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Corruption, Political Instability and Economic Development in the Economic Community of West African States (ECOWAS): Is There a Causal Relationship?

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ABSTRACT Despite the abundant research on economic development, corruption and political instability, little research has attempted to examine whether there is a causal relationship among them. This paper examines the causal relationship among corruption, political instability and economic development in the ECOWAS using the Granger causality test within a multivariate cointegration and error-correction framework for the 1996-2012 period. The findings indicate that political instability Granger-causes economic development in the short term, while political instability and economic development Granger-cause corruption in the long term. In addition, we employed the forecast error variance decomposition and impulse response function analyses to investigate the dynamic interaction between the variables. The results demonstrate positive unidirectional Granger causality from political instability to economic development in the short term and positive unidirectional Granger causality from political instability and economic development to corruption in the long term in ECOWAS countries. Thus, ECOWAS governments should employ policies to promote political stability in the region.

KEY WORDS: Corruption, Political instability, Economic development, ECOWAS

JEL Classification: E21

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Introduction

There is broad consensus that the Economic Community of West African States (ECOWAS) is one of the least developed regions in the world. Furthermore, the region has continued to face rising corruption and political instability, which in turn contribute to the region's underdevelopment through adverse effects on government revenue, production, savings, investment, growth, income distribution and poverty (see Aisen & Veiga, 2013; Asiedu & Freeman, 2009; Alesina & Perotti, 1996; Edwards, 1996; Fosu, 1992; Ghura, 2002; Gyimah-Brempong, 2002; Gyimah-Brempong & Dapaah, 1996; Gyimah-Brempong & Traynor, 1999; Oto-Peralías, Romero-Ávila, & Usabiaga, 2013). Although researchers have established that corruption is harmful to an economy (see Gyimah-Brempong, 2002;

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Mauro, 1995), we have observed the coexistence of high levels of corruption and economic development in some Asian countries, such as China. This observation is not surprising, as Leff (1964) and Huntington (1968) suggested that corruption can have positive impact on the economy via increased efficiency in countries where the bureaucracy is inefficient and constitutes a barrier to investment. This statement reflects the "grease the wheels" hypothesis. For instance, entrepreneurs pay bribes to government officials (grease the wheels) to reduce the time that they spend in queues to obtain business permits, licenses or contract approval. This system in turn increases efficiency and investment and, as a result, economic growth (Méon & Sekkat, 2005). In addition, Goldsmith (1999) cited cases in which entrepreneurs greased the wheels and won contracts even at inflated prices, thus facilitating construction of the intercontinental railway system in the United States.

However, the level of economic development (or income level) plays an important role in promoting or reducing corruption and political instability. Mauro (1995) noted that low-income (less developed) countries tend to be corrupt and politically unstable. Hence, higher-income countries (with improvements in economic conditions) tend to have lesser corruption (Montinola & Jackman, 2002; Van Rijckeghem & Weder, 2001; Schumacher, 2013) and higher political stability (Adelman & Morris, 1968; Helliwell, 1994). Corruption and political instability, including economic development, seem to reinforce one another, at least in the ECOWAS region. Whereas the military allude to corruption and poor economic conditions, among other things, for seizing power or staging a coup, it has also been accused of engaging in massive corruption and failing to bring the majority of citizens out of poverty (Edi, 2006). Moreover, some scholars hold the view that corruption is an important determinant of political instability (Mauro, 2004; Mbaku & Paul, 1989). Other authors claim that political instability accounts for the high level corruption found in many countries (Billger & Goel, 2009; Campbell & Saha, 2013; Park, 2003; Serra, 2006; Shabbir & Anwar, 2007; Zhang, Cao, & Vaughn, 2009) and that political stability tends to moderate the adverse effects of corruption in an economy (Habib & Zurawicki, 2001).

The various reports of Transparency International (TI), which publishes the corruption perception index (CPI), suggest that most ECOWAS countries are highly corrupt. Of the 15 countries in the ECOWAS region, only Cape Verde is among the top 50 in the TI ranking in the past few years. Similarly, the Political Risk Service International Country Risk Guide (ICRG) political risk rating, which reflects the extent of political uncertainty, demonstrates that ECOWAS countries are politically unstable. Many ECOWAS countries have had an average rating of less than 60% for several years, indicating that they have been experiencing serious political problems.

Despite the abundant research on economic development, corruption and political instability, few attempts have been made to examine whether there is a causal relationship among them. Most studies have focused on the relationship between two of the variables, while studies examining the association among the three variables are almost non-existent. For instance, researchers have investigated the causal effects of the relationships between corruption and development/growth (Bentzen, 2012; Blackburn & Forgues-Puccio, 2007; Gyimah-Brempong, 2002; Mauro, 1995; Ugur & Dasgupta, 2011), political instability and development/growth (Aisen & Veiga, 2013; Alesina et al., 1996; Comeau, 2003; Fosu, 2002a, 2002b; Mbaku, 1988), and corruption and political conditions (Mbaku & Paul, 1989; Montinola & Jackman, 2002). To our knowledge, this work is the first attempt to investigate the causal relationship among corruption, political instability, and economic development within a multivariate cointegration and error-correction framework in ECOWAS countries. An investigation of the causal relationship between corruption/political instability and economic development, for instance, is highly important because it provides useful information on which variables governments should emphasize. If the results of the causality test reveal that corruption causes political instability, then authorities can employ measures to reduce corruption to attain higher political stability. However, if the results indicate that it is political instability that precedes corruption, then governments can design policies to promote political stability with the goal of making society corruption-free. Similarly, if the causality test suggests that economic development causes corruption and/or political

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instability, then governments can implement policies that enhance development to lower corruption and/or promote political stability. It is important to mention that regardless of which hypothesis is true, employing a single policy of economic development or political stability may not be sufficient to solve other problems in ECOWAS countries. Therefore, causality test results can help in prioritizing the policies to be employed. Hence, the main objective of this paper is to examine the causal relationship among corruption, political instability and economic development in ECOWAS countries. The remainder of the paper is organized as follows. Section two reviews the relevant literatures. Section three describes the theoretical framework and model, and section four presents and discusses the results. Finally, section five concludes the paper.

