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AGDI Working Paper

Research Department

Politics and Consumer Prices in Africa

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Abstract

The motivations of the Arab Spring that have marked the history of humanity over the last few months have left political economists, researchers, governments and international policymakers pondering over how the quality of political institutions affect consumer welfare in terms of commodity prices. This paper investigates the effects of political establishments on consumer prices in the African continent. Findings suggest that in comparison with authoritarian regimes, democracies better provide for institutions that keep inflationary pressures on commodity prices in check. As a policy implication, improving the quality of democratic institutions will ameliorate consumer welfare through lower inflation rates. Such government quality institutional determinants include, among others: voice and accountability, rule of law, regulation quality, control of corruption and press freedom.

JEL Classification: I30; O00; P00; Q00; P50
Keywords: Consumer prices; Political institutions; Welfare; Africa

1. Introduction

The motivations of the Arab Spring and hitherto unanswered questions about some of its dynamics inspire this paper. The revolutions that have swept across Africa and the Middle East stress the relative importance of political regimes on living standards. The geopolitical landscape in the last couple of months has centered around the inability of some political regimes to ensure the livelihoods of their citizens. Tunisia, Egypt, Morocco, Senegal, Uganda,

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Zambia, Mauritania, Sudan, Western Sahara and most recently Nigeria are some countries that have witnessed major or minor unrests through techniques of civil resistance in sustained campaigns involving strikes, demonstrations, marches and rallies. Political strife plaguing many African countries seem to be centered around the need for basic livelihood.

In retrospect, the rapid inflation in global food prices since 2000 and its acceleration between 2007-08 has shown that price shocks can pose significant threats to political stability in the developing world. *"We will take to the streets in demonstrations or we will steal,"* a 30-year old woman said in 2008 as she queued outside a bakery in Egypt. Demonstrations and riots linked to consumer prices took place in over 30 countries between 2007-08. The Middle East witnessed food riots in Egypt, Jordan, Morocco and Yemen. In Ivory Coast, thousands marched to the home of President Laurent Gbagbo chanting: " *we are hungry*", "*life is too expensive*", "*you are going to kill us*"…etc. Similar demonstrations ensued in many other African countries, including Ethiopia, Burkina Faso, Senegal, Mozambique, Mauritania, Cameroon and Guinea. In Latin America, violent clashes over rising food prices occurred in Guatemala, Peru, Nicaragua, Bolivia, Argentina, Mexico and the Haitian prime minister was even toppled following food riots. In Asia, people took to the streets in Bangladesh, Cambodia, Thailand, India and the Philippines. Even North Korea experienced an incident in which market women gathered to protest against restrictions on their ability to trade in food (Hendrix et al., 2009).

The above stylized facts point to the role political institutions play in food prices and vice-versa. The present paper aims to investigate the effect of politics on consumer prices in the African continent. Data and methodology are presented and outlined respectively in Section 2. Empirical analysis is covered by Section 3. Section 4 concludes.

2. Data and Methodology

2.1 Data

We examine a panel of 34 African countries with data from African Development Indicators (ADI) of the World Bank (WB). Owing to constrains in data availability, dataset spans from 1980 to 2010. Consistent with the literature, *politics* is measured with indicators of democracy, autocracy and polity(Asongu, 2011a; Yang,2011). Inflation in terms of annual Consumer Price Index(CPI) is the outcome variable(Hendrix et al.,2009). Previous research has also substantially demonstrated the correlation between political institutions and moment conditions of legal-origin, income-level and religious-domination(La Porta et al., 1997; Stulz & Williamson, 2003; Beck et al., 2003; Asongu, 2011bc; Yang, 2011). Thus we use these instruments in a bid to address the issue of endogeneity. Control variables include trade(openness), public investment and population growth. While the first two are in percentages of GDP, the last is in annual growth rate.

2.2 Methodology

2.2.1 Endogeneity

While political institutions might account for living standards in terms of consumer prices, a reverse causality cannot be ruled-out especially as social riots engineered by soaring food prices have recently toppled many political establishments in Africa and beyond. This potential correlation between independent variables and the error term in the equation of interest(endogeneity) is taken into account by an Instrumental Variable (IV) estimation technique.

