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Abstract

Tebaldi & Mohan (2010, JDS) have established an empirical nexus between institutions and monetary poverty. We first, reflect their findings in light of recent development models, debates and currents in post-2010 literature. We then re-examine their results with a non-monetary and multidimensional poverty indicator first published in 2010. Our findings confirm the negative relationship and the nexus disappears with control for average income. Hence, confirming the conclusions of the underlying study that institutions could have an indirect effect on multidimensional poverty. In other words, the poverty eradication effect of institutions is through income-average as opposed to income-inequality. We discuss the confirmed findings in light of implications to: (1) debates over preferences in economic rights; (2) China's development/outlook; (3) the Chinese model versus sustainable development; (4) the Fosu conjectures; (5) Piketty's & Kuznets' celebrated literatures and (6) future research to ascertain the inequality mechanism.

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1. Introduction

There is a substantial bulk of literature on the theoretical relationship between poverty and institutions (Rodrik, 2000; Chong & Calderon, 2000; Grindle, 2004; Sindzingre, 2005; Bastiaensen et al., 2005; Tebaldi & Mohan, 2008). Conversely, very few empirical studies have examined the link (Chong & Calderon, 2000; Hasan et al., 2007). An interesting study in the latter stream is Tebaldi & Mohan (2010). According to the authors, corruption, political instability and government ineffectiveness will not only hurt income levels through market inefficiencies, but would also escalate poverty incidences via increased income inequality. The results also imply that the quality of the regulatory system, rule of law, voice and accountability, and expropriation risk are inversely related to poverty but their effect on poverty is via average income rather than income distribution.

This note re-examines the findings on Tebaldi & Mohan (2010) with a battery of estimation techniques. It complements the underlying study by using a different measurement of poverty: the new multidimensional poverty indicator provided by the United Nations Development Programme (UNDP). It is important to re-examine the findings of Tebaldi & Mohan (2010) because of two main developments in recent literature that have articulated the middle class and poverty-inequality relationship: the Washington Consensus (WC) versus the Beijing Model (BM) of development and the nexuses among, poverty, inequality and growth.

First, on the relevance of the middle class in development, China's breathtaking economic development has led to a new stream of research on development models, inter alia: a reconciliation of the WC & the BM as a development path for other developing countries (Asongu, 2014a); strategies of development founded on a mixture of the WC with other successful development strategies (Fosu, 2013); self-reliance as a development path (Fofack, 2014); false economics of pre-conditions (Monga, 2014); the New Structural Economics (Stiglitz & Lin, 2013; Stiglitz et al., 2013ab; Lin & Monga, 2011; Norman & Stiglitz, 2012)

which advocates for a synthesis of structuralism and liberalism; the Liberal Institutional Pluralism[2] and the Moyo Conjecture (Moyo, 2013). According to Moyo, a middle class is needed to sustainably demand for political rights. Hence, economic rights should be prioritised at the early stages of industrialisation. According to the narrative, the BM (WC) should be a short-run (long-term) development models because while the BM is more effective at delivering a short-term middle-class, it is also a less inclusive growth model compared to the WC[3]. The Moyo conjecture has been partially confirmed in developing (Lalountas et al., 2011) and African (Asongu, 2014b) countries[4].

Second, the recent literature on inclusive development has clearly articulated the critical feature of income-distribution in the effect of growth on poverty (Fosu, 2011; Thorbecke, 2013; Fosu, 2015). These narratives emphasise the imperative for policy makers to understand the following, among others: mastery of growth elasticity instruments; emphasise on how poverty is directly affected by income distribution and focus on the relevance of inequality in the growth-poverty relationship (Fosu, 2010a; Fosu, 2015; Asongu et al., 2014). More specifically: "*The study finds that the responsiveness of poverty to income is a decreasing function of inequality*" (Fosu, 2010b, p. 818); "*The responsiveness of poverty to income is a decreasing function of inequality, and the inequality elasticity of poverty is actually larger than the income elasticity of poverty*" (Fosu, 2010c, p. 1432); and "*In general, high initial levels of inequality limit the effectiveness of growth in reducing poverty while growing inequality increases poverty directly for a given level of growth*" (Fosu, 2011, p. 11). The conclusions of Fosu which converge with Piketty's (2014) celebrated 'capital in the 21st

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[2] This post WC school focuses on, among others: institutions in the delivery of good public commodities, institutional diversity and institutional conditions for successful economic prosperity. The interested reader can find more in this school in Fofack (2014, pp. 5-9; Rodrik, 2008; Acemoglu et al., 2005 and Brett, 2009).

[3] Moyo defines the WC as 'liberal democracy, private capitalism and priority in political rights', and the BM as 'de-emphasised democracy, state capitalism and priority in economic rights'. The interested reader can refer to Asongu (2014a) for insights into how a new development consensus could reconcile the BM with the WC.

