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Central Bank Independence in Sub-Saharan Africa: An Analysis, 1960-1989

Abstract

Central banks are instrumental to shaping and implementing monetary policy in both industrial and developing countries. They affect exchange rates, interest rates, and the success of private banks within their home country. Today, the world economy is becoming more globalized with the passing of each day, so international financial flows are very important to both developing and developed countries. Central banks, when allowed a degree of independence in policymaking, aid in formulating monetary policy that promotes economic stability within their respective countries, and create an atmosphere friendly for foreign investment. A vast amount of research has been devoted to investigating autonomy of central banks in developed countries and factors that affect their autonomy. This study aims to examine the behavior of central banks in sub-Saharan Africa and to determine what political factors affect central bank independence in sub-Saharan African countries?

Keywords

Sub-Saharan Africa, banks

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Megan Presnak

Central banks are instrumental to shaping and implementing monetary policy in both industrial and developing countries. They affect exchange rates, interest rates, and the success of private banks within their home country. Today, the world economy is becoming more globalized with the passing of each day, so international financial flows are very important to both developing and developed countries. Central banks, when allowed a degree of independence in policymaking, aid in formulating monetary policy that promotes economic stability within their respective countries, and create an atmosphere friendly for foreign investment. A vast amount of research has been devoted to investigating autonomy of central banks in developed countries and factors that affect their autonomy. This study aims to examine the behavior of central banks in sub-Saharan Africa and to determine what political factors affect central bank independence in sub-Saharan African countries?

Research suggests that a high level of informal central bank independence, as opposed to legal, or formal, central bank independence is a precondition for macroeconomic stability in developing countries (Maxfield 557). Sylvia Maxfield's research looks closely at the central banking systems of Brazil, South Korea, Thailand, and Mexico to explain central bank capacity and behavior in developing countries. Central bank behavior and capacity in developing countries is determined by government officials, private banks, and industrialists who are in a position to delegate authority to the bank (Maxfield 557). This study will expand upon Maxfield's study, using the countries in Africa's sub-Saharan region to test her hypothesis. Because many of Africa's economies are very weak and in the earlier stages of development, testing Maxfield's hypothesis in the sub-Saharan region can provide an additional assessment of her argument.

The geographical region of sub-Saharan Africa is home to a large percentage of the world's population, making it very important to include in this study. Due to the low level of economic development in the region, conservative monetary policy is needed to fight inflation and increase investor confidence in order to draw foreign direct investment. An independent central bank is best equipped to pursue a conservative policy track, as it is free from the pressure of government politicians. Research has found that, in developing countries, informal central bank autonomy is related to low inflation (Maxfield 557). Does this hold true for the sub-Saharan countries? Their history of colonial rule and fairly recent gains of independence make the sub-Saharan cases very different from those of Southeast Asia and Latin America, and hence worthy of further study.

Discussion on Central Bank Independence

Legality Only Goes So Far

This study considers central bank independence on two different levels, one of legal, or formal, independence, and one of behavioral, or informal, independence. Political economists rely on indicators such as government veto over bank policy; government's ability to determine appointment, dismissal, and term duration of central bank directors; bank budgetary autonomy; policy goals for the bank; performance incentives for bank directors; bank control over monetary instruments; and limitations on the banks ability to finance budget deficits in order to determine central bank independence (Bernhard 311). Formal central bank autonomy is best explained in terms of the legal framework that determines the establishment and operation of the bank (Goodman 330). Simply stated, in order to determine a central bank's degree of legal independence, one can look to the bank's charter.

Conversely, to determine a central bank's informal degree of independence, other fac-

tors are taken into consideration. "A central bank is independent if it can set policy instruments without prior approval from other actors and if, for some minimal time period (say, a calendar quarter), the instrument settings clearly differ from those preferred by other actors" (Woolley 13). Central banks that are relatively free from political interference in the policymaking process are considered to be independent, as their behavior is less restricted by the government. Political influence over central bank policy is important in that

[i]f political changes reflected changes in basic attitudes toward economic policy or if they were traumatic and irreversible for the politicians involved, then the instability would motivate politicians to control the central bank tightly and keep it at their disposal to help them stay in power. If, however, the political changes were alterations in power of two or three parties that shared a consensus on many basic tenets of economic policy, then the parties might agree to grant the central bank considerable autonomy to pursue price stability, so that the aspect of economic policy on which they agreed would not suffer from political contests over other issues (Cukierman and Webb 399).

Essentially, if given the opportunity, a single politician or political party could gain full control over monetary policy, given a dependent central bank.

Political scientists contend that political parties and politicians act on the desire to remain in office, and hence, have many reasons to pursue policy that will maintain the support of their constituents (Bernhard 312). Monetary policy tends to be slow-acting in producing desired outcomes, and sometimes fails to yield the results that it was engineered to produce. The effects of monetary policy throughout an economy are varied and occur at many different time intervals (Bernhard 312). For example, a set of monetary policies that is enacted to combat inflation may end up resulting in a rise in unemployment, along with cuts in social services that were formerly paid for by the state. Independent central banks allow policymakers to gather information from policy experts who have access to private information regarding outcomes of government policies (Bernhard 314). Furthermore, an independent central bank may help countries gain legitimacy with international creditors. Many lenders see an independent central bank as an indicator of the government's commitment to economically sound policy choices (Maxfield 556).

