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**On the dynamic effects of foreign aid on corruption**

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**On the dynamic effects of foreign aid on corruption**

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**Abstract**

We assemble more pieces on the puzzle of the aid-corruption nexus. In essence, we extend the debate on the effect of foreign aid on corruption by providing evidence on dynamic effects of wealth, legal origin, religious-domination, regional proximity, openness to sea, natural resources and politico-economic stability. The empirical evidence from dynamic panel GMM estimation is based on 53 African countries for the period 1996-2010. The findings show that the positive effect of foreign aid on corruption is most significant in: Middle-income, French civil-law, Christian-dominated, non-oil exporting and landlocked countries. Moreover, there is also some scanty evidence of foreign aid increasing corruption-control in Lower Middle income and Not-landlocked countries. Justifications for the dynamics are discussed.

*JEL Classification:* B20; F35; F50; O10; O55

*Keywords:* Foreign Aid; Political Economy; Development; Africa

**1. Introduction**

The recent debate on the effect of foreign aid on corruption has had an important influence in academic and policy circles (Okada & Samreth, 2012; Asongu, 2012a, 2013a; Asongu & Jellal, 2013). Policy implications from the debate in its current state are based on blanket recommendations across countries. However, it has recently been documented that fundamental characteristics of corruption substantially affect the modeling of corruption

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(Kodila-Tedika, 2012, 2013; Asongu, 2014a; Jellal & Bouzahzah, 2012; Musila, 2013; Ndikumana & Boyce, 2011; Hollyer & Wantchekon, 2012). In light of the above, this note assembles more pieces on the puzzle by providing dynamic assessments in terms of: the wealth of nations, legal origins, religious-domination, regional proximity, openness to sea, natural resources and politico-economic stability (Knack & Keefer, 1995; Knack, 2001)<sup>2</sup>. The weight of these fundamental characteristics is important for more focused policy implications.

Consistent with Asongu & Jellal (2013), the puzzle can be discussed in three main strands. In the first strand, Asongu (2012a) has responded to the findings of Okada & Samreth (O & S) by partially negating their criticism of the mainstream approach to the aid-development nexus. The empirical evidence of O & S (2012) which is based on a sample of 120 developing countries for the period 1995-2009 concludes that development assistance mitigates corruption and its mitigating effect is greater in less corrupt countries. Asongu (2012a) on his side has concluded that the findings of O & S may not be relevant for African countries because foreign aid stifles (inflames) corruption-control (corruption). These contradictory findings are based on 52 African countries for the period 1996-2010.

The second strand is based on comments from policy-making and academic circles that have informally criticized Asongu (2012a) for neglecting the conditional element on which the O & S policy recommendations are based (“...*reduces corruption especially and its reduction effect is greater in less corrupt countries*” p.1). In response to the growing criticisms, Asongu (2013a) has updated his account of the debate by: extending the realm of the puzzle from corruption to eight good governance indicators and fully considering the methodological underpinnings of O & S. Accordingly, the hypotheses underlying the empirical strategy is that the effect of aid maybe contingent on existing levels of institutional development such that countries with initially high levels of institutional quality respond differently to their counterparts with lower levels. When the O & S hypothesis on institutional benchmarks of development assistance are fully taken into account in the estimation strategy, the negative effect of foreign aid on institutional quality is overwhelmingly validated in 53 African countries for the period 1996-2010 (Asongu, 2013a). These findings have been subsequently confirmed in recent literature of the same scope and empirical strategy (Asongu, 2013b, c).

The third strand is motivated by some scholars that have informally criticized the debate for not taking into account investment and fiscal policy channels. Consistent with

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<sup>2</sup> Consistent with Knack & Keefer (1995, p. 223), more factors are needed to properly examine the quality of institutions.

Asongu & Jellal (2013), the debate had remained within the findings of Fielding et al. (2006) on the straight forward relationship between development assistance and economic prosperity. Hence, drawing from the recommendations of Knack & Keefer (1995) on the need for more indicators in the assessment of institutions, Asongu & Jellal have extended the debate by providing an indirect dimension via modeling with transmission channels. The empirical evidence which is based on 53 African countries for the period 1996-2010 provides two main findings: while development assistance channeled via government expenditure increases corruption, foreign aid channeled via tax effort mitigates the scourge.