[4] There is an evolving literature sustaining that institutions are more endogenous to economic growth (Anyanwu & Erhijakpor, 2014; Asongu, 2014c). While the Moyo proposal/hypothesis is based on the Kuznet's (1955) conjecture which has been recently debunked by Piketty's (2014) 'Capital in the 21st century', we resist the itch of engaging in the debate because it is out of scope.

century', are valid for both African (Fosu, 2010a, 2010b) and a broad sample of developing nations (Fosu, 2010c; Asongu et al., 2014)[5].

It is important to devote space to discussing how investigating the underlying study extends the above evolving currents and debates. To the best of our knowledge, the complementary/extensive motivation of this comment is at least threefold. First, Africa which is on time for certain Millennium Development poverty targets (Pinkivskiy & Sala-i-Martin, 2014) due to its growth miracle (Young, 2012) has been experiencing substantial growth of its middle class (Kodila-Tedika et al., 2014; Ncube et al., 2011, 2014; Ncube & Shimeles, 2013). Accordingly, the continent's decline in poverty relative to other regions of the world (Fosu, 2015) maybe more traceable to the middle class than to recent narratives of growing inequality marring its growth (Blas, 2014).

Second, poverty and inequality reduction challenges of the post-2015 development agenda are also incentives for this comment (United Nations, UN, 2013, p. 7-13). Hence, policy makers could be provided with new insights into poverty reduction, based on income-distribution, the middle-class and quality of institutions. This helps in extending the evolving and interesting literature on inclusive and sustainable development (Bagnara, 2012; Monika & Bobbin, 2012; Ozgur et al., 2013; Singh, 2014; Miller, 2014; Mlachila et al., 2014).

Third, this paper improves the *evolving currents* on the nexuses among, inequality, growth and poverty by assessing how an institutional dimension plays-out into the linkages. We have seen from the above that the growth effect of poverty depends on inequality because the inequality elasticity of poverty is higher than the growth elasticity of poverty. Tebaldi & Mohan (2010) have concluded that institutions affect poverty reduction more through average income as opposed to inequality (or income-distribution). If average income from Tebaldi & Mohan (2010) is equated to growth in Fosu (2010abc, 2011, 2015), the resulting comparative

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[5] More development literature on the nexuses among: inequality, growth and poverty can be found in Fosu (2008, 2009).

perspective is interesting. Accordingly, by comparing the Fosu narratives above with the Tebaldi & Mohan conclusion, we could logically infer that the conclusions of the latter that average income is more relevant than inequality in poverty reduction starkly contrast with those of the former: the response of poverty to growth is a decreasing function of inequality.

This study also complements the underlying paper by employing an alternative measurement of poverty. In essence, the motivation for employing a multidimensional poverty index (MPI) is at least twofold: time and substance. First, on the time dimension, while the MPI was first published in 2010, the final version of the underlying paper was submitted in 2009, to be later published in 2010. Second, on the substantive dimension, as opposed to the underlying paper which is based on a monetary measurement of poverty (people living on less than $2 a day), the MPI first published in 2010 considers poverty as a multidimensional concept. It complements the money measurement of poverty used by Tebaldi & Mohan (2010) by taking into account overlapping needs by a people within a given period. Needs identified by the index are the same as in the three dimensions of the human development index (HDI). The MPI is a better tool in policy making because it helps in enhancing effective resource allocation by enabling policy makers to devote resources to those sectors with the highest poverty intensity. The index is of great importance in strategically addressing the Millennium Development Goals (MDGs) as well as policy intervention monitoring. Moreover, the index can, inter alia be: adapted at the domestic levels with weights and indicators that are consistent with the country and region; used to examine variations over time and; adopted for poverty eradication programs at national levels.

The rest of the comment is organised as follows. Section 2 further discusses the data. The methodology and empirical analysis are covered in Section 3. Section 4 provides concluding implications, caveats and future research directions.

2. Data

The data and methodology are typically consistent with the underpinning study. It consists of a sample of 53 countries for the period 1996-2005. Hence, we express gratitude to Tebaldi & Mohan (2010) for sharing their data compiled from the World Bank Development Indicators (WDI). The main difference lies in the dependent variable. While they have used the poverty rate (at the PPP $2 threshold) for developing countries, we are using the MPI discussed in the motivation. It should be noted that these indicators are only limited to developing countries.

In accordance with the underlying paper, the variables of institutions are obtained from Kauffman et al. (2007) and McArthur & Sachs (2001). Expropriation risk which is appreciated as the risk of forced nationalisation and risk of confiscation is used for conformity with other studies in the institutions and growth literature. It ranges from 0 to 10 and is measured as the mean value of each nation for the period 1985-1995. Therefore higher scores denote better institutions and therefore, lowered risk of forced nationalisation and risk of confiscation.

The measurements of institutions obtained from Kauffman et al. (2007) include: *political governance* (voice & accountability and political stability/no violence), *economic governance* (government effectiveness and regulation quality) and *institutional governance* (corruption-control and rule of law). Consistent with Andrés & Asongu (2013): (1) *political governance* is the election and replacement of political leaders; (2) *economic governance* is the formulation and implementation of policies that deliver public commodities and (3) *institutional governance* is the respect of the State and citizens of institutions that govern interactions between them. The full definitions of specific governance variables are found in Footnote 9 of the underlying study. They can also be provided upon request. Higher values of the governance dynamics indicate better institutions. For further robustness purposes, principal component analysis (PCA) is used to obtain a general governance index.