Dependent central banks allow the government to manipulate the policymaking process, due to the fact that government ministers have the ability to punish central bank board members by dismissing them from their position (Bernhard 316). Bank board members are likely to share the policy preferences of the government in this case, and pursue policies that yield immediate results as opposed to long term stability (Bernhard 315). Many studies exist that emphasize the positive relationship between a central bank's degree of legal independence and low rates of inflation (Cargill 159). Due to the bank's independence, it is able to avoid opportunistic business cycles and promote price stability (Clark and Hallerberg 324). Looking closer, studies, (refer to Appendix) suggest that legal central bank independence, while it may be positively related to low inflation in industrialized countries, does not appear to be related to a low inflation rate in developing countries (Cukierman and Webb 397).

Developing countries are faced with many factors that affect their inflation rates. The government's role is seen as "providing 'social overhead capital' or 'infrastructure' to facilitate economic development" (Krueger 9). Citizens in developing countries look to the government to compensate for market failures, which usually results in populist spending and debt accumulation (Krueger 10). Politicians nationalize banking institutions and twist monetary policy to benefit themselves and their loyalists, resulting in large scale corruption and economic policy that cannot be maintained (Krueger 10). Political instability, which is com-

mon in many sub-Saharan African countries, negatively affects macroeconomic policy and outcomes, and has been shown to cause rising inflation rates (Cukierman and Webb 398).

The legal independence of the central bank in developing countries tends to differ from its actual behavioral independence (Maxfield 557). The actual degree of central bank independence is determined by those who are in a position to delegate power: government officials (Maxfield 557). The behavioral independence of central banks in developing countries is determined by the incentives that financial structures impose on industrialists, politicians, and private financiers, not by the bank's charter (Maxfield 557). Detailed ratings of behavioral central bank independence in developing countries are indexed according to each country's scores in a number of different categories (Cukierman, et. al 21-22)².

*The Problem with Reality*³

While informal central bank independence is best measured using a number of factors, collecting data for many countries is not practical. Instead, turnover of central bank governors serves as an indicator of actual independence in this study. The rates of governor turnover from periods shortly after a political transition are compared with turnover rates from other periods. During periods of heavy political influence, the rate of central bank governor turnover increases, in both industrialized and developing countries (Cukierman and Webb 399). Most importantly, governor turnover is far more easily measured than factors like the number of central bank victories over the government in policy debates. Using central bank governor turnover as a measure of behavioral bank independence is based on the assumption that a more rapid turnover rate indicates a lower level of independence. When governments take the time to choose a new governor frequently, it is probable that they will appoint someone who will cater to their demands. Conversely, frequent turnover may reflect dismissal of those governors who disagree with the government.

The use of central bank governor turnover is not an ideal measure, however. A governor may be allowed to keep his position for an unusually long time simply because he or she is subservient to the government (Maxfield 560). This tends to be true for countries with stable authoritarian regimes (Cukierman and Webb 402). It is probable that the tenure of a bank governor will be shorter than terms served by executive branch members (Maxfield 560). Because of this, the bank governor will be more open to government interference and less likely to pursue anti-inflationary policies that take a long time to pay off. Also, a short term allows the bank governor less time to acquire allies in government who are opposed to government interference with central bank policy (Maxfield 560). There are cases in which governments are dedicated to financial stability, in which case they would tend to allocate considerable policy autonomy to the central bank governor. Cukierman, et. al's pioneering study in this area indicates that governor turnover has little bearing on bank independence in industrialized countries, but acts as good indicator in developing countries (29).

Institutional Origins...Do They Matter?

In developing economies, central banks are most often born out of necessity to serve the financial needs of the government, private banks, and industrialists (Maxfield 563). Maxfield suggests that two key variables shape the emergence of central banks in develop-

² A reproduction of the index questions, values, and weights appears in the Appendix of this paper in Table 2.

³ This section draws heavily on Cukierman, Webb, and Neyapti's "Measuring Central Bank Independence & Its Effect on Policy Outcomes," pages 13-19.

ing countries: the nature of private financial markets, and the sources of public finance (Maxfield 563). When governments need extra financing, weak central banks are established that give the government considerable freedom in manipulating monetary policy. Once the bank is created, it is difficult to change its structure, so it tends to reinforce the current state of the economy (Henning, 55). Hence, when a weak central bank is created and allows the printing of more currency, inflation increases and it is harder to develop a strong private financial sector. Inflation, in turn, tends to increase and results in economic troubles.

The greater the internal debt of a country, the more likely it is to have a dependent central bank (Maxfield 564). When the government deficit is low, the financial institutions and industrialists will take the lead in pushing for a strong independent central bank that can create and maintain economic stability (Maxfield 564). Inflation is more costly in a country with developed markets, so businesses and private banks prefer a conservative monetary policy. Private banks also rely on the central bank to keep them afloat during economic down turns with loans, reduced reserve requirements, or other regulations (Maxfield 565). It is important to note that even with a dependent central bank, a country “may still enjoy price stability if it consistently pegs its currency to that of a country with stable prices” (Cukierman and Webb 398). However, this assumption is not always correct or sustainable. While pegging a country’s weak currency to another’s strong currency has been shown to slow hyperinflation and stabilize exchange rates, it severely limits a country’s monetary policy options (Haque).

