

**ANALYSIS OF POLITICAL INSTITUTIONS AND CENTRAL BANK
TRANSPARENCY IN SELECTED AFRICAN COUNTRIES**

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Abstract

Studies on central bank transparency focus on effect of central bank transparency rather than causes or determinants of central bank transparency. This paper empirically examined the impact of different measures of political institutions on central bank transparency. A panel data of twenty-two African countries was gathered over a period 2006 to 2018. Driscoll and Kraay method was used to gauge the model. The findings revealed that central bank transparency increases as quality of political institutions improve. The paper recommended that political institutions should be reformed to allow: (i) citizens participation in public decision making, (ii) equal opportunity for all including minority and women in political participation, (iii) restriction on exercise of executive powers, and (iv) adherence to the basic component of rule of law, principle of checks and balances, as well as true separation of power among the arms of government.

Keywords: Central Bank, Transparency, Political Institutions,

JEL Classification: E58

Introduction

Central bank transparency is about making available to the general public the objectives, targets, and instruments of monetary policy; minutes of central bank's board meetings and other policy decisions. This is meant to close the information gap between monetary policy authorities and economic agents. In principle, as central banks provide more accurate information, uncertainty become minimized, and hence the public takes efficient pricing and investment decisions. Economic agents can forecast future values of key economic variables with more accuracy when central banks provide appropriate monetary policy information and credibly commit to it.

It is evidenced in both the theoretical (Faust & Svensson 2001, Morris & Shin 2002, Mishkin 2004) and empirical (Demertzis & Hughes 2002, Eijffinger & Geraats 2006, Hayo & Mazhar 2011, Nhavira & Ocran 2012) literature that central bank transparency is imperative in ensuring the bank's reputation and credibility, which is crucial for effectiveness of monetary policy. Broaddus (2001), Crujisen and Demertzis (2008) show that a more transparent central bank reduces excessive speculation and volatility, hence makes macroeconomic variables to be more predictable. Central bank transparency is equally important in achieving financial market efficiency and macroeconomic stability at large (Fatas, Mihor & Rose, 2007). The numerical results in Sibert (2009) suggest that central banks and societies are better off in a transparent regime. However, Agoba, Abor, Osei and Sa-Aadu (2017, 2020) show that central bank independence has significant negative effect on inflation in developed countries and countries with strong political institutions,

while the significance disappeared in the case of developing and African countries, as well as countries with weak political institutions.

Despite emphasis on the transparency of central banks around the world, many central banks in Africa are yet to make significant improvement in making central banks' activities and policies more open to the public. Though, most countries in Africa have taken a variety of steps to improve the transparency of central banks, yet only few countries such as South Africa, Botswana, Ghana, Kenya, Mauritius, Nigeria and Namibia have made reasonable progress in this direction. Meanwhile there is still wide information gap between monetary policy authorities and general economic agents in countries like Sierra Leone, Angola, Zambia, and Malawi among others. Thus, investigating what influences the level of central bank transparency, particularly in Africa is a worthwhile endeavour.

The bulk of the literature on central bank transparency focused on effect of central bank transparency rather than causes or determinants of central bank transparency. Meanwhile, studies such as Eijffinger and Geraats (2006), Geraats (2009), Horvath and Vasko (2013), Dincer and Eichengreen (2014) among others examine determinants of central bank transparency as sub objectives in their studies. Generally, evidence in the literature shows that level of economic progress usually proxy with per capita income is a robust determinant of central bank transparency. Dincer and Eichengreen (2010) also find that countries with flexible exchange rate, better rule of law and more stable political system tend to have more transparent central banks. Hayo and Mahzar (2011) focus on determinants of transparency of monetary policy committee and they find out that past inflation, quality of institutional setup, and extent of Internet usage are important determinants.

This paper contributes to the existing literature by investigating determinants of central bank transparency with main focus on political institutions. Specifically, the paper aims at examining the impact of different measures of political institutions on different categories of central bank transparency in Africa. This objective is driven by political economy argument that strong and effective political institutions induce policymakers to be accountable to the people by conducting business of governance transparently. This paper probe into the validity of this argument in the case of monetary policy in Africa. The question is: are central banks more transparent in countries with better political institutions?

The rest of the paper is divided into four sections. Following the introduction is section 2 which presents the empirical strategy consisting of the model, nature and sources of data as well as the estimation technique. Section 3 provides the relationship between central bank transparency and political variables. The empirical results are presented in section 4, while the concluding remark is presented in section 5.

Data and Econometric strategies

Model specifications

As noted earlier, empirical study on modeling the determinants of central bank transparency is highly scanty. However, following Dincer and Eichengreen (2014), the model in this paper is specified with two broad determinants of central bank transparency, viz economic and political determinants. Thus, the model is specified as:

$$CBT_{it} = \beta_0 + \beta_1 EF_{it} + \beta_2 PF_{it} + \varepsilon_{it}$$

CBT_{it} is measure of central bank transparency. In this paper, six different categories of central bank transparency are considered, viz aggregate transparency, economic transparency, operational transparency, policy transparency, political transparency, and procedural transparency. While EF_{it} is vector of economic factors which consists of per capita GDP ($PCGDP$), past inflation (INF_{it-j}), financial depth ($FINDEPTH$), exchange rate regime ($EXRR$), and trade openness ($TOPEN$). And PF_{it} is vector of political factors comprising of constraint on executive power ($EXCONST$), polity2 values, voice and accountability (VAA), rule of law ($RULEL$), index of autocracy ($AUTO$), and index of democracy ($DEMO$). The subscripts i and t stand for individual country, and time respectively. Finally, ε_{it} is the error component which consists of unobservable individual specific effect (μ_i) and the usual Gauss Markov disturbance (V_{it}). Hence, the estimable model is specified as:

