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Globalization and Africa: implications for human development

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AGDI Working Paper

Research Department

Globalization and Africa: implications for human development

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Abstract

Purpose – The purpose of this paper is to assess the effects of trade and financial globalization on human development in 52 African countries using updated data (1996-2010) and a new indicator of human development (adjusted for inequality).

Design/methodology/approach – The estimation technique used is a Two-Stage-Least Squares Instrumental Variable methodology. Instruments include: income-levels, legal-origins and religious-dominations. The first-step consists of justifying the choice of the estimation technique with a Hausman-test for endogeneity. In the second-step, we verify that the instrumental variables are exogenous to the endogenous components of explaining variables (globalization dynamic channels) conditional on other covariates (control variables). In the third-step, the strength and validity of the instruments are assessed with the Cragg-Donald and Sargan overidentifying restrictions tests respectively. Robustness checks are ensured by: (1) use of alternative globalization indicators; (2) endogeneity based estimation; (3) adoption of two interchangeable sets of instruments; (4) estimation with a technique that controls for time-invariant unobservable shocks that affect openness and human development simultaneously.

Findings – Findings broadly indicate that while trade globalization improves human development (consistent with the neoliberal theory), financial globalization has the opposite effect (in line with the hegemony thesis). The ‘life expectancy’ component of the HDI weighs most in the positive impact of trade globalization on human emancipation.

Practical implications – Capital accounts should be opened in tandem with financial and institutional development. The investment atmosphere needs improvement to curtail capital flight (about 39%). Other policy implications include: adoption of openness options in a selective and gradual manner, development of some industrial backbone for an import-substitution or export-led industry, emphasis on regional trade and building capacity, development of the agricultural sector with continuous government assistance, building of rural infrastructure, increasing adult literacy rate and developing human resources, fighting corruption and mitigating wastages in government expenditure.

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Originality/value – These findings are based on very recent data. Usage of the inequality adjusted human development index first published in 2010, corrects past works of the bulk of criticisms inherent in the first index.

JEL Classification: F10; F30; I10; I30; O55

Keywords: Globalization; Human development; Africa

1. Introduction

Globalization has been recognized as the main force dominating the economic universe. It upholds to light-up the world with economic prosperity and seeks a victory of market over government and self-interest over altruism. No less imperative is the global commitment to continuing and accelerating the pace of human development, which signifies the culmination of the historical processes of cultural progress. The dilemma is that while globalization is a lusty, ineluctable historical process whose march can be stopped only by endangering the prosperity of peoples and nations, it also threatens to disfigure human development in the manner it is evolving. As a dynamic force for change through-out the world, it is expected to cause unprecedented surges in the wealth of nations by extending outwards the world production-possibility frontier and by redefining the world as a “Global Village”. Nay, it is also reviled as a process destined to cause social and economic disintegration as well as ecological decay. It is feared to be spurring on the race to the bottom by grabbing from the poor and giving to the rich, marginalizing nations already integrated in the world economy, decoupling them from scientific advancements carried-out in the developed world and widening the pre-existing disparities in the level of economic well-being within nations and between nations to a point where they have become socially, morally and economically unacceptable. Though not in substance, yet in form there are increasing fears that developed countries may increasingly use globalization to re-enact colonialism in another way. Thus, not surprisingly the public support for globalization has waned in both developed and developing countries, with a frantic search for a third-way out of the

morally enervating regime of unvarnished capitalism. In the meantime, there is a universal demand to recapture some of its attractive glow and lofty ambitions, that the superior claims of globalization be given a “human face” by saddling the increasingly ungovernable world of trade and finance with a global civic ethic.

To this end, the present paper aims to assess the incidence of trade and financial globalization on human development in the African continent. The choice of Africa is most relevant giving the continent’s appalling statistics in development: human and economic. This investigation will therefore contribute to the literature in the following dimensions. (1) The use of very updated data (1996-2010) provides results with more focused policy implications. (2) The assessment is based on 52 of the current 54 countries in the continent, thus providing an in depth and general picture of the financial and trade trends of globalization in the continent. (3) While literature on the openness-human development nexus is based a Human Development Index (HDI) unadjusted for inequality, this paper employs the inequality adjusted HDI first published in the 2010 Human Development Report. Thus in substance this study uses a novel HDI that has integrated criticisms labeled on the index over the past two decades. (4) A critical analysis of the effect of the globalization process on constituents of the HDI as well as other components not captured by the HDI. (5) Discussion of relevant policy implications based on the findings. The rest of the paper is organized in the following manner. Section 2 reviews existing literature. Data and methodology are presented and outlined in Section 3 respectively. Empirical analysis is covered by Section 4. We conclude with Section 5.

2. Liberalization, globalization and human development

2.1 Theoretical highlights

In line with Tsai (2006), two theories prevail in the debate over how globalization affects human well-being: the neoliberal and the hegemonic schools.

The neoliberal school contends globalization is an omnipresent power of ‘creative destruction’ in that global trade, cross-border investment and technological innovation improve production efficiency and generate extraordinary prosperity despite replacement of old jobs and fall in wages for unskilled workers. Globalization manages these potential threats by signaling to the latter group about the pay-offs from acquiring new skills. Rewards can spread over the masses ‘*if the labor market is responsive to changes in supply and demand*’ (Grennes, 2003). Empirical studies have also documented that globalization is fashioned to spread industrialization to developing countries and hence reduce global income inequality (Firebaugh, 2004). Rodrik et al. (2004) find foreign trade closely tied to societal institutional building, which constitute a decisive factor in economic growth.

The second school conceives globalization as a new hegemonic project. According to Petras & Veltmeyer (2001), globalization demonstrates the creation of a new world order architecture by global powers (industrial countries, international financial institutions...etc), with prime objective of facilitating capitalist accumulation in an environment of unconstrained market transactions. Petras & Veltmeyer (2001, 24) predicts ‘*a world-wide crisis of living standards for labor*’: since the brunt of the capitalist globalization process has been borne by the working class as ‘*technological change and economic reconversion endemic to capitalist development has generated an enormous growing pool of surplus labor, an industrial reserve army...with incomes at or below the level of subsistence*’. Another strand of this anti-thesis is that, contemporary global systems on its neoliberal course have imposed a “flexible” mode of production that undermine the redistributive mechanisms that were constructed through Keynesian social

democracy. As observed by Smart (2003) globalization features a ‘market ethos’ whose fervent pursuit of private interest operates without regard for persons (Tsai, 2006). In confirming this assertion Scholte (2000) posits, an unequal allocation of benefits is generated that favors the already advantaged. Though this radical stance is not explicitly shared by Sirgy et al. (2004), they do predict several negative effects in suggesting globalization has “double-bladed” outcomes.