The monetary crisis in Argentina is an example of how currency pegs can harm a country’s economy in the long run. Because Argentina adopted a dollar peg in the 1980s to “quell fears of inflation and capital flight,” the country was unable to follow suit in 2002 when one of its main trading partners, Brazil, devalued its currency (Haque). Argentina lost its competitive edge in regional trade, and in turn, socio-political crisis took hold in the country (Haque). Furthermore, when a country adopts a currency peg system, it appears more stable to outside investors, which attracts foreign investment. These countries, newly equipped with international credit, will be tempted to pursue a policy of domestic spending and borrowing (Caprio and Honohan 47). The debts that result from nearly unchecked borrowing in these countries become unsustainable and lead, in many cases, to the collapse of the currency (Caprio and Honohan 47).

Following will be both the methods and empirical data to test these assumptions in the case of sub-Saharan Africa. Africa’s sub-Saharan countries provide a sample of some of the most underdeveloped countries in the world in which the political and economic determinants of central bank independence can be tested.

Looking at Central Bank Independence

Macro-level Examination: Sub-Saharan Africa

This article will begin by examining informal and legal independence of central banks in eleven sub-Saharan African countries. Countries included in this study are: Tanzania, Kenya, Zaire, Ethiopia, Uganda, Nigeria, Botswana, Zambia, Ghana, South Africa, and Zimbabwe. The degree of legal central bank independence is determined by a number of factors. Each factor is weighted appropriately and then added into a composite score that represents the degree of formal independence enjoyed by the central bank⁴. The composite score for legal independence will be compared with the average rate of central bank governor turnover. Cukierman, et. al provide statistics for average central bank governor turnover in their study (17-19). Bivariate analysis will then be run on the two indexes of central bank independence to determine whether or not legal independence determines

⁴ For a list of factors and their weights, refer to the Appendix, Table 3 (Cukierman, et. al 6-9).

actual central bank independence in the sample of sub-Saharan African countries.

It should be noted that due to differing dates of independence, not all countries in the sample have data for all of the years being considered in this paper. Observations begin in 1960 and end in 1989, as those are the years covered in the index of central bank autonomy (Cukierman, et al 17-19). The data collected with regard to bank independence was acquired through direct contact with the banks in each country. To find data for the period from 1990-1999 would require contacting the central banks of each sub-Saharan African country in the sample and asking them a battery of questions. Unfortunately, due to time constraints, that kind of extension is not possible for this article.

This paper will also examine the relationship between legal central bank independence and the rate of inflation in the sub-Saharan African sample. The statistics for average rate of inflation will be calculated from the International Monetary Fund's (IMF) *International Financial Statistics Yearbook*. Inflation will be calculated to give an average rate per decade to coincide with bank independence figures. Aside from the relationship between legal independence and inflation, bivariate analysis will be used to examine the relationship between actual independence and inflation to see which type of independence serves as a better indicator of inflation rates for the sample. The aggregated data for developing countries shows that as governor turnover increases, so does the rate of inflation (Cukierman, et al 29). It is expected that this will hold true for sub-Saharan African countries as well.

Central banks are institutions that are born out of necessity. Using average internal deficit, this study will examine the relationship between debt and central bank independence in the sample. Internal deficit is determined using total government revenue less total government expenditure, divided by total government revenue⁵. Internal deficit will be calculated for each country in the sample, then, using bivariate analysis, will be compared with both actual and legal central bank independence. It is expected that the greater the internal deficit of a country, the less actual independence the central bank will enjoy (Maxfield 564). Looking at the deficit statistics before the establishment of the central bank in each country should give insight into the amount of legal independence that the bank will be granted.

Micro-level Explanations: Case Studies

There are many other factors that determine the degree of independence that a central bank enjoys (Bernhard 311). In order to address these factors more thoroughly, two case studies will be examined. Through the examination of the two cases, this study will be able to give a more complete picture of what kinds of political factors affect central bank independence in sub-Saharan Africa. The case studies will enable this article to address a number of issues, both political and economic, that affect central bank independence.

Using Eckstein's "most likely" and "least likely" observations, two countries have been chosen to examine as case studies in this article (King, et al 209-210). Tanzania and Zimbabwe will be studied closely as illustrations of the different political factors that affect central bank autonomy in sub-Saharan Africa. Tanzania ranks highest in legal central bank independence in the sample, while Zimbabwe has earned the lowest legal independence rating. What will make the examination of these two case studies more interesting is the fact that they share very similar average rates of governor turnover. This seems to run contradictory to Maxfield's claim that legal independence fails to predict actual independence (557). In both Tanzania and Zimbabwe, the study will address issues that cannot be adequately explained using an index.

The examination of these two cases will begin with an overview of the political and economic climate prior to the establishment of the central bank. Banking structures before the establishment of the central bank will be taken into consideration, as well as govern-

⁵ Statistics are available in the *International Financial Statistics* volume.

ment policies whose existence affects the bank's autonomy in policymaking. During colonial rule, many countries in sub-Saharan Africa found that they were dependent on a regional authority to issue currency and, hence, lacked considerable control over their own monetary policy (Harvey 3-4). The transition from a regional banking authority to an internal central bank presented individual governments with the opportunity to control monetary policy in a way many had not experienced. Most sub-Saharan countries enjoyed economic stability, as they were under direct colonial rule until the 1960s. The post-independence period, unfortunately, was a time of economic transition and experimentation with monetary policy that proved detrimental to the majority of these states.

