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## Globalization and Governance: A Critical Contribution to the Empirics

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# A G D I Working Paper

WP/16/017

## **Globalization and Governance: A Critical Contribution to the Empirics**

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**AGDI Working Paper**

Research Department

**Globalization and Governance: A Critical Contribution to the Empirics****Simplice A. Asongu, Uchenna Efobi & Vanessa S. Tchamyou**

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**Abstract**

This study assesses the effect of globalisation on governance in 51 African countries for the period 1996-2011. Ten bundled and unbundled governance indicators and four globalisation variables are used. The empirical evidence is based on Generalised Method of Moments. The following findings are established. First, on political governance, only social globalisation improves political stability while only economic globalisation does not increase voice & accountability and political governance. Second, with regard to economic governance: (i) only economic globalisation significantly promote regulation quality; (ii) social globalisation and general globalisation significantly advance government effectiveness and (iii) economic globalisation and general globalisation significantly promote economic governance. Third, as concerns institutional governance, whereas only social globalisation improves corruption-control, the effects of globalisation dynamics on the rule of law and institutional governance are not significant. Fourth, the impacts of social globalisation and general globalisation are positive on general governance. It follows that: (i) political governance is driven by voice and accountability compared to political stability; (ii) economic governance is promoted by both regulation quality and government effectiveness from specific globalisation angles and (iii) globalisation does not improve institutional governance for the most part. Theoretical contributions and policy implications are discussed.

*Keywords:* Africa; Governance; Globalization

*JEL Classifications:* F10; F30; I30; O10; O55

## 1. Introduction

This study assesses the effect of globalisation on governance by taking into consideration different dimensions of governance indicators and globalisation variables. It asks two important questions: how does globalisation influence the perceived level of governance in African countries; and what type of globalisation is most important for the development of governance structure within African countries. The positioning of this inquiry is based on two main motivations, notably: the prevailing African poverty and the role of institutions in decreasing this poverty, while considering that globalisation plays an important role in determining the quality of institutions; also, there is a lingering gap in the literature on the interplay between globalisation and governance and this study intends to empirically contribute in this regard.

Focusing on the prevailing rate of poverty in Africa, an April 15<sup>th</sup> World Bank report in 2015 on the Millennium Development Goals (MDGs) has shown that poverty has been decreasing in all world regions with the exception of Africa. About 45% of countries in Sub-Saharan Africa (SSA) are substantially off-track from achieving the MDGs extreme poverty target (Asongu & Kodila-Tedika, 2015; World Bank, 2015). This statistics sharply contrasts with recent evidence that the continent has been enjoying over two decades of resurgence in growth that began in the mid 1990s (see Fosu, 2015a, p. 44). Furthermore, good institutions are crucial in fighting extreme poverty (Fosu, 2015bc)<sup>1</sup> and the ineluctable process of globalisation affects the quality of these institutions (Lalountas et al., 2011; Asongu, 2014)<sup>2</sup>.

Some of the channels through which globalisation affects countries' institutional structure include the transmission of social values and individual value formation that comes from interactions with wide range of backgrounds and nationality (Jensen and Oster, 2009; Berggren and Nilsson, 2015). These values affect individuals' orientation to leadership and can help shape perceptions of governance and institutional structure. Globalisation can also shape checks and balances among countries, such that countries with poor governance are checked by other countries that they have a relationship with. Overall, this action transmits into improved governance structure in countries. More so, with the increasing rate of

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<sup>1</sup> The quality of institutions has been considerably documented to be connected to inclusive growth, notably in: consolidating the foundations of social change (Efobi, 2015) and uplifting living standards via better economic resource management (Fosu, 2013a, b; Fonchingong, 2014; Anyanwu and Erhijakpor, 2014).

<sup>2</sup> It is interesting to note that globalisation is an ineluctable process which can be neglected only at the price of endangering the prosperity of nations (Tchamyou, 2015).

technology advancement that drives globalisation, poor governance actions are able to be tracked and checked. For instance, corrupt practices can now be easily monitored through exchange of information among countries on individuals with corrupt track records. This is also able to reduce the incidence of cross-country corrupt practices.

Despite the predicted positive impact of globalisation on countries' governance structure, there are controversies in literature on the impact of globalisation. For instance, McMillan (2013) observes that the structural changes in Africa may not be caused by globalisation. With technology advancement that comes with globalisation, corruption has also been seen to escalate due to expanding networks of countries and individuals that make complex corrupt practices that are difficult to spot (Goredema, 2009; Shapiro and Levine, 2015). An important observation from some of the critics of globalisation, in relation to countries' governance structure, is that conclusion is reached by considering globalisation as a 'blanket' concept – I.e. the interaction among countries. Such definition of globalisation does not articulate some recent evolutions in the conception of globalisation and does not take into consideration the possibility that there may be differential governance impact if globalisation is disaggregated. Also, and on the other hand, the concept of governance has been employed without a holistic appreciation and measurement. For instance, Kangoye (2013) used 'corruption-control' as 'governance'. On the other hand, the concepts of political governance, economic governance and institutional governance have been employed in the literature (Kaufmann et al., 2007ab) without statistical validity. For instance, it is not appropriate to employ the term political governance unless it translates a variable that is composed of voice and accountability and political stability/no violence. We address this shortcoming by using ten bundled and unbundled governance indicators, namely: political governance (voice & accountability and political stability/no violence); economic governance (government effectiveness and regulation quality); institutional governance (corruption-control and the rule of law) and general governance (economic, political and institutional governances).

The rest of the study is structured as follows. Section 2 discusses the theoretical and empirical evidence on the relationship between governance and globalisation on the one hand and presents the testable hypotheses on the other hand. The data and methodology are presented in Section 3, while Section 4 presents the empirical results and implications. Section 5 concludes with future research directions.

## **2. Theoretical underpinnings and empirical evidence**

This section is discussed in three main strands, namely: (i) the relationship between globalisation and governance, (ii) factors linking globalisation to governance which is engaged in three main streams and (iii) testable hypotheses.

On the nexus between globalisation and governance, the relevant question worth considering is how globalisation influences the perceived level of governance in a country. With regard to Klitgaard (1988), bad governance thrives when monopoly in power is characterised with low accountability and discretion. Incentives to mismanagement and poor governance are not very feasible in societies in which economic activities are predominantly carried out within a perfect competition setting and no singular agent has the means of affecting the price of the good/services he/she buys/sells. Within the same perspective, poor governance can be curbed when economic rents rely on the discretionary power of some public officials and/or when governments as well as economic activities of monopolistic nature are within strict accountability rules (Asongu, 2014a). Political openness to the protestant ethic is generally associated with higher levels of governance (Treisman, 2000; Bonaglia et al., 2001). On the contrary, poor governance is more pervasive in the presence of a federal state, when a country is less open to international trade or when her democratic foundations are still immature (Klitgaard, 1998).

On the factors linking globalisation and governance, according to Krueger (1974) and Bonaglia et al. (2001), trade and financial globalisation could shift the balance between the costs and benefits via the following channels, which are engaged in three streams. The first channel articulates activities of rent-seeking that are caused by restrictions to imports. Contrary to quotas, imports, tariffs and other official permissions generated substantial economic rents because of the monopolistic power they endow to legal importers. In efforts to appropriate such rents, economic agents could compete legally or engage in rent-seeking of illegal nature, black market participation, smuggling, bribery and corruption. It has been demonstrated that such rent-seeking activities prompt an economy to operate at a low threshold of its optimal, generate some form of divergence between social and private cost and hence, engender some cost in welfare in addition to the tariff restrictions (Krueger, 1974). In the studies that followed, the original idea of Kreuger was generalised to a theory of direct unproductive profit-seeking activities (Bhagwati, 1982) and tariffs (Bhagwati & Srinivasan, 1980) in which more arguments were provided in substantiation of trade and capital openness.

Gatti (1999) has assessed linkages between ‘trade restrictions’ and corruption. The author disentangles two impacts of inward-linked policies on corruption, namely, the: foreign competition effect and direct policy distortion. Substantial barriers to international transactions have a direct effect on the ability of public officials to receive bribe from private economic agents in exchange for policy distortion and foreign competition. Moreover, this leads to reduced competition between foreign and domestic firms so that corruption, poor management and rent seeking is high.

Second, evidence has been provided by Ades and Di Tella (1999) for the competition-decreasing channel. The authors have argued that the level of rents from the markets in particular and in general terms, determine the intensity of aspects of poor governance like corruption within an economy. They have further hypothesized that because of changes in the size of rents due to variations in the intensity of competition, competition could have varying impacts on corruption. On the one hand, substantial rents consequent from an environment characterised with low competition can augment the quantity that bureaucrat can obtain as bribes. On the other hand, within such a framework, a society would benefit more by increasing the monitoring and accountability of its bureaucracy. The authors suggest that calculating the correct net effect sign of aspects of bad governance (like corruption) is relevant because of its opposing tendencies. According to the authors, Nigeria illustrates a good example of the positive association between rents and corruption. For more than thirty years, about 80% of the government’s income has been traceable to petroleum exports. Booms in imports and construction have been exclusively favourable to the ruling elite of political parties, hence validating the hypothesis of the connection between rents and bad governance.