The governance variables are in time periods of 2005, 2004, 2002, 2000, 1998 & 1996. We shall use the terms governance and institutions interchangeably hence. Accordingly, while the underlying paper has used 'institutions' in the title, the variables used in the analysis are economic, political and institutional governance dynamics. Moreover the Kauffman et al. (2007) citation used to define the variables, conceives governance in political, economic and institutional terms. In this light, our motivation for using the terms of 'governance' and 'institutions' interchangeably is to mitigate information asymmetry and enhance readability.

The geographic indicators that are sourced from La Porta et al. (1999) and McActhur & Sachs (2001) consists of coastal land that measures the *proportion of land* within a horizon of 100 km from the coast on the one hand and *latitude* which is scaled from 0 to 1, denoting the value of the latitude in absolute terms. *Colonial legacy* indicators that source from La Porta et al. (1999) consists of a set of dummy variables, which take the value of 1 if the country is a former *French, Socialist, Scandinavian, German or English* colony. The values of *ethnolinguistic fragmentation* are also from La Porta et al. (1999).
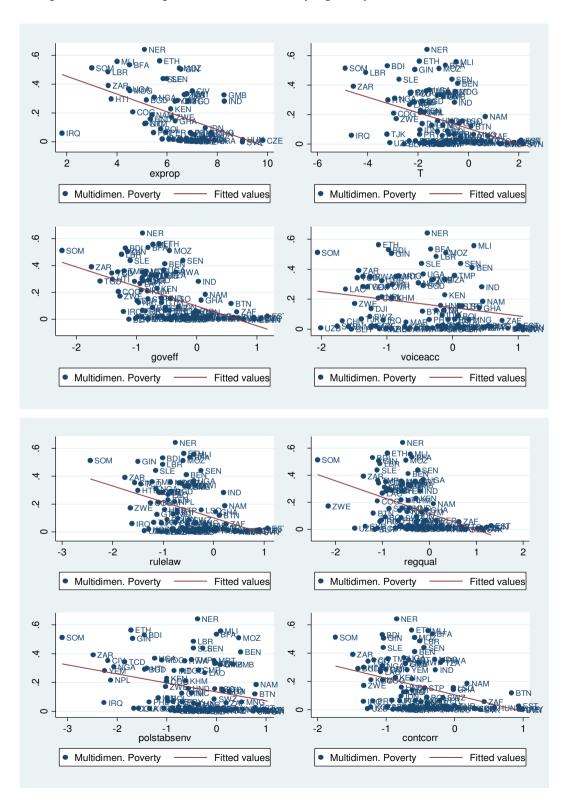
Under the hypothesis that institutions represent an evolutionary process which is contingent on previously gained knowledge, the specifications account for indicators of human capital accumulation in terms of primary and secondary school enrolments. The variable which is obtained from Mitchell (2003a, b, c) denotes the number of students per kilometre square in the 1920s.

The measurement of country area is based on the current geopolitical arrangement from the United Nations.

3. Methodology and empirical results

Figure 2 shows that poverty rates are negatively correlated with institutions as countries with better institutions have lower poverty rates. However, the simple correlations shown in these figures do not allow one to infer whether better institutions actually reduce multidimensional

poverty. We address the eventual endogeneity issue by estimating a set of regressions that utilize the instrumental variable (IV) method with robust standard errors. Table 2 reports the first-stage regression based on Ordinary Least Squares (OLS) while Table 3 shows the second-stage estimates of Equation 3 of the underlying study.

The results reported in Table 2 indicate that historical levels of human capital, geography, and the origin of the legal system are important determinants of current institutions and explain approximately 30 per cent of the variation in the alternative measures of institutions. Specifically, in all regressions, controlling for geographically-related variables and legal origin, human capital density in the early twentieth century have a positive and statistically significant influence on all measures of institutions (except Political Stability). This indicates that countries that accumulated relatively more human capital in the early twentieth century turned out to have better current institutions. These results are consistent with those of Glaeser et al. (2004).

We find that the coefficient of ethnolinguistic fragmentation is not significant, which suggests that this variable does not impact current institutions. These findings which are consistent with Tebaldi & Mohan (2010) run counter to those of La Porta et al. (1999). The legal origin variables are not statistically significant while geographic indicators are positively significant.