Aside from gaining independence, sub-Saharan countries inherited governmental systems from their former rulers. Therefore those in power had little experience with Western forms of government (Harvey 6-7). Struggling to maintain power and prove their regimes to be legitimate, the new African rulers often resorted to violence and attempted to gain direct control over as many elements of society as possible. It seems as though central banks in sub-Saharan Africa stood little chance of enjoying independence. This study will trace the histories of both countries, in relation to monetary policy to see what kinds of events tended to affect the degree of independence enjoyed by their central banks. Drawing on the observations from Tanzania and Zimbabwe and from the macro-level data collected from the sub-Saharan African sample, conclusions will be made with regard to what types of political and economic factors affect central bank independence in the region.

Explanations for Variance in Central Bank Independence: Illustrations

Empirical Evidence

In order to examine empirically the factors that affect central bank independence in sub-Saharan countries, this study employed bivariate analysis in testing the various correlations. The results from the analyses were expected to affirm Cukierman, et. al's, and Maxfield's findings. However, in most instances they failed to do so. Admittedly, the small number of cases that were tested affected the study's ability to produce statistically significant findings. Though not statistically significant, the findings directed this study to other possible explanations for the variations in central bank autonomy within the sample.

The first relationship examined was that of legal central bank independence and actual, or informal, central bank independence. After running bivariate tests to determine the Pearson coefficient, it was found that no statistically significant relationship exists between the two.

Correlations for Legal Independence and Informal Independence (Governor Turnover)

Pearson's Coefficient	Significance (Two-tailed)
.136	.475

The lack of a significant relationship reinforces both Cukierman, et. al's and Maxfield's assertion that a central bank's legal independence does not necessarily affect its informal independence in monetary policy formation. Though a central bank's charter may grant it complete autonomy from the government, reality might tell a different story. The central bank governor may be faced with losing his/her position if they fail to comply with the desires of those in powerful positions within the government (Bernhard 311).

The assumption that a higher rate of central bank governor turnover signals a lower level of informal central bank independence rests on the idea that conflict exists between the central bank governor and the individuals within the government (Cukierman, et. al 13-16). Furthermore, the threshold of governor turnover above which independence begins to decline significantly is between 0.2 and 0.25 changes per year (Cukierman, et. al 16). Of the eleven countries represented in this study, only four have average governor turnover rates that fall above this threshold. However, looking at these countries' histories on an individual

basis, it is hard to imagine that their central banks all were able to enjoy a considerable amount of independence.

Low governor turnover can, in a stable authoritarian regime, be unrelated to informal central bank independence (Cukierman and Webb 402). Simply stated, central bank governors under authoritarian regimes are less likely to stand up for a conservative monetary policy they wish to pursue if it runs contradictory to the government's policy desires. These central bank governors are less assertive because they can be dismissed easily and replaced by someone who will act in a friendlier manner to the government. In many cases, central bank governors in these authoritarian countries have strong ties to the government and act in a subservient manner throughout their tenure. Interestingly, of the eleven countries examined in this study, seven are characterized as being authoritarian (Cukierman and Webb 418-419). Their low governor turnover rates may not be associated with informal central bank independence. In order to assess informal central bank independence in these countries, an in-depth study is required.

Another problem with using governor turnover to predict informal central bank independence within the sample is the fact that central bank governor turnover is also viewed as being a result of political transition (Cukierman and Webb 403-404). In the sub-Saharan sample, many of the countries examined did not experience political transition or elections during the time period being considered. Zimbabwe, for example, had the same president for the entire period of this study. Immediately following post-independence, most sub-Saharan states instituted repressive one-party rule (Chabal 292). Characteristically, one-party states allow for little in the way of actual political transition. Though the bivariate analysis of legal and informal central bank independence reinforces Maxfield, and Cukierman, et. al's findings, it should be kept in mind that perhaps governor turnover is not an appropriate measure of informal central bank independence in the sub-Saharan sample.

This study also examined the relationship between central bank independence and inflation rates. Neither legal nor informal central bank independence was shown to have any correlative relationship with inflation.

Correlations for Central Bank Independence and Inflation (CPI)

<i>Pearson's Coefficient</i>	<i>Significance (Two-tailed)</i>
.071 (legal independence)	.771
.206 (informal independence)	.397

Again, the correlation tests failed to produce any statistically significant results, and hence, the study cannot assume a relationship exists between central bank independence and inflation in the sub-Saharan sample. This runs contrary to Cukierman, et. al's, and Maxfield's conclusions that high informal independence leads to low inflation rates in developing countries (Cukierman, et. al 43-44). During the period examined in this study, the central banks in most sub-Saharan African countries were relatively young and lacked the capacity to protect banks from government intervention (Harvey 14). This lack of capacity also diminished the banks' ability to implement inflation-fighting policy.

