



Short Communication

Economic freedom, democracy and inclusive growth: An empirical study for eleven ECOWAS countries

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Abstract

The goal of the study is to analyze the link between economic freedom, democracy and inclusive growth in eleven ECOWAS countries during the period 1995-2015. Using fixed and random effects models, we provide evidence of positive effects of economic freedom and democracy on inclusive growth, with the effect of economic freedom greater than the one of democracy. Using panel causality tests, we find that economic freedom causes inclusive growth in Mali. In Mali and Nigeria, inclusive growth causes economic freedom. Inclusive growth causes democracy in Senegal. Democracy causes inclusive growth in Benin, Nigeria and Senegal. Economic freedom causes democracy in Benin and democracy causes economic freedom in Côte d'Ivoire.

Keywords: Democracy, economic freedom, inclusive growth, panel data analysis.

Introduction

The nexus between economic freedom, democracy and economic growth has received increasing attention from the empirical literature over the years¹⁻³. Yet, the results regarding the democracy-economic growth nexus are mixed. In the empirical literature, three main hypothesis are most of the time tested: the Lipset⁴ hypothesis, the compatibility hypothesis and the conflict hypothesis. Beyond the democracy concept, economic freedom is an essential feature of human dignity, autonomy, and personal empowerment. More importantly, economic freedom is a formula to economic success⁵.

In this paper, the relationship between economic freedom, democracy and inclusive growth is analyzed with focus on eleven ECOWAS (Economic Community of West African States) countries: Benin, Burkina Faso, Carbo Verde, Cote d'Ivoire, Gambia, Ghana, Mali, Niger, Nigeria, Senegal and Sierra Leone. Focusing on economic freedom and democracy at the same time will allow us to test the differential effects of the two variables on inclusive growth. Contrary to the extensive literature on the topic, the paper focuses on inclusive growth instead of economic growth. Inclusive growth is a larger concept than economic growth. The basic idea is that a country's growth should be generated by – and benefit to – the entire population. Yet, in most African countries, this is not the case, particularly for the ECOWAS countries.

The paper uses fixed and random effects models to assess the relationship between economic freedom, democracy and inclusive growth. Causal relationships between the variables are tested by the mean of panel causality test⁶.

A positive impact of economic freedom and democracy on inclusive growth is found. Economic freedom impacts on inclusive growth is greater than the one of democracy. Causal, but country-varying, relationships are also identified between the variables.

Data and Econometric framework

We employ a balanced panel ranging on the period 1995-2015. This period is chosen due to data availability. The ECOWAS countries that we consider are also restricted to 11 (out of 15) due to data availability. These countries are: Benin, Burkina Faso, Carbo Verde, Cote d'Ivoire, Gambia, Ghana, Mali, Niger, Nigeria, Senegal and Sierra Leone.

Concerning the data, we use an economic freedom index taken from *The Heritage Foundation database*. The index is calculated using 12 different types of freedoms⁷. To measure democracy, the Polity 2 index is used and is taken from the *POLITY IV project database*. The Polity 2 index construction is based on the evaluation of elections in the country regarding competition, openness and level of participation. The index takes its values between -10 and 10. 10 corresponds to a fully democratic country while -10 corresponds to an autocracy.

We use the Gross Domestic Product per person employed as a measure of inclusive growth⁸. This variable comes from the *World Development Indicators database*. Openness rate and inflation rate are the growth determinants used as control variables in this study. Furthermore, beyond those classical determinants of economic growth, we use a structural transformation variable, namely the Economic Complexity

Index (ECI), as control variable. ECI is taken from the *Atlas of Economic Complexity of Harvard University*.

The general econometric model is specified as follows:

$$INCLUSIVE_{it} = \alpha_0 + \alpha_1 ECOFREEDOM_{it} + \alpha_2 DEMOC_{it} + \alpha_3 OPEN_{it} + \alpha_4 ECI_{it} + \alpha_5 INFLATION_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

Where INCLUSIVE is the GDP per person employed, ECOFREEDOM is the economic freedom index, DEMOC is the Polity 2 index, OPEN is the openness rate, INFLATION is the inflation rate, ECI is the Economic complexity index. The subscript $i=1, 2, \dots, N$ denotes the number of countries; $t=1, 2, \dots, T$ is the time period. μ_i represents the country specific effect and ε_{it} is the idiosyncratic term.

The model specified in Equation (1) is estimated by the mean of fixed and random effects models. We also examine the causality between economic freedom, democracy and inclusive growth. The panel causality test used⁶ is an extension of the standard causality tests in time series, to which is added the individual dimension. Possible heterogeneity in the data is taken into account by the test. The null hypothesis is the Homogenous Non Causality hypothesis and states that there is no causality from a variable X to a variable Y for all the individuals of the panel. An interesting feature of the test is the possibility to test for the

causality for each individual panel. Hence, we will focus on this last feature and present the results of test for each of the eleven country.

Results and discussion

The results of the estimation of the model (1) are shown in Table-1. Columns (1) and (3) present the results of the estimation using all the eleven countries of the sample. Columns (2) and (4) present the results using six countries: Benin, Cote d'Ivoire, Ghana, Mali, Nigeria, and Senegal. This is because ECI is only available for these 6 countries of our sample. Using both fixed and random effects models, the results suggest that economic freedom and democracy have positive effects on inclusive growth in the selected ECOWAS countries. The robustness of the results to the estimation technique used show that the aforementioned effects do not depend on the econometric specification. One striking observation is that the magnitude of the coefficient of economic freedom is greater than the one of democracy. This could be explained by the fact that economic freedom is a larger concept than democracy. Thus, its impact on inclusive growth is more important. Even if countries are democratic, it is important for people to have a minimum of freedom regarding the key sectors of the economy.