2.2 Liberalization of capital and trade flows

The increasing trend towards liberalization denotes a gradual lifting of the tariff and non-tariff restrictions on the flow of goods, services, factors of production (capital and labor for the most part), and ideas so that these move freely across national borders and ideally as if no national borders existed. A positive movement towards this goal has been eased since 1948 by the General Agreement on Tariffs and Trade (GATT) and since 1995 by the World Trade Organization (WTO). Both have sought, although with no much success this far to facilitate “market-access” and promote “rule-based” trade in a multilateral and nondiscriminatory fashion. These efforts are (crucial or important) because bilateralism and discrimination between nations severely limit the possibilities of mutually beneficial trade through “third-market” competition. The pre-war enthusiasm for multilateralism seems to have waned substantially. According to Bhagwati (1990), the proliferation of bilateral trade agreements and the regional trading blocs in the Cold War era have greatly weakened the multilateral trading system. There are definite signs that bilateral trade agreements will become the preferred mode of doing business with the developing countries (to extract better terms of trade than is possible with multilateral bargaining at the WTO where they have received a considerable leverage).

2.3 Impact of globalization on human development

The positive impact of globalization on human development could be discussed in the following strands. (1) Better education: to harness the benefits of globalization, education and training become a priority (Lai, 2003). (2) Increased quality of life through product availability: as in recent years countries that have opened their economies have experienced more poverty reduction (Dollar, 2001). (3) Improvement in GDP: because the redistribution of resources increase overall economic output (Rabbanee et al., 2010). (4) Employment and income distribution: trade liberalization has a direct impact on the employment scenario and wage condition of a country (Rabbanee et al., 2010). (5) Improvement in the human development index and gender equality (Wood, 1991).

Globalization could also be an inhibitor of human development in the following dimensions. (1) Reduction in government revenue: developing countries incur substantial reduction in revenue from tariffs compared to developed countries (Rabbanee et al., 2010, p.4). (2) Negative impact on agriculture: since most developing countries are largely dependent on agriculture, but highly subsidized and mechanized agricultural produce from developed countries greatly hampers the domestic agricultural industry. (3) Downbeat effect on income distribution (Cornia, 2001; Asongu, 2011a). (4) Trade related aspects of Intellectual Property Rights (IPR): IPR provisions of the WTO leads to the transfer of billions of dollars in royalties and licensing fees from developing to high income countries (Weisbrot & Baker, 2002). (5) Withdrawal of the quota which severely hampers domestic exports. (6) Food security and impact on peasants: with farmers facing a situation where the cost of agricultural inputs is much higher than the actual returns they get from their production. Moreover, developing countries are flooded with cheap

and highly subsidized Western agricultural imports and their agrarian economy is slowly being thrown out of gear.

3.Data and methodology

3.1 Data

We assess a panel of 52 African countries with data from African Development Indicators (ADI) of the World Bank (WB) and Freedom House. Details of summary statistics (Appendix 1), correlation analysis (Appendix 2), variable definitions (Appendix 3) and categorization of countries (Appendix 4) are presented in the appendices. In a bid for more updated policy implications, the dataset spans from 1996 to 2010. The dependent variables are the inequality adjusted HDI, life expectancy, mean years of schooling, GDP per capita growth, tariffs, agricultural productivity and press-freedom; consistent with the literature (Johnson, 2002; Rabbanee et al., 2010). Independent variables include: a proxy for economic globalization (trade) and two indicators of financial globalization (foreign direct investment and private capital flows). In the regressions we control for democracy, public investment, population growth and financial efficiency. The choice of control variables is also constrained by the degrees of freedom necessary for overidentifying restrictions (OIR) test at second-stage regressions (more than two control variables will result in exact or under-identification; meaning instruments are either equal-to or less-than the number of endogenous explaining variables respectively). These instruments include: income-levels, religious-dominations and legal-origins. They have been largely documented in the literature on economic development (La Porta et al., 1997; Beck et al., 2003; Asongu, 2011bc).

3.2 Methodology

3.2.1 Endogeneity

While openness has a bearing on human development the reverse effect cannot be ruled-out, as development may influence a country's policies towards globalization. We are thus confronted here with an issue of endogeneity owing to reverse-causality and omitted variables, since the openness indicators are correlated with the error term in the equation of interest. To address this issue we shall investigate the presence of endogeneity with the Hausman-test and should the results match our concerns, we employ an estimation technique that takes account of the endogeneity issue.

3.2.2 Estimation technique

Given the concern for endogeneity, we borrow from Beck et al. (2003) and recently African finance literature (Asongu, 2011def) in adopting a Two-Stage-Least-Squares (TSLS) estimation approach. Instrumental Variable (IV) estimations address the puzzle of endogeneity and hence avoid the inconsistency of estimated coefficients by Ordinary Least Squares (OLS) when the exogenous variables are correlated with the error term in the main equation. The TSLS-IV estimation method adopted by this study will entail the following steps.

First-stage regression:

$$Glob_{it} = \gamma_0 + \gamma_1(legalorigin)_{it} + \gamma_2(religion)_{it} + \gamma_3(incomelevel)_{it} + \alpha X_{it} + \nu \quad (1)$$

Second-stage regression:

$$HD_{it} = \gamma_0 + \gamma_1(Glob)_{it} + \beta X_{it} + \mu \quad (2)$$

The independent control variables are represented by X in the two equations. In Eq. (1) and Eq. (2), ν and μ respectively denote the disturbance terms. Legal-origins, dominant-

religions and income-levels represent the instruments. Globalization and human development are denoted by '*Glob*' and '*HD*' respectively.

In our analysis, we lay emphasis on the following in the analysis: (1) justify the choice of a TSLS over an OLS estimation technique with the Hausman-test for endogeneity; (2) show the instruments are exogenous to the endogenous components of explaining variables (openness channels), conditional on other covariates (control variables); (3) ensure the instruments are valid and not correlated with the error-term in the main equation with an Over-identifying Restrictions (OIR) test.

3.2.3 Robustness checks

For robustness purposes, the empirical analysis: (1) uses alternative indicators of financial liberalization; (2) employs two distinct interchangeable sets of instruments; (3) accounts for endogeneity; (4) models under both restricted and unrestricted hypotheses; (5) uses Fixed Effects (FE) regressions with Heteroscedasticity and Autocorrelation Consistent (HAC) standard errors to control for time-invariant unobservable shocks that affect both openness and human development simultaneously².

4. Empirical analysis

This section addresses the ability of the exogenous components of globalization dynamics to account for differences in human development; the ability of the instruments to explain variations in the endogenous components of globalization dynamics and the possibility of the instruments to account for human development beyond globalization dynamic channels.

² We think the panel data could be thoroughly exploited by employing this technique. This is because in panel Fixed Effect regressions there's an assumption that the exogenous variables are correlated with the error term; implying our concern for endogeneity is also addressed by this estimation technique.

To make these investigations, we use the panel TSLS-IV estimation method with legal-origins, income-levels, and religious-dominations as instrumental variables.

4.1 Globalization and instruments

Table 1 below assesses the validity of the instruments in explaining cross-country differences in globalization dynamics. Clearly, it could be observed that distinguishing African countries by legal-origins, income levels and religious-dominations help explain cross-country differences in globalization dynamics. Based on the Fisher-test, the instruments taken together enter significantly in all regressions at the 5% significance level for the most part. Broadly the following findings could be established. (1) Christian-dominant countries are more open to external trade and finance than their Islam-oriented counterparts. (2) English common-law countries are more responsive to economic and financial liberalization than French civil-law countries. Given the validity of joint significance in estimated coefficients, we proceed with the second-stage of the TSLS approach.