Furthermore, due to a lack of industrial infrastructure, these countries relied on the export of primary commodities while having to import any manufactured goods (Biermann and Wagao 89). Basing their entire economy on primary commodities left these countries open to shocks on the world market. It was considered the job of the government to compensate for any "market failures" that occurred (Krueger 9). This created dependent central banks which were eventually tied to an economic policy that was unworkable (Krueger 9). As governments were expected to provide for their citizens during times of economic hardship, the "lender of last resort" function of many central banks was being abused. This, in turn, could be associated with rising inflation as more currency was put

into circulation to compensate for market failures.

Most central banks in sub-Saharan Africa were established in the 1960s, at the same time these countries were gaining their independence. Opinion at the time favored centralized economic planning as the best route to development (Harvey 14). Hence, many countries in the sub-Sahara adopted an economic model that included government planning of the economy after independence. The establishment of central banks within an environment of central economic planning limited their autonomy considerably for obvious reasons. If the government ministries were responsible for economic planning, the process would have already been politicized. Direct government planning of the economy, as was the case in Tanzania, provided for government ministries to plan the economy and formulate policy while remanding the central bank to the position of advisor (Bank of Tanzania).

The central banks placed in such a position were given the job of implementing monetary policy that was effectively handed down to them by the state ministries in charge of planning (Bank of Tanzania). While central bank governors may have seemingly been legally independent, in that they advised the government on monetary policy, they lacked informal independence because they had to implement a monetary policy that was handed down to them. This may account for the observation that informal central bank independence and inflation rates were not negatively correlated during the period observed.

The final relationship examined in this paper was that of government deficit and both legal and informal central bank independence. Again, the results of bivariate tests for correlation failed to reinforce Maxfield's findings that higher government deficits tend to reinforce less independent central banks (563-564).

Correlations for Government Deficit and Central Bank Independence

<i>Pearson's Coefficient</i>	<i>Significance (Two-tailed)</i>
-.211 (legal independence)	.345
.029 (informal independence)	.898

Neither correlation was statistically significant and showed very weak Pearson's coefficients. The lack of relationship may also be a function of the relative weakness of central banks as a result of central economic planning. Governments, instead of allowing central banks additional independence, may have chosen to implement a different monetary policy to keep the bank in its previous position of policy-implementer. The many political and economic complexities that affected central bank independence in sub-Saharan countries after independence can best be explored through a case study. The following section of this study examines the cases of Zimbabwe and Tanzania in order to gain a better understanding as to what kinds of elements actually affected central bank independence in the sub-Sahara. These cases should aid in drawing conclusions and presenting questions for further research.

The Reserve Bank of Zimbabwe: a Legally Weak Central Bank

The Reserve Bank of Zimbabwe's (RBZ) legal independence ranks among the lowest in the sub-Saharan sample being examined in this article. The RBZ is also characterized by an extremely low rate of governor turnover, which according to the literature either signals a high level of informal independence, the existence of an authoritarian regime, or a very complacent central bank governor. This may seem to be a confusing case, but a closer look will clarify the RBZ's level of autonomy within the Zimbabwean economy. Zimbabwe was not granted formal independence until 1980, but their pre-independence history helps to provide a meaningful explanation for the RBZ's level of informal independence.

Zimbabwe was a British colony prior to 1980 and was administered through a government comprised mainly of white settlers, leaving the native population subject to white

minority rule (Harvey 3). The financial sector was dominated by foreign-owned private banks. However it was relatively better developed than markets in other African countries (Harvey 3). In 1956 a central bank was established for the Federation of Rhodesia and Nyasaland, the region that included Zimbabwe (Southern Rhodesia at that time) (Harvey 3). The early establishment of a central banking mechanism in the region laid the groundwork for Zimbabwe's future central banking institution. By 1960, "Zimbabwe had both a variety of financial institutions, and established markets in government paper and equities" (Harvey 4). In 1963, however, the Federation disbanded and the bank then became the Reserve Bank of Rhodesia, and would continue to serve the region that is now Zimbabwe (Harvey 4).

The functions of the Bank of Rhodesia were outlined in its charter, and continued to govern the RBZ after independence. Originally, the Bank of Rhodesia and Nyasaland, which replaced the Central African Currency Board, was assigned the responsibility of issuing currency in the Federation (BIS 244). When the Federation broke up, the Bank of Rhodesia took over its functions in Rhodesia and was given the sole right to issue currency within the country (BIS 244). The Bank's functions also include assisting in the formation and implementation of monetary policy, as well as acting as an economic advisor to the government. In addition, the Bank serves as a "banker's bank" and lender of last resort to the government. The RBZ has limited autonomy from the government and its governor is appointed by the state president. The remainder of the Bank's governing board includes two deputy governors, and seven executive directors who represent key sectors of the economy, all of whom are appointed by the state president.

In 1965, Ian Smith led the white settler government in Southern Rhodesia to declare unilaterally independence from British rule (Jenkins 582). As a result of the Unilateral Declaration of Independence (UDI), the United Nations imposed sanctions on the regime, which failed to gain international recognition (Davies and Rattsø 4). The sanctions, in turn, forced the government to amend its economic policy accordingly. Borrowing from abroad was no longer possible, so the government in Southern Rhodesia was forced to focus development inward and rely on domestic resource mobilization (Harvey 4). The sanctions ushered in a policy of import-substitution and economic diversification, which proved successful in promoting GDP growth (Davies and Rattsø 4). It was also during this period, due to a limited amount of foreign exchange, that a set of rigid exchange controls were implemented to prevent capital flight (Harvey 4).