A third channel that connects globalisation to governance acknowledges differences in the cost of monitoring public agents because of the substantial level of international integration (Wei, 2000). The underpinning logic here is that enhancing institutional quality and its capacity to improve governance standards substantially depends on the resources that are devoted for the purpose. Accordingly, if a society allocates more in the consolidation of existing institutions and/or building of new ones, more rewards can be expected in terms of lower costs and/or higher benefits. Assuming that compared to domestic producers, foreign producers can more easily divert their investments or exports from one national market to another, it is reasonable to expect that corruption and bad governance are more detrimental to international transactions than to domestic transactions. The differential impact of corruption

induces strong incentives for better governance. Hence, compared to an economy in isolation or autarky, an open economy is more likely to devote more resources to promoting good governance with increasing globalisation.

Lalountas et al. (2011) have shown that when faced with globalisation, higher-income countries are more concerned about the social and political dimensions of globalisation and hence, they benefit from improved corruption-control standards. Conversely, lower-income countries are more focused on the economic dimension of globalisation; hence the incidence on corruption is less apparent. The conclusions of Lalountas et al. (2011) in developing countries have been partially confirmed in African countries by Asongu (2014a). The current inquiry extends the underlying literature within three main perspectives. First, we bundle and unbundle institutions using ten governance indicators. It is interesting to note that the underlying studies are exclusively based on the corruption aspect of institutions. Second, the empirical strategy is based on Generalised Method of Moments (GMM) with forward orthogonal deviations as opposed to the Instrumental Variable Two-Stage-Least Squares used by the underlying authors. Third, our conception of globalisation is more holistic because social, political, economic and general dimensions of globalisation are critically engaged.

In the light of the above contribution, the following testable hypotheses are investigated in the empirics.

*Hypothesis 1:* Economic, social and political globalisations improve political governance and its constituents (voice & accountability and political stability/no violence).

*Hypothesis 2:* Economic, social and political globalisations improve economic governance and its constituents (government effectiveness and regulation quality).

*Hypothesis 3:* Economic, social and political globalisations improve institutional governance and its constituents (rule of law and corruption-control).

*Hypothesis 4:* Economic, social and political globalisations improve general governance.

### **3. Data and Methodology**

#### **3.1 Data**

This paper assesses a panel of 51 African countries with data from Dreher et al. (2010), World Development and World Governance Indicators of the World Bank for period 1996-2011. The sampled periodicity is constrained by data availability. The dependent variables which are from World Governance indicators are: political governance (consisting



of political stability/no violence and voice & accountability); economic governance (entailing government effectiveness and regulation quality); institutional governance (made of corruption-control and the rule of law) and general governance (including political governance, economic governance and institutional governance). The bundling exercise which is done by principal component analysis is discussed in Section 3.1.2.

The independent variables of interest are globalisation indicators from Greher et al. (2008) and include: social globalisation, economic globalisation, political globalisation and general globalisation. The control variables from World Development Indicators are: Gross Domestic Product (GDP) growth; foreign aid, public investment, inflation and the lagged dependent variable. We observe from a preliminary assessment that controlling for more than four variables leads to instrument proliferation that biases estimated models.

Consistent with Asongu and Nwachukwu (2016a), we expect GDP growth to positively affect governance because higher-income nations have been documented to be associated with better governance structures. According to the same authors, chaotic inflation should reduce governance standards because *inter alia*, it may be associated with: (i) political instability, (ii) high corruption by public officials to compensate for decreasing purchasing power and (iii) disrespect of the rule of law. The effects of public investment and foreign aid on governance are debatable. For instance, whereas Okada and Samreth (2012) have established a negative nexus with corruption in developing countries, Asongu and Nwachukwu (2016b) have concluded on negative effects from foreign aid to the six good governance indicators from Kaufmann et al. (2010). The effect of public investment depends on among others, the governance dynamic and how disbursed funds are managed. For instance, funds destined to improve public commodities may improve economic governance whereas if the disbursements of underlying funds are linked to mismanagement and corruption, the effect on institutional governance is likely to be negative.

The definition and sources of variables is provided in Appendix 1, the summary statistics in Appendix 2 while the correlation matrix is disclosed in Appendix 3. As apparent in Appendix 3, some of the control variables are not used because of concerns of multicollinearity. Accordingly, in addition of the discussed issue of overidentification or instrument proliferation when more than four control variables are employed, some control variables are not employed because of the high degrees of substitution with selected control variables. The unused control variables include: secondary school enrolment; mobile phone penetration and population growth.

## 3.2 Methodology

### 3.2.1 Principal Component Analysis (PCA)

The paper uses PCA to bundle the six governance variables from Kaufmann et al. (2010) into four composite variables, namely: political, economic, institutional and general governances. This technique has been applied in recent African institutional literature (see Asongu & Nwachukwu, 2016a). The PCA is a method in statistics that is used to reduce a set of highly correlated indicators into a smaller set of uncorrelated composite variables called principal components (PCs). These PCs are representative of a substantial variation or in the original dataset. Within this framework, six governance indicators are reduced into a general governance indicator or a single common factor. The resulting governance indicator represents three governance indicators, namely: political (voice & accountability and political stability), economic (regulation quality and government effectiveness) and institutional (corruption-control and the rule of law) governances. Institutional governance is the respect by citizens and the State of institutions that govern interactions between them. Economic governance is the formulation and implementation of policies that deliver public goods and services. Political governance is the election and replacement of political leaders.

The criterion used to retain common factors is from Jolliffe (2002) and Kaiser (1974). The authors recommend that only common factors that have an eigenvalue that is higher than the mean or one should be retained. From Table 1 it is apparent that General governance (G.Gov) has an eigenvalue of 4.787 and represents more than 79% of variability in the six governance indicators. Within the same framework, institutional governance (Instgov), political governance (Polgov) and economic governance (Ecogov) have total variations (eigenvalues) of 93.3%, 82.3% and 93.1% (1.867, 1.647 and 1.863) respectively.

**Table 1: Principal Component Analysis (PCA) for Governance (Gov)**

Principal Components	Component Matrix(Loadings)						Proportion	Cumulative Proportion	Eigen Value
	VA	PS	RQ	GE	RL	CC			
First PC (G.Gov)	0.385	0.370	0.412	0.426	0.440	0.412	0.797	0.797	4.787
Second PC	0.093	0.850	-0.364	-0.343	0.007	-0.140	0.072	0.870	0.437
Third PC	0.862	-0.179	0.122	-0.192	-0.182	-0.373	0.058	0.929	0.353
First PC (Polgov)	0.707	0.707	---	---	---	---	0.823	0.823	1.647
Second PC	-0.707	0.707	---	---	---	---	0.176	1.000	0.352
First PC (Ecogov)	---	---	0.707	0.707	---	---	0.931	0.931	1.863
Second PC	---	---	-0.707	0.707	---	---	0.068	1.000	0.137
First PC (Instgov)	---	---	---	---	0.707	0.707	0.933	0.933	1.867
Second PC	---	---	---	---	-0.707	0.707	0.066	1.000	0.132

P.C: Principal Component. VA: Voice & Accountability. RL: Rule of Law. R.Q: Regulation Quality. GE: Government Effectiveness. PS: Political Stability. CC: Control of Corruption. G.Gov (General Governance): First PC of VA, PS, RQ, GE, RL & CC. Polgov (Political Governance): First PC of VA & PS. Ecogov (Economic Governance): First PC of RQ & GE. Instgov (Institutional Governance): First PC of RL & CC.

It is important to note that some concerns have been raised on the quality of variables that are derived from primary regressions. As recently documented by Asongu and Nwachukwu (2016a), the issues are related to the consistency and efficiency of estimated coefficients as well as to the validity of inferences based on the estimated coefficients. According to Pagan (1984, p. 242), whereas *two-step* estimators are consistent and efficient, only few references that are valid can be drawn. The concern is broadly consistent with the bulk of literature on the subject (Oxley & McAleer, 1993; McKenzie & McAleer, 1997; Ba & Ng, 2006; Westerlund & Urbain, 2013a).

Within the framework of PC-augmented variables used in this study, Westerlund and Urbain (2012, 2013b) have built on previous studies (Pesaran, 2006; Stock & Watson, 2002; Bai, 2003; Bai, 2009; Greenaway-McGrevy et al., 2012) to conclude that normal inferences can be made from PC-augmented regressions so long as estimated coefficients converge to their true values at the rate  $\sqrt{NT}$ , (where T is the number of time series and N denotes the number of cross-sections). They have gone further to emphasise that for such convergence to take place; N and T should be sufficiently large. Unfortunately, to the best of our knowledge, there is no specificity of how 'large is sufficiently large'. In the light of this factor, two concerns are relevant to this inquiry. On the one hand, it is not likely to further stretch N because 51 countries in Africa are engaged. On the other hand, it is also not very likely to extend T because of three main reasons: (i) it is at the risk of compromising the validity of specifications since it will result in instrument proliferation that will bias estimated results; (ii) the starting year of the sample of 1996 cannot be extended downward because governance indicators from the World Bank are only available from 1996 and (iii) the periodicity ends in 2011 due to data availability constraints. Within the framework of empirical literature, valid inferences have been derived from PC-augmented empirics that have used far lower N and T, namely: countries in the MENA (Middle East & North Africa) on the one hand (Asongu & Nwachukwu, 2016a) and on the other hand countries of the BRICS (Brazil, Russia, India, China & South Africa) and MINT (Mexico, Indonesia, Nigeria & Turkey) countries (Asongu, 2016a).