Table-1: Results of estimation.

Variables	Random Effects Model		Fixed Effects Model	
	(1)	(2)	(3)	(4)
Dependent variable: Inclusive				
Economic freedom index	1.211*** (0.163)	0.780*** (0.275)	1.209*** (0.164)	0.797*** (0.275)
Democracy index	0.018*** (0.003)	0.018*** (0.004)	0.018*** (0.003)	0.019*** (0.004)
Openness rate	0.056 (0.046)	- -	0.051 (0.046)	- -
Inflation rate	-0.0019 (0.0012)	-0.0027* (0.0016)	-0.0020* (0.0012)	-0.0026 (0.0016)
Economic Complexity Index	- -	-0.003 (0.049)	- -	0.008 (0.048)
Constant	3.524*** (0.656)	5.674*** (1.129)	3.554*** (0.636)	5.615*** (1.115)
No. Obs.	231	126	231	126
Countries	11	6	11	6
F-statistic	-	-	38.01***	115.79***
Wald chi2	153.67***	54.30***	-	-
Hausman test	4.98	3.81	-	-
Prob (Hausman test)	0.289	0.432	-	-

Note: *, **, *** denotes significance at 10%, 5% and 1% respectively. Dependent variable is INCLUSIVE, the GDP per person employed. All the variables are taken in the natural logarithm except DEMOC, INFLATION and ECI. F-statistic is used to test the global significance of the fixed effects model. The global significance of the random effects model is tested using Wald chi2. The Hausman test validates the random effects model. The fixed effects model is estimated for robustness purpose.

Table-2A: Results of the Dumitrescu and Hurlin⁶ panel causality test.

Countries	Eco-freedom does not Granger cause INCLUSIVE		Inclusive does not Granger cause Eco-freedom		Inclusive does not Granger cause DEMOC		DEMOC does not Granger cause INCLUSIVE		Eco-freedom does not Granger cause DEMOC		DEMOC does not Granger cause Eco-freedom	
	Wi	PVi	Wi	PVi	Wi	PVi	Wi	PVi	Wi	PVi	Wi	PVi
Benin	0,307	0,587	1,266	0,921	8,641	0,281	21,240*	0,069	18,615*	0,088	0,016	0,902
Burkina Faso	0,015	0,904	15,019	0,126	13,062	0,158	3,372	0,662	3,228	0,679	0,217	0,647
Cabo Verde	1,245	0,280	1,689	0,871	1,763	0,861	13,819	0,144	2,567	0,759	0,053	0,821
Cote d'Ivoire	0,987	0,334	13,223	0,155	3,747	0,620	15,061	0,126	10,113	0,229	12,610**	0,002
Gambia	0,096	0,760	5,750	0,441	0,980	0,337	3,771	0,606	0,440	0,516	1,005	0,330
Ghana	0,504	0,487	7,936	0,312	3,173	0,685	3,055	0,699	1,763	0,861	0,005	0,947
Mali	7,522**	0,014	20,800*	0,072	3,323	0,668	8,079	0,306	0,571	0,984	0,242	0,629
Niger	1,277	0,274	1,442	0,901	2,312	0,791	7,389	0,339	4,970	0,503	0,070	0,795
Nigeria	0,550	0,468	31,171**	0,033	1,386	0,910	191,937**	0,000	1,746	0,866	0,357	0,558
Senegal	2,712	0,118	13,358	0,152	94,680**	0,003	40,086**	0,020	5,586	0,453	1,755	0,203
Sierra leone	0,357	0,558	16,849	0,104	3,910	0,603	4,719	0,525	13,647	0,147	0,007	0,934

Note: *, **, denotes significance at 10% and 5% respectively.

The results regarding the control variables show a positive but not significant effect of openness rate on inclusive growth. Concerning the inflation, even though it has a negative effect on inclusive growth, the significance of that effect depends on the countries considered and whether we use fixed or random effects. Moreover, the Economic Complexity Index does not significantly affect inclusive growth. This could mean that the countries of our sample do not have a sufficient level of structural transformation that could impact on inclusive growth.

We now turn to the causality mechanisms between the variables of interest. Causality results are reported in Table-2 and show that all the countries do not exhibit a causal relationship regarding the variables. In Mali, causal relationship running from economic freedom to inclusive growth is identified. In Mali and Nigeria, inclusive growth causes economic freedom. Inclusive growth causes democracy in Senegal. Democracy causes inclusive growth in Benin, Nigeria and Senegal. Moreover, economic freedom causes democracy in Benin and democracy causes economic freedom in Côte d'Ivoire. This supports the fact that democracy can help in providing favorable market reforms⁹ in Cote d'Ivoire.

Conclusion

This study uses panel data estimates and panel causality test to assess the nexus between economic freedom, democracy and

inclusive growth in eleven ECOWAS countries. Empirical evidence is provided that economic freedom and democracy positively and significantly affect inclusive growth. The impact of economic freedom on inclusive growth is higher than the impact of democracy on inclusive growth. This result is robust to both fixed and random effects model. Causality mechanisms between economic freedom, democracy and inclusive growth are mixed across countries.

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