Before Zimbabwe gained independence in 1980, the government had signed the Lancaster House Agreement, which limited the extent to which they would be allowed to implement the full socialist policy they desired (Jenkins 580-581). The Lancaster House Agreement mainly protected white investment in Zimbabwe, which comprised the majority of the economy (Jenkins 580-581). During the first few post-independence years, the government of Zimbabwe pursued a very non-interventionist monetary policy in order to avoid driving investment and white business out of the country (Harvey 4-5). During this time the import-substitution system created during the UDI was continued, but the growth it created became unsustainable on foreign exchange grounds (Davies and Rattsø 4). In response, foreign exchange allocations were imposed to balance the account deficit, which, in turn, restricted growth (Davies and Rattsø 4).

Zimbabwe entered independence with the legacy of white dominance, which left the majority black African population yearning for a solution to the immense inequality that enveloped the country (Jenkins 581). The new government was expected to address the staggering inequalities while avoiding economic ruin in a country that was far better developed than its neighbors. The new administration was dependent on white experience, as black Africans had been excluded from all forms of government until independence (Jenkins 581). The dominance in policy debates by whites was illustrative of the fact that

the new administration lacked control over its economic policy, and hence remained largely unable to implement its socialist development plan in the early years of independence (Jenkins 581). Eventually, the new government had decided to pursue an expansionist monetary policy that earned them growing budget deficits (Bautista, et. al 15).

The new Zimbabwean government took action in putting its socialist ideas into practice, as most other post-independence African leaders had done (Jenkins 583). State-planned, highly interventionist development strategy caused monetary policymaking to be politicized. Because of the nature of the new economic policies, it is probable that the RBZ was essentially acting as an instrument of the governing party. Before 1985, the government's new expansionist monetary policy had resulted in the money supply nearly doubling (Bautista, et. al 15). Furthermore, because international sanctions had been lifted and Zimbabwe was internationally recognized as a sovereign nation, the government was able to borrow from foreign creditors. This practice caused Zimbabwe's external debt to increase more than three-fold (Bautista, et. al 15). Around the same time, the government granted heavy public subsidies to transport and marketing facilities. These were put in place to guarantee that certain "controlled commodities" could only be bought and sold at prices set by the government (Bautista, et. al 15-17).

Surprisingly, the Zimbabwean government did not choose to nationalize commercial banks within the country in accordance with its socialist ideas (Harvey 9). However, a policy of increased public spending was introduced. Free access to healthcare and heavily subsidized education were created, along with a progressive tax system (Davies and Rattsø 16-17). The government claimed its dedication to economic stabilization, but defended its welfarist spending while decreasing spending on capital (Davies and Rattsø 17-18). The new policy of government spending on public services caused the economy to suffer, as industry was not built up. This instance clearly demonstrates the government's hand in controlling the RBZ. If left on its own to fight inflation and create a strong economy, the bank would not have pursued such a welfarist policy.

The party in power after Zimbabwe gained its independence was the ZANU Patriotic Front (ZANU-PF), led by Robert Mugabe, who remains in power today. During the mid-1980s ZANU-PF began to consolidate power and centralized the formulation of economic policy (Jenkins 587). The new centralization of power in creating economic policy found the Prime Minister (later to become President), the Minister of Finance, Planning and Development, and the Minister of Industry and Commerce in charge of formulating economic policy in Zimbabwe (Jenkins 588). Granting additional responsibility to the central government in economic policymaking worked to the exclusion of the central bank. In the late 1980s it was apparent that the government's isolationist economic policies were working to the detriment of the manufacturing sector (Jenkins 589-590). Industrialists, helped with the involvement of the World Bank, began to push for economic liberalization (Jenkins 590).

A struggle both within the government and between the government and the industrialists/World Bank ensued. Two camps formed within the government, one, that included the central bank governor and board realized the need for liberalization and the other which included Mugabe and the ideologues, preferred to maintain a closed economic policy (Jenkins 590). Eventually, the central bank won out, as it had the backing of the World Bank. By 1990 the World Bank's Economic Structural Adjustment Programme (ESAP) was instituted in Zimbabwe (Jenkins 590). The authoritarian structure of the Zimbabwean state, however, continued to contribute to the central bank's dependent status. Mugabe insisted that he needed to be consulted before any ministerial decisions were made (Jenkins 592). The stringent financial regime of the 1980s created an artificially low interest rate in Zimbabwe, and hence inflationary pressures were not felt as much as would have been expected (Bautista, et. al 22).

In the 1980s, Zimbabwe was characterized by large budget deficits and very low levels of foreign direct investment (Bautista, et. al 22). The central bank's hands were tied by the structure of the Zimbabwean state. Any form of dissent within the governing structure was met with dismissal from one's post. This policy included the central bank because the board and governor were all appointed by the head of state (Jenkins 592). Oppressive laws in Zimbabwe allowed the government to maintain control over nearly every facet of society. In a country where civil society is largely lacking in freedoms, the central bank stands little chance in pursuing policies that run counter to the government's desires. This was the case in Zimbabwe, explaining its low formal independence rating, and low governor turnover rate expected from an authoritarian state.