The present note focuses on the fourth strand of the debate that has arisen from informal criticisms by some researchers in policy-making and academic circles. According to them, the aid-corruption nexus is a complex and multidimensional relationship. Hence, the focus of the debate in Africa has to incorporate the heterogeneous nature of the continent, notably: wealth-effects (income-levels), colonial legacy (legal-origins), landlocked nature (openness to sea), natural resources (petroleum exporting countries for instance), regional proximity...etc. This note aims to extend the debate by taking the above points into account for more focused policy implications. The rest of the note is organized as follows. Section 2 discusses the data and outlines the methodology. Section 3 covers the empirical analysis and corresponding discussion. We conclude with Section 4.

## **2. Data and Methodology**

Consistent with the literature underpinning of the debate, we examine a panel of 53 African countries with data from the World Bank indicators for the period 1996-2010. Restricting the sample to this periodicity and focusing on African countries are in accordance with the papers underlying the debate<sup>3</sup>. The dependent variables are the corruption perception index (CPI) and corruption-control index (Asongu, 2012a, 2013a; Okada & Samreth, 2012; Asongu & Jellal, 2013). The main independent variables are Total Net Official Development Assistance (NODA), NODA from Multilateral Donors (MD), and NODA from the Development Assistance Committee (DAC) countries. While the first is used in the estimations, the last-two are used for robustness purposes to assess the consistency of the findings. We use government expenditure and public investment as control variables, in line with the foreign aid literature. Accordingly, the theoretical and empirical underpinnings of the

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<sup>3</sup> Note should be taken of the fact that the periodicity is in accordance with those employed by Okada & Samreth (2012), Asongu (2012a), Asongu (2013a) and Asongu & Jellal (2013). The first have used data on 120 developing countries for the period 1995-2009, the second has used data on 52 African countries for the period 1996-2010 while the third and fourth have used data for the period 1996-2010 from 53 African countries.

investment and fiscal behavior mechanisms have been substantially covered in the literature (Rostow, 1960; Chenery & Strout, 1966; Mosley et al., 1992; Boone, 1996; Addison et al., 2005; Reichel, 1995; Gomane et al., 2003; Larrain & Tavares, 2004; Mosley et al., 2004 ; Easterly, 2005; Bird, 2007; Baliaoune-Lutz & Ndikumana, 2008; Benedek et al., 2012; Morrissey, 2012).

Details about the variable definitions (with corresponding sources), correlation analysis and summary statistics can be provided upon request. The summary statistics shows that there is quite a degree of variation in the data such that significant estimated nexuses would emerge. The purpose of the correlation matrix is to avoid concerns of multicollinearity and overparametization.

For brevity and lack of space, we do not expatiate on the determination of fundamental characteristics which have been substantially covered in the literature (Weeks, 2012; Asongu, 2014bcd; La Porta et al., 1998, 1999, 2008, p. 289; Asongu, 2012b, p. 191; Arvis et al., 2007; CIA, 2011; Boyce & Ndikumana, 2008).

In order to control for endogeneity, the estimation strategy adopted is a dynamic panel estimation technique. Consistent with recent literature, there are some appealing features and one principal draw-back in using this estimation strategy (Demirgüç-Kunt & Levine, 2008; Asongu, 2013d). On the downside, the use of short-term time spans with data-averages implies that the findings should be interpreted as short-term impacts and not long-run effects. However, this setback is not a relevant concern for the present paper because data-averages are not employed. Accordingly, one of the prime conditions for adopting the Generalized Methods of Moments (GMM) is not violated:  $N > T$  ( $53 > 15$ ). With regard to the advantages, the principal arguments raised for the adoption of dynamic system GMM are: it mitigates potential biases of the difference estimator in small samples; it controls for the potential endogeneity in all the regressors; and it does not eliminate cross-country variation (Asongu, 2013e).

Between the existing GMM approaches (Difference and System estimator) the empirical strategy adopted is the system GMM estimation (Arellano & Bover, 1995; Blundell & Bond, 1998) instead of the difference GMM estimator (Arellano & Bond, 1991), in accordance with Bond et al. (2001, pp. 3-4). In modeling the GMM, we prefer the *two-step* option to the *one-step* because it accounts for heteroscedasticity. In the *one-step* approach, the residuals are homoscedastic.