Table 2. The determinants of current institutions

	Government effectiveness	Political Stability	Regulatory quality	Voice and accountability	Control of corruption	Rule of law	Expropriation risk	Principal component-weighted institutions
				Dependant variable				
Prop. land within100 km of the sea coast	**.086**	**-.126**	.026	.057	.036	.009	**.257**	.059
	(0.094)	**(0.090)**	(0.655)	(0.382)	(0.455)	(0.855)	**(0.029)**	(0.604)
Absolute latitude	**1.978**	**3.390**	**1.515**	1.048	**1.625**	**2.384**	2.445	**5.391**
	(0.003)	**(0.001)**	**(0.041)**	(0.203)	**(0.009)**	**(0.000)**	(0.113)	**(0.000)**
Ethnolinguistic fragmentation	.115	.659	.252	.623	.056	.251	.871	.251
	(0.656)	(0.083)	(0.394)	(0.064)	(0.818)	(0.337)	(0.162)	(0.664)
Legal origin –British	-.170	-.622	-.291	.463	.153	-.021	-1.257	.086
	(0.553)	(0.137)	(0.372)	(0.210)	(0.574)	(0.941)	(0.103)	(0.892)
Legal origin –French	-.218	-.505	-.160	.437	.159	-.093	-1.116	.201
	(0.380)	(0.162)	(0.571)	(0.171)	(0.495)	(0.708)	(0.107)	(0.717)
Human capital density in the early 20th century	**.108**	.015	**.094**	**.133**	**.054**	**.078**	**.273**	**.149**
	(0.000)	(0.712)	**(0.004)**	**(0.000)**	**(0.043)**	**(0.008)**	**(0.001)**	**(0.020)**
Constant	**-1.605**	.599	-.774	**-1.734**	**-1.387**	-1.043	**3.691**	**-2.894**
	(0.015)	(0.522)	(0.294)	**(0.040)**	**(0.026)**	(0.112)	**(0.029)**	**(0.049)**
Observations	63	63	63	63	63	63	55	63
R-squared	0.4279	0.2740	0.2593	0.2911	0.2460	0.3630	0.3709	0.3576

Note: lo_socialist, lo_german and lo_scandindropped because of collinearity. All regressions are estimated using White (1980) heteroskedasticity correction. P-values are in parentheses. Prop: Proportion.

Table 3 presents the results of the effect of institutions and geography on the MPI. We notice that the geographical variables are not overwhelmingly significant. Hence, the conclusions of Sachs et al. (2001) are not verifiable here. As for the institutional indicators, but for political stability, all have a significantly negative relationship with the dependent variable. Accordingly, an improvement of governance/institutions reduces multidimensional poverty. Given that the instruments are invalid, we cannot project the results with confidence.

Table 3. IV regressions of multidimensional poverty on institutions and geography

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Government effectiveness	**-.337** **(0.000)**							
Political stability		.210 (0.169)						
Regulatory quality			**-.381** **(0.003)**					
Voice and accountability				**-.131** **(0.029)**				
Control of corruption					**-.568** **(0.019)**			
Rule of law						**-.354** **(0.008)**		
Expropriation risk							**-.143** **(0.000)**	
Principal component-weighted institutions								**-.232** **(0.007)**
Prop. land within100 km of the seacoast	.004 (0.805)	.022 (0.377)	-.009 (0.647)	.001 (0.940)	.000 (0.998)	-.011 (0.563)	.027 (0.122)	-.008 (0.736)
Absolute latitude	.206 (0.478)	**-1.315** **(0.014)**	.090 (0.797)	**-.568** **(0.004)**	.346 (0.507)	.230 (0.572)	-.096 (0.698)	.713
Constant	-.055 (0.803)	.305 (0.252)	.136 (0.593)	.242 (0.234)	-.188 (0.612)	.091 (0.715)	**.762** **(0.003)**	-.112 (0.723)
Observations	63	63	63	63	63	63	55	63
Uncentered R-squared	0.6314	0.3555	0.4372	0.6298	0.1488	0.4889	0.6441	0.3012
Anderson Underidentification test (p-value)	0.0042	0.3182	0.0710	0.0015	0.2201	0.0552	0.0103	0.1668
Sargan statistic (overidentificationtest (p-value)	0.0609	0.0095	0.0838	0.0004	0.2009	0.0196	0.0010	0.1621
Hausmann test overidentification test (p-value)	0.0596	0.0060	0.0853	0.0000	0.2174	0.0154	0.0002	0.1740
Anderson-Rubin Wald test (p-value)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

All regressions are estimated using White (1980) heteroskedasticity correction. P-values are in parentheses. The dependent variable is the average poverty rates between 1999–2004; all regressions were run with standard errors robust to arbitrary heteroskedasticity. All first-stage regressions are estimated including the following set of variables: ln human capital density in the early twentieth century, dummies for the origin of the legal system, absolute latitude, proportion of land within 100 km of the seacoast, and ethnolinguistic fragmentation. IV: Instrumental Variable.

Table 4 below differs from the preceding table in the fact that, it controls for the impact of initial income, instead of geographical effects. However, it follows the same econometric logic. Hence, the specifications are comparable. We notice that the significance of all institutional variables disappear in the interest of average income. The signs of these institutional/governance indicators also become very unstable.