### 3.2.2 Generalised Method of Moments

There are six fundamental justifications for the adoption of the GMM empirical strategy. Whereas the first-two consists of requirements for adopting the strategy, the last-four are advantages that are associated with the strategy. First, the procedure of estimation is a plausible fit because governance is persistent. In essence, the correlation between the governance variables and their corresponding first lagged values is higher than the rule of thumb threshold of 0.800 for persistence in a dependent variable. Second, the number of years per country (T) is lower than the number of countries (N). Therefore, the T(16)<N(51) condition for GMM application is also satisfied. Third, the estimation technique enables the control for endogeneity in all regressors. Fourth, cross-country differences are not eliminated with the technique. Fifth, biases from small samples are accounted for by the system estimator. Sixth, it is principally for this fifth reason that Bond et al. (2001, pp. 3-4) have recommended that the *system* GMM estimator (Arellano & Bover, 1995; Blundell & Bond, 1998) is a better fit compared to the *difference* estimator from Arellano and Bond (1991).

In this study, we adopt the Roodman (2009ab) extension of Arellano and Bover (1995) that employs forward orthogonal deviations in place of first differences. The approach has been established to: (i) limit the proliferation of instruments and (ii) control for cross-country dependence (see Baltagi, 2008; Love & Zicchino, 2006). A *two-step* procedure is adopted because it accounts for heteroscedasticity because the *one-step* procedure is homoscedasticity-consistent.

The following equations in levels (1) and first difference (2) summarize the standard system GMM estimation procedure.

$$Gov_{i,t} = \sigma_0 + \sigma_1 Gov_{i,t-\tau} + \sigma_2 Glob_{i,t} + \sum_{h=1}^4 \delta_h W_{h,i,t-\tau} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (1)$$

$$Gov_{i,t} - Gov_{i,t-\tau} = \sigma_0 + \sigma_1 (Gov_{i,t-\tau} - Gov_{i,t-2\tau}) + \sigma_2 (Glob_{i,t} - Glob_{i,t-\tau}) + \sum_{h=1}^4 \delta_h (W_{h,i,t-\tau} - W_{h,i,t-2\tau}) + (\xi_t - \xi_{t-\tau}) + \varepsilon_{i,t-\tau} \quad (2)$$

Where:  $Gov_{i,t}$  is governance (political, economic, institutional and general) of country  $i$  at period  $t$ ;  $\alpha$  is a constant;  $\tau$  represents tau;  $Glob$ , denotes globalisation which may be economic, political, social or general;  $W$  is the vector of control variables (*GDP growth, foreign aid, public investment and inflation*),  $\eta_i$  is the country-specific effect,  $\xi_t$  is the time-specific constant and  $\varepsilon_{i,t}$  the error term.

### 3.2.3 Identification and exclusion restriction

Following recent literature, all the independent variables are treated as predetermined or suspected endogenous variables (Love & Zicchino, 2006; Dewan & Ramaprasad, 2014; Asongu & De Moor, 2016). Therefore the *gmmstyle* is employed for them. Hence, only years are considered as exogenous and the procedure for treating the *ivstyle* (years) is ‘iv(years, eq(diff))’ because it is not feasible for years be endogenous in first-difference (see Roodman, 2009b).

To tackle the issue of simultaneity, lagged regressors are used as instruments for forward-differenced indicators. Helmert transformations are also performed for the regressors in order to remove fixed effects that are likely to influence the examined relationships (Arellano & Bover, 1995; Love & Zicchino, 2006). These transformations consist of forward mean-differencing of the variables: as opposed to the process of deducting previous observations from present observations (see Roodman, 2009b, p. 104), the mean of all future observations is subtracted from the variables. Such transformation enables parallel or orthogonal conditions between forward-differenced variables and lagged values. Regardless of the number of lags, data loss is minimised by loss, with the exception of the last observation in cross sections, the underlying transformation are computable for all observations “*And because lagged observations do not enter the formula, they are valid as instruments*” (Roodman (2009b, p. 104).

In the study, it is further argued that ‘years’ which are considered as strictly exogenous influence governance exclusively via the endogenous explaining variables. As shown by Asongu and De Moor (2016), the statistical validity of this his exclusion restriction is examined with the Difference in Hansen Test (DHT) for the exogeneity of instruments. Accordingly, the null hypothesis of the DHT is the position that the ‘years’ (or instruments) are strictly exogenous. Hence, the alternative hypothesis should be rejected for the instruments to explain governance exclusively via the endogenous explaining variables. It is important to note that, in the standard instrumental variable (IV) technique, the validity of instruments is confirmed by the failure to reject the null hypothesis of the Sargan Over-identifying Restrictions (OIR) test, which is an indication that the instruments do not explain the governance beyond engaged channels of explaining variables.

Whereas this information criterion is used when the IV strategy is employed in the literature (see Beck et al., 2003; Asongu & Nwachukwu, 2016b), the DHT in the GMM strategy is employed to investigate if years exhibit strict exogeneity, by not explaining the

outcome variable beyond the proposed endogenous explaining variables or channels. Therefore, in the section that follows the findings reported would confirm the validity of the exclusion restriction if the null hypotheses of DHT corresponding to IV (year, eq(diff)) are not rejected.

## **4. Empirical results and discussion of results**

### **4.1 Presentation of results**

Table 2, Table 3, Table 4 and Table 5 respectively present findings for political governance, economic governance, institutional governance and general governance. Table 2, Table 3, Table 4 and Table 5 also respectively investigate Hypothesis 1, Hypothesis 2, Hypothesis 3 and Hypothesis 4. There are four specifications corresponding to each globalisation dynamic for each governance dimension. Consistent with recent literature on the application of the GMM with forward orthogonal deviations, four information criteria are used to investigate the validity of estimated models<sup>3</sup>.

The following findings can be established for Table 2 on the linkages between political governance and globalisation. (i) Only social globalisation significantly improves political stability. (ii) Only economic globalisation does not significantly increase voice & accountability and political governance. (iii) The significant control variables have expected signs for the most part.

The following findings can be established for Table 3 on the linkages between economic governance and globalisation. (i) Only economic globalisation significantly improves regulation quality. (ii) Social globalisation and general globalisation significantly increase government effectiveness. (iii) Economic globalisation and general globalisation significantly improve economic governance.

The following findings can be established for Table 4 on the linkages between institutional governance and globalisation. While only social globalisation improves corruption-control, the effects of globalisation dynamics on the rule of law and institutional

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<sup>3</sup>“Four main information criteria are used to assess the validity of the estimated models. First, the null hypothesis of the second-order Arellano and Bond autocorrelation test (AR(2)) in difference for the absence of autocorrelation in the residuals should not be rejected. Second the Sargan and Hansen OIR tests should not be significant because their null hypotheses are the positions that instruments are valid or not correlated with the error terms. In essence, whereas the Sargan OIR test is not robust but not weakened by instruments, the Hansen OIR is robust but weakened by instruments. In order to restrict identification or limit the proliferation of instruments, we have ensured that instruments are lower than the number of cross-sections in most specifications. Third, the DHT for exogeneity of instruments is also employed to assess the validity of results from the Hansen OIR test. Fourth, a Fischer test for the joint validity of estimated coefficients is also provided” (Asongu & De Moor, 2016, p. 21).

governance are not significant. In Table 5 on the linkages between general governance and globalisation, the effects of social globalisation and general globalisation are significantly positive.