Review of relevant literature

Most studies on corruption, political instability and economic development have focused on their causes and consequences. In fact, some authors have found political factors and/or the level of development (income level) to be important determinants of corruption. For instance, Park (2003) employed multiple regression analysis to examine the determinants of corruption across countries. The author discovered that economic freedom, socio-political stability, a tradition of law abidance and national cultures are the major factors explaining corruption in the countries considered in his study. Del Monte and Papagni (2007) evaluated the factors responsible for high levels of corruption in Italy during the 1963–2001 period using statistics on crimes against regional public administration. The empirical evidence illustrated that the main causes of corruption include government consumption, the level of development, party concentration, the presence of voluntary organizations, and absenteeism in national elections. Zhang et al. (2009) investigated the structural determinants of corruption using data from several sources, and their findings suggested that corruption is influenced to a greater extent by social support, the types of government and inequality. Furthermore, many studies have demonstrated that higher levels of democracy lead to lower levels of corruption (see Billger & Goel, 2009; Campbell & Saha, 2013; Emerson, 2006; Goldsmith, 1999; Iwasaki & Suzuki, 2012; Lederman, Loayza, & Soares, 2005; Serra, 2006; Shabbir & Anwar, 2007).

Meanwhile, some studies have established that corruption has a damaging impact on political conditions in a country, whereas others have concluded that higher economic development tends to reduce the level of political crisis in a society. For example, Mbaku and Paul (1989) found a positive relationship between rent seeking (corruption) and destabilization of political activities. Habib and Zurawicki (2001) concluded that corruption has an adverse effect on both domestic and foreign investments and found that the degree of openness and political stability of the host country moderates the influence of corruption. Montinola and Jackman (2002) discovered that corruption is lesser in dictatorships than in partially democratized countries. In addition, they found that higher levels of democracy reduce corruption. Other important determinants of corruption include membership in the Oil Producing and Exporting Countries (OPEC) and low wages for public sector employees in low-income countries. Claderon and Chong (2006) confirmed that democratic regimes have a negative association with rent seeking behavior in Uruguay. Moreover, a number of studies have shown that an improvement in economic development (or a higher growth rate) tends to reduce the political instability in a country (see Bollen & Jackman, 1985; Gasiorowski, 1998; Gupta, Madhavan & Blee, 1998; Gyimah-Brempong & Traynor, 1999).

The impact of corruption and political instability on economic development or growth has also been empirically investigated. Some studies have confirmed a negative impact of corruption on growth (see Gyimah-Brempong, 2002; Mauro, 1995; Ugur & Dasgupta, 2011). For instance, Mauro (1995) examined the impact of corruption on economic growth across countries using OLS and TSLS estimators. The author found that corruption has a negative impact on economic growth. Gyimah-Brempong (2002) employed a dynamic panel estimator to evaluate the effect of corruption on economic growth and income distribution in African countries. The author discovered that corruption decreases economic growth directly and indirectly via reduced investment in physical capital. Ugur and Dasgupta (2011) employed fixed effects and random effects weighted means to examine the effect of corruption across countries. Their results revealed that corruption has a negative effect on per capita GDP growth. Studies that have also found a negative impact

Table 1. A Summary of the Literature on Corruption, Political Instability and Economic Development

Author(s)	Objective(s)	Empirical evidence
Park (2003)	Examined the determinants of corruption across countries	Socio-political stability leads to lower corruption
Serra (2006)	Investigated the determinants of corruption in 62 countries	Higher levels of political instability are associated with higher corruption, while the length of preservation of democratic institutions has a negative relationship with corruption
Shabbir and Anwar (2007)	Evaluated economic and non-economic determinants of corruption in 41 developing countries	The level of economic development has a negative effect on corruption
Billger and Goel (2009)	Determined whether greater democracy and economic freedom lead to less corruption in nearly 100 countries	Greater democracy reduces corruption
Lederman et al. (2005)	Examined the determinants of corruption with a primary focus on political institutions that increase accountability across countries from 1975 to 1999	Democracies along with parliamentary systems, political stability, and freedom of press are negatively related to corruption
Mbaku and Paul (1989)	Tested the hypothesis that corruption destabilizes political activities in African countries	Corruption leads to the destabilization of political activities
Bollen and Jackman (1985)	Examined economic and non-economic determinants of political democracy in a sample of almost 100 countries	Economic development was significant in all regression analyses
Gupta et al. (1998)	Analyzed the relationship among democracy, political instability and economic growth in a sample of 120 countries	Growth in income per capita has a positive impact on democracy, but the effect on political violence is negative
Gyimah-Brempong and Traynor (1999)	Explored the relationship between political instability and economic growth in SSA	Higher economic growth leads to lesser political instability
Gyimah-Brempong (2002)	Evaluated the impact of corruption on economic growth and income distribution in African countries	Corruption decreases economic growth directly and indirectly via reduced investment in physical capital
Ugur and Dasgupta (2011)	Examined the effect of corruption across countries	Corruption has a negative effect on per capita GDP growth.
Anoruo and Braha (2005)	Investigated the impact of corruption on economic growth in 18 African countries	Corruption reduces economic growth directly by slowing productivity and indirectly by lowering investment
Aisen and Veiga (2013)	Assessed the effect of political instability on economic growth in a sample of 169 countries from 1960 to 2004	Higher political instability leads to lower GDP per capita growth rates via its effect on productivity growth as well as physical and human capital accumulation
Okafor et al. (2014)	Investigated the impact of corruption in a sample of 48 SSA countries from 1996 to 2008	Corruption has a significant negative relationship with economic development
Del Monte and Papagni (2007)	Evaluated the factors responsible for high corruption in Italy during the 1963-2001 period	Level of economic development has a significant impact on corruption
Butkiewicz and Yanikkaya (2006)	Estimated the relationship between economic growth and five measures of democracy in 100 countries from 1970 to 1999	Democratic countries have higher growth rates

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Table 1. A Summary of the Literature on Corruption, Political Instability and Economic Development (Continued)

Author(s)	Objective(s)	Empirical evidence
Fosu (2002)	Studied the different effects of various elite political instability situations (which include coups d'état, abortive coups or coup plots) on economic growth in 31 SSA countries from 1960 to 1986	Abortive coups and coup plots rather than successful coups have a negative effect on economic growth
Mbaku (1988)	Examined the impact of political instability on economic development in SSA countries	Lack of political stability has negatively impacted economic performance
Ades and Chua (1997)	Evaluated the effect of regional instability on economic growth in 98 countries from 1960 to 1985	Existence of negative spillovers in politically unstable neighboring countries
Alesina et al. (1996)	Investigated the relationship between political instability and GDP per capita growth in a sample of 113 countries from 1950 to 1982	Growth tends to be lower in countries and periods with a strong tendency for government collapse

of corruption on economic growth include the works of Mo (2001), Anoruo and Braha (2005), and Farooq et al. (2013). Similarly, others have confirmed a negative association between corruption and economic development (Bentzen, 2012; Blackburn & Forgues-Puccio, 2007; Okafor, Smith, & Ujah, 2014).