$$CBT_{jit} = \beta_0 + \beta_1 INF_{it-1} + \beta_2 \log PCGDP_{it} + \beta_3 FINDEPTH_{it} + \beta_4 EXRR_{it} + \beta_5 TOPEN_{it} + \delta_1 EXCONST_{it} + \delta_2 POLITY2_{it} + \delta_3 VAA_{it} + \delta_4 RULEL_{it} + \delta_5 AUTO_{it} + \delta_6 DEMO_{it} + \mu_i + V_{it}$$

The baseline model consists only of the economic factors, while each of the measures of political institutions is introduced one after the other. Only the first lag of inflation is considered since the data is annual averages. The natural logarithm of Per capita GDP is taken to eliminate the wide income gap across countries.

Sources of data and variables measurement

A panel data of twenty-two African countries as of 2006 to 2018 is gathered for the analysis. The countries covered are Angola, Botswana, Egypt, Ethiopia, Ghana, Kenya, Lesotho, Libya, Namibia, Nigeria, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Sierra Leone, Sudan, South Africa, Tanzania, Tunisia, Uganda and Zambia. Some of the countries in the continent are omitted due difficulties in assessing necessary information for the computation of central bank transparency because they were published in languages other than English in these countries.

Central banking transparency is measured by a composite monetary policy transparency index constructed by Eijffinger and Geraats (2006) and later extended by different scholars including Dincer and Eichengreen (2010 & 2014), Siklos (2011). This study updates the Dincer and Eichengreen (2014) index so as to cover more recent times. The index is updated to 2018 for the twenty-two (22) countries listed above. The value of the index ranges from minimum of zero (0) to maximum of fifteen (15). The closer to fifteen, the more transparent the bank is, while the bank is less transparent as the value moves towards zero. The index is made up of five categories of transparency, viz., economic transparency, operational transparency, policy transparency, political transparency, and procedural transparency respectively. The index is constructed from fifteen different qualitative questions concerning different aspects of transparency. The highest score for each question is one point, thus, simple summation of the points give the maximum of fifteen points. Meanwhile, the maximum points for each category of transparency is three points.

The data on per capita GDP, inflation (measure as first difference of log of Consumer Price Index, CPI), trade openness (measure as total trade as ratio of GDP) and financial depth (measure as ratio of broad money to GDP, M2/GDP) are all sourced from the World Development Indicators. While data on exchange rate regime are sourced from IMF (2018) Annual Report on Exchange Rate Instruments and Exchange Rate Restrictions database. Exchange rate regime is an index with

values range from 0 to 7, where 7 is the most flexible exchange rate regime and 0 is the most restricted regime. Thus, the closer to 7, the more flexible the regime.

Constraint on executive power, overall polity2 score, indexes of democracy and autocracy are sourced from Polity IV (2018) database. Constraint on executive power measures the extent of institutionalized constraints on the decision-making powers of chief executives. The index ranges from +1 (unlimited executive authority) to +7 (executive parity). The Polity2 index is the overall score of Polity which measures the difference between the democratic score and the autocratic score, the value ranges between +10 (for the most democratic countries) and -10 (for the most autocratic countries). The index of democracy is a composite index derived from the coded value of authorities' characteristics. It is an ordinal variable taking values from 0 to 10, which measures the level of democratization in the country on three main elements: firstly, presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Secondly, the existence of institutionalized constraints on the exercise of power by the executive. And thirdly, the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. The index of autocracy is also an ordinal variable taking values from 0 to 10, measuring the level of autocracy in the country, taking into account essential attributes such as selection process of chief executives, and extent of institutional constraint on exercise of executive power.

Data on the remaining two measures of political institutions, viz., rule of law and voice and accountability are sourced from World Bank (2018) Governance Indicators database. Rule of law measures the perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. While voice and accountability measures the extent to which citizens of a country are involved in public decision making process and the extent to which they enjoy freedom of expression as well as freedom of association.

Estimation technique

The appropriate estimation technique for this study must be able to deal with a twin problem of unobservable heterogeneity across the different countries brought together to form the panel data, and issue that is likely to arise from the structure of the panel which consists of relatively long T (where T is time period) and small N (N is number of countries). Given these two issues, the regular fixed effect model and random effect model would not be appropriate in this case. Dynamic fixed effect which could have handled the long T would not also perform efficiently because of the small N. Therefore, the study made use of Driscoll and Kraay (1998) approach which eliminates the deficiencies in the covariance matrix that is common with long T estimators. Driscoll and Kraay method is a modification of standard nonparametric time series covariance matrix estimator such that the estimates could be robust even in the general forms of cross-sectional model. The method applies a Newey-West type correction to the sequence of cross-sectional averages of the moment conditions.