**Table 2: Political Governance and Globalisation (for Hypothesis 1)**

	Dependent Variable: Political Governance											
	Political Stability (PS)				Voice & Accountability (VA)				Political Governance (Polgov)			
	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob
Constant	-0.280 (0.162)	-0.036 (0.834)	<b>-0.438***</b> (0.002)	-0.577 (0.136)	-0.102 (0.172)	-0.044 (0.709)	<b>-0.298***</b> (0.001)	<b>-0.550***</b> (0.000)	<b>-0.206*</b> (0.090)	0.052 (0.778)	<b>-0.559***</b> (0.002)	<b>-0.581***</b> (0.007)
PS (-1)	<b>0.817***</b> (0.000)	<b>0.964***</b> (0.000)	<b>0.752***</b> (0.000)	---	---	---	---	---	---	---	---	---
VA (-1)	---	---	---	---	<b>1.019***</b> (0.000)	<b>0.841***</b> (0.000)	<b>0.992***</b> (0.000)	<b>1.004***</b> (0.000)	---	---	---	---
Polgov(-1)	---	---	---	---	---	---	---	---	<b>0.958***</b> (0.000)	<b>0.893***</b> (0.000)	<b>0.881***</b> (0.000)	<b>0.919***</b> (0.000)
Political Glob.	0.003 (0.195)	---	---	---	<b>0.002**</b> (0.028)	---	---	---	<b>0.004***</b> (0.004)	---	---	---
Economic Glob.	---	-0.001 (0.600)	---	---	---	-0.0002 (0.908)	---	---	---	-0.001 (0.632)	---	---
Social Glob.	---	---	<b>0.008**</b> (0.016)	---	---	---	<b>0.007***</b> (0.003)	---	---	---	<b>0.016***</b> (0.001)	---
Globalisation(Glob)	---	---	---	0.008 (0.243)	---	---	---	<b>0.012***</b> (0.000)	---	---	---	<b>0.015***</b> (0.001)
GDP growth	<b>0.006***</b> (0.001)	<b>0.010***</b> (0.000)	<b>0.007***</b> (0.000)	<b>0.007***</b> (0.000)	<b>0.002*</b> (0.090)	0.002 (0.101)	<b>0.003**</b> (0.017)	<b>0.003*</b> (0.055)	<b>0.006***</b> (0.005)	<b>0.011***</b> (0.000)	<b>0.008***</b> (0.001)	<b>0.004**</b> (0.048)
Foreign aid	<b>-0.001**</b> (0.035)	0.0003 (0.706)	-0.0006 (0.481)	<b>-0.001**</b> (0.036)	<b>0.0008*</b> (0.061)	<b>0.001**</b> (0.013)	<b>0.002***</b> (0.001)	<b>0.001**</b> (0.023)	0.0005 (0.935)	0.001 (0.285)	<b>0.003***</b> (0.003)	-0.000 (0.996)
Public Invt.	0.007 (0.136)	0.002 (0.704)	0.0006 (0.905)	0.006 (0.254)	0.001 (0.581)	<b>-0.006**</b> (0.035)	-0.0007 (0.663)	<b>0.005***</b> (0.007)	0.003 (0.196)	-0.002 (0.648)	-0.001 (0.754)	<b>0.007**</b> (0.041)
Inflation	<b>-0.000***</b> (0.000)	<b>-0.000**</b> (0.014)	<b>-0.000***</b> (0.000)	<b>-0.000***</b> (0.000)	0.000 (0.141)	<b>-0.000***</b> (0.000)	-0.000 (0.656)	<b>0.000*</b> (0.096)	<b>-0.000***</b> (0.003)	<b>-0.000***</b> (0.007)	<b>-0.000***</b> (0.000)	<b>-0.000***</b> (0.006)
AR(1)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
AR(2)	<b>(0.640)</b>	<b>(0.525)</b>	<b>(0.548)</b>	<b>(0.650)</b>	<b>(0.545)</b>	<b>(0.443)</b>	<b>(0.720)</b>	<b>(0.319)</b>	<b>(0.666)</b>	<b>(0.868)</b>	<b>(0.524)</b>	<b>(0.824)</b>
Sargan OIR	<b>(0.285)</b>	<b>(0.193)</b>	<b>(0.677)</b>	<b>(0.400)</b>	<b>(0.242)</b>	<b>(0.076)</b>	<b>(0.716)</b>	<b>(0.385)</b>	<b>(0.149)</b>	<b>(0.040)</b>	<b>(0.473)</b>	<b>(0.160)</b>
Hansen OIR	<b>(0.238)</b>	<b>(0.336)</b>	<b>(0.497)</b>	<b>(0.427)</b>	<b>(0.312)</b>	<b>(0.263)</b>	<b>(0.595)</b>	<b>(0.504)</b>	<b>(0.085)</b>	<b>(0.231)</b>	<b>(0.267)</b>	<b>(0.061)</b>
DHT for instruments												
(a) Instruments in levels												
H excluding group	<b>(0.792)</b>	<b>(0.832)</b>	<b>(0.666)</b>	<b>(0.761)</b>	<b>(0.645)</b>	<b>(0.510)</b>	<b>(0.557)</b>	<b>(0.575)</b>	<b>(0.821)</b>	<b>(0.704)</b>	<b>(0.612)</b>	<b>(0.727)</b>
Dif(null, H=exogenous)	<b>(0.101)</b>	<b>(0.167)</b>	<b>(0.352)</b>	<b>(0.246)</b>	<b>(0.190)</b>	<b>(0.190)</b>	<b>(0.522)</b>	<b>(0.406)</b>	<b>(0.024)</b>	<b>(0.114)</b>	<b>(0.163)</b>	<b>(0.020)</b>
(b) IV (years, eq(diff))												
H excluding group	<b>(0.793)</b>	<b>(0.347)</b>	<b>(0.570)</b>	<b>(0.741)</b>	(0.060)	<b>(0.471)</b>	<b>(0.341)</b>	<b>(0.296)</b>	<b>(0.516)</b>	<b>(0.178)</b>	<b>(0.245)</b>	<b>(0.657)</b>
Dif(null, H=exogenous)	<b>(0.048)</b>	<b>(0.386)</b>	<b>(0.357)</b>	<b>(0.168)</b>	<b>(0.967)</b>	<b>(0.163)</b>	<b>(0.789)</b>	<b>(0.712)</b>	<b>(0.025)</b>	<b>(0.114)</b>	<b>(0.373)</b>	<b>(0.009)</b>
Fisher Instruments	<b>219.82***</b>	<b>178.46***</b>	<b>206.83***</b>	<b>219.25***</b>	<b>3048.4***</b>	<b>403.01***</b>	<b>1424.7***</b>	<b>881.53***</b>	<b>1605.0***</b>	<b>495.25***</b>	<b>1314.9***</b>	<b>2211.4***</b>
Countries	30	30	30	30	30	30	30	30	30	30	30	30
Observations	45	41	45	45	45	41	45	45	45	41	45	45
	332	308	332	332	332	308	332	332	332	308	332	332

\*\*\*, \*\*, \*: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

**Table 3: Economic Governance and Globalisation (for Hypothesis 2)**

	Economic Governance (Dependent Variable)											
	Regulation Quality (RQ)				Government Effectiveness (GE)				Economic Governance (Ecogov)			
	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob
Constant	0.037 (0.648)	-0.297 (0.001)	-0.132 (0.159)	<b>-0.186*</b> ( <b>0.096</b> )	-0.124 (0.132)	<b>-0.172*</b> ( <b>0.085</b> )	<b>-0.301**</b> ( <b>0.013</b> )	<b>-0.227**</b> ( <b>0.040</b> )	-0.067 (0.315)	<b>-0.171*</b> ( <b>0.090</b> )	-0.061 (0.674)	-0.172 (0.322)
RQ (-1)	<b>0.844***</b> ( <b>0.000</b> )	<b>0.848***</b> ( <b>0.000</b> )	<b>0.866***</b> ( <b>0.000</b> )	<b>0.815***</b> ( <b>0.000</b> )	---	---	---	---	---	---	---	---
GE (-1)	---	---	---	---	<b>0.874***</b> ( <b>0.000</b> )	<b>0.841***</b> ( <b>0.000</b> )	<b>0.881***</b> ( <b>0.000</b> )	<b>0.901***</b> ( <b>0.000</b> )	---	---	---	---
Ecogov(-1)	---	---	---	---	---	---	---	---	<b>0.915***</b> ( <b>0.000</b> )	<b>0.951***</b> ( <b>0.000</b> )	<b>0.887***</b> ( <b>0.000</b> )	<b>0.947***</b> ( <b>0.000</b> )
Political Glob.	-0.001 (0.138)	---	---	---	0.001 (0.375)	---	---	---	0.001 (0.240)	---	---	---
Economic Glob.	---	<b>0.004**</b> ( <b>0.028</b> )	---	---	---	0.001 (0.383)	---	---	---	<b>0.003**</b> ( <b>0.044</b> )	---	---
Social Glob.	---	---	0.0007 (0.765)	---	---	---	<b>0.006**</b> ( <b>0.024</b> )	---	---	---	0.003 (0.375)	---
Globalisation(Glob)	---	---	---	0.001 (0.470)	---	---	---	<b>0.005*</b> ( <b>0.062</b> )	---	---	---	<b>0.947***</b> ( <b>0.000</b> )
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR(1)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AR(2)	<b>(0.167)</b>	<b>(0.169)</b>	<b>(0.142)</b>	<b>(0.151)</b>	<b>(0.139)</b>	<b>(0.148)</b>	<b>(0.125)</b>	<b>(0.131)</b>	<b>(0.131)</b>	<b>(0.128)</b>	<b>(0.134)</b>	<b>(0.111)</b>
Sargan OIR	<b>(0.505)</b>	<b>(0.035)</b>	<b>(0.124)</b>	<b>(0.503)</b>	<b>(0.458)</b>	<b>(0.215)</b>	<b>(0.799)</b>	<b>(0.416)</b>	<b>(0.282)</b>	<b>(0.060)</b>	<b>(0.291)</b>	<b>(0.164)</b>
Hansen OIR	<b>(0.414)</b>	<b>(0.203)</b>	<b>(0.590)</b>	<b>(0.522)</b>	<b>(0.494)</b>	<b>(0.625)</b>	<b>(0.729)</b>	<b>(0.619)</b>	<b>(0.206)</b>	<b>(0.164)</b>	<b>(0.254)</b>	<b>(0.240)</b>
DHT for instruments												
(a) Instruments in levels												
H excluding group	<b>(0.463)</b>	<b>(0.223)</b>	<b>(0.236)</b>	<b>(0.434)</b>	<b>(0.595)</b>	<b>(0.594)</b>	<b>(0.542)</b>	<b>(0.606)</b>	<b>(0.376)</b>	<b>(0.635)</b>	<b>(0.269)</b>	<b>(0.407)</b>
Dif(null, H=exogenous)	<b>(0.368)</b>	<b>(0.267)</b>	<b>(0.773)</b>	<b>(0.513)</b>	<b>(0.384)</b>	<b>(0.535)</b>	<b>(0.699)</b>	<b>(0.520)</b>	<b>(0.182)</b>	<b>(0.083)</b>	<b>(0.301)</b>	<b>(0.206)</b>
(b) IV (years, eq(diff))												
H excluding group	<b>(0.980)</b>	<b>(0.600)</b>	<b>(0.476)</b>	<b>(0.830)</b>	<b>(0.413)</b>	<b>(0.417)</b>	<b>(0.413)</b>	<b>(0.329)</b>	<b>(0.938)</b>	<b>(0.736)</b>	<b>(0.271)</b>	<b>(0.708)</b>
Dif(null, H=exogenous)	<b>(0.050)</b>	<b>(0.071)</b>	<b>(0.596)</b>	<b>(0.189)</b>	<b>(0.515)</b>	<b>(0.706)</b>	<b>(0.857)</b>	<b>(0.802)</b>	<b>(0.019)</b>	<b>(0.032)</b>	<b>(0.314)</b>	<b>(0.066)</b>
Fisher	<b>3092.9***</b>	<b>3999.0***</b>	<b>4581.9***</b>	<b>2266.1***</b>	<b>678.07***</b>	<b>892.87***</b>	<b>746.56***</b>	<b>479.02***</b>	<b>1288.2***</b>	<b>738.85***</b>	<b>1097.2***</b>	<b>1424.6***</b>
Instruments	30	30	30	30	31	31	31	31	30	30	30	30
Countries	45	41	45	45	45	41	45	45	45	41	45	45
Observations	332	308	332	332	365	340	365	365	332	308	332	332