Some researchers have also found a negative effect of political instability on growth (see Asteriou & Price, 2001; Comeau, 2003; Devereux & Wen, 1998; Butkiewicz & Yanikkaya, 2006). For example, Devereux and Wen (1998) developed a simple model that relates political instability to the share of government spending in GDP and economic growth for a group of 52 countries during the 1960-1985 period. The authors discovered that political instability dampens economic growth but increases the share of government spending in GDP. Asteriou and Price (2001) employed GARCH-M models to examine the effect of political instability on economic growth in the United Kingdom from 1961 to 1997. The authors found a strong negative effect of political instability on growth. Comeau (2003) tested the hypothesis that socio-political instability has a negative effect on growth in a group of countries selected from the Latin American and East Asian regions. The author discovered that socio-political instability has a negative impact on growth. Butkiewicz and Yanikkaya (2006) estimated the relationship between economic growth and five measures of democracy using panel data for 100 countries during the 1970-1999 period. The results suggested that democratic countries have higher growth rates.

Many studies have found that political instability has a negative effect on economic growth (see Ades & Chua, 1997; Aisen & Veiga, 2013; Alesina et al., 1996; Asteriou & Siriopoulos, 2000; Campos & Karanasos, 2008; Fosu, 2002; Mbaku, 1988). However, Butkiewicz and Yanikkaya (2005) found a weak relationship between socio-political instability and economic growth. The authors also discovered that the impact of socio-political instability is higher in more developed and highly democratic states. A summary of the literature review is presented in table 1.

The literature review clearly indicates that researchers have not paid adequate attention to the issue of causality among corruption, political instability and economic development. Thus, this paper attempts to contribute to the literature by investigating the causal relationship among the variables in ECOWAS countries.

Theoretical framework and model

Scholars have made attempts to theoretically establish a link among corruption, political instability, and economic development. In explaining the connection between corruption, political instability and economic growth, for instance, Mauro (2000) described a scenario in which an individual politician sets a high bribe rate. The attendant widespread corruption will

have adverse effects on economic performance (that is, sluggish economic growth), leading to the collapse of the government. For example, corruption among government officials or bureaucrats reduces the amount of social services such as healthcare and education that alleviate poverty and inequality (Gupta, Davoodi, & Alonso-Terme, 2002) and therefore leads to social discontent, protests, strikes, and political violence. Sustained dissatisfaction among citizens will lead to a collapse of (or a change in) government. In developed countries, a change in government occurs through the electioneering process (Gyimah-Brempong & Dapaah, 1996) and in line with constitutional provisions. By contrast, in developing countries such as those in the ECOWAS, an unconstitutional change in government through military intervention has always been the case. Military takeover in the ECOWAS region appears to be the norm rather than exception (Edi, 2006), and it tends to have a destabilizing impact on political stability in these countries because of their fragile political structures (Adelman & Morris, 1968).

Moreover, frequent changes in government induce public or elected officials to practice rent-seeking behavior because of the high uncertainty surrounding their tenure of office. In a previous study, Shleifer and Vishny (1993) cited in Park (2003) argued that if public officials realize that their term in office will be short-lived because of political instability, they will become irresponsible and become involved in rent-seeking behavior. Using the same line of argument, Park (2003) opined that high uncertainty and anxiety among public officials (arising from political instability) would lead them to seek gain through corrupt means to protect their social status even after they no longer have their positions. Moreover, in explaining Lipset and Raab's (1970) concept of "status strain", Park (2003) emphasized that the fear of a decline in status will compel people to do anything (including engage in corrupt behaviors) to maintain their status and property.

Economic development (or income level) largely promotes or reduces corruption and political instability in a country. Mauro (1995) proposed that low-income countries are likely to be corrupt and politically unstable. In fact, low income levels or civil servant wages encourage rent-seeking behavior because people see corruption as an opportunity to improve their socio-economic well-being. By contrast, an improvement in economic conditions (such as higher wages or income) tends to lower corruption (Montinola & Jackman, 2002; Van Rijckeghem & Weder, 2001; Schumacher, 2013). Similarly, declining economic fortunes encourages discontent and socio-political instability. However, higher economic development, such as higher incomes, improves people's well-being and promotes political stability (Adelman & Morris, 1968; Helliwell, 1994).

Meanwhile, economic development can be influenced by the level of corruption and political instability through their negative impact on savings, investment and production, among other effects. For instance, political instability disrupts production activity, reduces investment and negatively influences economic performance (Alesina & Perotti, 1996; Aisen & Veiga, 2013; Alesina et al., 1996). According to Butkiewicz and Yanikkaya (2005), one of the best measures to improve the economic well-being of people in the poorest nations is to prevent political instability. In the same vein, corruption discourages investment and production, leading to sluggish growth (Asiedu & Freeman, 2009; Gyimah-Brempong, 2002; Mauro, 1995). Thus, corruption, political instability and economic development appear to cause each other. Given the issues discussed above, we hypothesize the following:

1: Political instability and economic development do not Granger-cause corruption.
2: Corruption and economic development do not Granger-cause political instability.
3: Corruption and political instability do not Granger-cause economic development.

To estimate the relationship between the variables, we formulate three models in which corruption (COR), political instability (POL) and economic development (PCY) are specified as a function of the other variables. That is,

$$COR_{it} = \alpha_0 + \alpha_1 POL_{it} + \alpha_2 PCY_{it} + U_{1it} \quad (1)$$

$$POL_{it} = \beta_0 + \beta_1 COR_{it} + \beta_2 PCY_{it} + U_{2it} \quad (2)$$

$$PCY_{it} = \delta_0 + \delta_1 COR_{it} + \delta_2 POL_{it} + U_{3it} \quad (3)$$

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Where i refers to a given country and t a given year; α_i, β_i and δ_i are coefficients; and U is the error term.

The data used in this paper were obtained from three main sources: TI, ICRG and the World Bank's World Development Indicators (WDI). Specifically, data on political instability were collected from the ICRG. Political instability has been measured by the number of successful coups, the number of people killed in domestic mass violence incidents as a fraction of the total population, the number of attempted but unsuccessful coups, or the number of politically motivated assassinations (Alesina & Perotti, 1996). Unfortunately, such (rich) data are not available for most ECOWAS countries for a considerable number of years. Moreover, the objective indices are not without shortcomings. For instance, frequent changes in government, which is an indication of political instability (Edwards, 1996), may give the wrong information about the political conditions in a country. Mauro (1995) noted that although Italy had more than fifty changes in government between 1945 and 1995, the country remained relatively stable during the period. Thus, we captured political instability by using the ICRG political risk rating (index). Although the ICRG index is subjective, it has been increasingly used in empirical research and has been found be highly associated with economic variables (see Erb, Harvey, & Viskanta, 1996; Hayakawa, Kimura, & Lee, 2013). The index measures the extent of political instability or uncertainty in a country, and its components include political leadership, military role in politics, external conflicts, the role of organized religion in politics, racial and national tension, law and order, political terrorism, civil war, and political party development. The index ranges from 0% (indicating higher political instability) to 100% (indicating higher political stability), and it has been employed in previous studies (see Abu et al., 2013; Erb et al., 1996; Hayakawa et al., 2013; Heaney & Hooper, 1999; Linder & Santiso, 2002).