Table 1: First-stage regressions

		Financial Globalization				Trade Globalization	
		Foreign Direct Investment		Private Capital Flows		Trade	
		1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set
Instruments	Constant	2.441*** (3.185)	6.419*** (5.422)	0.738 (0.414)	4.813*** (3.125)	52.683*** (9.530)	98.710*** (20.32)
	English	1.409* (1.810)	---	1.042 (1.183)	---	7.266** (2.399)	---
	French	---	-1.366* (-1.785)	---	-1.042 (-1.183)	---	-7.266** (-2.399)
	Christianity	1.592** (2.023)	---	1.578* (1.735)	---	15.502*** (5.206)	---
	Islam	---	-1.812** (-2.318)	---	-1.578* (-1.735)	---	-15.502*** (-5.206)
	L.Income	---	-1.510 (-1.701)	---	-1.454 (-1.415)	---	-23.258*** (-6.570)
	M. Income	-0.372 (-0.344)	---	-1.373 (-1.072)	---	24.561*** (6.266)	---
	LMIncome	1.368 (1.098)	---	2.828** (1.997)	---	-1.303 (-0.288)	---
	UMIncome	---	-0.878 (-0.776)	---	-2.828** (-1.997)	---	1.303 (0.288)

Control Variables	Democracy	-0.133 (-1.329)	---	-0.197* (-1.782)	-0.197* (-1.782)	-0.904** (-2.477)	-0.904** (-2.477)
	Pub. Inv.	---	---	0.202** (2.057)	0.202** (2.057)	2.001*** (6.442)	2.001*** (6.442)
	Popg	---	0.064 (0.150)	0.076 (0.158)	0.076 (0.158)	-5.313*** (-3.350)	-5.313*** (-3.350)
	Adjusted R ²	0.011	0.015	0.020	0.020	0.235	0.235
	Fisher Statistics	2.268**	2.708**	2.392**	2.392**	27.787***	27.787***
	Observations	611	611	611	611	611	611

L: Low. LM: Lower Middle. UM: Upper Middle. Ivt: Investment. Pop: population. *, **, ***: significance levels of 10%, 5% and 1% respectively. Student statistics ratios are in brackets. 1st Set: First Set of Instruments. 2nd Set: Second Set of Instruments.

4.2 Globalization and human development

Tables 2-5 investigate two main issues: (1) the ability of openness channels to account for human development and; (2) the possibility of the instrumental variables explaining human development beyond openness channels. Whereas we address the first issue by investigating the significance of estimated coefficients, the second is assessed by the Cragg-Donald and Sargan-OIR tests for instrument strength and validity respectively. The null hypothesis of the Sargan test is the view that the instruments account for human development only through openness channels. Thus a rejection of the null hypothesis is the rejection of the view that the instruments explain human development through no other mechanisms than openness channels. The null hypothesis of the Cragg-Donald test is the view that the instruments are weak; thus its rejection points to the strength of the instruments at first-stage regressions. The Hausman-test for endogeneity precedes the TSLS-IV regressions and thus justifies the choice of the estimation technique. The null hypothesis of this test is the stance that OLS estimates are efficient and consistent. Thus a rejection of the null hypothesis points to the issue of endogeneity we have elucidated earlier (see Section 3.2.1) and hence lends credit to the TSLS-IV estimation approach. Else, we model by OLS. For robustness purposes, results are replicated using an alternative set of instrumental variables, as depicted in the second and third to the last lines of Table 2. Looking at the

unrestricted regressions in Table 2, the null hypothesis of the Hausman-test is rejected in all the regressions; confirming the presence of endogeneity and hence the choice of the TSLS-IV approach.

With regard to the first concern which is addressed by the significance of estimated coefficients, it can be firmly established that while financial openness significantly decreases human development, trade openness suggests the contrary in Africa. The positive effect of trade on human development could be explained by the cheap imports in basic human needs flooding African markets from China and beyond. The negative effect of financial openness confirms the relative lack of a financial-service comparative advantage in the African financial industry. Another possible cause for this negative effect is the high rate of capital flight from Africa owing to corruption and averse to risky investments. In a closed economy, savings depend not only on the distance from subsistence but also on the incentive to save depending on the rate of return to saving and investment. In an open economy, investment is not only a function of domestic saving but also depends on the rate of return to investment. As documented by Collier et al. (2001) in the capital flight literature, an estimated 39% of African capital stock is held outside the continent. Domestic investors compare the returns to domestic and foreign investments while private investors and bank lenders will invest within the African economy only if returns are attractive enough. From a broad perspective, the results of financial openness are consistent with empirical investment-inequality literature (Pan-Long, 1995; Basu & Guariglia, 2007; Kai & Hamori, 2009; Asongu, 2011a) and theoretical postulations (Greenwood & Jovanovic, 1990). All these have pointed to the disequalizing redistributive income effect of foreign investment, which in contextual terms depict decrease in inequality adjusted human development.

Turning to the second-issue, rejection of the null hypothesis of the OIR test in all regressions implies that the instruments explain human development through some other mechanisms beside openness channels. Thus the instruments are not valid as they are correlated with the error term in the main equation; the instruments suffer-from endogeneity. We also report the Cragg-Donald test statistics for the strength of the instruments at the first stage of the TSLS. For the restricted second stage regressions, the Cragg-Donald test does not reject the null hypothesis of weak instruments, as the relative bias of TSLS over OLS exceeds 5% and 20% for the two regressions (confirming the weakness of the instruments). When there are 3 endogenous variables and 5 instrumental variables (including constant), the critical value is 4.99 for bias = 20%, and is 9.53 for bias = 5% (Stock & Yogo, 2003). The control variable is significant with the right sign: consistent with the African law-finance literature (Asongu, 2011g). The analysis in Table 2 is replicated with the second-set of instruments to confirm robustness of results. Given the invalidity of the instruments, we relax the strict exogenous growth context and assume the existence of constant (autonomous) human development. By unrestricting the regressions there is an implicit assumption that even economies in autarky do exhibit a fixed threshold of human development.

Table 2: Restricted TSLS and Fixed Effect regressions

		Human Development Index		
		TSLS-IV Estimations	Fixed Effect Estimations with HAC SE	
Financial Globalization	Foreign Investment	-1.069** (-2.306)	---	
	Private Capital Flows	---	-0.875** (-2.752)	
Trade Globalization	Trade	0.155*** (3.866)	0.143*** (4.197)	
	Banking Efficiency	-8.631*** (-3.024)	-8.420*** (-3.070)	
Control Variable	Hausman-test	54.398***	68.760***	By definition, 'restricted Fixed Effect' regressions are not applicable. A restricted equation entails the absence of a constant term which is uncharacteristic of
	OIR-Sargan test	6.309**	5.462*	
	P-value	[0.042]	[0.065]	

	Cragg-Donald	4.809	8.211	Fixed Effect regressions.
	Adjusted R ²	0.006	0.012	
	Fisher Statistics	8.359***	9.051***	
	Observations	385	385	
First-Set of Instruments (1 st Set)	Constant; English ; Christianity; Middle Income; Lower Middle Income			
Second-Set of Instruments (2 nd Set)	Constant; French; Islam; Lower Income; Upper Middle Income			

***,**: significance levels of 10%, 5% and 1% respectively. (): z-statistics . []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. For the Cragg-Donald statistics, critical values of TLS bias over OLS are: 4.99 and 9.53 for biases of 20% of 5% respectively . TLS-IV: Two Stage Least Squares Instrumental Variable. HAC SE: Heteroscedasticity and Autocorrelation Consistent Standard Errors. The TSLV results are robust to the second-set of instruments.

