An analysis of the globalisation and income inequality relationship in the developing economies: A Static Approach

Swapnanil SenGupta

MSc Financial Economics, Department of Economics, The University of Manchester, Oxford Rd, Manchester, M13 9PL, UK
Email: senguptaswapnanil1@gmail.com

ABSTRACT

This paper investigates the impacts of globalisation on income inequality in less developed economies. Firstly, the impact is examined using the aggregate globalisation index. Subsequently, the impacts of economic, trade, financial, informational and cultural globalisation has been analysed individually, in order to examine the magnitude of the impacts of each category. A panel dataset of 110 countries over the period of 1980-2016, has been used for the study. For estimation, static approach of fixed effects model with both country and time fixed effects, has been employed. The results suggest that globalisation led to the increase in income inequality in the less developed nations. On examination of individual globalisation indices, it was found that financial and cultural globalisation had the least and most impacts on income inequality, respectively. Meanwhile, no relationship between trade/informational globalisation and income inequality could be established.

▪ INTRODUCTION

"The whole of the global economy is based on supplying the cravings of two percent of the world's population"
-Bill Bryson
(Best-selling Author)

In the recent decades, globalisation, an integration of economic, financial, social, cultural, informational, and political activities in the world via development of international trade and investment, hast most certainly become one of the most crucial trends in the global economy. Not only limited to the developed economies, several developing nations have followed the path and opened up their economies to the international markets since the beginning of the '70s. Although, the actual pattern of the economic liberalisation procedure has differed across the developing countries, as a whole, it has increased significantly (an upward trend in trade flows

(Figure 1) is the evidence of it), and the diffusion of technology along with certain other factors like cultural, social, interpersonal factors amongst others, between countries has become more widespread and rapid.

In light of this, the causal effect of globalisation on income inequality in the less-developed economies is a matter of significant academic interest. Whether such a process of globalisation is associated with widening or narrowing income disparities, particularly among the developing economies, is a topic of endless debate in the economic literature. One school of thought argues that that the global economic integration promotes economic growth via skill and knowledge transfer, which in turn, aids the solving of the problems of poverty and inequality amongst others (Bhagwati, 2004; Zhou et al., 2011). However, the other school of thought argues that globalisation results in income insecurity and enhances inequality in both

developed and developing nations (Bergh & Nilsson, 2010; Marjit et al., 2004; Stiglitz, 2002). Given the inconclusive nature of the debate, it is important to investigate the relationship with more extensive and comprehensive analysis.

This paper takes up a static approach to shed light into the globalisation-income inequality relationship in less-developed countries, extensively. A fixed effects (FE) model with both country and time fixed effects, has been employed to estimate the above-mentioned relationship for a panel of 110 developing countries over the period of 1996-2016. Subsequently, a series of robustness tests have been carried out to check the integrity of the outcomes. The study contributes to the existing literature in several ways. Firstly, no previous studies have used such a large dataset. Secondly, a set of control variables has been carefully selected to control for a broad range of factors. Finally, an unprecedented investigation has been carried out to check the impacts of various forms of globalisation on income inequality, individually.

The rest of the paper is structured in the following order: literature review, empirical analysis and conclusion.
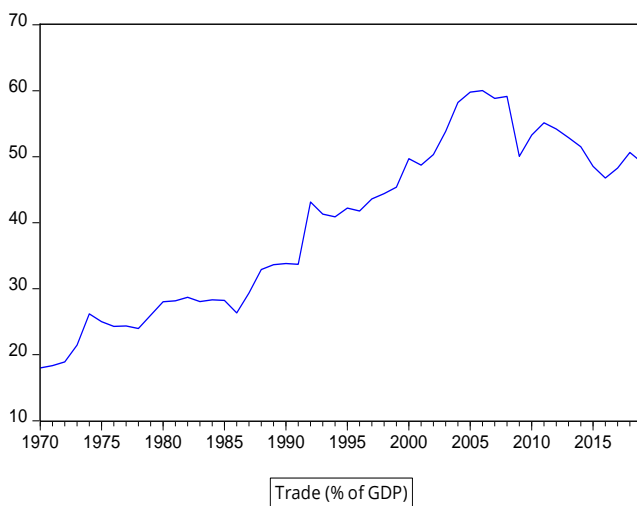

Figure 1. Trade Volume of Low and Middle-Income Countries. Source: World Bank Database.

