622
Transfers and Subsidies as a Share of GDP	Percentage	Fraser Institute: Gwartney, Lawson, and Hall (2020)	9.157	7.875	0.000	30.08	1,977
Institutional Quality (Executive Constraints Concept)	Index from 1 to 7	Polity IV Annual Time-series: Marshall, Gurr, and Jaggers (2019)	4.970	1.996	1.000	7.000	2,835
Index of Economic Freedom	Index from 0 to 10	Fraser Institute: Gwartney, Lawson, and Hall (2020)	6.698	0.972	2.880	9.190	2,105
Level of Institutional Democracy	Index from 1 to 10	Polity IV Annual Time-series: Marshall, Gurr, and Jaggers (2019)	5.558	3.810	0.000	10.00	2,835
Total Summed Magnitudes of All (Societal and Interstate) Conflicts	Index from 0 to 14	Major Episodes of Political Violence Database: Marshall (2019)	0.601	1.499	0.000	9.000	2,961
Human Capital per Person	Index	Penn World Table (Version 9.1): Feenstra, Inklaar, and Timmer (2015)	2.387	0.710	1.053	3.734	2,394
Unemployment, Total (% of Total Labour Force) (National Estimates)	Percentage	World Development Indicators: World Bank (2020)	8.269	6.186	0.140	44.15	2,982
External Balance on Goods and Services (% of GDP)	Percentage	World Development Indicators: World Bank (2020)	-4.698	16.13	-161.4	48.45	2,892
Inflation (Consumer Prices, Annual %)	Percentage	World Development Indicators: World Bank (2020)	10.15	84.65	-16.11	4145	2,746
Absolute Redistribution	Index	Standardized World Income Inequality Database: Solt (2020)	0.058	0.071	-0.075	0.242	2,527
Market Income Inequality	Index	Standardized World Income Inequality Database: Solt (2020)	0.441	0.066	0.214	0.687	2,527

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Data Appendix I

List of Countries in the Panel Dataset (142 Countries)

Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Benin, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, the Central African Republic, Chad, Chile, China, Colombia, Congo DR, Congo Republic, Costa Rica, Côte d'Ivoire, Croatia, the Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Ethiopia, Finland, France, Gabon, the Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Haiti, Honduras, Hong Kong SAR, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Korea Republic, Kuwait, Kyrgyz Republic, Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, the Netherlands, New Zealand, Nicaragua, Niger, Nigeria, North Macedonia, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, the Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Tajikistan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, the United Arab Emirates, the United Kingdom, the United States, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

Table 2. Correlation matrix.

Regressors	Economic Globalization (Overall)	Economic Globalization (De Facto)	Economic Globalization (De Jure)	Trade Globalization (Overall)	Trade Globalization (De Facto)	Trade Globalization (De Jure)	Financial Globalization (Overall)	Financial Globalization (De Facto)	Financial Globalization (De Jure)	Log Real GDP per Capita	Age Dependency Ratio	Δ World Uncertainty Index	Δ Trade Policy Uncertainty Index
Economic Globalization (Overall)	1.000	–	–	–	–	–	–	–	–	–	–	–	–
Economic Globalization (De Facto)	0.864	1.000	–	–	–	–	–	–	–	–	–	–	–
Economic Globalization (De Jure)	0.902	0.564	1.000	–	–	–	–	–	–	–	–	–	–
Trade Globalization (Overall)	0.931	0.840	0.812	1.000	–	–	–	–	–	–	–	–	–
Trade Globalization (De Facto)	0.655	0.873	0.335	0.772	1.000	–	–	–	–	–	–	–	–
Trade Globalization (De Jure)	0.855	0.548	0.936	0.865	0.348	1.000	–	–	–	–	–	–	–
Financial Globalization (Overall)	0.924	0.761	0.866	0.725	0.437	0.722	1.000	–	–	–	–	–	–
Financial Globalization (De Facto)	0.858	0.879	0.655	0.705	0.538	0.615	0.892	1.000	–	–	–	–	–
Financial Globalization (De Jure)	0.790	0.475	0.890	0.588	0.240	0.675	0.890	0.590	1.000	–	–	–	–
Log Real GDP per Capita	0.761	0.505	0.814	0.662	0.228	0.794	0.752	0.653	0.687	1.000	–	–	–
Age Dependency Ratio	–0.630	–0.417	–0.677	–0.643	–0.287	–0.726	–0.524	–0.445	–0.493	–	0.745	1.000	–
Δ World Uncertainty Index	0.005	0.008	0.002	0.006	0.004	0.005	0.005	0.009	–0.001	–	0.001	0.006	1.000
Δ Trade Policy Uncertainty Index	0.008	0.004	0.009	0.004	–0.005	0.011	0.010	0.013	0.005	0.011	–0.007	0.099	1.000