### 3. Empirical results and discussion

#### 3.1 Presentation of results

Tables 1-2 below present the empirical findings. While Table 1 reports results on wealth (income-levels), colonial legacy (legal origin) and religious domination, Table 2 shows findings on regional proximity, natural resources, political stability and openness to sea. For both tables, the two null hypotheses for the validity of the models and absence of autocorrelation are overwhelmingly not rejected. Hence, confirming the absence of autocorrelation and validity of the instruments<sup>4</sup>. While Panel A of either table investigates the effects on corruption, Panel B assesses the incidences on corruption-control.

From Table 1, the following findings can be established in Panel A. (1) The positive effect of foreign aid on corruption is most significant in: Middle-income countries (for wealth-effects), French civil-law countries (for legal-origin effects) and Christian-dominated countries (for religious effects). (2) The results of Panel B are not so significant to enable comparative inferences. It should be noted that the corruption indicators are measured in decreasing order by Transparency International; with the most corrupt countries having the least values.

While the estimations in Table 2 suffer from some degree of freedom issues, two main results broadly stand out: the aid-corruption nexus is more corrosive in non-oil exporting countries (Panel A). Moreover, there is also some scanty evidence of foreign aid increasing corruption-control in Lower Middle income and Not-landlocked countries (Panel B). For both tables the baseline (or overall African) aid-corruption nexus results in the last column are consistent with recent literature and the control variables have the expected signs (Asongu, 2012a, 2013a; Asongu & Jellal, 2013”).

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<sup>4</sup> In order to assess the validity of the model, two tests are performed, notably the Arellano and Bond test for autocorrelation which examines the null hypothesis of no autocorrelation and the Sargan-test which investigates the over-identification restrictions. Accordingly, the latter test examines whether instruments are uncorrelated with the error term in the main equation. The null hypothesis of this test is the position that the instruments as a group do not suffer from endogeneity (that is, are strictly exogenous). With regard to the former test, the AR(2) in first difference is reported because it is more relevant than the AR(1) which examines autocorrelation in levels. For most of the estimated models, neither the null hypothesis of the AR(2) for the absence of autocorrelation nor that of the Sargan for the validity of the instruments are overwhelmingly rejected.

**Table 1: Wealth-, ‘legal origin’- and ‘religious domination’- effects**

	Panel A: Corruption								
	Income Levels				Legal Origins		Religious Dom.		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	
Cor_1	-0.760 (0.351)	0.537 (0.047)	<b>0.630***</b> <b>(0.000)</b>	0.420 (0.180)	<b>0.776**</b> <b>(0.034)</b>	0.236 (0.351)	<b>0.586***</b> <b>(0.000)</b>	0.612 (0.452)	<b>0.591***</b> <b>(0.000)</b>
Constant	<b>7.394**</b> <b>(0.010)</b>	0.127 (0.821)	<b>1.25***</b> <b>(0.000)</b>	<b>1.164*</b> <b>(0.057)</b>	0.732 (0.635)	<b>2.03***</b> <b>(0.002)</b>	<b>1.309***</b> <b>(0.009)</b>	0.887 (0.812)	<b>1.29***</b> <b>(0.000)</b>
NODA	0.221 (0.380)	0.036 (0.279)	<b>-0.032*</b> <b>(0.092)</b>	0.017 (0.327)	-0.018 (0.641)	<b>-0.02***</b> <b>(0.001)</b>	<b>-0.036**</b> <b>(0.011)</b>	-0.023 (0.834)	<b>-0.027***</b> <b>(0.000)</b>
Gov.Exp	-0.019 (0.135)	0.003 (0.402)	-0.002 (0.142)	-0.004 (0.203)	-0.006 (0.355)	-0.002 (0.182)	-0.003 (0.162)	0.0004 (0.986)	<b>-0.004**</b> <b>(0.035)</b>
Pub. Ivt	0.060 (0.632)	0.141 (0.121)	<b>0.024**</b> <b>(0.046)</b>	0.003 (0.872)	0.025 (0.472)	<b>0.04***</b> <b>(0.000)</b>	0.049 (0.103)	0.044 (0.783)	<b>0.032*</b> <b>(0.059)</b>
AR(2)	<b>-0.442</b> <b>(0.658)</b>	<b>0.432</b> <b>(0.665)</b>	<b>1.451</b> <b>(0.146)</b>	<b>0.960</b> <b>(0.336)</b>	<b>1.202</b> <b>(0.229)</b>	<b>0.268</b> <b>(0.788)</b>	1.766* (0.077)	<b>0.013</b> <b>(0.989)</b>	1.764* (0.077)
Sargan	<b>0.488</b>	<b>5.197</b>	<b>10.317</b>	<b>6.958</b>	<b>10.374</b>	<b>5.461</b>	<b>17.418</b>	<b>4.991</b>	<b>21.495</b>
Wald	n.a	<b>68.25***</b> <b>(0.000)</b>	<b>118***</b> <b>(0.000)</b>	<b>15.8***</b> <b>(0.003)</b>	<b>305***</b> <b>(0.000)</b>	<b>67.2***</b> <b>(0.000)</b>	<b>120.1***</b> <b>(0.000)</b>	<b>141***</b> <b>(0.000)</b>	<b>134.1***</b> <b>(0.000)</b>
Obser.	60	69	129	74	107	96	153	50	203