Literature review

The existing literature on the topic concerned is diverse. Lee (2014) examined the effects of globalisation including international trade and financial integration on income distribution and poverty using data from 1976 to 2004. He found out that financial globalisation increases income inequality and poverty in general. Atif et al. (2012) analysed the impact of globalisation on income inequality by estimating static and dynamic models for panel data of 68 developing countries over the period of 1990-2010. The results suggested that an increase in globalisation in developing countries enhances the income inequality level. Meschi and Vivarelli (2007) used a dynamic specification to estimate the impact of trade (as a proxy for globalisation) on within-country income inequality in a sample of 70 developing countries over the 1980-1999 period. The findings of the study elucidated that total aggregate trade flows are weakly related to income inequality. However, once they disaggregated total trade flows according to their origins/destinations, they found that trade with high income countries worsen income distribution in the developing countries, both through exports and imports.

On the other hand, there exists multiple studies and proponents who found out and claims that globalisation leads to improved income distribution conditions. Lindert and Williamson (2001) asserted that the countries that integrated to world economy, succeeded in reducing the level of income inequality. It has also been claimed that through FDI, emerging economies have the opportunities to reach the level of developed countries (Brown et al., 1993; Tsai, 1995). Figini & Görg (2006) used a panel of more than 100 countries for the period 1980 to 2002 to examine the relationship between inward FDI and wage inequality. The results suggested that wage inequality increases with FDI inward stock

but this effect diminishes with further increase in FDI.

▪ METHODOLOGY

Model specification and variable description

The study involves a panel dataset of 110 developing countries (Appendix I). In this case, simple estimation techniques like pooled OLS is likely to be inefficient since it does not take into account and control for the unobservable individual effects. Therefore, a more advanced technique like fixed effects (FE) model has been incorporated. The intercept varies across individuals (countries, in this case) in the FE model and hence, it depends on the variation within individuals and not between them. It is assumed in this approach that if not controlled for, something with the individual may bias or impact the outcome variables which is the justification of the assumption of the correlation between entity's error term and explanatory variables. In other words, the consistent estimation in the fixed effects model does not impose that the unobserved heterogeneity is uncorrelated with the regressors. The test results of Hausman test and the test for time fixed effects (testparm) confirm that the FE model with both country and time fixed effects is appropriate for this analysis (Table 1).

The models used are specified as follows:

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 KGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (i)

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 ECGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (ii)

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 TRGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (iii)

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 FIGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (iv)

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 INGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (v)

$GINI_{it} = \alpha_0 + \alpha_i + \alpha_t + \beta_1 CUGI_{it} + \beta_2 GOV_{it} + \beta_3 URP_{it} + \beta_4 SSE_{it} + \beta_5 GDPPC_{it} + \beta_6 GCAPF_{it} + \beta_7 GCON_{it} + \beta_8 AGVA_{it} + \beta_9 INVA_{it} + \beta_{10} CRED_{it} + \varepsilon_{it}$ (vi)

where,

GINI is the Gini index to measure the income distribution ranging from 0 to 1 (0 being least income inequality). *KGI*, *ECGI*, *TRGI*, *FIGI*, *INGI* and *CUGI* are overall, economic, trade, financial, informational and cultural globalisation indices respectively and the main independent regressors of interest. Following several literatures, a set of control variables has been meticulously selected (Atif et al., 2012; Bukhari & Munir, 2016; Ganaie et al., 2018; Munir & Sultan, 2017). *GOV* is used as a control for the politically administrative efficiency and is prepared using principal component analysis (PCA) combining six indices namely political stability, regulatory quality, rule of law, voice and accountability, control of corruption and government effectiveness (Appendix IV); *URP* is the percent of urban population and is used as a proxy for urbanisation; *SSE* is secondary school enrolment ratio and is used as a standard measure to control for human capital development; *GDPPC* is GDP per capita at constant 2010 USD and is used as a measure of economic development; *GCAPF* is gross capital formation (% of GDP) and it is utilised as a proxy for macroeconomic prosperity; *GCON* is general government final consumption expenditure (% of GDP) and is used to control for fiscal policy measures; *AGVA* is agriculture value