Table 3 below presents unrestricted TSLS results. First and foremost, the results of the Hausman-test confirm the choice of the estimation approach. Results of the Cragg-Donald and Sargan-OIR tests also confirm the strength and validity of the instruments respectively. While the null hypothesis of weak instrument is rejected (the relative bias is probably less than 5% since the critical value for TLS bias over OLS is 4.95), the alternative hypothesis of the Sargan-OIR test is rejected. Broadly, but for the validity of the instruments findings based on unrestricted regressions confirm those in Table 2 (even after they are replicated with an alternative set of instruments). In substance both the endogenous regressors and control variables are significant with the right signs. Findings from FE with HAC standard errors confirm the positive bearing of trade openness on human development but not the negative incidence of financial openness on the phenomenon. This slight difference could be understood from the roles legal-origins, income-levels and religious-dominations play in the impact of globalization on human development, which are not specifically accounted for in the FE regressions.

Table 3: Unrestricted TSLS and Fixed Effect regressions

		Human Development Index			
		TSLS-IV Estimations		Fixed Effect Estimations with HAC SE	
Financial Globalization	Constant	12.529* (1.813)	12.009* (1.838)	1.702*** (55.69)	1.700*** (52.43)
	Foreign Investment	-1.420** (-2.519)	---	0.002 (1.543)	---
	Private Capital Flows	---	-1.098*** (-2.752)	---	0.000 (0.021)
Trade Globalization	Trade	0.133*** (2.788)	0.114*** (2.765)	0.0005** (1.975)	0.0006* (1.965)
Control Variable	Banking Efficiency	-21.567*** (-2.749)	-20.622*** (-2.820)	0.014 (1.035)	0.015 (0.935)
Hausman-test		64.355***	68.760***		
OIR-Sargan test		1.548	0.998		
P-value		[0.213]	[0.317]		
Cragg-Donald		4.959	7.323		
Adjusted R ²		0.003	0.008	0.999	0.999
Fisher Statistics		4.646***	5.275***	96286***	95136***
Observations		385	385	385	385
First-Set of Instruments (1 st Set)		Constant; English ; Christianity; Middle Income; Lower Middle Income			
Second-Set of Instruments (2 nd Set)		Constant; French; Islam; Lower Income; Upper Middle Income			

***, **, *: significance levels of 10%, 5% and 1% respectively. (): z-statistics. []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. For the Cragg-Donald statistics the relative bias is probably less than 5% since critical value for TSLS bias over OLS is 4.95. TSLS-IV: Two Stage Least Squares Instrumental Variable. HAC SE: Heteroscedasticity and Autocorrelation Consistent Standard Errors. The TSLS results are robust to the second-set of instruments.

The difference in the number of observations between first and second-stage regressions can be explained on two counts. 1) The instruments which constitute independent variables of interest in Table 1 (First-stage regressions) are binary variables (0 or 1). Thus corresponding regressions entail no missing data as opposed to those of Tables 2-3 where-in, some missing data is present. 2) The first-stage regressions as expressed in Table 1 are simply to confirm that the instruments are exogenous to the endogenous components of globalization channels as required by the TSLS Instrumental Variable approach. However, regressions in Tables 2-3 combine first and second-stage regressions, although the outputs of first-stage regressions are not revealed. The Cragg-Donald test for weak instrument is available to assess the strength of the instruments in the first-stage regressions.

4.3 Estimation with components of the Human Development Index

4.3.1 *Constituents of the Human Development Index*

In a bid to understand how components of the HDI play-out in the results obtained in Table 3, we decompose the HDI into its constituents and replicate the regressions in Table 3. Thus the dependent variables become GDP per capita growth, Mean years of schooling and Life expectancy. The spirit of this decomposition is to come to grasp with specificities in the HDI that matter most in the gains of the globalization process. While Panel A of Table 4 shows TSLS-IV estimations, Panel B reveals FE regressions with HAC standard errors.

Addressing the first issue³, there is a positive effect of trade openness: (1) on the ‘Years of Schooling’ (consistent with panels A and B) and; (2) on ‘Life Expectancy’ (in line only with Panel A). The other regressions reveal insignificant results. The second issue is addressed only by the ‘Life Expectancy’ estimation, since the null hypothesis of the OIR-Sargan test is not rejected; as opposed to results in the ‘Years of Schooling’ regressions. What do these findings tell us? They point to the significant effect of globalization in increasing life expectancy by virtue of trade account openness. This further reveals, the ‘life expectancy’ component of the HDI weighs most in the impact of trade globalization on human emancipation; consistent with Johnson (2002).

Another important collateral finding worth elucidating is the imperative of interaction-effects. We have observed from the findings that insignificant trade-openness estimates have the right positive signs for the most part. Implying, when the effect on human development is collectively considered via the interaction of the three components that constitute the HDI, the

³ Like in the case of Table 2, Table 3 investigates two main issues: (1) the ability of openness channels to account for human development and; (2) the possibility of the instrumental variables explaining human development beyond openness channels.

interaction-effect yields trade-openness elasticities of higher magnitude (0.133 and 0.114 in Table 3 against 0.007, 0.009 and 0.002 in Table 4).

So why does 'life expectancy' matter most? If we critically analyze the distributions of some of the major benefits of globalization, the examination will neglect some of the usual measures of economic growth and changes in per capita income (Johson, 2002). In fact for the sub-Saharan African segment of the world's population, it is estimated that per capita GDP declined at an annual rate of -0.2% from 1965 to 1999 (World Bank, 2001, 26), though for all low income countries including sub-Saharan Africa (SSA), the growth rate was 1.8% (the world's, 1.6%). Whereas 1.8% seem small, it represents a doubling time of 39 years and more than a quadrupling in a century. Thus recent income growth rates for African countries as a group are high by historical standards. Life expectancy appears to be the most significant benefit of globalization because it did not exceed 35 years three centuries ago (Bogue, 1969). From a world average perspective, at the turn of the last century it had almost doubled; standing at 67 years (UNDP, 2001, 144). With respect to Johnson (2002, 431), based on available evidence from UNDP (2001), globalization has been very significant at increasing life expectancy among the poorer nations of the world. In fact, in Least Developed Countries (LDCs), life expectancy increased by 23 years between 1960 and 1997 owing to a substantial decline in child mortality rates and improved health care availability. The facts above are further confirmed in the correlation analysis (Appendix 2) in which 'Life Expectancy' has the highest positive correlation with the HDI. Moreover, results in Table 4 may not overwhelmingly reflect those in Tables 2-3 because of low correlations among the dependent variables and the HDI.