  

	Panel B: Corruption-Control								
	Income Levels				Legal Origins		Religious Dom.		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	
CorC_1	1.778 (0.481)	0.276 (0.619)	<b>0.888***</b> <b>(0.000)</b>	<b>0.877**</b> <b>(0.011)</b>	<b>1.062***</b> <b>(0.000)</b>	<b>0.619**</b> <b>(0.021)</b>	<b>0.998***</b> <b>(0.000)</b>	0.503 (0.242)	<b>0.842***</b> <b>(0.000)</b>
Constant	0.072 (0.817)	-0.857 (0.166)	-0.034 (0.767)	-0.125 (0.733)	<b>0.112*</b> <b>(0.094)</b>	<b>-0.374*</b> <b>(0.077)</b>	0.015 (0.891)	-0.418 (0.161)	-0.108 (0.232)
NODA	-0.104 (0.695)	<b>0.027*</b> <b>(0.067)</b>	0.002 (0.552)	0.004 (0.612)	0.005 (0.522)	0.002 (0.516)	0.001 (0.864)	0.003 (0.682)	-0.002 (0.368)
Gov.Exp	0.002 (0.851)	0.002 (0.266)	0.003 (0.157)	0.002 (0.300)	0.002 (0.118)	<b>0.002*</b> <b>(0.082)</b>	0.002 (0.166)	<b>0.004**</b> <b>(0.023)</b>	0.002 (0.194)
Pub. Ivt	-0.006 (0.691)	0.050 (0.208)	-0.0003 (0.977)	-0.005 (0.610)	<b>-0.019*</b> <b>(0.055)</b>	<b>0.014**</b> <b>(0.026)</b>	-0.004 (0.768)	0.011 (0.279)	0.005 (0.357)
AR(2)	<b>1.379</b> <b>(0.167)</b>	<b>0.353</b> <b>(0.723)</b>	<b>0.244</b> <b>(0.807)</b>	<b>1.306</b> <b>(0.191)</b>	<b>1.249</b> <b>(0.211)</b>	<b>0.500</b> <b>(0.617)</b>	<b>0.950</b> <b>(0.341)</b>	<b>0.682</b> <b>(0.494)</b>	<b>1.186</b> <b>(0.235)</b>
Sargan	<b>1.776</b>	<b>2.996</b>	<b>10.616</b>	<b>14.848</b>	<b>7.853</b>	<b>15.807</b>	<b>19.924</b>	<b>6.267</b>	<b>29.551</b>
Wald	n.a	<b>1063***</b> <b>(0.000)</b>	<b>41.23***</b> <b>(0.000)</b>	<b>87.2***</b> <b>(0.000)</b>	<b>848***</b> <b>(0.000)</b>	<b>46.69***</b> <b>(0.000)</b>	<b>199***</b> <b>(0.000)</b>	<b>8.180*</b> <b>(0.085)</b>	<b>203***</b> <b>(0.000)</b>
Obser.	49	60	109	86	83	112	137	58	195

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10% levels respectively. AR(2): Second Order Autocorrelation test. Sargan: Sargan OIR: Overidentifying Restrictions test. Gov. Exp: Government Expenditure. Pub. Ivt: Public Investment. UMI: Upper Middle Income. LMI: Lower Middle Income. MI: Middle Income. LI: Low Income. English: English Common-law. French: French Civil-law. Christ: Christianity dominated countries. Islam: Islam dominated countries. Dom: Domination. na: insignificant estimate or variable not included in model. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