\*, \*\*, \*\*\*: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.



**Table 4: Institutional Governance and Globalisation (for Hypothesis 3)**

Panel B: Institutional Governance (Dependent Variable)												
	Corruption-Control (CC)				Rule of Law (RL)				Institutional Governance (Instgov)			
	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob	Polglob	Ecoglob	Socioglob	Glob
Constant	<b>-0.269**</b> (0.046)	-0.053 (0.676)	<b>-0.300**</b> (0.020)	-0.364 (0.115)	<b>-0.153**</b> (0.041)	-0.133 (0.255)	-0.105 (0.443)	-0.225 (0.121)	-0.239 (0.240)	0.016 (0.942)	-0.305 (0.187)	-0.332 (0.256)
CC (-1)	<b>0.832***</b> (0.000)	<b>0.797***</b> (0.000)	<b>0.877***</b> (0.000)	<b>0.805***</b> (0.000)	---	---	---	---	---	---	---	---
RL (-1)	---	---	---	---	<b>0.948***</b> (0.000)	<b>0.867***</b> (0.000)	0.001 (0.685)	<b>0.961***</b> (0.000)	---	---	---	---
Instgov(-1)	---	---	---	---	---	---	---	---	<b>0.927***</b> (0.000)	<b>0.895***</b> (0.000)	<b>0.907***</b> (0.000)	<b>0.918***</b> (0.000)
Political Glob.	0.002 (0.182)	---	---	---	0.001 (0.110)	---	---	---	0.003 (0.269)	---	---	---
Economic Glob.	---	-0.002 (0.318)	---	---	---	0.0009 (0.663)	---	---	---	0.0004 (0.928)	---	---
Social Glob.	---	---	<b>0.007**</b> (0.028)	---	---	---	0.001 (0.685)	---	---	---	0.007 (0.303)	---
Globalisation(Glob)	---	---	---	0.005 (0.244)	---	---	---	0.003 (0.246)	---	---	---	0.007 (0.262)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR(1)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
AR(2)	<b>(0.500)</b>	<b>(0.644)</b>	<b>(0.596)</b>	<b>(0.523)</b>	<b>(0.434)</b>	<b>(0.430)</b>	<b>(0.402)</b>	<b>(0.443)</b>	<b>(0.281)</b>	<b>(0.330)</b>	<b>(0.293)</b>	<b>(0.279)</b>
Sargan OIR	<b>(0.771)</b>	<b>(0.791)</b>	<b>(0.356)</b>	<b>(0.814)</b>	(0.029)	(0.008)	(0.093)	(0.014)	<b>(0.277)</b>	<b>(0.205)</b>	<b>(0.178)</b>	<b>(0.246)</b>
Hansen OIR	<b>(0.181)</b>	<b>(0.465)</b>	<b>(0.279)</b>	<b>(0.414)</b>	<b>(0.296)</b>	<b>(0.135)</b>	<b>(0.385)</b>	<b>(0.280)</b>	<b>(0.376)</b>	<b>(0.498)</b>	<b>(0.345)</b>	<b>(0.256)</b>
DHT for instruments												
(a) Instruments in levels												
H excluding group	<b>(0.796)</b>	<b>(0.865)</b>	<b>(0.696)</b>	<b>(0.897)</b>	<b>(0.187)</b>	<b>(0.063)</b>	<b>(0.425)</b>	<b>(0.136)</b>	<b>(0.416)</b>	<b>(0.491)</b>	<b>(0.937)</b>	<b>(0.582)</b>
Dif(null, H=exogenous)	(0.069)	<b>(0.236)</b>	<b>(0.150)</b>	<b>(0.185)</b>	<b>(0.444)</b>	<b>(0.378)</b>	<b>(0.358)</b>	<b>(0.495)</b>	<b>(0.356)</b>	<b>(0.447)</b>	<b>(0.128)</b>	<b>(0.162)</b>
(b) IV (years, eq(diff))												
H excluding group	<b>(0.248)</b>	<b>(0.423)</b>	<b>(0.134)</b>	<b>(0.275)</b>	<b>(0.112)</b>	<b>(0.820)</b>	<b>(0.270)</b>	<b>(0.208)</b>	<b>(0.277)</b>	<b>(0.828)</b>	<b>(0.412)</b>	<b>(0.413)</b>
Dif(null, H=exogenous)	<b>(0.218)</b>	<b>(0.463)</b>	<b>(0.646)</b>	<b>(0.591)</b>	<b>(0.758)</b>	<b>(0.017)</b>	<b>(0.550)</b>	<b>(0.462)</b>	<b>(0.526)</b>	<b>(0.172)</b>	<b>(0.301)</b>	<b>(0.190)</b>
Fisher	<b>534.05***</b>	<b>443.80***</b>	<b>890.26***</b>	<b>711.43***</b>	<b>3129.7***</b>	<b>874.54***</b>	<b>2559.8***</b>	<b>1739.0***</b>	<b>1462.4***</b>	<b>469.22***</b>	<b>1611.4***</b>	<b>742.47***</b>
Instruments	30	30	30	30	30	30	30	30	30	30	30	30
Countries	45	41	45	45	45	41	45	45	45	41	45	45
Observations	332	308	332	332	332	308	332	332	332	308	332	332

\*, \*\*, \*\*\*: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

**Table 5: General Governance and Globalisation (for Hypothesis 4)**

	Dependent variable: General Governance (G.Gov)			
	Polglob	Ecoglob	Socioglob	Glob
Constant	-0.149 (0.367)	-0.007 (0.977)	<b>-0.526*</b> (0.051)	-0.464 (0.122)
G.Gov (-1)	<b>0.976***</b> (0.000)	<b>0.939***</b> (0.000)	<b>0.960***</b> (0.000)	<b>0.951***</b> (0.000)
Political Glob.	0.002 (0.249)	---	---	---
Economic Glob.	---	0.0004 (0.936)	---	---
Social Glob.	---	---	<b>0.015**</b> (0.041)	---
Globalisation(Glob)	---	---	---	<b>0.009***</b> (0.000)
Control Variables	Yes	Yes	Yes	Yes
AR(1)	(0.000)	(0.000)	(0.000)	(0.000)
AR(2)	<b>(0.190)</b>	<b>(0.312)</b>	<b>(0.186)</b>	<b>(0.208)</b>
Sargan OIR	<b>(0.356)</b>	(0.072)	<b>(0.192)</b>	<b>(0.295)</b>
Hansen OIR	<b>(0.128)</b>	<b>(0.268)</b>	<b>(0.108)</b>	(0.051)
DHT for instruments				
(a) Instruments in levels				
H excluding group	<b>(0.604)</b>	<b>(0.506)</b>	<b>(0.490)</b>	<b>(0.601)</b>
Dif(null, H=exogenous)	(0.063)	<b>(0.196)</b>	(0.065)	(0.020)
(b) IV (years, eq(diff))				
H excluding group	<b>(0.219)</b>	<b>(0.248)</b>	<b>(0.123)</b>	<b>(0.367)</b>
Dif(null, H=exogenous)	<b>(0.157)</b>	<b>(0.370)</b>	<b>(0.236)</b>	(0.022)
Fisher	<b>6750.74***</b>	<b>8584.29***</b>	<b>9145.62***</b>	<b>4087.33***</b>
Instruments	30	30	30	30
Countries	45	41	45	45
Observations	332	308	332	332