Table 4: Unrestricted TSLS and Fixed Effect regressions with HDI components

		GDP per capita growth	Years of Schooling	Life Expectancy			
Panel A: Two-Stage Least Squares Instrumental Variable Estimations							
Financial Globalization	Constant	-1.711 (-0.517)	-1.617 (-0.687)	1.895*** (6.474)	2.033*** (7.723)	3.403*** (8.471)	3.346*** (15.66)
	Foreign Investment	0.669 (0.826)	---	0.034 (0.516)	---	-0.054 (-0.609)	---
	Private Capital Flows	---	0.320 (1.189)	---	-0.006 (-0.251)	---	-0.019 (-0.928)
Trade Globalization	Trade	-0.028 (-0.504)	0.0005 (0.032)	0.007** (2.153)	0.009*** (6.159)	0.005 (0.806)	0.002* (1.761)
Control Variable	Banking Efficiency	4.801 (0.856)	3.570 (1.108)	-0.634 (-1.600)	-0.819*** (-2.802)	0.564 (0.797)	0.750*** (2.590)
Hausman-test		7.744*	8.106**	61.085***	56.430***	178.016***	175.44***
OIR-Sargan test		1.503	2.378	8.630**	9.607***	0.053	0.146
P-value		[0.220]	[0.123]	[0.003]	[0.001]	[0.816]	[0.701]
Cragg-Donald		0.236	1.102	1.400	7.017	0.116	0.801
Adjusted R²		0.026	0.015	0.037	0.048	0.008	0.013
Fisher Statistics		0.768	1.410	14.164***	15.316***	4.798***	11.377***
Observations		507	507	296	296	491	491
First Set of Instruments		Constant; English ; Christianity; Middle Income; Lower Middle Income					
Second Set of Instruments		Constant; French; Islam; Lower Income; Upper Middle Income					
Panel B: Fixed Effect Estimations with HAC Standard Errors							
Financial Globalization	Constant	1.570 (0.753)	1.598 (0.740)	2.108*** (16.56)	2.106*** (16.88)	3.986*** (125.2)	3.984*** (127.9)
	Foreign Investment	-0.075 (-0.964)	---	0.0004 (0.127)	---	0.001 (1.168)	---
	Private Capital Flows	---	-0.078 (-0.999)	---	-0.0005 (-0.152)	---	0.001 (1.265)
Trade Globalization	Trade	0.019 (0.989)	0.020 (0.930)	0.002** (2.345)	0.002** (2.391)	-0.000 (-0.113)	-0.000 (-0.074)
Control Variable	Banking Efficiency	-0.866 (-0.677)	-0.94 (-0.754)	-0.150 (-0.985)	-0.151 (-1.002)	0.022 (0.918)	0.024 (0.981)
Adjusted R²		0.223	0.225	0.950	0.950	0.937	0.937
Fisher Statistics		4.105***	4.132***	136.824***	136.836***	160.559***	161.173***
Observations		507	507	296	296	491	491

***, **, *: significance levels of 10%, 5% and 1% respectively. (): z-statistics . []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. For the Cragg-Donald statistics the relative bias is probably less than 5% since critical value for TSLS bias over OLS is 0.00. TSLS-IV: Two Stage Least Squares Instrumental Variable. HAC: Heteroscedasticity and Autocorrelation Consistent. HDI: Human Development Index. The first set of instruments is used in the specification involving 'Foreign Investment' while, the second set is employed in that involving 'Private Capital Flows'.

4.3.2 Other components of Human Development

To further emphasize other dimensions of human development not captured by the HDI that could be relevant in understanding how the globalization process affects human emancipation, we replicate our standard estimation approach and independently regress 'Agricultural productivity', 'Tariffs' and 'Press freedom' on globalization dynamics (un) conditional on instrumental variables: Panel B (Panel A) of Table 5. The choice of these variables is in line with globalization-human development literature (Johnson, 2002; Rabbanee et al., 2010). With regard to the first issue, based on Panel A we find overwhelming evidence of the

detrimental effect of trade-openness on agricultural productivity and imposition of tariffs; consistent with Rabbanee et al. (2010). It follows that agricultural output decreases and tariff barriers are increasingly lifted owing to trade liberalization. The second specifications with respect to private capital flows confirm the second issue for both dimensions of human development (tariffs and agricultural productivity) since the null hypothesis of the Sargan-OIR test is not rejected. In Panel B, while the negative incidence of trade-openness on the reduction of ‘tariff barriers’ is confirmed, that on agricultural-productivity is insignificant. Still in Panel B, based on the FE results, press-freedom seems to increase with trade-openness and decrease with financial-openness. In the interpretation of globalization elasticities of freedom (last two specifications of Panel B), note should be taken of the fact that whereas a negative trade-openness elasticity of freedom denotes an increase in press-freedom, a positive financial-openness elasticity of freedom suggests the contrary⁴.

Table 5: Unrestricted TSLS and Fixed Effect regressions with other HD components

		Agri. Productivity		Tariffs		Freedom	
Panel A: Two-Stage Least Square Instrumental Variable Estimations							
Financial Globalization	Constant	4.732*** (34.30)	4.738*** (47.60)	4.867*** (7.392)	3.535*** (3.735)	60.506 (0.392)	50.828 (1.214)
	Foreign Investment	0.025 (0.880)	---	-0.097 (-0.580)	---	41.708 (0.331)	---
	Private Capital Flows	---	0.012 (1.211)	---	0.185 (1.243)	---	10.227 (1.450)
Trade Globalization	Trade	-0.003 (-1.482)	-0.001*** (-2.821)	-0.009* (-1.781)	-0.015*** (-3.887)	-3.222 (-0.336)	-0.652 (-1.369)
Control Variable	Banking Efficiency	0.075 (0.329)	0.022 (0.166)	-0.126 (-0.198)	0.926 (1.075)	96.966 (0.210)	19.947 (0.340)
Hausman-test		4.859	5.075	37.931***	41.935***	93.757***	102.163***
OIR-Sargan test		0.720	1.094	6.129**	2.613	0.048	0.370
P-value		[0.396]	[0.295]	[0.013]	[0.105]	[0.826]	[0.542]
Cragg-Donald		0.317	1.304	0.353	0.468	0.027	0.520
Adjusted R ²		-0.001	0.001	0.021	0.030	0.007	0.018
Fisher Statistics		2.260*	3.915***	7.668***	5.401***	0.085	1.464
Observations		511	511	226	226	422	422
First Set of Instruments		Constant; English ; Christianity; Middle Income; Lower Middle Income					
Second Set of Instruments		Constant; French; Islam; Lower Income; Upper Middle Income					

⁴ Press-freedom as measured by Freedom House is such that a decreasing index denotes more freedom of the press.