**Table 2: Regional-, Resources-, Political Stability- and Landlocked-effects**

Panel A: Corruption									
	Regions		Resources		Stability		Landlocked (LL)		Africa
	SSA	NA	Oil	Non-oil	Conflict	Non-co.	LL	Not LL	
Cor_1	<b>0.64***</b> (0.000)	---	-1.377 (0.541)	<b>0.58***</b> (0.000)	---	<b>0.58***</b> (0.000)	0.806 (0.248)	<b>0.20***</b> (0.000)	<b>0.591***</b> (0.000)
Constant	<b>1.06***</b> (0.000)	---	5.054 (0.462)	<b>1.38***</b> (0.000)	---	<b>1.38***</b> (0.000)	1.923 (0.460)	0.0004 (0.892)	<b>1.29***</b> (0.000)
NODA	<b>-0.028**</b> (0.020)	---	-0.117 (0.707)	<b>-0.03***</b> (0.000)	---	<b>-0.03***</b> (0.000)	-0.038 (0.321)	-0.010 (0.120)	<b>-0.027***</b> (0.000)
Gov.Exp	-0.003 (0.167)	---	0.022 (0.200)	-0.003 (0.145)	---	-0.003 (0.145)	-0.006 (0.216)	<b>-0.003***</b> (0.000)	<b>-0.004**</b> (0.035)
Pub. Ivt	<b>0.042**</b> (0.038)	---	0.114 (0.218)	<b>0.037**</b> (0.026)	---	<b>0.037**</b> (0.026)	n.a (0.541)	0.002 (0.541)	<b>0.032*</b> (0.059)
AR(2)	1.889* (0.058)	---	<b>-0.649</b> (0.515)	1.772* (0.076)	---	1.772* (0.076)	<b>0.352</b> (0.724)	<b>1.382</b> (0.167)	1.764* (0.077)
Sargan	<b>20.385</b>	---	n.a	<b>19.297</b>	---	<b>19.297</b>	<b>4.144</b>	<b>13.539</b>	<b>21.495</b>
Wald	<b>129.8***</b> (0.000)	---	<b>68.9***</b> (0.000)	<b>124.3***</b> (0.000)	---	<b>124***</b> (0.000)	n.a (0.000)	<b>28.6***</b> (0.000)	<b>134.1***</b> (0.000)
Obser.	174		27	176		176	51	132	203

  

Panel B: Corruption-Control									
	Regions		Resources		Stability		Landlocked (LL)		Africa
	SSA	NA	Oil	Non-oil	Conflict	Non-co.	LL	Not LL	
Cor_1	<b>0.878***</b> (0.000)	---	4.116 (0.280)	<b>1.02***</b> (0.000)	---	<b>1.02***</b> (0.000)	<b>0.652*</b> (0.089)	-0.023 (0.752)	<b>0.842***</b> (0.000)
Constant	-0.068 (0.483)	---	4.429 (0.301)	0.017 (0.863)	---	0.017 (0.863)	0.023 (0.913)	<b>-0.016**</b> (0.010)	-0.108 (0.232)
NODA	-0.002 (0.612)	---	0.050 (0.749)	0.001 (0.717)	---	0.001 (0.717)	-0.022 (0.224)	<b>0.006**</b> (0.027)	-0.002 (0.368)
Gov.Exp	0.002 (0.193)	---	-0.025 (0.212)	<b>0.003*</b> (0.097)	---	0.003 (0.097)	0.001 (0.307)	<b>0.002**</b> (0.014)	0.002 (0.194)
Pub. Ivt	0.002 (0.800)	---	-0.186 (0.222)	-0.007 (0.564)	---	-0.007 (0.564)	0.004 (0.838)	0.004 (0.430)	0.005 (0.357)
AR(2)	<b>1.081</b> (0.279)	---	n.a	<b>0.573</b> (0.566)	---	<b>0.573</b> (0.566)	<b>1.405</b> (0.159)	<b>-0.024</b> (0.980)	<b>1.186</b> (0.235)
Sargan	<b>26.202</b>	---	n.a	<b>22.821</b>	---	<b>22.821</b>	<b>4.968</b>	<b>19.724</b>	<b>29.551</b>
Wald	<b>201***</b> (0.000)	---	<b>49.03***</b> (0.000)	<b>147.8***</b> (0.000)	---	<b>147***</b> (0.000)	<b>191***</b> (0.000)	<b>11.51**</b> (0.021)	<b>203***</b> (0.000)
Obser.	171		29	166		166	52	119	195