Corruption is difficult to measure/quantify, and what is perceived as a norm in one country at one point in time may be considered corruption in other countries. Also, given that most corrupt practices are regarded as unlawful activities, they occur in secrecy. Thus, it is difficult to measure/quantify them. Moreover, the only objective measure of corruption that is available is the number of individuals who have been convicted of engaging in corrupt practices. However, higher conviction rates (as in the case of Singapore and Hong Kong) do not necessarily imply that corruption is higher but may indicate the effectiveness of the judiciary and anti-corruption agencies in detecting and prosecuting offenders (Lambsdorff, 1999; 2006). Given the weakness of such objective data, corruption perception indices (subjective data) have been widely used. Furthermore, because of the lack of adequate measurements of corruption, one may resort to using corruption perception indices (Gyimah-Brempong, 2002). In this study, therefore, we employed the TI corruption perception index (CPI) that has been employed in many empirical studies as a measure of corruption. The CPI reveals the extent to which a country is perceived to be corrupt. This index is also a reflection of the depth and frequency of corruption (Swaleheen, 2007), and it ranges from 0 (very corrupt) to 10 (very clean).

Corruption perception indices are not completely devoid of criticism. For instance, as reported by Williams and Siddique (2008) cited in Swaleheen (2007), some researchers have questioned the importance of the CPI for year-to-year comparisons. They have argued that the increase in the number of countries covered by the index over time has resulted in additional new data sources and improvements in the precision of estimates of the incidence of corruption, which could disturb the continuity of an index. However, Lambsdorff (1999) allayed this fear and likened the problem to that typically encountered when designing the price index for a basket of goods while the composition of the basket is constantly changing. Often referred to as a composite index, the CPI has two main advantages (Méon & Sekkat, 2005). For instance, because basic indicators are constructed based on subjectivity, they may be biased. The composite index can help to cancel out the biases, thereby resulting in the determination of the average opinion on corruption. Second, given that the composite index is an aggregate of several other indices, it facilitates data availability for larger samples of countries. The corruption perception indices have been found to be reliable because of their high correlations with important economic variables, suggesting that spuriousness is not a problem (Blackburn et al., 2010). The index has been employed in recent studies (Blackburn et al., 2010; Gyimah-Brempong, 2002; Swaleheen, 2007).

Table 2. Panel Unit Root Test Results for the Variables

Variables	Fisher-ADF		Fisher Phillips-Perron	
	Level	First difference	Level	First difference
POL	-1.0684	-7.1952***	-2.0456	-10.3496***
	(0.1427)	(0.0000)	(0.2004)	(0.0000)
COR	3.6992	-5.6420***	4.8088	-6.2817***
	(0.9999)	(0.0697)	(1.0000)	(0.0000)
PCY	5.9814	-5.7279***	7.9195	-2.9273***
	(1.0000)	(0.0000)	(1.0000)	(0.0017)

Note: POL refers to political instability, COR refers to corruption, and PCY refers to economic development. The numbers in parentheses are probability values. *** indicate a rejection of the null hypothesis of the unit root at the 1% significance level.

Economic development is captured by income (GDP) per capita. Studies have used income per capita as a proxy for economic development (see Bentzen, 2012; Bollen & Jackman, 1985). Data on GDP per capita were obtained from the WDI. This paper considers ECOWAS countries (excluding Cape Verde and Benin because of unavailable data on political instability) and covers the 1996-2012 period. Although Benin and Cape Verde are not included in our analysis, their exclusion may not have had any serious effects on the results. For instance, countries with similar characteristics (such as the level of development) are considered in our analysis. Cape Verde has the highest GDP per capita ($4,000) in the ECOWAS region, followed by Ghana ($3,300) and Nigeria (2,700), which are included in the analysis. Similarly, Cote D'Ivoire ($1,700) has almost the same GDP per capita as Benin ($1,600).

Results

Having specified the respective models, we conducted a unit root test to ascertain whether the series used in this study are stationary. Standard economic theory requires series to be stationary prior to estimating their relationship to avoid generating spurious results. Fisher augmented Dickey-Fuller (Fisher-ADF) and Fisher Phillips-Perron (Fisher-PP) statistics were employed to test the unit root properties of the series. The results of the unit root test are presented in table 2.

The table clearly indicates that the series have a unit root at level but are stationary at the first difference. This outcome supports the claim that many macroeconomic variables are non-stationary at level but stationary after the first difference (Nelson & Plosser, 1982). Our next task is to investigate if there is a long-term equilibrium relationship (cointegration) between the series using the Pedroni residual cointegration test (Pedroni, 1999). The Pedroni statistics tests (seven of them) were used to investigate whether the error process of the estimated equation is stationary and to test the null hypothesis of no cointegration against the alternative of cointegration. The first four statistics test the null hypothesis of no cointegration for all cross-sectional units (within a dimension), while the other three statistics test the null hypothesis of no cointegration based on pooling between dimensions. The existence of cointegration suggests that the estimated relationship is not spurious. In addition, if the tests reveal the presence of cointegration, then causality will exist in at least one direction (Granger, 1986). The results of the cointegration test are presented in table 3.

Given that the variables are cointegrated, we took another step to determine the direction of causality between them. Granger (1969) proposed that variable X is said to "Granger cause" variable Y if and only if Y is better predicted by past values of X than by using past values of Y in either case. In other words, if X helps in forecasting Y, we can conclude that X Granger-causes Y. Thus, our main objective here is to examine whether current values of the individual dependent varble can be predicted by past values of the explanatory variables. To employ the Granger causality test for the variables, we estimated the following multivariate vector error-correction models (VECM):

$$\Delta COR_{it} = \alpha_0 + \sum_{j=1}^{J}\alpha_1\Delta POL_{it-j} + \sum_{j=1}^{J}\alpha_2\Delta PCY_{it-j} + \\ + \sum_{j=1}^{J}\alpha_3\Delta COR_{it-j} + \phi_1 ECT_{t-1} + U_{4it}. \quad 4$$

Table 3. Results of the Pedroni Residual Cointegration Test

Statistics (Within dimension)	Value
Panel v-statistic	-1.2027
Panel rho-statistic	2.5870
Panel PP-statistic	-2.2122**
Panel ADF-statistic	-1.7342**

Statistics (Between dimensions)	Value
Group rho-statistic	3.5304
Group PP-statistic	-4.2650***
Group ADF-statistic	-2.2412**

Note: POL refers to political instability, COR refers to corruption, and PCY refers to economic development. ** and *** indicate a rejection of the null hypothesis of no cointegration at the 5% and 1% significance levels, respectively.