Relationship between central bank transparency and political variables

Figure 1 displays the relationship between central bank aggregate transparency and constraints on executive power. The figure shows a relatively strong positive relationship between transparency and constraints on executive power. Meaning that the more constraints on the exercise of executive

power, the more transparent the central bank is likely to be. From the figure, countries with more transparent central bank such as South Africa, Namibia, Botswana and Ghana are equally countries with more constraints on executive powers. On the other hands, countries like Libya and Sierra Leone where there are less constraints on executive power, the central banks of these are also less transparent.

The relationship between central bank transparency and average democracy index is displayed in Figure 2 and the pattern is similar to what is demonstrated in Figure 1. Higher democratic index correlates with more transparent central bank. In other words, central bank transparency is positively related to level of democracy. Figure 3 on the other hand shows the relationship between central bank transparency and level of autocracy. The figure does not clearly display specific pattern of relationship between transparency and autocracy. It is difficult to tell the direction of relationship between central bank transparency and autocracy.

Figure 4 presents the relationship between central bank transparency and rule of law which shows positive relationship though not a very strong one. There are countries like Botswana, Kenya and Nigeria with relatively higher transparent central banks but the adherent to rule of law in these countries is poor. The relationship between transparency and voice and accountability is splashily positive as showed in Figure 5. Botswana has a transparency level that is par with Mauritius and little above that of Ghana, while voice and accountability in Mauritius and Ghana are far beyond that of Botswana. However, a number of countries with low levels of voice and accountability equally have low levels of transparency (examples are Sudan, Rwanda, Libya, Ethiopia and Angola).