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10% levels respectively. AR(2): Second Order Autocorrelation test. Sargan: Sargan OIR: Overidentifying Restrictions test. Gov. Exp: Government Expenditure. Pub. Ivt: Public Investment. UMI: Upper Middle Income. SSA: Sub-Saharan Africa. NA: North Africa. Oil: Petroleum exporting countries. Non-oil: Countries with no significant exports in petroleum. Conflict: Countries with significant political instability. Non-co: Countries without significant political instability. Dom: Domination. na: insignificant estimate or variable not included in model. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(2) tests and; b) the validity of the instruments in the Sargan OIR test. ---: estimation not feasible due to issues in degrees of freedom.

### 3.2 Discussion of results

Poor quality of institutions has been substantially documented as the one of the root causes of Africa's poverty: lack of property rights, high corruption, weak courts and contract enforcements, hostile regulatory environment for private investment and political stability (Easterly, 2005). According to this narrative, in order to eradicate poverty in the continent,



more advanced nations need to promote good institutions. A growing literature has been devoted to assessing how aid influences the quality of institutions (Alesina & Dollar, 2000; Alesina & Weder, 2002; Knack, 2001; Dixit, 2004; Djankov et al., 2005; Asongu & Jellal, 2013). For over five decades, this interesting development assistance literature has revolved around three main concerns. First, the issue of whether Donors allocate more to poor countries with good institutions. Second, the concern of if foreign aid leads to worse or better institutional quality. Third, the manner in which Donors use foreign aid as an instrument in improving government quality. The present paper that is positioned on the second strand has established that the positive effect of foreign aid on corruption is most significant in: Middle-income, French civil-law, Christian-dominated, non-oil exporting and, landlocked countries.

On the colonial legacy effect, the fact that French civil-law countries become more corrupt with foreign aid than their English common law counterparts is consistent with the predictions of theoretical and empirical literature. The law and property rights theory holds that legal systems that place more emphasize on State power vis-à-vis private property rights tend to be more corrupt (La Porta et al., 1998; La Porta et al., 1999). Hence the likelihood that a greater proportion of foreign aid will be misappropriated when the institutional web of formal rules, informal norms and enforcement characteristics are poorer. Consistent with Asongu (2012c), the edge of English legal origins over the French colonial legacy has been extended to other management areas: more informative accounting standards (La Porta et al., 1998), better institutions with less corrupt governments (La Porta et al., 1999) and more efficient courts (Djankov et al., 2003). These findings have broadly been confirmed in recent African literature on the weight of legal origins in government quality (Asongu, 2012b, 2014c) and property rights institutions (Asongu, 2014e).

The higher positive aid-corruption nexus in Christian-dominated countries relative to their Islam-oriented counterparts could be explained by the weight of foreign aid in the fundamental characteristics. In essence, the former are averagely more reliant on development assistance than the latter: 11.36 versus 9.79 as a percentage of GDP. Another explanation could be that the punishment against corruption related to foreign aid maybe less severe in the former than in the latter set of countries.

The reason Non-oil exporting countries are more exposed to corruption as a result of development assistance is simple. In fact, petroleum exporting countries averagely receive far less foreign aid (3.29 as a percentage of GDP), relative to their non-exporting counterparts (12.59)

The fact that aid leads to more corruption-control in countries that are open to the sea, relative to their landlocked counterparts is expected. This is essentially because apart from the higher institutional cost of being closed from the sea, landlocked countries also averagely receive more aid: 12.55 versus 10.06 as a percentage of GDP.

#### **4. Conclusion**

We have assembled more pieces on the puzzle of the aid-corruption nexus. In essence, have we extended the debate on the effect of foreign aid on corruption by providing evidence on dynamic effects of wealth, legal origin, religious-domination, regional proximity, openness to sea, natural resources and politico-economic stability. The empirical evidence from dynamic panel GMM estimation is based on 53 African countries for the period 1996-2010. The findings show that the positive effect of foreign aid on corruption is most significant in: Middle-income, French civil-law, Christian-dominated, non-oil exporting and landlocked countries. Moreover, there is also some scanty evidence of foreign aid increasing corruption-control in Lower Middle income and Not-landlocked countries. Justifications for the dynamics have been discussed.