addition (% of GDP) and is incorporated in the model since most of the developing economies are agro-based and as a measure of sectoral contribution; *INVA* is industry value addition (% of GDP) and is used as a measure of sectoral distribution and technological development; and *CRED* is a composite index used as a control for financial development which is prepared via PCA (Appendix III) using three closely correlated variables namely, domestic credit provided by financial sector (% of GDP), domestic credit to private sector (% of GDP) and domestic credit to private sector by banks (% of GDP). α_0 is the constant term; α_i is the country fixed effect which captures for the unobservable heterogeneity across countries; α_t is the time fixed effect or the unobservable effects that varies by year and is fixed across countries and ε is the error term. Country and time are represented by i and t respectively.

Data type and source

The study involves data collected annually for a panel of 110 developing countries over the period from 1980 to 2016. The data has been collected from World Bank World Development Indicators (February 2019). The data for globalisations are the KOF Globalisation indices and has been collected from Gygli et al. (2019). The indices were originally prepared by Dreher (2006). The data for the government indices has been collected from the Worldwide Governance Indicators.

Estimation and analysis

The empirical analysis is initiated by first examining the impact of globalisation on income inequality without adding any other control variables (Reg. 1, Table 1). Subsequently, the other regressors are added one at a time. The motive behind following this step is to check whether the outcome regarding the variable of interest

change. The benchmark regression results of this study are plotted under Reg. 10 in Table 1.

From the results of Table 1, it is observed that the overall KOF globalisation index has a positive symbol and highly significant throughout. The result corroborates with the popular hypothesis and findings that increased globalisation leads a certain level of income inequality in the developing countries (Munir & Sultan, 2017). Rest of the interpretation of the control variables is carried out with respect to the benchmark regression results (Reg. 10, Table 1). The government index is found to have a significant and negative coefficient which bolsters the theory that an efficient and proper-functioning government reduces the income gap. Urbanisation is found to increase income inequality. One reason could be that most of the developing economies are majorly rural economies and rapid urbanisation might increase the wage gap by significantly improving the job prospects of workers in urban areas, while causing no change for the rural labours. Human capital has a positive and significant co-efficient. This is a surprising outcome since increased education is known to reduce disparities in income level. The reason for this could be less data points of the chosen variable. Also, secondary school enrolment might not properly capture the educational scenario in less developed countries since a significantly large proportion of the population does not cross the threshold of the primary education in most of the developing countries. GDP per capita is found to increase income inequality as it increases. The potential reason could be the economic growth for a particular section of the population and not overall. Both agricultural and industrial value addition were found to reduce income inequality bolstering, the facts that the growth in both agricultural sector and technological development plays a crucial role in decreasing income level disparity. The remaining of the

control variables were found insignificant and hence not discussed. In the next steps, the impacts of individual indices are scrutinised.

In Table 2, it is observed that all the individual indices of globalisation (economic, trade, financial, informational and cultural) have positive symbol irrespective of the magnitude. Economic, financial and cultural globalisation indices are significant at 5%, 10% and 5% level respectively. It was found that financial and cultural globalisation had the least and most impacts on income inequality, respectively. The other two indices were found insignificant. The outcomes of rest of the control variables are mostly similar to the findings of eq. (i) except for the governance variable being no longer significant and the credit variable having a positive sign.