Figure 1: Relationship between Transparency and Constraints on Executive Power

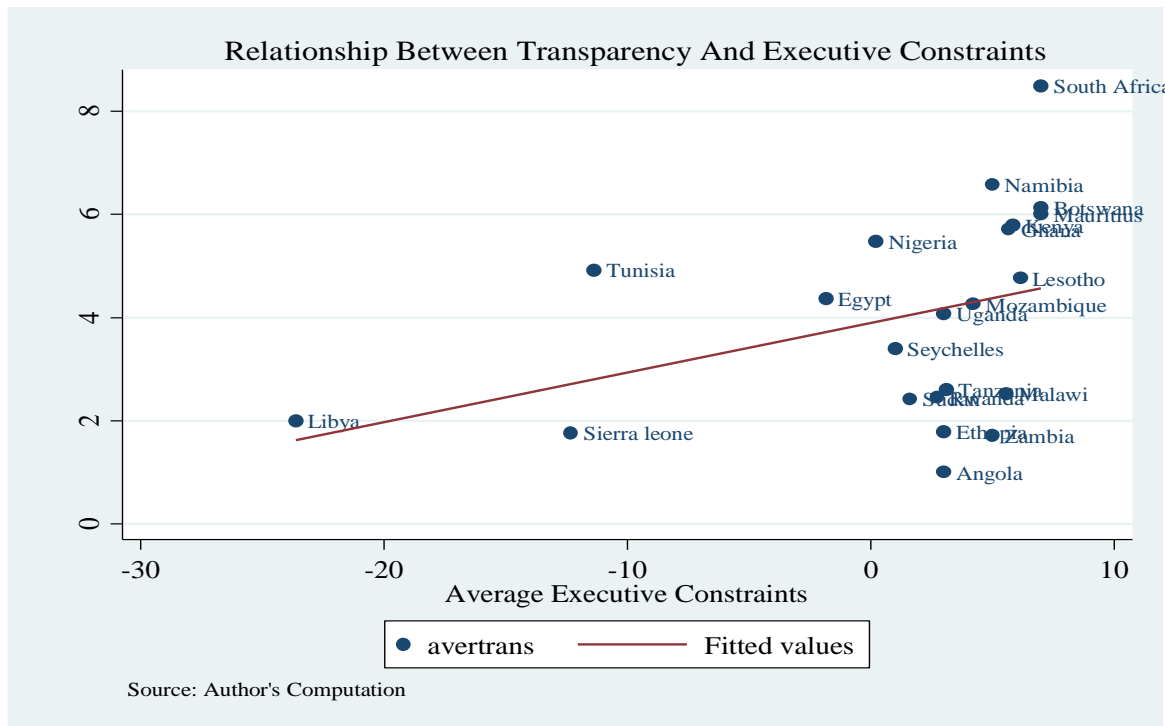


Figure 2: Relationship between Transparency and Democracy

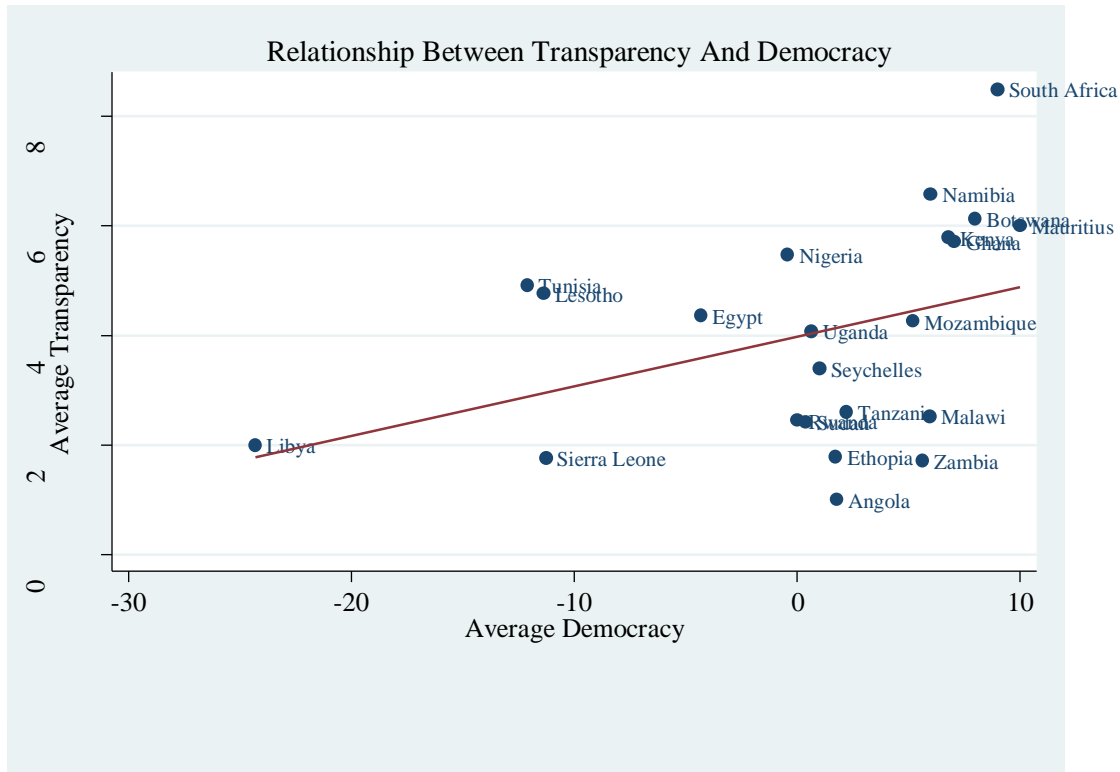


Figure 3: Relationship between Transparency and Autocracy

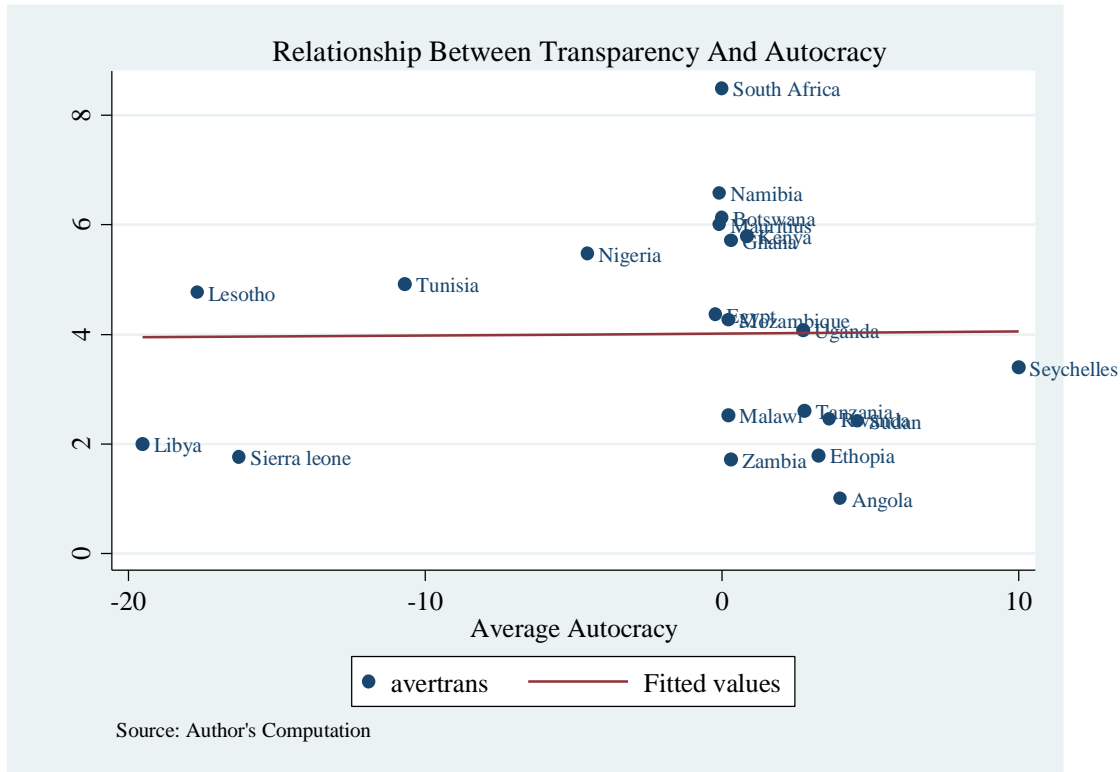


Figure 4: Relationship between Transparency and Rule of Law

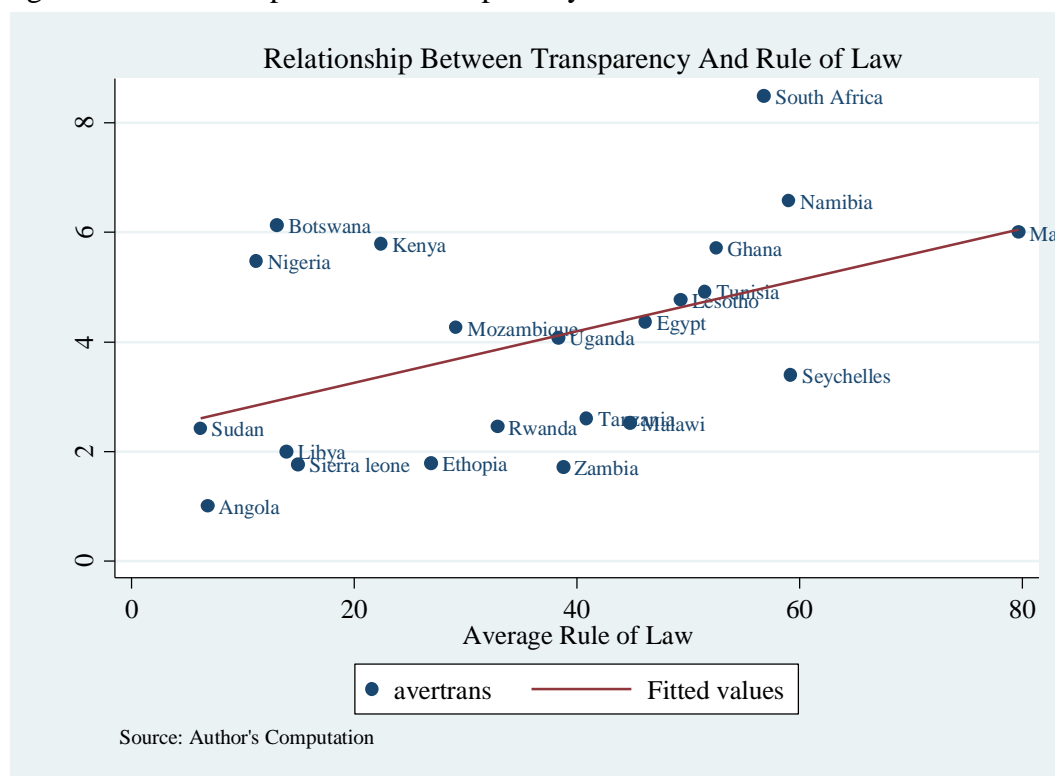
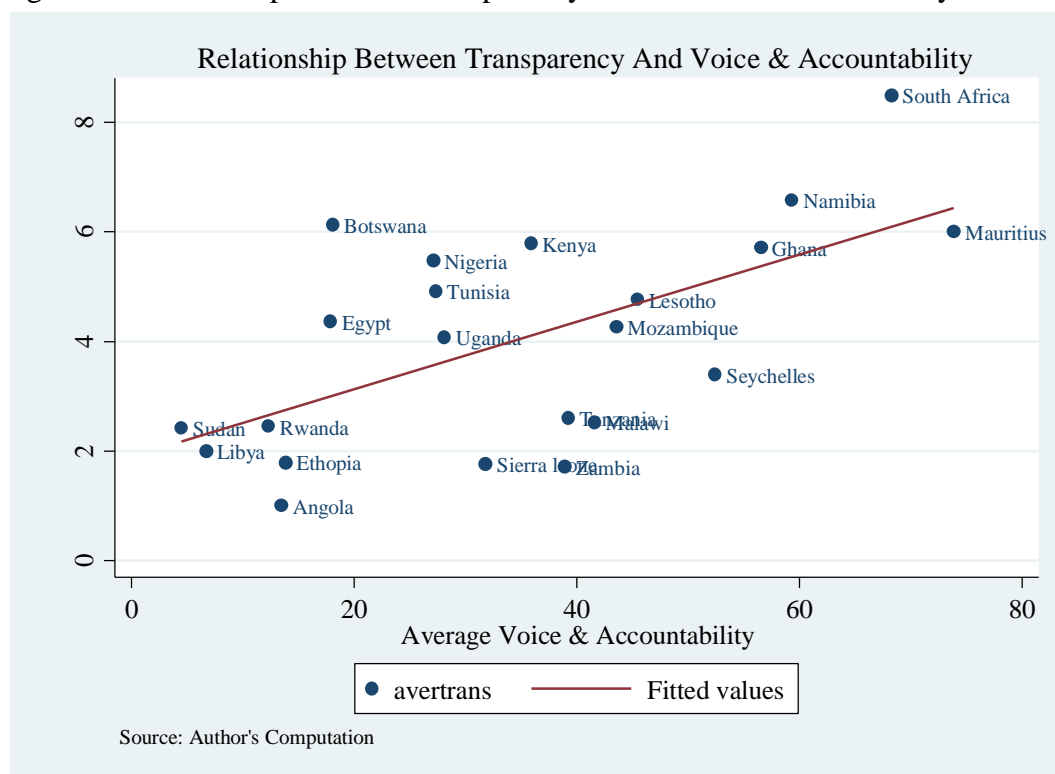


Figure 5: Relationship between Transparency and Voice & Accountability



Empirical Results

The regression results are presented in Tables 1 to 6, while Table 1 presents average transparency result, Tables 2 to 5 present results on economic, operational, policy, political and procedural transparencies respectively. All the models consist of all the economic factors which are lag of inflation, log of per capita income, financial depth, exchange rate regime and trade openness. In each of the result, the political institutional variables are controlled for one after the other.