## References

- Addison, T., Mavrotas, G., and McGillivray, M. (2005) "Development Assistance and Development Finance: Evidence and Global Policy Agendas" *Journal of International Development* **17**, 819-836.
- Alesina, A., and Dollar, D. (2000) "Who gives Foreign Aid to Whom and Why?" *Journal of Economic Growth*, **5**, 33-64.
- Alesina, A., and Weder, B. (2002) "Do Corrupt Governments Receive Less Foreign Aid?" *American Economic Review* **92**, 1126-1137.
- Arellano, M., and Bond, S. (1991) "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations" *The Review of Economic Studies* **58**, 277-297.
- Arellano, M., and Bover, O. (1995) "Another look at the instrumental variable estimation of error-components models" *Journal of Econometrics* **68**, 29-52.
- Asongu, S. A. (2012a) "On the effect of foreign aid on corruption" *Economics Bulletin* **32(3)**, 2174-2180.
- Asongu, S. A., (2012b), "Government quality determinants of stock market performance in African countries", *Journal of African Business*, 13(2), pp. 183-199.
- Asongu, S. A., (2012c), "Law and finance in Africa", *Brussels Economic Review*, 55(4), pp. 385-408.
- Asongu, S. A. (2013a) "On the effectiveness of foreign aid in institutional quality" *European Economics Letters* **2(1)**, 12-19.
- Asongu, S. A. (2013b) "Fighting corruption in Africa: do existing corruption-control levels matter?" *International Journal of Development Issues* **12(1)**, 36-52.
- Asongu, S. A. (2013c) "Fighting Corruption when Existing Corruption-Control Level Count: What do Wealth-Effects Tell us in Africa?", *Institutions and Economies*, 5(3), pp. 53-74.
- Asongu, S. A., (2013d). "How has politico-economic liberalization affected financial allocation efficiency? Fresh African evidence", *Economics Bulletin*, 33(1), pp. 663-676.
- Asongu, S. A., (2013e). "Harmonizing IPRs on Software Piracy: Empirics of Trajectories in Africa", *Journal of Business Ethics*, 118(1), pp. 45-60.
- Asongu, S. A. (2014a) "Fighting African corruption when existing corruption-control levels matter in a dynamic cultural setting", *International Journal of Social Economics*: Forthcoming.
- Asongu, S. A., (2014b), "Fighting African Capital Flight: Trajectories, Dynamics and Tendencies", *African Governance and Development Institute Working Paper*.

Asongu, S. A., (2014c), “Law, finance, economic growth and welfare: why does legal origin matter?”, *Institutions and Economies*: Forthcoming.

Asongu, S. A., (2014d), “Fighting corruption with existing corruption-control levels count: what do wealth-effects tell us in Africa?”, *Institutions and Economies*: Forthcoming.

Asongu, S. A., (2014e), “Fighting software piracy in Africa: how do legal origins and IPRs protection channels matter?” *Journal of the Knowledge Economy*: Forthcoming.

Asongu, S. A., & Jellal, M., (2013) “On the channels of foreign aid to corruption”, *Economics Bulletin*, 33(3), pp. 2191-2201.

Arvis, J-F., Marteau, J-F., & Raballand, G., (2007), “The cost of being landlocked: logistics costs and supply chain reliability”, *World Bank Working Paper Series* No. 4258.

Baliamoune-Lutz, M., and Ndikumana, L. (2008), “Corruption and Growth: Exploring the Investment Channel”, University of Massachusetts, Amherst.

Benedek, D., Crivelli, E., Gupta, S., and Muthoora, P. (2012) “Foreign Aid and Revenue: Still a Crowding Out Effect?” *IMF Working Paper* 12/186.

Bird, R. M. (2007) “Tax Effort: The Impact of Corruption, Voice and Accountability”, ITP Paper 0702.

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

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

Boyce, J. K., & Ndikumana, L., (2008), “New Estimate of Capital Flight from Sub-Saharan African Countries: Linkages with External Borrowing and Policy Option”, PERI Working Paper No. 166, University of Massachusetts Amherst, USA.