Table 4. IV regressions of multidimensional poverty on institutions and initial GDP per capita

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Government effectiveness	-.138 (0.169)							
Political stability		-.0514 (0.455)						
Regulatory quality			-.080 (0.490)					
Voice and accountability				.040 (0.364)				
Control of corruption					-.111 (0.778)			
Rule of law						-.187 (0.152)		
Expropriation risk							.015 (0.658)	
Principal component-weighted institutions								-.023 (0.837)
Log of average income	**-.102 (0.048)**	**-.156 (0.000)**	**-.136 (0.007)**	**-.184 (0.000)**	-.137 (0.247)	**-.106 (0.029)**	**-.186 (0.000)**	-.147 (0.191)
Constant	**.932 (0.040)**	**1.389 (0.000)**	**1.23 (0.006)**	**1.656 (0.000)**	1.207 (0.294)	**.917 (0.043)**	**1.572 (0.000)**	1.3226 (0.191)
Observations	63	63	63	63	63	63	55	
Uncentered R-squared	0.8223	0.8361	0.8376	0.8654	0.8260	0.7635	0.8461	0.8484
Anderson Underidentification test (p-value)	0.0920	0.2753	0.3708	0.0056	0.9718	0.3243	0.0170	0.8832
Sargan statistic (overidentification test (p-value)	0.1285	0.0538	0.0502	0.0272	0.0537	0.3034	0.0286	0.0316

All regressions are estimated using White (1980) heteroskedasticity correction. P-values are in parentheses.
Log : Logarithm. IV: Instrumental Variable.

The weakness of Table 3 is based on the fact that the instruments are not efficient and may be of questionable validity. On this account, we follow the same econometric logic as in Table 5 while using only human capital as an instrument. The table in the Appendix represents the

first-stage of Table 5. Based on the results, we ascertain that the instruments are valid this time. Accordingly, but for political stability, all the governance variables are significant.

It should be noted that Table 5 is a reproduction of Table 4. While in Table 4 we have instrumented our indicators of interest with many variables, we have retained only human capital accumulation as instrument in Table 5. Hence, since we do not have at least two instruments for the over-identification test, we present the regression in two stages. The first-stage in which we have investigated if cumulative human capital is a good instrument is provided in the appendix. In this light, Table 5 is the second-stage of the estimation.

Table 5. IV regressions of multidimensional poverty on institutions and geography

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Government effectiveness	**-.3418**							
	(0.000)							
Political stability		48.174						
		(0.983)						
Regulatory quality			**-.436**					
			(0.003)					
Voice and accountability				**-.291**				
				(0.002)				
Control of corruption					**-.6523**			
					(0.016)			
Rule of law						**-.475**		
						(0.005)		
Expropriation risk							**-.1787**	
							(0.001)	
Principal component-weighted institutions								**-.238**
								(0.008)
Prop. land within100 km of thesea coast	-.0019	4.883	-.0177	-.0089	-.0048	-.0193	.023	-.0115
	(0.906)	(0.983)	(0.429)	(0.674)	(0.859)	(0.423)	(0.313)	(0.643)
Absolute latitude	.275	-138.742	.283	-.2997	.460	.486	.053	.630
	(0.342)	(0.983)	(0.465)	(0.234)	(0.398)	(0.305)	(0.866)	(0.252)
Constant	.0027	-4.482	.185	.252	-.2039	.0633	**.991**	-.0677
	(0.990)	(0.985)	(0.508)	(0.350)	(0.615)	(0.837)	**(0.007)**	(0.844)
Observations	66	66	66	66	66	66	57	66
Uncentered R-squared	0.5750	-1.6e+04	0.2490	0.2880	0.1702	0.1458	0.2942	0.0362

All regressions are estimated using White (1980) heteroskedasticity correction. P-values are in parentheses.
Prop : Proportion. IV : Instrumental Variable.

When the instruments of the Appendix are employed in the specifications of Table 4, the same results are obtained[6]. In other words, the institutional variables are not significant. This implies that the effect of institutions disappears when we control for the revenue effect.

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[6] Results can be provided upon request.

Hence, consistent with the underlying paper, the effects of institution on multidimensional poverty are indirect.

4. Concluding implications, caveats and future research directions

After employing the same economic techniques and data (but for the dependent variable) as in Tebaldi and Mohan (2010), we have established the same conclusion: institutions mitigate poverty through the average income channel, as opposed to the inequality mechanisms. In other words, we have used a non monetary & multidimensional poverty measurement to confirm the findings of the underlying study that have been based on a monetary measurement of poverty. Hence, we have used a more holistic poverty measurement, published in 2010 after Tebaldi & Mohan (2010), to confirm the findings of the underlying study. In light of growing currents and debates, this finding has implications for: (1) the debate over preferences in economic rights; (2) China's development/outlook; (3) the Chinese model versus sustainable development; (4) Fosu's conjectures; (5) Piketty's celebrated literature contrasting with Kuznets' and (6) future research to ascertain the inequality mechanism.

First, the results have critical implications over preferences in economic rights. In simple terms, the conclusions sound like: the economic rights to 'equitable income distribution' are less important than economic rights 'to economic growth or average income', as a mechanism from institutions to poverty mitigation. The logical inference is that, institutions should be at the service of economic growth instead of inequality in order to fight poverty. This implies income-average is a more instrumental poverty eradication channel than income-inequality. But this implication reminds us of Lewis (1955): '*Output may be growing, and yet the mass of the people may be becoming poorer*'. Accordingly, '*Lewis led all developing countries to water, proverbially speaking, some African countries have so far chosen not to drink*' (Amavilah, 2014). This may paint a picture showing why Africa is the

continent with the highest poverty rate. But we resist the itch of engaging further in this direction, as we are more concerned with the underlying paper.