In model I constraints on executive power is controlled for, while Polity2, voice and accountability, rule of law, autocracy and democracy are introduced in models II, III, IV, V and VI. Immediate past inflation is statistically significant in all the regressions except regression on political transparency of central bank. The meaning of this, is that central bank becomes more transparent as a response to high inflation. This finding conforms with Hayo and Mahzar (2011) who find out that past inflation is an important determinant of central transparency. Since the main obligation of central banks is maintenance of prices, rising rate of inflation will trigger reforms in monetary policy process including level of transparency. Thus, most countries facing inflation crisis are more likely to become more transparent. Only political transparency is not likely to improve as a response to crisis of inflations.

Like in many studies such as Horvath and Vasko (2013), Dincer and Eichengreen (2014) among others, economic progress captured with per capita income is consistently positive and statistically significant through all the regressions, implying that countries with more income per head are most likely to have more transparent central banks. This could be due to the fact that when a country makes progress economically, a robust middle class that is more conscious of public policies would emerge. Hence, demand for more information concerning government policies would intensify, consequently making public policy more transparent.

Financial depth is generally not statistically significant throughout the regressions. The evidence here suggests that financial depth does not influence central bank transparency in Africa. This could most likely be as a result of the weakness of financial system in the continent. The link between the financial system and the general public is poor as majority of people are financially excluded in most parts of the continent.

Exchange rate regime does not show consistent sign and significance across the regressions. It is positive and significant in seven out of the thirty-six regressions, while negative and significant in nine of the regressions and not significant in the rest. It is observed that exchange rate regime is positive mostly when polity2, which measure development of political institutions, is introduced. It is negatively mainly when either autocracy or democracy is controlled for. Trade openness is not statistically significant in almost all the regressions. This shows that openness of trade does not significantly affect central bank transparency across African countries.

Among the political variable, constraints on executive power is significant in average transparency, economic and policy transparency, while it is not significant in the other categories of transparencies. More restriction on exercise of executive powers only significantly influence policy, economic and average transparencies, while there is no evidence that constraints on executive power significantly affect operational, political and procedural transparency. This

finding might be a reflection of the situation in most African countries where fiscal authorities usually have undue interference on monetary policy processes.

Polity2 and democracy are significant and positive through all the regressions. The coefficient of Voice and accountability is also significant with positive sign in all the regressions except in the case of procedural transparency where it is positive but not statistically significant. Rule of law is significant in regressions of average transparency, economic, operational and political transparencies, while it is not significant for policy and procedural. Autocracy has negative and significant effect on average transparency as expected. But contrary to expectation, it has significant positive impact on operational, policy and political transparency respectively. It is not significant for economic and procedural transparencies.

Improvement in the two most significant political variables, viz., polity2 and index of democracy would make political institutions generally inclusive. Strict adherence to rule of law and allowing people to truly have voice are necessary to attainment of inclusive political institutions as well as achieving transparent central banking in the Africa. Making significant progress in this direction would ensure that political power is not concentrated in the hands of few individuals or narrow group of people, rather political power is open to broad set of people. That is, political institutions would create level playing political ground, so as to allow citizens to hold politicians accountable, and will ensure politicians do not use their political power to promote narrow interest. The selection process of the chief executive would be decided by broad section of the society rather just few elite or narrow group section of the society. If political institutions are inclusive, citizens influence how political power can be used to the best interest of the majority, such as free flow and access to information from the government to the people. Thus, inclusive political institutions would guarantee transparent central banking.

Table 1: Average Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0040*** (0.0012)	0.0041*** (0.0010)	0.0046*** (0.0012)	0.0042*** (0.0012)	0.0041*** (0.0012)	0.0041*** (0.0013)
Logpcgdp	1.6180*** (0.2730)	1.2110*** (0.2770)	1.4380*** (0.2650)	1.5250*** (0.2840)	1.5770*** (0.2700)	1.5260*** (0.2760)
Findepth	0.0089 (0.0065)	0.0039 (0.0060)	0.0088 (0.0069)	0.0089 (0.0062)	0.0092 (0.0065)	0.0086 (0.0064)
EXRR	-0.0042 (0.0061)	0.0198** (0.0082)	0.0091 (0.0064)	0.0022 (0.0049)	-0.0121* (0.0058)	-0.0155** (0.0065)
Topen	-0.0026 (0.0031)	-0.0035 (0.0024)	-0.0026 (0.0029)	-0.0024 (0.0031)	-0.00213 (0.0030)	-0.0021 (0.0029)
exconst	0.0077* (0.0042)					
polity2		0.2530*** (0.0447)				
VAA			0.0368*** (0.0080)			
Rule of law				0.0148*** (0.0045)		
Auto					-0.0152*** (0.0039)	
Demo						0.0189*** (0.0042)
Constant	-12.65*** (2.943)	-8.846*** (2.943)	-12.11*** (2.951)	-12.26*** (3.025)	-12.24*** (2.874)	-11.74*** (2.925)
Within R2	0.1633	0.2713	0.1994	0.1689	0.1766	0.1891
F-Statistics	27.78 (0.0000)	27.85 (0.0000)	15.58 (0.0000)	19.77 (0.0000)	53.47 (0.0000)	76.29 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,
Source: computed by authors