Boone, P. (1996) “Politics and Effectiveness of Foreign Aid,” *European Economic Review*, **40**, 289-329.

Chenery, H. B., and Strout, A. M. (1966) “Foreign Assistance and Economic Development”, *American Economic Review* **56**, 679-733.

CIA (2011). Central Intelligence Agency, The World Factbook 2011.

Demirgüç-Kunt, A., and Levine, R. (2008) “Finance, Financial Sector Policies, and Long-Run Growth” *World Bank Policy Research Working Paper* No. 4469, Washington, DC: The World Bank.

Dixit, A. (2004), *Lawlessness and Economics: Alternative Modes of Governance*. Princeton: University Press.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A., (2003), “Courts”, *Quarterly Journal of Economics*, 118, pp.453-517.

- Djankov, S., Jose, G. M., and Marta, R. (2005) *The Curse of Aid*. World Bank, Mimeo, April, 2005.
- Easterly, W. (2005) "Can foreign aid save Africa", Saint John's University.
- Fielding, D., McGillivray, M., & Torres, S., (2006), "A Wider Approach to Aid Effectiveness: Correlated Impacts on Health, Wealth, Fertility and Education", The World Institute for Development Economics Research(UNU-WIDER).
- Gomane, K., Morrissey, O., Mosley, P., and Verschoor, A. (2003) "Aid, pro-poor Government Spending and Welfare" *CREDIT Working Paper* 03/01.
- Hollyer, J. R., & Wantchekon, L., (2012). "Corruption in Autocracies", University of Minnesota, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1861464](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1861464) (accessed: 28/12/2013).
- Jellal, M., & Bouzahzah, M., (2012). "Corruption and tax evasion: an optimal policy", *MPRA Paper* No. 38813.
- Knack, S. (2001) "Aid Dependence and the Quality of Governance: Cross-Country Empirical Tests" *Southern Economic Journal* **68(2)**, 310-329.
- Knack, S., and Keefer, P. (1995) "Institutions and Economic Performance: cross-country tests using alternative institutional measures" *Economics and Politics* **7(3)**, 207-227.
- Kodila-Tedika, O. (2012) "Empirical Survey on the Causes of Corruption" *MPRA Paper* No. 41484.
- Kodila-Tedika, O. (2013) "Corruption and Failed African States" *MPRA Paper* No. 44686.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W., (1998), "Law and finance", *Journal of Political Economy*, 106, pp. 1113-1155.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W., (1999), "The quality of government", *Journal of Law, Economics and Organization*, 15, pp. 222-279.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A., (2008), "The Economic Consequences of Legal Origin," *Journal of Economic Literature*, 46(2), pp. 285-332.
- Larrain, F., and Tavares, J. (2004) "Does Foreign Direct Investment Decrease Corruption" *Cuadernos de Economia-Latin American Journal of Economics* **41(123)**, 217-230.
- Morrissey, O. (2012) "Aid and Government Fiscal Behavior. What Does the Evidence Say?" *UNU-WIDER Working Paper* No. 2012/01.
- Mosley, P., Hudson, J., and Horrell, S. (1992) "Aid, The Public Sector and The Market in Less Developed Countries: A Return to The Scene of Crime" *Journal of International Development* **4**,139-150.

Mosley, P., Hudson, J., and Verschoor, A. (2004) "Aid, Poverty Reduction and the 'new' Conditionality" *Economic Journal* **114**, F217–F243.

Musila, J. W., (2013) "Does Democracy Have a Different Impact on Corruption in Africa?", *Journal of African Business*, *Journal of African Business*, 14(3), pp. 162-170.

Ndikumana, L., & Boyce, J., (2011) "Capital flight from sub-Saharan Africa: linkages with external borrowing and policy options", *International Review of Applied Economics*, 25(2), pp. 149-170.

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

Reichel, R. (1995) "Development, Aid, Savings and Growth in the 1980s: A Cross-Sectional Analysis" *Savings and Development* **19(3)**, 279-296.

Rostow, W. W. (1960) *The Stages of Economic Growth: A Non-Communist Manifesto*.

Weeks, J., (2012), "Macroeconomic Impact of Capital Flows in Sub-Saharan African Countries, 1980-2008", *Association of Concerned Africa Scholar Bulletin*, No. 87, pp. 1-7.