2.2.2 Estimation technique

The IV estimation process of the paper shall adopt the following steps:

-justify the use of an IV over an OLS estimation technique with the Hausman-test for endogeneity;

-verify that instrumental variables are exogenous to the endogenous components of explaining variables (political-regime channels), conditional on other covariates (control variables);

-assess the validity of the instruments by virtue of the Sargan Over-identifying Restrictions (OIR) test.

Thus the above methodology will entail the following regressions:

First-stage regression:

$$Politics_{it} = \gamma_0 + \gamma_1(legalorigin)_{it} + \gamma_2(religion)_{it} + \gamma_3(incomelevel)_{it} + \alpha_i X_{it} + \upsilon \quad (1)$$

Second-stage regression:

$$CPI_{it} = \gamma_0 + \gamma_1(DemocraticChannel)_{it} + \gamma_2(AutocraticChannel)_{it} + \beta_i X_{it} + \mu \quad (2)$$

In the two equations, *X* is a set of exogenous control variables. For the first and second equations, υ and *u*, respectively denote the disturbance terms. Instrumental variables include legal-origins, dominant-religions and income-levels

2.2.3 Robustness checks

In order to assess the robustness of findings, the paper: (1)uses an estimation technique that addresses the issue of endogeneity; (2) adopts two interchangeable sets of instruments; and (3) uses different political-regime indicators.

3. Empirical results

3.1 First-stage regressions

Table 1 investigates the role of instrumental dynamics in the quality of political institutions and consumer prices. This first-stage regression is the initial condition for the IV process where-in the endogenous components of the political-regime channels must be explained by the instruments contingent on other covariates (control variables). Clearly we notice from findings that distinguishing African countries by the instrumental dynamics helps elucidate cross-country differences in political institutions. Also, results for inflation are

robust given their consistency with recent empirical literature (Asongu, 2011d) where-in, the low level of inflation experienced by Francophone African civil-law countries is associated with their fixed-exchange rate regimes.

On average we notice that English common-law (Islam-oriented) countries have better democratic institutions than their French civil-law (Christian) counterparts. The comparative religious findings run counter to those of El Badawi, & Makdisi(2007). This contradiction is based on contextual differences. There is evidence of a U-shape relationship between national wealth and the level of democracy with Low-income countries experiencing lower (higher) levels of democracy than Upper (Lower) middle income countries.

Table 1: Endogenous variables and instruments (first-stage regressions)

		Endogenous Explaining Variables						**Endogenous Variable**	
		Democracy		**Polity(Revised)**		**Autocracy**		**Consumer Price**	
		1st Set	2nd Set	1st Set	2nd Set	1st Set	2nd Set	1st Set	2nd Set
	Constant	**1.475*** (2.765)**	**1.061** (2.364)**	-1.158 (-1.407)	-0.106 (-0.154)	**2.805*** (4.853)**	**1.109** (2.281)**	**23.827*** (7.966)**	**6.700** (2.502)**
	English	---	**2.138*** (8.396)**	---	**2.651*** (6.747)**	---	-0.418 (-1.518)	---	**15.069*** (10.40)**
	French	**-2.138*** (-8.396)**	---	**-2.651*** (-6.747)**	---	0.418 (1.518)	---	**-15.06*** (-10.40)**	---
	Christianity	---	**-0.485* (-1.838)**	---	-0.373 (-0.918)	---	-0.065 (-0.230)	---	0.212 (0.138)
Instruments	Islam	**0.485* (1.838)**	---	0.373 (0.918)	---	0.065 (0.230)	---	-0.212 (-0.138)	---
	L.Income	**1.239*** (4.094)**	---	**3.329*** (7.127)**	---	**-2.180*** (-6.650)**	---	-1.845 (-1.079)	---
	M. Income	---	**2.207*** (6.459)**	---	**2.382*** (4.520)**	---	-0.111 (-0.300)	---	-1.723 (-0.909)
	LMIncome	---	**-3.446*** (-9.651)**	---	**-5.711*** (-10.37)**	---	**2.291*** (5.926)**	---	**3.569* (1.816)**
	UMIncome	**3.446*** (9.651)**	---	**5.711**** (10.37)**	---	**-2.291*** (-5.926)**	---	**-3.569* (-1.816)**	---
	Trade	**0.008** (2.227)**	**0.008** (2.227)**	**0.011** (1.987)**	**0.011** (1.987)**	-0.003 (-0.940)	-0.003 (-0.940)	**-0.099*** (-4.811)**	**-0.099*** (-4.811)**
Control Variables	Public Ivt.	**0.052* (1.784)**	**0.052* (1.784)**	-0.054 (-1.213)	-0.054 (-1.213)	**0.110*** (3.501)**	**0.110*** (3.501)**	-0.067 (-0.407)	-0.067 (-0.407)
	Pop. growth	**-0.313*** (-2.929)**	**-0.313*** (-2.929)**	**-0.891*** (-5.402)**	**-0.891*** (-5.402)**	**0.570*** (4.922)**	**0.570*** (4.922)**	**2.111*** (3.429)**	**2.111*** (3.429)**
Adjusted R^2		0.206	0.206	0.207	0.207	0.093	0.093	0.134	0.134
Fisher-test		**34.439***	**34.439***	**34.555***	**34.555***	**14.249***	**14.249***	**19.998***	**19.998***
Observations		899	899	899	899	899	899	855	855