\*, \*\*, \*\*\*: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

## 4.2 Further discussion of results and policy implications

### 4.2.1 Retrospect to tested hypothesis, theoretical contributions and policy implications

We set out to test four hypotheses that are linked to each dimension of governance, namely: political governance, economic governance, institutional governance and general governance for *Hypothesis 1*, *Hypothesis 2*, *Hypothesis 3* and *Hypothesis 4* respectively. From a broad perspective, with the exception of *Hypothesis 3* that is only mildly confirmed, all the tested hypotheses are validated. However, the incidences of globalisation on the governance variables differ in terms of specificities of globalisation and governance. The specificities of globalisation variables cannot be overly emphasised because they obtained

from Greher et al. (2008). Conversely, the theoretical contributions of this study are apparent in the differences in effects between composite governance variables obtained by means by principal component analysis and their constituents. The theoretical contribution builds on conceptual clarifications. As discussed in the introduction, it is conceptually flawed to use concepts of governance (political, economic, institutional, *inter alia*) without some statistical validity. We have consistently noticed that when the globalisation dynamic significantly affects a composite indicator of governance, the effect on constituent governance indicators is not consistent. In the same vein, the positive effects on constituent indicators of a composite governance variable may not be reflected in the composite governance variable. In the paragraphs that follow, we engage specific findings by articulating three main peculiarities, notably: (i) political governance is driven by voice and accountability compared to political stability and (ii) economic governance is driven by both government effectiveness and regulation quality from specific angles of globalisation (more insights into *Hypothesis 2*)

First, the fact that in the globalisation-‘political governance’ nexus, political governance is driven fundamentally by ‘voice & accountability’ (compared to political stability) can be explained on two counts. On the one hand, the Washington Consensus has fundamentally articulated the concept of governance to reflect political governance and democratic processes. Hence, it is not surprising that the criteria used to collect data for the globalisation variables may be framed toward influencing more of ‘voice and accountability’ than of political stability/non violence. Hence, the theoretical constructs of globalisation and democratic processes emphasising ‘voice & accountability’ overlap by design. In addition to the six meanings of governance clearly discussed by the influential paper of Rhodes (1996), the seventh meaning of governance we are discussing is what escaped Rhodes’ attention. Simply put, governance was a ‘code word’ used to promote democracy. This is the reason why indicators (such as voice and accountability) used by Kaufmann and his collaborators in the various ‘governance matters’ publications have been for all practical purposes measures of democracy (Kaufmann et al., 2010a, 2010b). The interested reader can also find more insights from criticism by Kurtz and Schrank (2007a, 2007b). This narrative which consistent with the definition of the Washington Consensus (WC) which is designed to prioritise political governance, contrary the Beijing Model (BM) which prioritises economic governance: “... defines the WC as liberal democracy, private capitalism, and priority in political rights, the BM is defined as deemphasized democracy, state capitalism, and priority in economic rights”. (Asongu, 2016b, p.354; Asongu & Ssozi, 2016).

On the other hand and in the light of the clarifications, the more significant connection between ‘voice and accountability’ and political governance can be explained by the fact that countries espousing the BM could be considered as reflecting low levels of political governance despite enjoying comparatively higher levels of political stability/non violence. To put this point into greater perspective, not all dimensions of political governance as measured by Kaufmann and co-authors directly reflect democratic quality. For instance, a strong dictatorship may enjoy substantial political stability with little or no ‘voice and accountability’, while liberal democracies may enjoy strong ‘voice and accountability’ simultaneously with substantial political instability.

Second, the fact that economic governance is driven both by government effectiveness and regulation quality partly substantiates the narrative on political governance and the priority of the Washington Consensus discussed in the preceding paragraph. In other words, the globalisation process and measurement was not designed to prioritise one aspect of economic governance over the other. It is important to note that political governance is the election and replacement of political leaders while economic governance is the formulation and implementation of policies that deliver public commodities. As we have established: (i) the positive effect of economic globalisation on economic governance is driven by regulation quality while and (ii) the positive impact of general globalisation on economic governance is driven by government effectiveness.

## **5. Conclusion and further research directions**

In this study, we have assessed the effect of globalisation on governance using in 51 African countries for the period 1996-2011. Ten bundled and unbundled governance indicators are used, namely: political governance (consisting of political stability/non violence and voice & accountability), economic governance (encompassing regulation quality and government effectiveness), institutional governance (entailing corruption-control and the rule of law) and general governance (consisting of political, economic and institutional governances). Political, economic, social and general globalisation variables are used and the empirical evidence is based on Generalised Method of Moments.

The following findings have been established. First, on political governance, only social globalisation improves political stability while only economic globalisation does not increase voice & accountability and political governance. Second, with regard to economic

governance: (i) only economic globalisation significantly promote regulation quality; (ii) social globalisation and general globalisation significantly advance government effectiveness and (iii) economic globalisation and general globalisation significantly promote economic governance. Third, as concerns institutional governance, whereas only social globalisation improves corruption-control, the effects of globalisation dynamics on the rule of law and institutional governance are not significant. Fourth, the impacts of social globalisation and general globalisation are positive on general governance.

It in the light of the above: (i) political governance is driven by voice and accountability compared to political stability and (ii) economic governance is promoted by both regulation quality and government effectiveness from specific globalisation angles. Theoretical contributions and policy implications have been discussed.

Future research can improve extant literature by assessing if established linkages withstand empirical scrutiny when the nexuses are investigated within the some fundamental characteristics of Africa governance, namely: legal origins, income levels, landlockedness, resource wealth, *inter alia*. Moreover, investigating the established linkages throughout the conditional distributions of governance may provide more insights into the nexuses because blanket globalisation-governance policies may not be effective unless they are contingent on initial levels of governance and tailored differently across countries with low, intermediate and high levels of governance.

## Appendix

### Appendix 1: Definitions of Variables

Variables	Signs	Definitions of variables (Measurement)	Sources
Political Stability	PolSta	“Political stability/no violence (estimate): measured as the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional and violent means, including domestic violence and terrorism”	World Bank (WGI)
Voice & Accountability	V&A	“Voice and accountability (estimate): measures the extent to which a country’s citizens are able to participate in selecting their government and to enjoy freedom of expression, freedom of association and a free media”.	World Bank (WGI)
Political Governance	Polgov	First Principal Component of Political Stability and Voice & Accountability. The process by which those in authority are selected and replaced.	PCA
Government	Gov. E	“Government effectiveness (estimate): measures the quality of public services, the quality and degree of independence	World Bank (WGI)

Effectiveness		from political pressures of the civil service, the quality of policy formulation and implementation, and the credibility of governments' commitments to such policies".	
Regulation Quality	RQ	"Regulation quality (estimate): measured as the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development".	World Bank (WGI)
Economic Governance	Ecogov	"First Principal Component of Government Effectiveness and Regulation Quality. The capacity of government to formulate & implement policies, and to deliver services".	PCA
Rule of Law	RL	"Rule of law (estimate): captures perceptions of the extent to which agents have confidence in and abide by the rules of society and in particular the quality of contract enforcement, property rights, the police, the courts, as well as the likelihood of crime and violence".	World Bank (WGI)
Corruption-Control	CC	"Control of corruption (estimate): captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests".	World Bank (WGI)
Institutional Governance	Instgov	First Principal Component of Rule of Law and Corruption-Control. The respect for citizens and the state of institutions that govern the interactions among them	PCA
General Governance	G.gov	First Principal Component of Political, Economic and Institutional Governances	PCA
Political Globalisation	Polglob	"This captures the extent of political globalisation in terms of number of foreign embassies in a country, membership in international organisations, participation in UN security".	Dreher et al. (2010)
Economic Globalisation	Ecoglob	"Overall economic globalisation (considers both the flow and the restrictions in a given country to derive this). The higher, the better social globalisation".	Dreher et al. (2010)
Social Globalisation	Socglob	"Overall scores for the countries extent of social globalisation. The higher the better socially globalised the country".	Dreher et al. (2010)
Globalisation	Glob	This is an overall index that contains economic globalisation, social globalisation and political globalisation	Dreher et al. (2010)
Education	Educ	Secondary School Enrolment (% of Gross)	World Bank (WDI)
Mobile phones	Mobile	Mobile phone subscriptions (per 100 people)	World Bank (WDI)
GDP growth	GDPg	Gross Domestic Product (GDP) growth (annual %)	World Bank (WDI)
Population growth	Popg	Population growth rate (annual %)	World Bank (WDI)
Foreign aid	Aid	Total Development Assistance (% of GDP)	World Bank (WDI)
Public Investment	Pub. Ivt.	Gross Public Investment (% of Gross)	World Bank (WDI)
Inflation	Inflation	Annual Consumer Price Inflation	World Bank (WDI)

WDI: World Bank Development Indicators. WGI: World Governance Indicators. PCA: Principal Component Analysis.