		Panel B: Fixed Effect Estimations with HAC Standard Errors					
Financial Globalization	Constant	4.638*** (26.31)	4.635*** (26.37)	4.242*** (10.99)	4.241*** (11.25)	57.345*** (17.42)	57.371*** (17.53)
	Foreign Investment	0.001 (0.370)	---	-0.001 (-0.114)	---	0.363*** (5.448)	---
	Private Capital Flows	---	0.0005 (0.162)	---	-0.004 (-0.436)	---	0.356*** (5.511)
Trade Globalization	Trade	-0.0003 (-0.222)	-0.0002 (-0.171)	-0.006** (-2.064)	-0.006** (-2.091)	-0.061 (-1.984)	-0.064** (-2.084)
Control Variable	Banking Efficiency	0.040 (0.331)	0.0406 (0.338)	-0.066 (-0.294)	-0.077 (-0.343)	0.149 (0.049)	0.644 (0.213)
Adjusted R ²		0.278	0.277	0.577	0.578	0.890	0.890
Fisher Statistics		5.180***	5.164***	8.488***	8.522***	82.235***	82.304***
Observations		511	511	226	226	422	422

*,**,***: significance levels of 10%, 5% and 1% respectively. (): z-statistics . []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. For the Cragg-Donald statistics the relative bias is probably less than 5% since critical value for TSLS bias over OLS is 0.00. TSLS-IV: Two Stage Least Squares Instrumental Variable. HAC: Heteroscedasticity and Autocorrelation Consistent. Agri: Agricultural. HD: Human Development. The first set of instruments is used in the specification involving 'Foreign Investment' while, the second set is employed in that involving 'Private Capital Flows'.

Majority of developing countries are still largely dependent on agriculture. This implies with the advent of globalization, when developed countries are transiting from an industrial to an information era, most developing countries are still entering the industrialization phase of development. A great chunk of the GDP of developing countries still comes from the agricultural sector. As held by Rabbanee et al. (2010), a bumper production of crops usually results in a hike in GDP and vice versa. This low agricultural productivity owing to trade openness could be due to the following. Firstly, there is low government support to domestic farmers. In other words the absence of subsidized fertilizers and electricity as well as agricultural capital at low interest rates. It should be recalled that between 40-50% of the European Unions (EUs) budget is allocated to agricultural subsidies, which (agricultural sector) represents less than 2% of GDP and employs less than 2% of the population. This guarantees a minimum price for farmers within the EU. By definition, this is a form of protectionism, inhibiting trade and damaging developing countries. France being a very wealthy nation and the bloc's second largest economy is the biggest beneficiary of the Common Agricultural Policy (CAP). Secondly, there are the issues of Aggregate

Measurement Commitments (AMS) and Reducing Commitments which are quite detrimental to developing countries (Rabbanee, 2010, 39). Even the Uruguay Round Agreement on Agriculture (URAA) did not settle interesting terms for poorer nations that are heavily reliant on agriculture. This is because the share of export subsidies for developed countries is far smaller in overall agricultural support in comparison to that of developing countries. Thirdly, the potential for reduction of tariffs will render farmers of developing countries vulnerable to tough competition against highly subsidized agro-products. Tough competition may lead to price reductions and subsequently deterioration of the domestic agricultural industry in African countries.

All these in the long run may lead to a large-scale displacement of the rural population owing to rural exodus. It is interesting to note that, the annual loss due to trade liberalization in agricultural has gained increasing relevance in the literature. Brown et al. (2001) for instance have calculated the annual loss in the agricultural sector of different countries owing to trade liberalization. The picture they present depicts a negative trend in annual GDP in the aftermath of the agreement, with South American and Caribbean countries most affected.

Subservient to the peril in agricultural productivity is the issue of food-security and impact on peasants. Though many proponents are in line with the position that free-trade will increase food-security, this hypothesis(assumption) has been greatly criticized in some academic and policy making circles. The object of food-security in trade openness is increasingly threatened today. Soaring food prices in 2008 and the socio-political upheavals resulting there-from are eloquent testimonies presented by the strand of academic and policy makers who question the validity of free-trade as means to food-security. Subjection of a basic human need(food for example) to the whims and caprices of speculation in financial

markets points to what extent globalization could really be detrimental when both ‘unregulated financial and trade liberalizations’ simultaneously come into play.

Beyond this recent fact, from the genesis, the WTO Agreement on Agriculture (AOA) has promoted an industrial model of agriculture that has jeopardized food security in developing countries. AOA has incorporated three broad areas of commitments from member states, notably in market access, export subsidies and domestic support. The global food chain is increasingly distorted by the inequalities in power between global agribusinesses on the one hand and ‘farmers and consumers’ on the other. A case in point is the removal of quantitative restrictions which has resulted in declining commodity prices and the consequence has been a spate of farmer suicides (Francis, 2001). Alarming and hypocritically, 36 countries (all developed and industrialized) have the right to impose special safeguard provisions if agricultural imports distort their domestic markets and these said countries up-till 1999 had used this provision 399 times. Thus with the available weight of negative effects of trade openness on agriculture, small and marginal farmers are the worst hit. Structural adjustment programs imposed by the IMF and World Bank which are sympathetic to trade openness policies on the one hand and highly subsidized cheap agricultural imports from developed countries on the other hand, have pushed farmers to abandon subsistence farming for cash-crop production. Even with this change in strategy, they are increasingly coming to grasp with the situation where the cost of the agricultural inputs is much higher than the actual returns they get from their production, since cash-crop prices are subservient to speculations and other inhumane financial practices at the international level.

We have also seen that trade liberalization typically improves press-freedom. In the analysis we have used the quality of press-freedom to proxy for equality (specifically gender-equality). Thus given this line of assumption, we side with the positive openness-equality nexus (Wood, 1991; Gladwin & Thompson, 1995; Nicita & Razzaz, 2003). A study on 35 developing countries found a strong positive correlation between the female intensity in manufacturing and export-growth (Wood, 1991). In Madagascar, women accounted for three-quarters of the country's almost 140 000 textile and apparel workers in 1999 (Nicita & Razzaz, 2003). More so, 85% of women in that country who found new employment in the textile sector had never received any monetary income, in comparison to 15% of male entrants. Thus the insight here is that trade liberalization, in increasing freedom also offers women opportunities of employment, which somewhat contributes to gender quality. This is in line with Gladwin & Thompson (1995) who studied 50 rural families in Mexico for 20 years and found that a significant proportion of the women reported an improvement in their 'quality of life' owing to increase in income obtained from working outside their homes (including export-oriented factory jobs).

4.4 Policy recommendations

While globalization paves the way to human development, it also opens up threatening situations which hinder human development. Developed countries still have protectionist measures in sectors like agriculture, steel, textile ...etc. Such a backdrop begs the question of what strategies developing countries need to adopt. The following are some recommendations for African countries under a global economic structure. We first present policy recommendations directly resulting from the outcome of the empirical framework (contextual) before broad options extracted from the literature (Section 4.3.2).