Table 1. FE Estimation Outputs for Eq. (i)

Dependent Variable: GINI

Ind. Variable	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5	Reg. 6	Reg. 7	Reg. 8	Reg. 9	Reg. 10
KGI	0.063 (0.04) [1.58]	0.11** (0.05) [2.42]	0.14*** (0.05) [2.86]	0.22*** (0.05) [4.11]	0.22*** (0.05) [4.06]	0.22*** (0.05) [4.17]	0.26*** (0.05) [4.82]	0.21*** (0.06) [3.73]	0.23*** (0.06) [4.02]	0.24*** (0.06) [4.09]
GOV		0.22 (0.38) [0.57]	0.35 (0.39) [0.90]	-0.25 (0.41) [-0.61]	-0.29 (0.4) [-0.7]	-0.26 (0.4) [-0.65]	-0.49 (0.41) [-1.2]	-0.59 (0.41) [-1.45]	-0.75* (0.39) [-1.88]	-0.96** (0.4) [-2.4]
URP			0.17*** (0.06) [2.89]	0.09 (0.07) [1.45]	0.14** (0.07) [2.06]	0.14** (0.07) [2.12]	0.14** (0.07) [2.18]	0.14** (0.07) [2.14]	0.14** (0.07) [2.1]	0.17** (0.07) [2.6]
SSE				0.05** (0.02) [2.52]	0.04** (0.02) [2.32]	0.04** (0.02) [2.29]	0.04** (0.02) [2.13]	0.05** (0.02) [2.6]	0.06*** (0.02) [3.31]	0.06*** (0.02) [3.47]
GDPPC					0.04*** (0.01) [2.82]	0.04*** (0.01) [3.00]	0.05*** (0.01) [4.00]	0.06*** (0.01) [4.18]	0.06*** (0.01) [4.23]	0.04*** (0.01) [2.94]
GCAPF						-0.01 (0.02) [-0.29]	-0.04* (0.02) [-1.71]	-0.04 (0.02) [-1.63]	-0.03 (0.02) [-1.15]	-0.02 (0.03) [-0.82]
GCON							0.13* (0.07) [1.91]	0.11 (0.07) [1.53]	0.02 (0.07) [0.23]	0.01 (0.07) [0.18]
AGVA								-0.08 (0.05) [-1.64]	-0.14*** (0.05) [-2.83]	-0.14*** (0.05) [-2.82]
INVA									-0.21*** (0.05) [-4.3]	-0.19*** (0.05) [-3.80]
CRED										-0.03 (0.24) [-0.14]
Regression Summary										
R^2	0.23	0.30	0.33	0.39	0.41	0.41	0.44	0.45	0.47	0.5
Hausman	-22.3	103.7***	0.18	24.89	51.94***	53.5***	244.42***	4.58	416.2***	228.3***
testparm	4.49***	7.34***	7.56***	8.48***	8.62***	8.84***	10.2***	10.35***	11.59***	11.63***
Prob>F	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Obs. (N)	979	725	679	549	545	538	534	529	525	503

Note: ***, ** and * represent 1%, 5% and 10% significance level respectively. Standard errors are shown in () and t-statistics are shown in []

Table 2. FE Estimation Outputs for Eq. (ii-vi)