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**Appendix 2: Summary statistics (1996-2011)**

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	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Observations</b>
Political Stability	-0.572	0.954	-3.304	1.189	612
Voice & Accountability	-0.709	0.730	-2.178	1.009	612
Political Governance	0.000	1.273	-3.323	2.790	612
Government Effectiveness	-0.731	0.639	-2.454	0.876	662
Regulation Quality	-0.708	0.654	-2.663	0.846	612
Economic Governance	-0.0009	1.048	-2.252	2.458	611
Rule of Law	-0.708	0.683	1.048	-2.525	612
Control of Corruption	-0.600	0.601	-2.061	1.255	611
Institutional Governance	-0.002	1.368	-3.584	3.596	611
General Governance	-0.004	1.985	-5.535	4.819	611
Political Globalisation	58.142	18.323	19.958	94.164	816
Economic Globalisation	44.625	13.095	12.301	84.949	688
Social Globalisation	28.519	11.247	5.773	65.033	816
Globalisation	41.376	10.133	17.514	68.523	816
Education(SSE)	40.941	26.892	4.022	123.893	491
Mobile phone penetration	19.829	29.390	0.000	171.515	811
GDP growth	4.863	7.297	-32.832	106.279	792
Population growth	2.317	1.007	-1.081	9.770	816
Foreign aid	10.212	12.245	-0.251	147.054	791
Public Investment	7.491	4.692	0.000	43.011	713
Inflation	54.723	925.774	-9.797	24411.03	717

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S.D: Standard Deviation.

### Appendix 3: Correlation matrix for GMM (uniform sample size : 329)

Political Governance			Economic Governance			Institutional Governance			Globalisation				Control Variables									
PS	VA	Polgov	GE	RQ	Ecogov	CC	RL	Instgov	G.gov	Polglob	Ecoglob	Socglob	Glob	SSE	Mobile	GDPg	Popg	Aid	Pub.Ivt.	Inflation		
1.000	0.690	0.911	0.678	0.712	0.460	0.736	0.792	0.785	0.865	-0.129	0.363	0.561	0.393	0.402	0.245	-0.078	-0.342	-0.143	0.136	-0.189	PS	
	1.000	0.921	0.690	0.735	0.425	0.697	0.762	0.752	0.857	0.015	0.373	0.477	0.430	0.411	0.206	-0.060	-0.211	-0.078	0.141	-0.100	VA	
		1.000	0.740	0.787	0.482	0.774	0.843	0.833	0.936	-0.046	0.381	0.555	0.442	0.431	0.246	-0.073	-0.291	-0.108	0.147	-0.154	Polgov	
			1.000	0.876	0.647	0.865	0.887	0.905	0.889	0.132	0.422	0.720	0.631	0.661	0.368	-0.038	-0.475	-0.295	0.054	-0.127	GE	
				1.000	0.736	0.814	0.858	0.862	0.912	0.138	0.428	0.727	0.640	0.605	0.387	-0.091	-0.386	-0.342	-0.380	-0.220	RQ	
					1.000	0.552	0.611	0.597	0.635	0.199	0.304	0.591	0.541	0.407	0.307	-0.084	-0.325	-0.262	-0.274	-0.222	Ecogov	
						1.000	0.877	0.971	0.917	-0.080	0.411	0.679	0.499	0.596	0.311	-0.096	-0.513	-0.213	0.217	-0.147	CC	
							1.000	0.965	0.953	0.045	0.409	0.741	0.590	0.625	0.354	-0.058	-0.471	-0.250	0.123	-0.170	RL	
								1.000	0.964	-0.020	0.419	0.728	0.557	0.629	0.341	-0.077	-0.506	-0.240	0.125	-0.163	Instgov	
									1.000	0.005	0.431	0.705	0.565	0.581	0.333	-0.083	-0.427	-0.219	0.098	-0.184	G.gov	
										1.000	-0.117	0.099	0.486	0.192	0.245	-0.014	0.057	-0.232	-0.108	-0.099	Polglob	
											1.000	0.525	0.715	<b>0.585</b>	<b>0.509</b>	0.048	-0.476	-0.419	0.012	0.198	Ecoglob	
												1.000	0.802	<b>0.792</b>	0.551	-0.168	<b>-0.734</b>	<b>-0.512</b>	-0.141	-0.156	Socglob	
													1.000	<b>0.780</b>	<b>0.652</b>	-0.062	<b>-0.570</b>	<b>-0.580</b>	-0.115	-0.021	Glob	
														1.000	<b>0.602</b>	-0.120	<b>-0.693</b>	-0.580	-0.046	-0.092	SSE	
															1.000	-0.090	-0.421	-0.348	-0.020	-0.083	Mobile	
																1.000	0.195	0.073	0.216	0.023	GDPg	
																	1.000	0.476	0.063	0.079	0.079	Popg
																		1.000	0.288	0.099	0.099	Aid
																			1.000	0.018	0.018	Pub. Ivt.
																				1.000	1.000	Inflation

PS: Political Stability/Non violence. VA: Voice & Accountability. Polgov: Political Governance. GE: Government Effectiveness. RQ: Regulation Quality. Ecogov: Economic Governance. CC: Corruption-Control. RL: Rule of Law. Instgov: Institutional Governance. G.Gov: General Governance. Polgov: Political Globalisation. Ecoglob: Economic Globalisation. Socglob: Social Globalisation. Glob: Globalisation. SSE: Secondary School Enrolment. Mobile: Mobile Phone Penetration. GDPg: Gross Domestic Product growth. Popg: Population growth. Aid: Foreign aid. Pub. Ivt: Public Investment.



## Appendix 4: Persistence of the dependent variables

	Political Governance			Economic Governance			Institutional Governance			G.gov
	PS	VA	Polgov	GE	RQ	Ecogov	CC	RL	Instgov	
PS(-1)	0.961									
VA(-1)		0.981								
Polgov(-1)			0.978							
GE(-1)				0.980						
RQ(-1)					0.978					
Ecogov(-1)						0.990				
CC(-1)							0.967			
RL(-1)								0.981		
Instgov(-1)									0.981	
G.gov(-1)										0.988

PS: Political Stability/Non violence. PS(-1): Lagged value of Political Stability/Non Violence. VA: Voice & Accountability. Polgov: Political Governance. GE: Government Effectiveness. RQ: Regulation Quality. Ecogov: Economic Governance. CC: Corruption-Control. RL: Rule of Law. Instgov: Institutional Governance. G.Gov: General Governance.

## References

- Ades, A., & Di Tella, R., (1999), "Rents, competition and corruption", *American Economic Review*, 89(4), pp. 982-993.
- Anyanwu, J., & Erhijakpor, A., (2014). "Does Oil Wealth Affect Democracy in Africa?" *African Development Review*, 26(1), pp. 15-37.
- Arellano, M., & Bond, S., (1991), "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations" *The Review of Economic Studies*, 58(2), pp. 277-297.
- Arellano, M., & Bover, O., (1995), "Another look at the instrumental variable estimation of error components models", *Journal of Econometrics*, 68(1), pp. 29-52.
- Asongu, S. A., & Kodila-Tedika, O., (2015). "Is Poverty in the African DNA (Gene)?" *African Governance and Development Institute Working Paper No. 15/011*, Yaoundé.
- Asongu, S. A., (2014). "Globalisation (fighting) corruption and development. How are these phenomena linearly and non-linearly related in wealth effects?" *Journal of Economic Studies*, 41(3), pp. 346-369.
- Asongu, S. A., (2016a). "Determinants of Growth in Fast Developing Countries: Evidence from Bundling and Unbundling Institutions", *Politics & Policy*, 44(1), pp. 97-134.
- Asongu, S. A., (2016b). "Sino-African relations: a review and reconciliation of dominant schools of thought", *Politics & Policy*, 44(2), pp. 351-383.

Asongu, S. A., & De Moor, L., (2016). “Financial globalisation dynamic thresholds for financial development: evidence from Africa”, *The European Journal of Development Research*. DOI: 10.1057/ejdr.2016.10.

Asongu, S. A., & Nwachukwu, J., (2016a). “Revolution empirics: predicting the Arab Spring” *Empirical Economics*: <http://link.springer.com/article/10.1007/s00181-015-1013-0>

Asongu, S. A. & Nwachukwu, J. C., (2016b). “Foreign aid and governance in Africa”, *International Review of Applied Economics*, 30(1), pp. 69-88.