4.4.1 Contextual policy implications

(1) Adopting globalization policies in a selective and gradual manner. Our findings demonstrate the need for African countries to open their capital accounts in a gradual manner. Complete openness to foreign direct investment or private capital flows will seriously hamper human development. These recommendations have been largely documented in the African openness-development literature (Dornbusch, 1992; Asongu, 2010; Asongu, 2011h). Policy should target foreign direct investment openness in sectors where the country doesn't have expertise as well as in technology intensive areas necessary in knowledge building.

(2) Developing a backbone for an import-substitution or export-led industry. This is essential for developing countries, given the negative consequences of openness on the domestic industry. Most African countries are agro-based with over 12% of the world population in sub-Saharan Africa producing only 1% of global output (Easterly, 2005). Thus industrial backbone building will help in strategic self-dependence to a certain degree. The solid industrial base should be accompanied with an export-led strategy that optimizes existing labor-intensive skills and resources in the countries. This will ensure higher employment rates and per capita incomes, which will then create favorable conditions for capital intensive and technology oriented import substitution strategies.

(3) Emphasizing on regional trade and capacity building. Though developed countries are the main proponents of globalization, they are not following the lofty goals of the Free-trade concept they preach. The USA and continental Europe, protagonists of globalization are merely practicing Preferential-trade. The North American Free Trade Agreement (NAFTA) and European Community (EC) are two bright examples of such a preferential treatment for developed countries. Since developing countries are still not economically sound to open their

markets fully to the world, they should also gear towards preferential trade agreements. Building trade blocks will increase their bargaining power and influence in World Trade Organization (WTO) decision making bodies. Such efforts will ultimately have a positive impact on human resource development in member states.

4.4.2 Other policy implications

Other recommendations resulting directly or indirectly from the outcome of this work could be classified into the following strands.

(1) Development of the agricultural sector with continuous government assistance. This will make the country less vulnerable to speculations and international price fluctuations. Policy towards the cultivation of agricultural land for biofuels should not be at the price of inflationary pressures on basic consumer agricultural commodities. Due to high population pressure, farmer miserable income and low investment in land, labour productivity in African countries is comparatively marginal. To mitigate this vulnerable situation, government assistance to the agricultural sector should be policy. Subsidizing agriculture is mainstream in the USA and the EU.

(2) Improvement of rural infrastructure. Agricultural growth should move in tandem with social and physical development. Unfortunately, rural areas in Africa have very few roads and means of preserving (transporting) produce for (to) markets in urban areas. Thus the agricultural development paradox has also been the outcome of weak infrastructure. East Africa has recently witnessed massive famine owing to droughts; development of irrigation facilities (in predominantly farming rural areas) by governments could attenuate this human misery in the future. A significant allocation of national budget for drought related casualties by governments is also required.

(3) Increasing adult literacy rate and developing human resources. Though African countries have made considerable strides in the direction to child education, adult literacy rate is still low. Adult literacy would better human resources and hence improve productivity and overall economic performance. Educational standards should also be upgraded in order to deter the growing phenomenon of ‘brain-drain’.

(4) Fighting corruption and wastages in government expenditures. It is a widely accepted phenomenon that corruption remains a substantial infringement to economic growth and human development. Corruption cripples and institutionalized corruption seriously deteriorates the economy. If corruption and wastages are managed properly, more government budget will be optimally allocated to economic and human developments.

5.Conclusion

Globalization has been recognized as the main force dominating the economic universe and its public support has waned in both developed and developing countries, with a frantic search for a third-way out of the morally enervating regime of unvarnished capitalism. In the mean, there is a universal demand to recapture some of its attractive glow and lofty ambitions; that the superior claims of globalization be given a “human face” by saddling the increasingly ungovernable world of trade and finance with a global civic ethic. To this end, this paper has assessed the incidence of trade and financial globalization on human development in Africa. The choice of the African continent is most relevant giving the continent’s appalling statistics in development: human and economic. The investigation has contributed to the literature in the following dimensions. (1) The use of very updated data (1996-2010) has provided results with more focused policy implications. (2) The assessment based on 52 of the current 54 countries in the continent, has also provided an in depth and general picture of the financial and trade

globalization trends in the continent. (3) While past studies on the openness-human development nexus have used a Human Development Index (HDI) unadjusted for inequality, this paper has employed the inequality adjusted HDI first published in the 2010 Human Development Report. Thus in substance this study has used a novel HDI that has integrated criticisms labeled on the index over the past two decades. (4) A critical analysis of the effect of the globalization process on constituents of the HDI as well as other components not captured by the HDI. (5) Discussion of relevant policy implications based on the findings.

Findings broadly indicate that while trade globalization improves human development (consistent with the neoliberal theory), financial globalization has the opposite effect (in line with the hegemony thesis). The ‘life expectancy’ component of the HDI weighs most in the positive impact of trade globalization on human emancipation. Social implications and policy options include: opening-up of financial accounts in tandem with financial and institutional development, improvement of the investment atmosphere to curtail capital flight from the continent, adoption of openness policies in a selective and gradual manner, developing an industrial backbone for import-substitution or export-led industry, emphasizing on regional trade and building capacity, development of the agricultural sector with continuous government assistance, improvement of rural infrastructure, increasing adult literacy rate, developing human resources, combating of corruption and reducing wastages in government expenditure.

Appendices

Appendix 1: Summary Statistics

	Variables	Mean	S.D	Min.	Max.	Observations
Dependent Variables	Human Development Index	1.351	6.341	0.127	47.486	551
	GDP Per capita growth	2.380	6.754	-33.07	90.140	753
	Log Education	2.123	0.495	0.854	3.869	407
	Log Life Expectancy	3.993	0.149	3.466	4.311	708
	Log Agricultural Productivity	4.648	0.171	3.891	5.318	728
	Log Tariffs	3.678	0.466	1.649	4.578	333
	Freedom	57.701	19.297	17.000	94.000	598
Independent Variables	Foreign Direct Investment	4.221	8.451	-8.629	145.20	557
	Private Capital Flows	4.051	8.788	-13.67	145.20	566
	Trade	78.352	39.923	17.859	275.23	705
Control Variables	Population growth	2.359	1.015	-1.081	10.043	780
	Bank Efficiency	0.700	0.341	0.133	2.304	692
	Democracy	2.307	4.089	-8.000	10.000	735
	Public Investment	7.489	4.535	0.000	39.984	641
Instrumental Variables	English Common-Law	0.384	0.486	0.000	1.000	780
	French Civil-Law	0.615	0.486	0.000	1.000	780
	Christianity	0.634	0.481	0.000	1.000	780
	Islam	0.365	0.481	0.000	1.000	780
	Low Income	0.576	0.494	0.000	1.000	780
	Middle Income	0.423	0.494	0.000	1.000	780
	Lower Middle Income	0.230	0.421	0.000	1.000	780
	Upper Middle Income	0.192	0.394	0.000	1.000	780

S.D: Standard Deviation. Min: Minimum. Max: Maximum.