Dependent Variable: GINI

Ind. Variable	Eq. (ii)	Eq. (iii)	Eq. (iv)	Eq. (v)	Eq. (vi)
ECGI	0.063** (0.029) [2.11]				
TRGI		0.038 (0.025) [1.49]			
FIGI			0.043* (0.022) [1.88]		
INGI				0.009 (0.04) [0.21]	
CUGI					0.103** (0.043) [2.35]
GOV	-0.647 (0.398) [-1.63]	-0.636 (0.403) [-1.58]	-0.544 (0.392) [-1.39]	-0.51 (0.399) [-1.28]	-0.591 (0.393) [-1.51]
URP	0.165** (0.069) [2.39]	0.172** (0.069) [2.49]	0.171** (0.069) [2.49]	0.185*** (0.069) [2.68]	0.17** (0.069) [2.48]
SSE	0.064*** (0.019) [3.36]	0.063*** (0.019) [3.34]	0.061*** (0.019) [3.25]	0.061*** (0.019) [3.19]	0.064*** (0.019) [3.39]
GDPPC	0.039** (0.015) [2.52]	0.04** (0.016) [2.56]	0.04** (0.016) [2.38]	0.04** (0.017) [2.34]	0.03* (0.016) [1.94]
GCAPF	-0.026 (0.027) [-0.96]	-0.026 (0.027) [-0.96]	-0.023 (0.027) [-0.86]	-0.024 (0.028) [-0.86]	-0.018 (0.027) [-0.67]
GCON	-0.034 (0.072) [-0.48]	-0.055 (0.072) [-0.76]	-0.022 (0.074) [-0.3]	-0.046 (0.074) [-0.62]	-0.043 (0.072) [-0.60]
AGVA	-0.197*** (0.049) [-3.98]	-0.209*** (0.049) [-4.23]	-0.209*** (0.049) [-4.23]	-0.206*** (0.05) [-4.09]	-0.194*** (0.049) [-3.90]
INVA	-0.196*** (0.053) [-3.70]	-0.194*** (0.053) [-3.63]	-0.191*** (0.053) [-3.55]	-0.182*** (0.053) [-3.42]	-0.18*** (0.053) [-3.43]
CRED	0.074 (0.239) [0.31]	0.193 (0.236) [0.82]	0.016 (0.25) [0.06]	0.16 (0.246) [0.65]	0.045 (0.241) [0.19]
Regression Summary					
R^2	0.481	0.479	0.48	0.48	0.483
Hausman	247.22***	103.07***	299.74***	769.91***	183.36***
testparm	11.49***	11.21***	10.61***	3.97***	11.6***
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000
Obs. (N)	504	504	504	504	504

Note: ***, ** and * represent 1%, 5% and 10% significance level respectively. Standard errors are shown in () and t-statistics are shown in []

Robustness Check

This section aims to analyse the validity of the outcomes obtained under different situations. Henceforth, the robustness of the empirical model prepared would be examined in different steps. In the first step, the benchmark regression has been carried out with robust standard errors following same estimation technique. Robust standard errors take into account the heteroskedasticity in a model's unexplained variation i.e., if the amount of variation in the outcome variable is correlated with the explanatory variables, these correlations are taken into account by the robust standard errors. Also, robust standard errors provide estimates of standard errors which are not biased under heteroskedasticity. Generally, the robust standard errors are larger than the non-robust standard errors. It was observed that the results remain unaltered overall.

Following Bukhari and Munir (2016), IVLS estimation technique was used where the instruments used were log of GDP per capita (*LGDPPC*) and its square term (*LGDPPC_sq*), globalisation (*KGI*), foreign direct investment (*FDI*), urban population (*URP*) and education (*SSE*) for the following specification:

$$GINI_{it} = \alpha_0 + \beta_1 KGI_{it} + \beta_2 LGDPPC_{it} + \beta_3 LGDPPC\_sq_{it} + \beta_4 URP_{it} + \beta_5 SSE_{it} + \beta_6 FDI_{it} + \varepsilon_{it}$$

The results obtained are consistent with the benchmark regression outputs. Hence, it can be concluded that the primary estimation results are robust.

■■ CONCLUSION

In light of the constant and rapid exposure of the developing economies to the world and acknowledging the debates concerning whether such phenomenon curbs income inequality, this study takes up a static empirical analysis approach in a broader scale to shed light on the relationship. A FE model estimation has been carried out incorporating both country and time fixed effects. A panel of 110 countries has been used in the dataset over the period between 1980 and 2016. The findings suggest that increased globalisation enhanced income inequality in the target countries. The findings are in line with several previous studies conducted on the same

subject matter (Atif et al., 2012; Bukhari & Munir, 2016). Additionally, individual impacts of other globalisation indices namely economic, trade, financial, informational and cultural globalisation, have been analysed. It was found that financial and cultural globalisation had the least and most impacts on income inequality, respectively. No relationship could be established for trade and informational globalisation with the gini index, representing income inequality.