Second, the findings may also reflect the Chinese current development outlook and the Beijing Model. While poverty has decreased substantially over the past decades owing to the country's breathtaking economic growth, inequality has also risen sharply (Asongu, 2014a). This implies, institutional development or governance in China has enabled the mitigation of poverty through average income (which has risen) as opposed to income-inequality (which has also risen). A natural criticism that may counter this line of inference in relation to the findings should be that China has questionable institutional quality. Accordingly, while China may have questionable political governance standards (i.e, the election and replacement of political leaders), the other two governance dynamics of economic governance (regulation quality and government effectiveness) and institutional governance (corruption-control and rule of law) escape this criticism. Moreover, a dimension of political governance (political stability/no violence) is consistently insignificant in our findings, which gives more weight to the other two governance dynamics that are relevant to the Chinese model.

Third, the Chinese model as conceived by the Moyo conjecture discussed in the introduction is not a sustainable development model because it mitigates inequality at a lower rate than the Washington Consensus (WC). Hence in light of the post-2015 development agenda, putting economic growth before income-inequality may not be the right way forward towards inclusive and sustainable development.

Fourth, the findings run counter to the Fosu conjectures discussed in the introduction that are valid for both African and a broad sample of developing countries. As a reminder, we have seen that the response of poverty to growth is a decreasing function of inequality because the growth elasticity of poverty is lower than the inequality elasticity of poverty.

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Fifth, Piketty's celebrated '*capital in the 21ˢᵗ century*' which has debunked the Kuznets (1995) conjectures is indirectly called to question. In other words, the findings have the following policy implication: institutions should be developed at the service of economic growth if poverty is to be eradicated. This substantially contradicts a growing strand of literature calling for less developed countries to be oriented towards industrialisation in the perspective of Piketty, as opposed to Kuznets (Asongu, 2014d). Overall, the findings seriously challenge the substantially documented concern of inequality as a critical set back to 21ˢᵗ century capitalism (Brada & Bah, 2014).

Sixth, the above criticisms would have some substance as long as the dimension of inequality in the conclusions of Tebaldi and Mohan (2010) is not backed by some empirical validity. Accordingly, the channel of inequality is used as a logical alternative to the average income mechanism without empirical justification. While the intuition for this inference by the authors is logical and sound, it nonetheless has to be backed by sound empirical validity. The evolving currents and debates after the published paper cannot be overlooked. In this light, introducing inequality indicators into the analysis is an interesting future research direction that would improve the extant of literature on the issues.

Appendix

Appendix 1. The determinants of current institutions

	Government effectiveness	Political Stability	Regulatory quality	Voice and accountability	Control of corruption	Rule of law	Expropriation risk	Principal component-weighted institutions
Human capital density in the early 20th century	**.11077** **(0.000)**	-.0007 (0.984)	**.0868** **(0.003)**	**.1300** **(0.000)**	**.0580** **(0.017)**	**.07966** **(0.003)**	**.2848** **(0.001)**	**.1588** **(0.011)**
Prop. land within100 km of the sea coast	**.0832** **(0.091)**	-.1019 (0.175)	.0288 (0.597)	.0736 (0.257)	.0391 (0.390)	.0232 (0.644)	**.2894** **(0.034)**	.0791 (0.498)
Absolute latitude	**1.9828** **(0.000)**	**2.8716** **(0.000)**	**1.5729** **(0.006)**	.3529 (0.592)	**1.3227** **(0.006)**	**1.869** **(0.001)**	1.859 (0.193)	**4.3328** **(0.001)**
Constant	**-1.7027** **(0.005)**	.1051 (0.907)	-.9169 (0.170)	-1.1425 (0.148)	**-1.209** **(0.031)**	**-1.097** **(0.075)**	2.655 (0.111)	**-2.7378** **(0.056)**
Observations	66	66	66	66	66	66	57	66
R-squared	0.4617	0.2280	0.3032	0.2352	0.2579	0.3619	0.2892	0.3304

All regressions are estimated using White (1980) heteroskedasticity correction. P-values are in parentheses. Prop: proportion.

References

Acemoglu, D., Johnson, S., & Robinson, J., (2005). "Institutions as a Fundamental Cause of Long-Run Growth". In Handbook of Economic Growth, Vol. 1, Part A. North Holland: Elsevier.

Andres, A, S., & Asongu, S. A., (2013). "Fighting Software Piracy: Which Governance Tools Matter in Africa?", *Journal of Business Ethics*, 118(3), pp. 667-682.

Amavilah, V. H. S., (2014). "Sir W. Arthur Lewis and the Africans: Overlooked Economic Growth Lessons", *MPRA Working Paper* No. 57126.