Table 2: Economic Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0007* (0.0003)	0.0007** (0.0003)	0.0007** (0.0003)	0.0008** (0.0004)	0.0006* (0.0004)	0.0007* (0.0004)
Logpcgdp	0.2590*** (0.0460)	0.2090*** (0.0475)	0.2420*** (0.0473)	0.2010*** (0.0577)	0.2660*** (0.0447)	0.2610*** (0.0459)
Findepth	0.0014 (0.0008)	0.0007 (0.0007)	0.0014 (0.0009)	0.0013* (0.0007)	0.0014* (0.0008)	0.0014* (0.0008)
EXRR	-0.0017 (0.0015)	0.0037** (0.0015)	0.0022* (0.0011)	0.0007 (0.0008)	0.0012 (0.0010)	0.0005 (0.0011)
Topen	-0.0001 (0.0005)	-0.0003 (0.0005)	-0.0002 (0.0005)	3.0005 (0.0006)	-0.0002 (0.0006)	-0.0002 (0.0006)
exconst	0.0032*** (0.0010)					
polity2		0.0342*** (0.0069)				
VAA			0.0047*** (0.0014)			
Rule of law				0.0087*** (0.0024)		
Auto					0.0003 (0.0005)	
Demo						0.0010** (0.0005)
Constant	-1.981*** (0.460)	-1.520*** (0.479)	-1.966*** (0.472)	-1.717*** (0.546)	-2.048*** (0.447)	-2.000*** (0.459)
Within R ²	0.1107	0.1515	0.1176	0.1662	0.1024	0.1043
F-Statistics	43.21 (0.0000)	48.82 (0.0000)	14.26 (0.0000)	94.49 (0.0000)	21.57 (0.0000)	59.62 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,

Source: computed by authors

Table 3: Operational Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0010*** (0.0003)	0.0010*** (0.0003)	0.0011*** (0.0004)	0.0010*** (0.0003)	0.0010** (0.0004)	0.0010** (0.0004)
Logpcgdp	0.4010*** (0.0724)	0.3010*** (0.0784)	0.3570*** (0.0732)	0.3800*** (0.0794)	0.3880*** (0.0710)	0.3750*** (0.0731)
Findepth	0.0013 (0.0013)	0.0001 (0.0012)	0.0013 (0.0014)	0.0013 (0.0012)	0.0014 (0.0013)	0.0013 (0.0013)
EXRR	-0.0013 (0.0014)	0.0043* (0.0022)	0.0016 (0.0016)	-0.00002 (0.0012)	-0.0040*** (0.0012)	-0.0048*** (0.0014)
Topen	-0.0015** (0.0006)	-0.0017*** (0.0004)	-0.0015** (0.0005)	-0.0014** (0.0006)	-0.0014** (0.0005)	-0.0013** (0.0005)
exconst	0.0016 (0.0011)					
polity2		0.0617*** (0.0146)				
VAA			0.0088*** (0.0026)			
Rule of law				0.0034** (0.0015)		
Auto					0.0042*** (0.0009)	
Demo						0.0050*** (0.0010)
Constant	-3.366*** (0.778)	-2.430*** (0.815)	-3.229*** (0.800)	-3.272*** (0.821)	-3.240*** (0.755)	-3.112*** (0.773)
Within R ²	0.1478	0.2423	0.1786	0.1524	0.1634	0.1754
F-Statistics	30.83 (0.0000)	23.00 (0.0000)	12.04 (0.0000)	19.88 (0.0000)	69.63 (0.0000)	118.92 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,
Source: computed by authors

Table 4: Policy Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0008*** (0.0003)	0.0008*** (0.0003)	0.0009*** (0.0003)	0.0007** (0.0003)	0.0008** (0.0003)	0.0008** (0.0003)
Logpcgdp	0.3440*** (0.0912)	0.2340** (0.1040)	0.3010*** (0.0985)	0.3580*** (0.0895)	0.3290*** (0.0883)	0.3140*** (0.0912)
Findepth	0.0016 (0.0019)	0.0003 (0.0020)	0.0016 (0.0020)	0.0017 (0.0019)	0.0017 (0.0019)	0.0015 (0.0019)
EXRR	-0.0057*** (0.0019)	0.0023 (0.0019)	-0.0008 (0.0016)	-0.0021 (0.0015)	-0.0082*** (0.0020)	-0.0088*** (0.0022)
Topen	-0.0015 (0.0010)	-0.0018* (0.0010)	-0.0016 (0.0010)	-0.0016 (0.0011)	-0.0014 (0.0010)	-0.0014 (0.0010)
exconst	0.0034** (0.0016)					
polity2		0.0701*** (0.0103)				
VAA			0.0096*** (0.0020)			
Rule of law				-0.0007 (0.0014)		
Auto					0.0058*** (0.0017)	
Demo						0.0066*** (0.0018)
Constant	-2.626** (0.993)	-1.604 (1.120)	-2.521** (1.046)	-2.738** (0.977)	-2.481** (0.953)	-2.330** (0.981)
Within R ²	0.1329	0.2433	0.1620	0.1266	0.1574	0.1726
F-Statistics	37.95 (0.0000)	70.04 (0.0000)	19.23 (0.0000)	6.40 (0.0011)	44.16 (0.0000)	61.48 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,
Source: computed by authors