Table 4. Results of Granger Causality Test

Dependent variable	ΔCOR_t	ΔPOL_t	ΔPCY_t	ECT_{t-1}
ΔCOR_{it}	-	1.6508	2.5074	-0.1882**
ΔPOL_{it}	0.3609	-	0.0411	-0.0580
ΔPCY_{it}	0.0197	11.2356***	-	-0.0243

Note: ** and *** indicate a rejection of the null hypothesis of no Granger causality at the 5% and 1% significance levels, respectively.

$$\Delta POL_{it} = \beta_0 + \sum_{j=1}^{J}\beta_1 \Delta COR_{it-j} + \sum_{j=1}^{J}\beta_2 \Delta PCY_{it-j} + \\ + \sum_{j=1}^{J}\beta_3 \Delta POL_{it-j} + \phi_2 ECT_{t-1} + U_{5it} \quad 5$$

$$\Delta PCY_{it} = \delta_0 + \sum_{j=1}^{J}\delta_1 \Delta COR_{it-j} + \sum_{j=1}^{J}\delta_2 \Delta POL_{it-j} + \\ + \sum_{j=1}^{J}\delta_3 \Delta PCY_{it-j} + \phi_3 ECT_{t-1} + U_{6it} \quad 6$$

Where COR_{it} and COR_{it-j} represent the current and lagged values of corruption, POL_{it} and POL_{it-j} are the current and lagged values of political instability, and PCY_{it} and PCY_{it-j} are the current and lagged values of the level of economic development, respectively. Additionally, Δ is the first-difference operator, and U_{it} are the residuals. Moreover, ECT_{t-1} is the one period lag of the error-correction term, and the statistical significance of the ECT_{t-1} is used to determine the long-term causality.

The results of the Granger causality tests reported in table 4 indicate that there is short-term unidirectional causality from political instability to economic development, while there is long-term unidirectional causality from political instability and economic development to corruption. This result implies that political instability Granger-causes economic development in the short term and that both economic development and political instability Granger-cause corruption in the long term in ECOWAS countries.

Forecast Error Variance Decomposition Analysis

The Granger causality analysis conducted above is limited to the 1996-2012 period, but it does not consider the dynamic interaction of the variables beyond that period. In an attempt to understand the dynamic relationship among corruption, political instability and economic development outside of the sample period of 1996-2012, we performed a forecast error variance decomposition analysis (FEVD) (Sims, 1980). The FEVD is useful in assessing the amount of variation in a variable caused by its own shock and by shocks to other variables. In the short term, a larger percentage of the variation in a variable results from its own shock, while in the long term, the impact of shocks on other variables increases. Each of the variables in the system is disturbed by one standard deviation.

The results of the variance analysis presented in table 5 indicate that corruption is the most exogenous variable, followed by political instability and economic development. In the second year, for instance, 98.53%, 98.47% and 98.04% of the variations in the forecast error variance for corruption, political instability and economic development, respectively, is explained by its own shock. In explaining the shocks to corruption, political instability is more important than economic development in both the short and long term. Specifically, political instability explains 1.00% of the variations in corruption, while economic development accounts for 0.46% of the variations in corruption in the second year. Moreover, political instability explains 7.97% and 17.73% of the variations in corruption in the fifth and tenth years compared with the contributions of economic development at 4.53% and 14.65% during the same period.

Furthermore, corruption is more important than economic development in explaining shocks to political instability in both the short and long term. In the second year, for instance, 1.43% of the variation in political instability is explained by corruption, but economic development accounts for 0.10% of the variation in political instability. Similarly, corruption explains 8.35% and 20.81% of the variations in political instability, but the contribution of economic development to variations in political instability is 0.61% and 1.02% in the fifth and fifteenth year, respectively. Moreover, corruption is more important than political instability in explaining shocks to economic development in the short and long term. In the second year, for instance, corruption accounts for 1.95% whereas political instability explains 0.32% of the variation in economic development. In the same vein, corruption accounts for 0.76% and 0.55% of the variation in economic development, while political instability explains 0.27% and 0.35% of this variation in the tenth and fifteenth year, respectively.

Impulse Response Function Analysis

The causality tests conducted earlier provide information only on the direction of causality among the variables; these tests do not indicate whether the sign of the relationship is positive or negative. In addition, causality tests are unable to explain how much time is needed for the impacts to occur in the system. To this end, we conducted impulse response function analysis (IRF) to trace how each variable responded to a shock to the other variables in the system. The IRF results for corruption, political instability and economic development in response to a one-standard-deviation shock in corruption, political instability and economic development over the 15-year period are reported in table 6.

The results of the IRF reveal that over a period of fifteen years, a one-standard-deviation shock to political instability exerts a positive impact on corruption. A shock to political instability has a positive impact on corruption for the first five years, but between the tenth and fifteenth year, the impact declines but remains near the positive region. Similarly, a shock to economic development has a positive impact on corruption between the first and fifteenth years. Regarding the response of political instability to a shock in corruption and economic development, the results illustrate that a shock to corruption exerts a positive effect on political instability, but the impact declines continuously over the fifteen-year period and remains near the positive region. A shock to economic development has a negative impact on political instability, but the effect decreases over the fifteen-year period. Furthermore, the results demonstrate that a shock to corruption exerts a negative impact on economic development, while a shock to political instability exerts a positive impact on economic development over the fifteen-year period. Although the impact of

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Table 5. Results of the Variance Decomposition Analysis

Relative Variance of COR				Relative Variance of POL				Relative Variance of PCY			
Years	COR	POL	PCY	Years	COR	POL	PCY	Years	COR	POL	PCY
1	100.00	0.00	0.00	1	0.03	99.97	0.00	1	1.95	0.32	97.72
2	98.53	1.00	0.46	2	1.43	98.47	0.10	2	1.67	0.29	98.04
3	95.61	2.95	1.44	3	3.60	96.17	0.27	3	1.46	0.26	98.28
4	91.77	5.39	2.84	4	6.00	93.55	0.45	4	1.29	0.25	98.46
5	87.50	7.97	4.53	5	8.35	91.04	0.61	5	1.16	0.24	98.60
10	67.62	17.73	14.65	10	16.75	82.23	1.02	10	0.76	0.27	98.97
15	53.42	21.33	25.24	15	20.81	78.17	1.02	15	0.55	0.35	99.10