Anyanwu, J., & Erhijakpor, A. E. O., (2014). "Does Oil Wealth Affect Democracy in Africa?", *African Development Review*, 26(1), pp. 15-37.

Asongu, S. A., (2014a). "A Development Consensus reconciling the Beijing Model and Washington Consensus: Views and Agenda", *African Governance and Development Institute Working Paper* No. 14/013.

Asongu, S. A., (2014b). "Globalization (fighting) corruption and development: how are these phenomena linearly and nonlinearly related in wealth effects", *Journal of Economic Studies*, 41(3), pp. 346-369.

Asongu, S. A., (2014c). "On taxation, political accountability and foreign aid: empirics to a celebrated literature", *South African Journal of Economics*: http://onlinelibrary.wiley.com/doi/10.1111/saje.12064/abstract

Asongu, S. A., (2014d). "A brief clarification to the questionable economics of foreign aid for inclusive human development", *African Governance and Development Institute Working Paper* No. 14/028.

Asongu, S. A., Efobi, U., & Beecroft, I., (2014). "Inclusive human development in pre-crisis times of globalisation-driven debts", *African Governance and Development Institute Working* Paper No. 14/024.

Bagnara, A., (2012). "Aid Effectiveness: Effective Aid is Good Foreign Policy", *Partners in Research for Development*, (Summer Issue), pp. 4-6.

Bastiaensen, J., De Herdt, T., & D'exelle, B., (2005). "Poverty reduction as a local institutional process". *World Development*, 33(6), pp. 979–993.

Blas, J., (2014). "Inequality mar Africa's rise", Financial Times (October 5th). http://www.ft.com/intl/cms/s/0/9e74aa50-1e4d-11e4-ab52-00144feabdc0.html#axzz3GWsY4I91 (Accessed: 18/10/2014).

Brada, J. C., & Bah, E. M. (2014). "Growing Income Inequality as a Challenge to 21stCentury Capitalism", Italian Association for the Study of Economic Asymmetries, *Working Paper* No. 1402.

Brett, E., (2009). Reconstructing Development Theory: International Inequality, Institutional Reform and Social Emancipation. Basingstoke: Palgrave Macmillan.

Chong, A., & Calderon, C., (2000). "Institutional quality and poverty measures in a cross-section of countries". *Economics of Governance*, 1(2), pp. 123–135.

Fofack, H., (2014). "The Idea of Economic Development: Views from Africa", *WIDER Working Paper* 2014/093.

Fosu, A., (2013), "Achieving development success: Strategies and lessons from the developing world", *UNU-WIDER Policy Brief* (November).

Fosu, A. K., (2015). "Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progressin a Global Context", *Oxford Development Studies*, 43(1), pp. 44-59.

Fosu, A. K., (2008). "Inequality and the Growth-Poverty Nexus: Specification Empirics Using African Data", *Applied Economics Letters*, 15(7), pp. 563-566.

Fosu, A. K., (2009). "Inequality and the Impact of Growth on Poverty: Comparative Evidence for Sub-Saharan Africa", *Journal of Development Studies*, 45(5), pp. 726-745.

Fosu, A. K., (2010a). "The Effect of Income Distribution on the Ability of Growth to Reduce Poverty: Evidence from Rural and Urban African Economies", *American Journal of Economics and Sociology*, 69(3), pp. 1034-1053.

Fosu, A. K., (2010b). "Does Inequality Constrain Poverty Reduction Programs? Evidence from Africa", *Journal of Policy Modeling*, 32(6), pp. 818-827.

Fosu, A. K., (2010c). "Inequality, Income and Poverty: Comparative Global Evidence", *Social Sciences Quarterly*, 91(5), pp. 1432-1446.

Fosu, A. K., (2011). "Growth, Inequality and Poverty Reduction in Developing Countries: Recent Global Evidence", *UNU WIDER Working Paper* 2011/01.

Glaeser, E. L., La Porta, R., Lopez-de-Silane, F., & Shleifer, A., (2004). "Do institutions cause growth?" *NBER Working Papers* 10568.

Grindle, M. S., (2004). "Good Enough Governance: Poverty Reduction and Reform in Developing Countries". *Governance* 17 (4): 525–548.

Grindle, M. S., (2004). "Good enough governance: poverty reduction and reform in developing Countries", *Governance*, 17(4), pp. 525–548.

Hasan, R., Mitra, R., & Ulubasoglu, M., (2007). "Institutions and policies for growth and Poverty reduction: the role of private sector development". *Asian Development Review*, 24(1), pp. 69–116.

Kaufmann, D., Kraay, A., & Mastruzzi, M., (2007). "Governance matters VI: governance indicators for1996–2006". *World Bank Policy Research Working Paper* No. 4280.

Kodila-Tedika, O., Asongu, S. A., & Kayembe, J. M., (2014). "Middle class in Africa: Determinants and Consequences", *African Governance and Development Institute Working Paper* No. 14/026.

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

Kuznets, S., (1955). "Economic Growth and Income Inequality", *American Economic Review*, 45, pp. 1-28.

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, pp.636-648.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R., (1999). "The quality of government". *Journal of Law, Economics and Organization*, 15(1), pp. 222–279.