However, this study is not free of shortcomings. First of all, there could exist a problem of endogeneity which could be solved by employing appropriate instruments and using estimation techniques like 2SLS. Secondly, there are chances that this static model is mis-specified, because the within-group error terms are serially correlated. Thirdly, the relationship obtained might not be so simplistic to determine. It is possible that the impact of globalisation on income distribution varies across nations depending on the economic structures and institutions of the particular nation. Finally, lack of data availability was a serious set-back.

This study was done with an aim to preliminarily examine the results of the concerned research question and prepare a platform for further analysis using more enhanced techniques. On this note, sophisticated dynamic estimation analysis like GMM, panel ARDL, PECM (panel error correction model) amongst others, should be used to estimate the relationship for more insightful results. Efforts should be put to find more data to carry out the investigation on a broader scale.

■■ DECLARATIONS

Author's contributions

The author worked fully engaged starting from proposal to end work alone.

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Availability of data and materials

Data were collected from the respondents through social media channels and considered as primary data. Analysis part took place after data screening.

Competing interests

The author declares that he has no competing interests.

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APPENDIX

Appendix I. List of Countries

Albania	Bulgaria	Dominican Republic	Indonesia	Madagascar	Namibia	Sierra Leone	Trinidad and Tobago
Algeria	Burkina Faso	Ecuador	Iraq	Malawi	Nepal	Solomon Islands	Tunisia
Angola	Burundi	El Salvador	Israel	Malaysia	Nicaragua	South Africa	Turkey
Argentina	Cabo Verde	Gabon	Jamaica	Maldives	Niger	Sri Lanka	Turkmenistan
Armenia	Cameroon	Georgia	Jordan	Mali	Nigeria	St. Lucia	Uganda
Azerbaijan	Chad	Ghana	Kazakhstan	Mauritania	Pakistan	Sudan	Ukraine
Bangladesh	Chile	Guatemala	Kenya	Mauritius	Panama	Suriname	Uruguay
Belarus	China	Guinea	Kyrgyz Republic	Mexico	Papua New Guinea	Syria	Uzbekistan
Belize	Colombia	Guinea-Bissau	Lao PDR	Moldova	Paraguay	Tajikistan	Vanuatu
Benin	Comoros	Guyana	Latvia	Mongolia	Peru	Tanzania	Vietnam
Bhutan	Congo	Haiti	Lebanon	Montenegro	Russia	Thailand	Zambia
Bolivia	Costa Rica	Honduras	Lesotho	Morocco	Rwanda	Timor-Leste	Zimbabwe
Botswana	Cote d' Ivoire	Iceland	Liberia	Mozambique	Senegal	Togo	
Brazil	Djibouti	India	Lithuania	Myanmar	Seychelles	Tonga	

Appendix II. Variable Statistics

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
GINI	994	42.346	9.372	16.2	65.8
KGI	4526	46.516	13.054	16.502	81.144
ECGI	4242	45.756	13.706	12.2	85.2
TRGI	4215	44.78	15.814	10.2	87.2
FIGI	4242	46.657	14.98	4.7	87.3
INGI	4242	44.919	20.958	2.6	92.5
CUGI	4242	38.632	17.852	4	92.3
GOV	2400	-3.54e-09	1.000	-1.909	4.241
URP	4485	44.431	21.353	4.178	95.24
SSE	3346	57.384	30.161	2.133	126.054
GDPPC	4119	3675.909	5001.69	133.967	51281.99
GCAPF	3642	23.675	9.294	-5.739	89.381
GCON	3567	15.19	7.286	0	135.809
AGVA	3878	19.389	13.221	0.345	79.042
INVA	3848	26.445	11.534	2.073	85.659
CRED	3724	0.001	0.999	-1.090	9.883

Appendix III. PCA of Credit Variable (*CRED*)