The Bank of Tanzania: a Legally Strong Central Bank

Compared to the RBZ and the central banks of other countries in this sub-Saharan sample, the Bank of Tanzania (BOT) enjoys a very high legal independence rating. The BOT was also characterized by a very low rate of governor turnover during the time period this study covers. Tanzania gained its independence in 1961, and from that time until the mid-1980s the Tanzanian government chose to pursue a socialist model of economic development (US Dept. of State). The BOT's experience under a socialist system was a unique one as it was one of the earlier African countries to gain its independence. Therefore it will be an interesting to compare with the RBZ, as Zimbabwe was one of the last African countries to gain independence. Despite the fact that their index of legal independence falls completely opposite one another, the BOT and the RBZ enjoyed almost identical levels of governor turnover.

Prior to the BOT's establishment, Tanzania's monetary policy was strictly controlled by Britain, using the East African Currency Board (EACB) (Coulson 274). The EACB ensured that inflationary pressures were kept in check by issuing "local currency only if an equivalent amount of foreign exchange was deposited in London" (Coulson 274). While the EACB was able to control domestic economic expansion, it did not have policy in place to prevent massive capital outflows. Capital control policies were not instituted until 1965, after Tanzania had already attained formal independence (Coulson 274-275). Julius Nyerere, in 1961, was elected President of Tanzania and would remain in office until 1985 (US Dept. of State). Nyerere took office and found Tanzania as a country with stark inequalities due to the fact that infrastructure was only developed to aid in extractive export-oriented colonial industry. This left many who lived in non-productive regions extremely poor (Klugman, et. al 80).

Because Tanzania and other East African countries had formally been granted independence, their governments moved to break up the EACB and separate central banks were established in Tanzania, Kenya, and Uganda (BOT). In 1966 the Bank of Tanzania was established pursuant to the breaking of the EACB. With authority granted from the government, the BOT "issued currency, performed the function of banker to the government (which meant it could lend to the government), policed the exchange controls, and (some-what later) operated a strict system for licensing imports" (Coulson 275). Only a short time after its establishment, the BOT was left to redefine its role within the Tanzanian economy as a result of the Arusha Declaration of 1967 (Coulson 176). The government knew that in order to successfully pursue its socialist goals, it would need to synchronize central bank functions to follow socialist principles, while keeping commercial banks from pursuing their own capitalist goals (Mittelman 602).

The Arusha Declaration changed Tanzania both internally and with regard to its international reputation. Tanzania was actively pursuing a socialist development strategy and was frequently grouped with countries like Cuba, North Korea, and North Vietnam (Coulson 176). Nyerere's Arusha Declaration suggested a lack of faith in democracy, and led

Tanzania to establish a one-party state (Coulson 177). It was also in 1967 that President Nyerere announced that all private and commercial banks in Tanzania were to be nationalized (Mittelman 600). The government of Tanzania, under the Declaration, would play a direct role in controlling the economy (Mittelman 602). "The assets and liabilities of seven foreign and two local banks were taken over and vested in a wholly government-owned corporation — the National Bank of Commerce (NBC)" (Mittelman 600). The Arusha Declaration and the legislation that called for the nationalization of private banks and establishment of the NBC in Tanzania did not designate how the central bank was to work with the new state-owned establishments (Loxley 123).

The government's objective in nationalizing private banks was to extend the monetary sector of the economy to those who, until then, had been forced to live off of subsistence farming (Mittelman 601). Unfortunately, with the creation of new powerful financial institutions in the Tanzanian economy, the BOT was left to "adapt its behavior as it saw fit, subject to broad policy directives being issued from the Ministries (Loxley 123). The BOT, however, remained in existence beside the NBC, which was almost unheard of in a socialist economy that would usually assign all banking functions to one large bank controlled by the state (Loxley 123). Due to the socialist path chosen by Nyerere, the BOT stood little chance of enjoying a large degree of informal independence from the state.

It was the belief of the government that in order for a successful transition to socialism to take place, it needed to control monetary policy almost completely. Tanzania's form of central planning "spelled out in money terms the detailed implications of the physical plan" (Loxley 123). With a set monetary policy that was dictated by the government, "the need for a separate institution having as its main function the formulation and implementation of macro-monetary policy as we know it in Western capitalist economies totally disappeared" (Loxley 123). The NBC, because of the system of extensive government economic planning, was capable of absorbing most of the "purely banking functions" of the BOT, as they no longer were subject to the BOT's discretion (Loxley 123).

The new economic policies signaled a move away from international patrons, like Germany and Britain, which made investors and creditors skeptical about Tanzania (Mittelman 603). In addition to the socialist ideas of the government, this turned development and economic policy further inward to focus on domestic issues. The role of the BOT changed from one of carrying out its original functions to one of assisting in government economic planning (Loxley 124). The BOT was looked to as a body that could forecast the results of certain policy objectives, and hence was able to help plan monetary policy (Loxley 124). Still, because the government was ultimately given the last word in this system, the independence of the BOT was severely limited throughout the 1960s. At the same time, an ideological split was growing within the governing party pitting ideological socialists against their pragmatic counterparts (Klugman, et. al 81).