Asongu, S. A. & Ssozi, J., (2016). “Sino-African Relations: Some Solutions and Strategies to the Policy Syndromes”, *Journal of African Business*, 17(1), pp. 33-51.

Ba, J., & Ng S (2006). “Confidence intervals for diffusion index forecasts and inference for factor-augmented regression”, *Econometrica*, 74(4), pp. 1133-1150.

Bai, J., (2003). “Inferential theory for factor models of large dimensions”. *Econometrica*, 71 (1), pp.135-173.

Bai, J., (2009). “Panel data models with interactive fixed effects”. *Econometrica*, 77(4), pp. 1229-1279.

Baltagi, B. H., (2008). “Forecasting with panel data”, *Journal of Forecasting*, 27(2), pp. 153-173.

Beck, T., Demirgüç-Kunt, A., & Levine, R., (2003), “Law and finance: why does legal origin matter?”, *Journal of Comparative Economics*, 31(4), pp. 653-675.

Bhagwati, J. (1982), “Directly unproductive, profit-seeking (DUP) activities”, *Journal of Political Economy*, 90(5), pp. 988-1002.

Bhagwati, J. & Srinivasan, T. N. (1980), “Revenue seeking: a generalisation of the theory of tariffs”, *Journal of Political Economy*, 80(1), pp. 1069-1087.

Bonaglia, F., Braga de Macedo, J. & Bussolo, M. (2001), “How globalization improves governance”, *Working Paper*, No. 181, OECD, Paris.

Blundell, R., & Bond, S., (1998). “Initial conditions and moment restrictions in dynamic panel data models” *Journal of Econometrics*, 87(1), pp. 115-143.

Bond, S., Hoeffler, A., & Temple, J. (2001) “GMM Estimation of Empirical Growth Models”, University of Oxford.

Dewan, S., & Ramaprasad, J., (2014). “Social media, traditional media and music sales”, *MIS Quarterly*, 38(1), pp. 101-128.

Dreher, A., Gaston, N., Martens, P., & Van Boxem, L., (2010). “Measuring Globalization – Opening the Black Box. A Critical Analysis of Globalization Indices”, *Journal of Globalization Studies*, 1(1), pp. 166-185.

- Efobi, U., (2015). "Politicians' Attributes and Institutional Quality in Africa: A Focus on Corruption", *Journal of Economic Issues*, 49(3), pp. 787-813.
- Fonchingong, C., (2014). "Firming Up Institutional Policy for Deprived Elderly in Cameroon", *Politics & Policy*, 42(6), pp. 948-980.
- Fosu, A., (2013a), "Growth of African Economies: Productivity, Policy Syndromes and the Importance of Institutions" *Journal of African Economies*, 22(4), pp. 523-551.
- Fosu, A., (2013b). "Growth of African Economies: Productivity, Policy Syndromes and the Importance of Institutions" *Journal of African Economies* 22(4), pp. 523-551.
- Fosu, A. K., (2015a). "Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progress in a Global Context", *Oxford Development Studies*, 43(1), pp. 44-59.
- Fosu, A., (2015b). *Growth and Institutions in African Development*, First edited by Augustin K. Fosu, , Routledge Studies in Development Economics: New York
- Fosu, A., (2015c). *Growth and institutions in African Development*, in *Growth and Institutions in African Development*, First edited by Augustin K. Fosu, 2015, Chapter 1, pp. 1-17, Routledge Studies in Development Economics: New York.
- Gatti, R. (1999), "Corruption and trade tariffs, or a case for uniform tariffs", *Working Paper*. No. 2216, *World Bank Policy Research*, Washington, DC.
- Goredema, C, (2009). "Recovery of proceeds of crime: observations on practical challenges in Sub-Saharan Africa." In Basel Institute on Governance, *Tracing Stolen Assets: A Practitioner's Handbook*. Available at: [http://www.baselgovernance.org/fileadmin/docs/publications/books/asset-tracing\\_web-version.pdf](http://www.baselgovernance.org/fileadmin/docs/publications/books/asset-tracing_web-version.pdf) (06-26-14)
- Greenaway-McGrevy, R., Han, C., & Sul, D., (2012). "Asymptotic distribution of factor augmented estimators for panel regression". *Journal of Econometrics*, 169 (1), pp. 48-53.
- Jolliffe, I. T. (2002) *Principal Component Analysis* (2nd Ed.) New York: Springer.
- Kaiser, H. F. (1974) "An index of factorial simplicity" *Psychometrika*, 39(1), pp. 31-36.
- Kangoye, T., (2013). "Does Aid Unpredictability Weaken Governance? Evidence From Developing Countries", *The Developing Economies*, 51(2), pp. 121-144.
- Kaufmann, D., Kraay, A., & Mastruzzi, M., (2007a). "Growth and Governance: A Reply", *Journal of Politics*, 69(2), pp. 555-562.
- Kaufmann, D., Kraay, A., & Mastruzzi, M., (2007b). "Growth and Governance: A Rejoinder", *Journal of Politics*, 69(2), pp. 570-572.

Kaufmann, D., Kraay, A & Mastruzzi, M., (2010). "The worldwide governance indicators: Methodology and analytical Issues". *World Bank Policy Research Working Paper* No 5430, Washington.

Kurtz, M., & Schrank, A., (2007a). "Growth and Governance: Models, Measures, and Mechanisms", *Journal of Politics*, 69(2), pp. 538-554.

Kurtz, M., & Schrank, A., (2007b). "Growth and Governance: A Defense", *Journal of Politics*, 69(2), pp. 563-569.

Klitgaard, R. (1988), *Controlling Corruption*, University of California Press, Berkeley, CA and London.

Krueger, A. (1974), "The political economy of the rent seeking society", *American Economic Review*, 64(3), pp. 291-303.

Lalountas, D.A., Manolas, G.A., & Vavouras, I. S., (2011), "Corruption, globalization and development: How are these three phenomena related?", *Journal of Policy Modeling*, 33(4), pp. 636-648.

Love, I., & Zicchino, L., (2006). "Financial Development and Dynamic Investment Behaviour: Evidence from Panel VAR" *The Quarterly Review of Economics and Finance*, 46(2), pp. 190-210.

McKenzie C, R., & McAleer M (1997). "On efficient estimation and correct inference in models with generated regressors: A general approach." *Japanese Economic Review*, 48(4), pp. 368-389.

McMillan, M.S., (2013). "The Changing Structure of Africa's Economies." Background Paper for *African Economic Outlook 2013*. African Development Bank, OECD Development Center, and United Nations Development Program. Revised version available at: [http://legacy.wlu.ca/documents/57803/McMillian\\_ChangingAfrica\\_140317.pdf](http://legacy.wlu.ca/documents/57803/McMillian_ChangingAfrica_140317.pdf)

Okada, K., & Samreth, S.,(2012), "The effect of foreign aid on corruption: A quantile regression approach", *Economic Letters*, 11(2), pp. 240-243.

Oxley L, & McAleer, M., (1993). "Econometric issues in macroeconomic models with generated regressors." *Journal of Economic Surveys*, 7(1), pp. 1-40.

Pagan, A., (1984). "Econometric issues in the analysis of regressions with generated regressors" *International Economic Review*, 25(1), pp. 221-247.

Pesaran, M. H., (2006). "Estimation and inference in large heterogeneous panels with a multifactor error structure". *Econometrica* 74 (4), pp. 967-1012.

Rhodes, R. A. W., (1996). "The New Governance: Governing without Government", *Political Studies*, 44(4), pp. 652-667.

Roodman, D., (2009a). "A Note on the Theme of Too Many Instruments", *Oxford Bulletin of Economics and Statistics*, 71(1), pp. 135-158.

Roodman, D., (2009b). "How to do xtabond2: An introduction to difference and system GMM in Stata", *Stata Journal*, 9(1), pp. 86-136.

Stock, J. H. & M. W. Watson (2002). "Forecasting using principal components from a large number of predictors". *Journal of the American Statistical Association*, 97 (460), pp.1167-1179.

Tchamyou, V. S., (2015). "The role of knowledge economy in African business", *African Governance and Development Institute Working Paper No. 14/049*, Yaoundé.

Treisman, D. (2000), "The causes of corruption: a cross-national study", *Journal of Public Economics*, 76(3), pp. 399-457.

Wei, S.J. (2000), "Natural openness and good governance", Working Paper, No. 7765, NBER, Cambridge, MA.

Westerlund, J., & Urbain, J-P., (2013a). "On the estimation and inference in factor-augmented panel regressions with correlated loadings", *Economic Letters*, 119(3), pp. 247-250.

Westerlund, J., & Urbain, J-P., (2013b). "On the implementation and use of factor-augmented regressions in panel data", *Journal of Asian Economics*, 28(October), pp. 3-11.

Westerlund, J., & Urbain, J-P., (2012). "Cross-sectional averages versus principal components", Maastricht University, RM/11/053, Maastricht.

World Bank (2015). "World Development Indicators", *World Bank Publications* <http://www.gopa.de/fr/news/world-bank-release-world-development-indicators-2015> (Accessed: 25/04/2015).