Note: Cholesky ordering: COR, POL and PCY

Table 6. Results of the Impulse Response Function Analysis

Response of COR				Response of POL				Response of PCY			
Years	COR	POL	PCY	Years	COR	POL	PCY	Years	COR	POL	PCY
1	0.31	0.00	0.00	1	0.05	2.80	0.00	1	-12.90	5.23	91.33
2	0.24	0.04	0.03	2	0.44	2.44	-0.12	2	-11.08	4.69	92.88
3	0.19	0.06	0.05	3	0.70	2.17	-0.19	3	-9.78	4.48	94.65
4	0.15	0.08	0.06	4	0.86	1.96	-0.24	4	-8.84	4.49	96.60
5	0.13	0.09	0.07	5	0.96	1.81	-0.25	5	-8.14	4.67	98.70
10	0.08	0.10	011	10	1.00	1.36	-0.21	10	-6.46	6.60	110.70
15	0.06	0.09	0.14	15	0.86	1.12	-1.11	15	-5.77	9.07	124.75

Note: Cholesky ordering: COR, POL and PCY

political instability fell between the first and second years, it shows a rising trend from the third to fifteenth years.

In sum, the empirical results indicate that there is positive causality running from political instability to economic development in the short term and from political instability and economic development to corruption in the long term in ECOWAS countries. In separate studies, Fosu (1992, 2001, 2002a, 2002b) confirmed that political instability is deleterious to economic growth in Sub-Saharan African (SSA) countries. For instance, Fosu (1992) found the adverse impact of political instability in SSA to be almost 33 percent of GDP growth over the 1960-1986 period. Similarly, Fosu (2002b) discovered that political instability adversely affected the transfer of economic growth to human development (measured as a change in an index of life expectancy and literacy) between 1970 and 1985. Many years of political instability (military intervention in politics) have contributed to the poor economic performance of ECOWAS countries such as Nigeria. Between 1960 and 1995, Nigeria failed to make any meaningful economic progress (given its potential) because of numerous military takeovers. In addition to military coups, conflicts caused primarily by armed rebels have been on the rise since the 1990s

in Liberia, Sierra Leone, Guinea-Bissau, Mali, Cote D'Ivoire and, more recently, in Nigeria. Such rising conflict has led to the displacement and destruction of human and physical capital, thus further contributing to the underdevelopment of the region.

Moreover, military rulers in the ECOWAS region have been blamed to a greater extent for the institutionalization of corruption as evident in some countries. The various military regimes alluded to corruption as one of the reasons that they seized power (Edi, 2006). Furthermore, Nigeria's former military rulers have been accused of stealing and mismanaging several billions of dollars belonging to the country. Recently, the Swiss government returned some of the funds alleged to have been looted by the late General Sani Abacha to the Nigerian government. Similarly, General Ibrahim Babangida was accused of mismanaging US$12 billion of oil windfalls while he headed the military Junta for 8 years in Nigeria. Moreover, after 15 years of democracy, the political class has also had its fair share of corruption-related activities. Many former governors and cabinet members have been investigated for helping themselves to state resources. For instance, a former governor of the oil-rich Delta state in Nigeria (James Ibori) was convicted and consequently sentenced to 13 years in prison by the British government for stealing public funds. In the same vein, high-ranking military officers in Guinea Bissau have been accused of not only legitimizing corruption but they aiding drug trafficking along the shores of their country.

Conclusion and recommendations

Given that less developed ECOWAS countries are corrupt and politically unstable, it is important to examine the interaction among economic development, corruption and political instability in these countries. This paper examines the causal relationship among corruption, political instability, and economic development in ECOWAS countries within a multivariate cointegration and error-correction framework. The Pedroni cointegration test reveals that the variables are cointegrated, indicating the existence of a long-term equilibrium relationship among corruption, political instability, and economic development. Having confirmed the existence of cointegration, we investigated the direction of causality between the variables using the VECM. The results illustrate that there is short-term unidirectional causality from political instability to economic development, while in the long term, causality runs from economic development and political instability to corruption in ECOWAS countries.

Moreover, we employed the FEVD and IRF to examine the dynamic interaction among corruption, political instability and economic development in ECOWAS outside the sample period of 1996-2012. The FEVD confirmed that corruption, political instability and economic development are endogenous. Political instability is the most important variable accounting for shocks in corruption, while corruption is the most important variable accounting for shocks in political instability and economic development. Furthermore, the IRF illustrated that a shock to political instability and economic development has a positive effect on corruption. Additionally, a shock to corruption has a positive impact on political instability, while a shock to economic development has a negative effect on political instability. In addition, a shock to political instability has a positive effect on economic development, whereas a shock to corruption has a negative impact on economic development. Thus, there is positive unidirectional causality from political instability and economic development to corruption in the long term and positive unidirectional causality from political instability to economic development in the short term in ECOWAS countries.

The findings of this study suggest that years of political instability have contributed to the high rate of corruption and underdevelopment in ECOWAS countries. Researchers have confirmed that corruption increases with political instability (see Lederman et al., 2005; Leite & Weidmann, 1999; Park, 2003). Likewise, other proxies of political instability have also been found to be correlated with corruption. For instance, it has been observed that democracy (as measured by press freedom) is negatively related to corruption (Brunetti & Weder, 2003; Lederman et al., 2005). Similarly, improvements in civil liberty reduce corruption (Lederman et al., 2005). In addition, higher levels of decentralization reduce corruption by bringing government closer to the people and ensuring that government officials can be held accountable when the need arises (Fisman & Gatti, 2002). Furthermore, political instability destroys physical capital and displaces human capital (Le, 2004), disrupts production activ-

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ity (Aisen & Veiga, 2013), and encourages the violation of property rights, including lack of guarantee for contracts (Svensson, 1998). All of these consequences adversely affect the economy (Aisen & Veiga, 2013; Alesina et al., 1996).

High levels of corruption and underdevelopment in ECOWAS have been blamed on political instability primarily resulting from many years of military rule (including ethno-religious crises). For instance, Edi (2006) posited that the failure to improve socio-economic conditions and high corruption, among other factors, led to reoccurring military takeovers in ECOWAS countries. Based on our findings, ECOWAS governments should employ policies to promote political stability to improve economic development and reduce corruption in the region. However, as we stated in the introduction, the use of a single policy option of political stability may not be sufficient to achieve higher levels of economic development and to eliminate corruption from ECOWAS countries.