Eigen Values: (Sum = 3, Average = 1)

Number	Value	Difference	Proportion	Cumulative value	Cumulative proportion
1	2.661954	2.352745	0.8873	2.661954	0.8873
2	0.309208	0.280370	0.1031	2.971162	0.9904
3	0.028838	-----	0.0096	3.000000	1.0000

Eigenvectors (loadings):

Variable	PC 1	PC 2	PC 3
DCRFS	0.542119	0.838894	0.048617
DCRPS	0.591489	-0.422054	0.687031
DCRPSB	0.596865	-0.343696	-0.725000

Correlation Matrix

	DCRFS	DCRPS	DCRPSB
DCRFS	1.000000		
DCRPS	0.745060	1.000000	
DCRPSB	0.771164	0.970263	1.000000

Appendix IV. PCA of Governance Variable (GOV)

Eigen Values: (Sum = 6, Average = 1)

Number	Value	Difference	Proportion	Cumulative Value	Cumulative Proportion
1	4.541095	3.895997	0.7568	4.541095	0.7568
2	0.645097	0.267510	0.1075	5.186192	0.8644
3	0.377587	0.138044	0.0629	5.563779	0.9273
4	0.239543	0.139023	0.0399	5.803322	0.9672
5	0.100519	0.004361	0.0168	5.903841	0.9840
6	0.096159	-----	0.0160	6.000000	1.0000

Eigenvectors (loadings):

Variables	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6
POLST	0.336433	0.810322	-0.261934	0.381904	0.122725	0.025876
REGQ	0.406909	-0.457854	0.044666	0.602300	0.225137	-0.457546
ROLW	0.447602	0.003101	-0.124407	-0.205846	-0.811831	-0.287617
VOAC	0.389325	0.142139	0.881093	-0.060891	0.018108	0.218772
CONCOR	0.432066	0.002210	-0.185361	-0.663829	0.524216	-0.251960
GOVEFF	0.427359	-0.336943	-0.321300	0.068081	-0.007179	0.771955

Correlation Matrix

	POLST	REGQ	ROLW	VOAC	CONCOR	GOVEFF
POLST	1.000000					
REGQ	0.434649	1.000000				
ROLW	0.668198	0.788653	1.000000			
VOAC	0.577156	0.674277	0.745713	1.000000		
CONCOR	0.624699	0.721772	0.883853	0.707748	1.000000	
GOVEFF	0.516613	0.859475	0.858947	0.632999	0.830600	1.000000

Appendix V. Variable Descriptions

Variables	Description	Source
GINI	Gini Index	The World Bank
KGI	KOF Globalisation index	KOF Swiss Economic Institute
ECGI	Economic Globalisation	KOF Swiss Economic Institute
TRGI	Trade Globalisation	KOF Swiss Economic Institute
FIGI	Financial Globalisation	KOF Swiss Economic Institute
INGI	Informational Globalisation	KOF Swiss Economic Institute
CUGI	Cultural Globalisation	KOF Swiss Economic Institute
GOV	PCA of six governance variables (Political Stability and Absence of Violence; Regulatory Quality; Rule of Law; Voice and Accountability; Control of Corruption; Government Effectiveness)	Worldwide Governance Indicators
URP	Urban Population (% of total population)	The World Bank
SSE	School Enrolment, Secondary (% gross)	The World Bank
GDPPC	GDP Per Capita (Constant 2010 US$)	The World Bank
GCAPF	Gross Capital Formation (% of GDP)	The World Bank
GCON	General Government Final Consumption Expenditure (% of GDP)	The World Bank
AGVA	Agriculture, value Added (% of GDP)	The World Bank
INVA	Industry, Value Added (% of GDP)	The World Bank
CRED	PCA of three credit variables (Domestic Credit by Financial Sector; Domestic Credit to Private Sector; Domestic Credit to Private Sectors by Banks)	The World Bank

Note: Detailed descriptions and definitions of the variables can be obtained from the respective sources