L: Low. LM: Lower Middle. UM:Upper Middle. Ivt: Investment. Pop: population. *;**;***: significance levels of 10%, 5% and 1% respectively. Set: Set of Instruments.

3.2 Second-stage regressions

Table 2 addresses two principal concerns: (1) the ability of political regimes to explain cross-country differences in consumer prices and; (2) the ability of the instruments to explain

consumer prices beyond political regime channels. Firstly, we notice the null hypothesis of the Hausman test is rejected in all the regressions: confirming the presence of endogeneity and justifying our estimation approach. The significance of estimated coefficients address the first issue; thus we notice that in comparison to democratic institutions, authoritarian regimes exert a higher effect on inflation. The control variable is significant with the right sign. We also notice substantial evidence of constant deflationary pressures(negative intercept). The Sargan test for OIR addresses the second issue. We find support for the validity of the instruments since the null hypothesis of the OIR test is not rejected for all the models. This suggests that the instruments do not explain consumer prices beyond political-regime mechanisms.

Table 2 : Politics and consumer prices

	Consumer Price Index(Inflation)			
	First Set of Instruments		**Second Set of Instruments**	
Constant	**-151.282****	**-153.006****	**-151.282****	**-153.006****
	(-2.355)	**(-2.394)**	**(0.018)**	**(-2.394)**
Democracy	**10.756*****	---	**10.756*****	---
	(2.757)		**(2.757)**	
Polity 2(Revised)	---	**10.636*****	---	**10.636*****
		(2.804)		**(2.804)**
Autocracy	**16.144****	**26.719****	**16.144****	**26.719****
	(2.238)	**(2.498)**	**(2.238)**	**(2.498)**
Population growth	**32.443****	**33.272****	**32.443****	**33.272****
	(2.445)	**(2.490)**	**(2.445)**	**(2.490)**
Hausman-test	**132.637*****	**137.764*****	**132.637*****	**137.764*****
OIR-Sargan test	**1.228**	**0.950**	**1.228**	**0.950**
P-value	**[0.267]**	**[0.329]**	**[0.267]**	**[0.329]**
Adjusted R^2	0.005	0.005	0.005	0.005
Fisher Statistics	**2.948****	**3.035****	**2.948****	**3.035****
Observations	989	989	989	989

1st Set of Instruments Constant; English ; Christianity; Middle Income; Lower Middle Income
2nd Set of Instruments Constant; French; Islam; Lower Income; Upper Middle Income

*;**;***: significance levels of 10%, 5% and 1% respectively. L: Low. LM: Lower Middle. OIR: Overidentifying Restrictions.

4. Conclusion

The motivations of the Arab Spring that have marked the history of humanity over the last few months have left political economists, researchers, governments and international policymakers pondering over how the quality of political institutions affect consumer welfare

in terms of commodity prices. Our findings suggest that in comparison with authoritarian regimes, democracies better provide for institutions that keep the inflation of commodity prices in check. As a policy implication, improving the quality of democratic institutions will ameliorate consumer welfare through lower inflation rates. Such government quality institutional determinants include, among others: voice and accountability, rule of law, regulation quality, control of corruption and press freedom.

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