References

Abu, N., Karim, M.Z.A., & Aziz, M.I.A. (2013). Low savings rates in the Economic Community of West African States (ECOWAS): The role of the political instability-income interaction. *South East European Journal of Economics and Business*, 8 (2), 53-63.

Adelman, I., & Morris, C. T. (1968). An econometric model of socio-economic and political change in underdeveloped countries. *American Economic Review,* 58 (5), 1184-1218.

Ades, A., & Chua, H. B. (1997). Thy neighbor's curse: Regional instability and economic growth. *Journal of Economic Growth,* 2 (3), 279-304.

Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth?. *European Journal of Political Economy*, 29, 151-167.

Alesina, A., & Perotti, R. (1996). Income distribution, political instability and investment. *European Economic Review,* 40 (6), 1203-1228.

Alesina, A., Ozler, S., Roubini, N., & Swagel, P. (1996). Political instability and economic growth. *Journal of Economic Growth,* 1 (2), 189-212.

Anoruo, E., & Braha, H. (2005). Corruption and economic growth: The African experience. *Journal of Sustainable Development in Africa*, 7 (1), 43-55.

Asiedu, E. (2006). Foreign direct investment in Africa: The role of natural resources, market size, government policy, institutions and political instability. *World Economy,* 29 (1), 63-77.

Asiedu, E., & Freeman, J. (2009). The effect of corruption on investment growth: Evidence from firms in Latin America, Sub-Saharan Africa, and transition countries, *Review of Development Economics,* 13 (2), 200-214.

Asteriou, D., & Price, S. (2001). Political instability and economic growth: UK time series evidence. *Scottish Journal of Political Economy,* 48 (4), 383-399.

Asteriou, D., & Siriopoulos, C. (2000). The role of political instability in stock market development and economic growth: The case of Greece. *Economic Notes*, 29 (3), 355-374.

Bentzen, J. S. (2012). How bad is corruption? Cross-country evidence of the impact of corruption on economic prosperity. *Review of Development Economics*, 16 (1), 167-184.

Billger, S. M., & Goel, R. K. (2009). Do existing corruption levels matter in controlling corruption?: Cross-country quantile regression estimates. *Journal of Development Economics,* 90 (2), 299-305.

Blackburn, K., & Forgues-Puccio, G. F. (2007). Distribution and development in a model of misgovernance. *European Economic Review*, 51 (6), 1534-1563.

Bollen, K. A., & Jackman, R. W. (1985). Economic and noneconomic determinants of political democracy in the 1960s. *Research in Political Sociology*, 1, 27-48.

Brunetti, A. & Weder, B. (2003). A free press is bad news for corruption. *Journal of Public Economics,* 87 (7-8), 1801-1824.

Butkiewicz, J. L., & Yanikkaya, H. (2005). The impact of sociopolitical instability on economic growth: Analysis and implications. *Journal of Policy Modeling* 27 (5), 629-645.

Butkiewicz, J. L., & Yanikkaya, H. (2006). Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? *Economic Modelling,* 23 (4), 648-661.

Campbell, N., & Saha, S. (2013). Corruption, democracy, and Asia-Pacific countries. *Journal of the Asia Pacific Economy,* 18 (2), 290-303.

Campos, N. F., & Karanasos, M. G. (2008). Growth, volatility and political instability: Non-linear time-series evidence for Argentina, 1896–2000. *Economics Letters*, 100 (1), 135-137.

Claderon, C., & Chong, A. (2006). Do democracies breed rent-seeking behaviour? *Journal of Policy Reform*, 9 (4), 247-260.

Comeau, L. (2003). The political economy of growth in Latin America and East Asia: Some empirical evidence. *Contemporary Economy Policy,* 21 (4), 476-489.

Del Monte, A., & Papagni, E. (2007). The determinants of corruption in Italy: Regional panel data analysis. *European Journal of Political Economy,* 23 (2), 379-396.

Devereux, M. B., & Wen, J. F. (1998). Political instability, capital taxation, and growth. *European Economic Review,* 42 (9), 1635-1651.

Edi, E. (2006). Pan West Africanism and political instability in West Africa: Perspectives and reflections. *The Journal of Pan African Studies,* 1 (3), 7-31.

Edwards, S. (1996). Why are Latin America's savings rates so low? An international comparative analysis, *Journal of Development Economics,* 51 (1), 5-44.

Emerson, P. M. (2006). Corruption, competition and democracy. *Journal of Development Economics*, 81 (1), 193-212.

Erb, C. B., Harvey, C. R., & Viskanta, T. E. (1996). Political risk, financial risk and economic risk. *Financial Analysts Journal,* 52 (6), 29-46.

Farooq, A., Shahbaz, M., Arouri, M., & Teulon, F. (2013). Does corruption impede economic growth in Pakistan?. *Economic Modelling*, 35, 622-633.

Fisman, R. & Gatti, R. (2002). Decentralization and corruption: Evidence across countries. *Journal of Public Economics,* 83 (3), 325-345.

Fosu, A. K. (1992). Political instability and economic growth: Evidence from Sub-Saharan Africa. *Economic Development and Cultural Change*, 40 (4), 829-841.

Fosu, A. K. (2001). Political instability and economic growth in developing economies: Some specification empirics. *Economics Letters*, 70 (2), 289-294.

Fosu, A. K. (2002a). Political instability and economic growth: Implications of coup events in Sub-Saharan Africa. *American Journal of Economics and Sociology*, 61 (1), 329-348.

Fosu, A. K. (2002b). Transforming economic growth to human development in Sub-Saharan Africa: The role of elite political instability. *Oxford Development Studies,* 30 (1), 9-19.

Gasiorowski, M. J. (1998). Macroeconomic conditions and political instability: An empirical analysis. *Studies in Comparative International Development*, 33 (3), 3-17.

Ghura, D. (2002). Tax revenue in Sub-Saharan Africa: Effects of economic policies and corruption. In G. T. Abed, S. Gupta (Eds.), *Governance, Corruption, and Economic Performance* (pp. 369-395). Washington, DC: International Monetary Fund.

Goldsmith, A. A. (1999). Slapping the grasping hand. *American Journal of Economics and Sociology*, 58 (4), 865-883.

Granger, C. W. J. (1969). Investigating causal relations by econometric models and cross spectral methods. *Econometrica,* 37 (3), 424-438.

Granger, C. W. J. (1986). Development in the study of cointegrated economic variables. *Oxford Bulletin of Economics and Statistics,* 48 (3), 213-228.

Gupta, S., Davoodi, H., & Alonso-Terme, R. (2002). Does corruption affect income inequality and poverty? Economics of Governance, 3 (1), 23-45.