Table 5: Political Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0002 (0.0003)	0.0003 (0.0004)	0.0004 (0.0004)	0.0003 (0.0003)	0.0003 (0.0003)	0.0003 (0.0004)
Logpcgdp	0.2430*** (0.0616)	0.1820*** (0.0401)	0.1880*** (0.0456)	0.2030*** (0.0567)	0.2270*** (0.0540)	0.2180*** (0.0518)
Findepth	0.0012 (0.0012)	0.0005 (0.0011)	0.0012 (0.0013)	0.0012 (0.0012)	0.0013 (0.0012)	0.0011 (0.0012)
EXRR	0.0009 (0.0007)	0.0029** (0.0013)	0.0020** (0.0009)	0.000001 (0.0007)	-0.0035** (0.0012)	-0.0037*** (0.0012)
Topen	0.0005 (0.0005)	0.0004 (0.0005)	0.0005 (0.0005)	0.0006 (0.0005)	0.0006 (0.0006)	0.0006 (0.0006)
exconst	-0.0003 (0.0003)					
polity2		0.0361*** (0.0110)				
VAA			0.0099*** (0.0015)			
Rule of law				0.0052** (0.0021)		
Auto					0.0039*** (0.0008)	
Demo						0.0042*** (0.0008)
Constant	-1.265* (0.685)	-0.686 (0.464)	-1.057* (0.562)	-1.052 (0.640)	-1.103* (0.607)	-1.011 (0.584)
Within R ²	0.072	0.1185	0.1299	0.0920	0.0933	0.1011
F-Statistics	5.80 (0.0019)	11.81 (0.0000)	10.81 (0.0001)	6.94 (0.0007)	14.50 (0.0000)	16.85 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,
Source: computed by authors

Table 6: Procedural Transparency Regression Results

Variables	I	II	III	IV	V	VI
Inf _{t-1}	0.0014*** (0.0005)	0.0014*** (0.0005)	0.0014*** (0.0005)	0.0014** (0.0005)	0.0014** (0.0005)	0.0014** (0.0005)
Logpcgdp	0.3730*** (0.0760)	0.2880*** (0.0801)	0.3550*** (0.0754)	0.3750*** (0.0732)	0.3680*** (0.0763)	0.3600*** (0.0778)
Findepth	0.0026 (0.0018)	0.0016 (0.0016)	0.0026 (0.0018)	0.0026 (0.0018)	0.0027 (0.0018)	0.0026 (0.0018)
EXRR	0.0029 (0.0018)	0.0060** (0.0024)	0.0033 (0.0021)	0.0028 (0.0018)	0.0018 (0.0016)	0.0008 (0.0018)
Topen	-0.0004 (0.0009)	-0.0005 (0.0007)	-0.0004 (0.0009)	-0.0004 (0.0009)	-0.0003 (0.0009)	-0.0003 (0.0009)
exconst	-8.9123 (0.0009)					
polity2		0.0503*** (0.0098)				
VAA			0.0031 (0.0024)			
Rule of law				-0.0004 (0.0015)		
Auto					0.0010 (0.0007)	
Demo						0.0020*** (0.0006)
Constant	-3.390*** (0.814)	-2.593*** (0.844)	-3.325*** (0.802)	-3.403*** (0.785)	-3.348*** (0.812)	-3.270*** (0.825)
Within R ²	0.1054	0.1591	0.1088	0.1054	0.1062	0.1093
F-Statistics	13.18 (0.0000)	46.30 (0.0000)	11.46 (0.0000)	22.69 (0.0000)	17.13 (0.0000)	31.04 (0.0000)
Observations	385	385	385	385	385	385
Number of groups	22	22	22	22	22	22

Robust Standard errors in parentheses, ***, **, * significant at 1%, 5%, and 10% respectively,

Source: computed by authors

Conclusion

This paper investigated the impact of two broad factors, viz., economic and political factors on the transparency of central bank using sample of twenty-two African countries. The paper examined the impact of these factors on economic, operational, policy, political and procedural transparency, as well as average of the five categories of transparency. Five economic factors and six political factors were considered in the analysis. Among the five economic factors considered only two, viz., past values of inflation and per capita income show significant influence on all the five categories of transparency as well as the average transparency. Similarly, only index of democracy has significant influence on all the six categories, while polity2 and voice and accountability have significant effects on all the categories of transparency except procedural transparency.

One of key conclusions from the empirical analysis is that political institutional reforms, which promote plurality of the democratization process, is relevant in improving the transparency of central banks in Africa. Thus, political institutional reforms are paramount to attaining more transparent central banking in the continent. The reforms need to necessarily focus on certain essential institutional setting such as: (i) institutions that give citizens power to influence public policies and general public decision making; (ii) institutions that restrict the powers of the chief executive, particularly from abusing such powers; (iii) institutions that guarantee level playing ground in the political landscape for all participants; and (iv) institutions that promote all the essential components of democracy such as rule of law, freedom of the press, checks and balances, voice and accountability, civil liberties and so on. The sustainability of these reforms is also important in achieving mature democracy which would guarantee transparency of central banks. A number of policy issues can be deduced here. All these aforementioned reforms cannot be achieved without conscious effort be made to strengthen the electoral system that will ensure that elections are free and fair and also ensure that the vote of the people count. The political party system needs to be restructured such as to allow participation of mass of people including the minority and women. The judicial system equally needs to be restructured so as to allow judges in all courts decide cases fairly, impartially, according to facts and laws and free from fear, prejudice, and intervention of the legislature, executive or any institution. Finally, the institutional reforms should also make sufficient provisions for checks and balances as well as true separation of power among the arms of government.

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