Lewis, A., (1955). Theory of Economic Growth. Milton Park: Routledge

Lin, J., & Monga, C., (2011). "Growth Identification and Facilitation : The Role of the State in the Dynamics of Structural Change". *Development Policy Review*, 29(3), pp. 264-90.

McArthur, J. W., & Sachs, J. D., (2001). "Institutions and geography: comment on Acemoglu, Johnson, and Robinson (2000)". *NBER Working Paper* No. 8114.

Miller, D. C., (2014). "Explaining Global Patterns of International Aid of Linked Biodiversity Conservation and Development", *World Development*, 59, pp. 341-359.

Mitchell, B. R., (2003a).*International Historical Statistics: Africa, Asia & Oceania*, 1750–2001, 4th ed. (New York: Palgrave Macmillan).

Mitchell, B. R., (2003b). *International Historical Statistics: Europe, 1750–2000*, 5th ed. (New York: Palgrave Macmillan).

Mitchell, B. R., (2003c). *International Historical Statistics: The Americas 1750–2000*, 5th ed. (New York:Palgrave Macmillan).

Mlachila, M., Tapsoba, R., & Tapsoba, S. J. A., (2014). "A Quality of Growth Index for Developing Countries: A Proposal", *IMF Working Paper* No. 14/172.

Monga, C., (2014). "The False Economics of Pre-Conditions: Policymaking in the The African Context", *Journal of African Development*, 16(2), pp. 121-140.

Monika, A., & Bobbin, T., (2012). "The Billion Dollar Solution that Isnt: How systems modeling in foreign aid could save billions and serve the poor", *Development*, 55(1), pp. 71-80.

Moyo, D., (2013). "Is China a new idol for developing countries", TED Talks, New Ideas Every day, https://www.youtube.com/watch?v=4Q2aznfmcYU (Accessed: 07/05/2014).

Ncube, M., Lufumpa, C. L., & Kayizzi-Mugerwa, S., (2011). "The Middle of the Pyramid: Dynamics of the Middle Class in Africa", AfDB Market Brief.

Ncube, M., & Shimeles, A., (2013). "The Making of Middle Class in Africa: Evidence from DHS Data," *IZA Discussion Papers 7352*, Institute for the Study of Labor (IZA).

Ncube, M., Anyanwu, J. C., & Hausken, K., (2014). "Inequality, Economic Growth and Poverty in the Middle East and North Africa (MENA)", African Development Review, 26(3), pp. 435-453.

Norman, A., & Stiglitz, J., (2012). 'African Development Prospects and Possibilities. In E. Aryeetey et al. (eds), The Oxford Companion to the Economics of Africa. Oxford: Oxford University Press.

Ozgur, K., Ilker, K., & Lewell, G., (2013). "Foreign Aid and the Quest for Poverty Reduction: Is Aid to Agriculture Effective?", *Journal of Agricultural Economics*, 64(3), pp. 583-596.

Piketty, T., (2014). "Capital in the Twenty First Century", Harvard University Press.

Pinkivskiy, M., & Sala-i-Martin, X., (2014). "Africa is on time", *Journal of Economic Growth*, 19(3), pp. 311-333.

Rodrik, D., (2008). One Economics, Many Recipes: Globalization, Institutions and Economic Growth. Princeton: Princeton University Press.

Rodrik, D., (2000). "Institutions for high-quality growth: what they are and how to acquire them", *Studies in Comparative International Development*, 35(3), pp. 3–31.

Sachs, J. D., Mellinger, A., & Gallup, J., (2001). "The Geography of Poverty and Wealth", *Scientific American*, 284, pp. 70–76.

Sindzingre, A., (2005). "Explaining threshold effects of globalization on poverty an institutional perspective". *UNU-WIDER Research Paper* No. 2005/53 Helsinki, Finland.

Singh, P., (2014, September). "Austerity, Welfare State and Eco-Socialism: With Special reference to the United Kingdom", Economic and Political Weekly, XLIX(39), pp. 111-118.

Stiglitz, J., & Lin, J., (eds.), (2013). The Industrial Policy Revolution I: The Role of Government Beyond Ideology. New York, Palgrave Macmillan.

Stiglitz, J., Lin, J., & Monga , C., (2013a). 'The Rejuvenation of Industrial Policy', Policy Research Working Paper 6628. Washington, DC: World Bank.

Stiglitz, J., Lin, J., Monga , C., & Patel, E., (2013b). "Industrial Policy in the African Context". Policy Research Working Paper 6633. Washington, DC: World Bank.

Tebaldi, E., & Mohan, R., (2010). "Institutions and Poverty". *Journal of Development Studies*, 46(6), pp. 1047-1066.

United Nations (2013). "A New Global Partnership: Eradicate Poverty and Transform Economies Through Sustainable Development", The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. http://www.un.org/sg/management/pdf/HLP_P2015_Report.pdf (Accessed: 31/08/2014).

Young, A., (2012). "The African growth miracle", *Journal of Political Economy*, 120 (4), pp. 696-739.