Appendix 2: Correlation Analysis

Human Development							Globalization Vbles			Control Variables				Instrumental Variables								
HDI	GDP	Edu	LE	Agri	Tariffs	Free	FDI	PCF	Trade	Popg	BcBd	Demo	PubI	Eng	Frch	Chris	Islam	LI	MI	LMI	UMI	
1.00	-0.02	-0.07	0.02	-0.08	-0.05	-0.19	-0.04	-0.02	-0.09	-0.01	0.09	0.13	-0.15	0.18	-0.18	0.10	-0.10	-0.08	0.08	-0.08	0.23	HDI
	1.00	0.10	0.00	0.08	-0.10	-0.02	0.20	0.19	0.16	0.18	-0.05	0.07	0.11	0.01	-0.01	0.03	-0.03	-0.12	0.12	0.03	0.12	GDP
		1.00	0.45	0.17	-0.31	-0.13	0.09	0.03	0.19	-0.30	-0.13	0.06	-0.14	0.44	-0.44	0.16	-0.16	-0.32	0.32	0.11	0.29	Edu
			1.00	0.05	0.02	-0.36	-0.01	-0.2	0.12	-0.28	-0.004	0.05	0.08	-0.13	0.13	-0.16	0.16	-0.46	0.46	0.15	0.41	LE
				1.00	0.01	-0.03	-0.04	-0.04	-0.17	-0.001	0.008	0.14	0.03	-0.10	0.10	-0.14	0.14	0.09	-0.09	-0.00	-0.11	Agri
					1.00	0.16	-0.02	0.04	-0.22	0.19	-0.01	-0.24	-0.05	-0.34	0.34	-0.33	0.33	0.26	-0.26	-0.02	-0.31	Tariffs
						1.00	0.11	0.12	0.03	0.15	-0.11	-0.67	-0.12	-0.07	0.07	-0.11	0.11	0.20	-0.20	0.09	-0.38	Free
							1.00	0.96	0.45	-0.03	-0.16	-0.04	0.07	0.10	-0.10	0.11	-0.11	-0.07	0.07	0.04	0.04	FDIgdg
								1.00	0.42	-0.02	-0.17	-0.06	0.06	0.07	-0.07	0.10	-0.10	-0.04	0.04	0.04	-0.00	PCFgdg
									1.00	-0.25	-0.08	0.01	0.17	0.17	-0.17	0.18	-0.18	-0.35	0.35	0.13	0.29	Trade
										1.00	-0.06	-0.06	0.04	-0.10	0.10	0.00	-0.00	0.42	-0.42	-0.22	-0.29	Popg
											1.00	0.06	-0.23	-0.11	0.11	-0.08	0.08	-0.07	0.07	0.10	-0.01	BcBd
												1.00	0.14	0.17	-0.17	0.16	-0.16	-0.03	0.03	-0.16	0.22	Demo
													1.00	0.14	-0.13	0.00	-0.00	-0.04	0.04	0.00	0.05	PubI
														1.00	-1.00	0.18	-0.18	-0.04	0.04	-0.05	0.11	Eng.
															1.00	-0.18	0.18	0.04	-0.04	0.05	-0.11	Frch.
																1.00	-1.00	-0.00	0.00	-0.15	0.16	Chris.
																	1.00	0.00	-0.00	0.15	-0.16	Islam
																		1.00	-1.00	-0.63	-0.56	LI
																			1.00	0.63	0.56	MI
																				1.00	-0.26	LMI
																					1.00	UMI

HDI: Human Development Index. GDP: GDP per capita growth. Edu: Expected Years of Schooling. LE: Life Expectancy. Agri: Agricultural Productivity. Free: Press Freedom. FDI: Foreign Direct Investment. PCF: Private Capital Flows. Popg: Population growth. BcBd: Banking Efficiency. Demo: Democracy. PubI: Public Investment. Eng: English Common-Law. Frch: French Civil-Law. Chris: Christian Religion. LI: Low Income. MI: Middle Income. LMI: Lower Middle Income. UMI: Upper Middle Income.

Appendix 3: Variable Definitions

Variables	Signs	Variable Definitions	Sources
Human Development	HDI	Inequality Adjusted HDI	World Bank(WDI)
Foreign Direct Investment	FDI	Foreign Direct Investment(% of GDP)	World Bank(WDI)
Private Capital Flow	PCF	Total Private Capital Flows(% of GDP)	World Bank(WDI)
Trade(Openness)	Trade	Imports plus Exports in commodities(% of GDP)	World Bank(WDI)
Banking Efficiency	BcBd	Bank Credit on Bank Deposits	FDSD(WDI)
Population growth	Popg	Average annual population growth rate	World Bank(WDI)
Democracy	Demo	Level of Institutionalized Democracy	World Bank(WDI)
Public Investment	PubI	Gross Public Investment(% of GDP)	World Bank(WDI)
GDP per capita growth	GDP	GDP per capita growth(annual %)	World Bank(WDI)
Education	Edu	Logarithm of Expected Years of Schooling	World Bank(WDI)
Life Expectancy	LE	Logarithm of Life Expectancy at Birth(total years)	World Bank(WDI)
Agricultural Productivity	Agri	Logarithm of Agricultural Production Index(gross, 1999-2001=100)	World Bank(WDI)
Tariffs	Tariffs	Logarithm of Tariff barriers, share of lines bound, manufactured products(%)	World Bank(WDI)
Freedom(Gender Equality)	Free	Quality of Press Freedom	Freedom House

WDI: World Bank Development Indicators. FDSD: Financial Development and Structure Database.

Appendix 4: Categorization of Countries

Instruments	Instrument Category	Countries	Num.
Legal-origins	English Common-Law	Botswana, The Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Uganda, Zambia, Tanzania, Zimbabwe.	20
	French Civil-Law	Algeria, Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Egypt, Eritrea, Equatorial Guinea, Ivory Coast, Ethiopia, Gabon, Guinea, Guinea-Bissau, Libya, Madagascar, Mali, Mauritania, Morocco, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Togo, Tunisia.	32
Religions	Christianity	Angola, Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Congo Republic, Congo Democratic Republic, Ivory Coast, Equatorial Guinea, Ethiopia, Eritrea, Gabon, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Sao Tome & Principe, South Africa, Swaziland, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	33
	Islam	Algeria, Burkina Faso, Chad, Djibouti, The Gambia, Egypt, Guinea-Bissau, Guinea, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tunisia.	19
Income Levels	Low Income	Benin, Burkina Faso, Burundi, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Ethiopia, Eritrea, The Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	30
	Middle Income	Algeria, Angola, Botswana, Cameroon, Cape Verde, Egypt, Ivory Coast, Equatorial Guinea, Gabon, Lesotho, Libya, Mauritius, Morocco, Namibia, Nigeria, Senegal, Seychelles, Sao Tome & Principe, South Africa, Sudan, Swaziland, Tunisia.	22
	Lower Middle Income	Angola, Cameroon, Cape Verde, Egypt, Ivory Coast, Lesotho, Morocco, Nigeria, Sudan, Swaziland, Tunisia.	11
	Upper Middle Income	Algeria, Botswana, Equatorial Guinea, Gabon, Libya, Mauritius, Namibia, Sao Tome & Principe, Seychelles, South Africa.	10

Num: number of countries

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