Gupta, D. K., Madhavan, M. C., & Blee, A. (1998). Democracy, economic growth and political instability: an integrated perspective. *The Journal of Socio-Economics*, 27 (5), 587-611.

Gyimah-Brempong, K. (2002). Corruption, economic growth, and income inequality in Africa. *Economics of Governance,* 3 (3), 183-209.

Gyimah-Brempong, K., & Dapaah, A. S. (1996). Non elite political instability and economic growth: Evidence from Sub-Saharan Africa. *Journal of Economic Development,* 21 (1), 181-210.

Gyimah-Brempong, K. & Traynor, T. L. (1999). Political instability, investment and economic growth in Sub-Saharan Africa. *Journal of African Economies,* 8 (1), 52-86.

Habib, M., & Zurawicki, L. (2001).Country-level investments and the effect of corruption- Some empirical evidence. *International Business Review,* 10 (6), 687-700.

Hayakawa, K., Kimura, F., & Lee, H. H. (2013). How does country risk matter for foreign direct in-

vestment? *The Developing Economies,* 5 (1), 60-78.

Heaney, R., & Hooper, V. (1999). World, regional and political risk influences upon Asia Pacific equity market returns. *Australian Journal of Management*, 24 (2), 131-142.

Helliwell, J. F. (1994). Empirical linkages between democracy and economic growth. *British Journal of Political Science,* 24 (2), 225-248.

Huntington, S. P. (1968). *Political order in changing societies*. New Haven, CT: Yale University Press.

Iwasaki, I., & Suzuki, T. (2012). The determinants of corruption in transition economies. *Economics Letters*, 114 (1), 54-60.

Lambsdorff, J. G. (1999, October). The Transparency International corruption perceptions index 1999: Framework document. *Transparency International, Berlin.* Retrieved from http://www.icgg.org/downloads/1999_CPI_FD.pdf

Lambsdorff, J. G. (2006). The validity and precision of subjective indicators (CPI). In C. Sampford, A. Shacklock, C. Connors, & F. Galtung (Eds.), *Measuring Corruption* (pp. 81-99). Aldershot, UK: Ashgate Publishing Company.

Le, Q. V. (2004). Political and economic determinants of private investment. *Journal of International Development,* 16 (4), 589-604.

Lederman, D., Loayza, N. V., & Soares, R. R (2005). Accountability and corruption: Political institutions matter. *Economics & Politics,* 17 (1), 1-35.

Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist*, 8 (3), 8-14.

Leite, C. A. & Weidmann, J. (1999). Does mother nature corrupt?: Natural resources, corruption, and economic growth (Working Paper No. 99/85). International Monetary Fund.

Linder, A., & Santiso, C. (2002). Assessing the predictive power of country risk ratings and governance indicators (Working Paper No. 0202). School of Advanced International Studies. The Johns Hopkins University.

Lipset, S. M., & Raab, E. (1970). *The politics of unreason: Right-wing extremism in America, 1790-1970*. New York, NY: Harper & Row.

Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics,* 110 (3), 681-712.

Mauro, P. (2004). The persistence of corruption and slow economic growth. *International Monetary Fund Staff Papers,* 51 (1), 1-18.

Mbaku, J. M. (1988). Political instability and economic development in Sub-Saharan Africa:

Some recent evidence. *Review of Black Political Economy*, 17 (1), 89-111.

Mbaku, J. M., & Paul, C. (1989). Political instability in Africa: A rent-seeking approach. *Public Choice Public Choice,* 63 (1), 63-72.

Méon, P. G., & Sekkat, K. (2005). Does corruption grease or sand the wheels of growth? *Public Choice,* 122 (1-2), 69-97.

Mo, P. H. (2001). Corruption and economic growth. *Journal of Comparative Economics,* 29 (1), 66-79.

Montinola, G. A., & Jackman, R.W. (2002). Sources of corruption: A cross-country study. *British Journal of Political Science,* 32 (1), 147-170.

Nelson, C. R., & Plosser, C. I. (1982). Trends and random walks in macroeconomic time series: Some evidence and implications. *Journal of Monetary Economics,* 10 (2), 139-162.

Okafor, C. E., Smith, M., & Ujah, N. (2014). Kleptocracy, nepotism, kakistrocracy: Impact of corruption in Sub-Saharan African countries. *International Journal of Economics and Accounting,* 5 (2), 97-115.

Oto-Peralías, D., Romero-Ávila, D., & Usabiaga, C. (2013). Does fiscal decentralization mitigate the adverse effects of corruption on public deficits? *European Journal of Political Economy,* 32, 205-231.

Park, H. (2003). Determinants of corruption: A cross-national analysis. *Multinational Business Review,* 11 (2), 29-48.

Pedroni, P. (1999). Critical values for cointegration tests in heterogeneous panels with multiple regressors. *Oxford Bulletin of Economics and Statistics,* 61, 653-670.

Serra, D. (2006). Empirical determinants of corruption: A sensitivity analysis. *Public Choice,* 126 (1), 225-256.

Schumacher, I. (2013). Political stability, corruption and trust in politicians. *Economic Modelling*, 31, 359-369.

Shabbir, G., & Anwar, M. (2007). Determinants of corruption in developing countries. *The Pakistan Development Review,* 46 (4), 751-764.

Shleifer, A., & Vishny, R. (1993). Corruption. *Quarterly Journal of Economics,* 108 (3), 599-617.

Sims, C. A. (1980). Macroeconomics and Reality. *Econometrica*, 48 (1), 1-48.

Svensson, J. (1998). Investment, property rights and political instability: Theory and evidence. *European Economic Review,* 42 (7), 1317-1341.

Swaleheen, M. (2007). Corruption and investment choices: A panel data study. *Kyklos,* 60 (4), 601-616.

Ugur, M., & Dasgupta, N. (2011). Corruption and economic growth: A meta-analysis of the evidence on low-income countries and beyond (MPRA 31226). University Library of Munich, Germany.

Van Rijckeghem, C., & Weder, B. (2001). Bureaucratic corruption and the rate of temptation: Do wages in the civil service affect corruption, and by how much? *Journal of Development Economics,* 65 (2), 307-331.

Williams, A., & Siddique, A. (2008). The use (and abuse) of governance indicators in economics: A review. *Economics of Governance*, 9 (2), 131-175.

Zhang, Y., Cao, L., & Vaughn, M. S. (2009). Social support and corruption: Structural determinants of corruption in the world. *Australian & New Zealand Journal of Criminology,* 42 (2), 204-217.

 DOI: 10.5709/ce.1897-9254.159