The pragmatic socialists agreed with the ideology of socialism, but pushed for a more liberal economic policy, which differed from the policy of ideological socialists (Klugman, et. al 81). Unfortunately for the BOT, the ideological socialists dominated the party in power, and increased their control over the state's economy throughout the 1970s (Klugman, et. al 81). Simultaneously, Tanzania's debt began to grow, due to a lack of export diversification which limited the amount of foreign capital flowing into the country (Biermann and Wagao 89). The "Tanzanian decision-makers failed to achieve self-sustained growth as the essential precondition for any pattern of development-capitalist or socialist" (Biermann and Wagao 90). Eventually, the government began to decentralize itself and allotted increasing amounts of political power to groups throughout the country (Klugman, et. al 83).

Market and pricing decisions remained centralized during the 1970s, but were affected by external shocks that included war with Uganda (Klugman, et. al 86). The centralization

of these functions still did not appear to affect the independence of the BOT in policymaking, as it still existed beside the NBC. With or without the NBC, the BOT still would have been secondary to the Ministry of Development and Planning, as they decided on policy during the 1970s (BOT). In 1978, the Bank of Tanzania Act, that laid the groundwork for the BOT's functions, was amended to give the bank more development functions to oversee (BOT). Also, the planning functions of the Ministries were shifted to the BOT, which allowed the BOT to oversee the other banks and financial institutions in Tanzania (BOT).

As the 1970s drew to a close, bilateral aid was cut drastically to most Third World countries, forcing Tanzania to approach the IMF in order to obtain development aid (Biermann and Wagao 91). The IMF responded to Tanzania with a Structural Adjustment Program (SAP) that carried with it certain conditions to be fulfilled. The IMF had asked for Tanzania to pursue economic liberalization strategies, as it had with many other countries at the time (Biermann and Wagao 93). The BOT found itself in a position to accept a loan from the IMF, but the government failed to introduce policies that adhered to the conditions, and the IMF pulled its funding (Biermann and Wagao 93). As the 1980s continued, the economic situation in Tanzania deteriorated, leaving the country with few options other than to accept the IMF's SAP and its conditions (Biermann and Wagao 94). In 1986, Tanzania finally reached an agreement with the IMF to implement an Economic Reform Program (Klugman, et. al 89).

Tanzania's economic failures during the 1980s were largely the fault of inappropriate government policies. Government parastatals, extensive state controls over production, an overvalued exchange rate, and reduced incentives to the private sector all contributed to the downturn in the 1980s (Klugman, et. al 89-90). The existence of such disastrous economic policies implies a lack of informal independence for the central bank in Tanzania. The members of the Board of Directors for the BOT are appointed with the government's advice and include government ministers (BOT). Though the BOT may have enjoyed a fair degree of legal independence, the policies of a socialist regime limited its informal autonomy greatly.

Conclusions

The evidence presented in this article suggests that the legal autonomy of a central bank in sub-Saharan Africa cannot solely account for its policymaking capacity. On the other hand, the measure of informal independence, central bank governor turnover, appears to have little explanatory power with respect to bank capacity. Neither measure of independence was able to explain variation in the level of inflation, so this study implies that further research must look elsewhere in order to explain fluctuation in inflation rates. A different measure of informal central bank authority would provide a good starting point for studying the effect of central bank authority on rates of inflation in sub-Saharan Africa. The cases examined in this article suggest that in order to understand the informal authority of a central bank in the sub-Saharan sample, one must consider the political context in which the bank exists.

This study also found that the level of government deficit had little power in explaining variation in informal central bank authority. The sample of sub-Saharan countries examined in this study does, however, provide interesting cases that warrant further study. Their legacy of colonial rule and relatively recent dates of independence left the sub-Saharan African countries to formulate a development strategy in a globalizing world. These countries, while many attempted to pursue protectionist policies during their early economic development stages, were eventually forced to open to the world economy. The vast inequalities that colonialism left behind were seen as something that needed to be remedied by post-independence regimes. Because many governments adopted policies of redistribution and populist spending, central banks were left with little control over such

politicized economic policy.

A larger sample of countries would have been helpful in conducting this study, as it was difficult to obtain significant results from a group of only eleven countries. Also, many of the countries examined in this article lacked data for a number of years that were considered. If complete figures were available for government expenditure and revenue, as well as for consumer price index, then this study could possibly have produced more significant results. This study suggests that when studying institutions, financial or governmental, sub-Saharan African cases cannot be lumped together with the whole of the developing world. Comparatively, African countries have fairly young institutions that were adopted from their colonial rulers after independence. Such institutions did not fit in to the traditional idea of leadership in African society, which was based on local units (Friedman 3). Government authority, in these largely authoritarian regimes, usurped the power of the central bank in fighting inflation and pursuing a conservative monetary policy. To effectively study the level of informal central bank autonomy in sub-Saharan Africa, detailed case studies are needed in order to address the various factors that affect it. As these countries continue to develop and rid themselves of authoritarian regimes, governor turnover may serve as a valid indicator of informal central bank independence. Until that time, alternative methods must be devised to study variations in informal central bank independence in sub-Saharan Africa.

Appendix

Table 1
Regressions of Legal Central Bank Independence and Informal Central Bank Authority on Inflation (1950-1989)

	<i>Industrialized Countries</i>	<i>Developing Countries</i>
<i>Legal independence</i>	-0.06	0.01
<i>Significance level</i>	5%	<i>not significant</i>
<i>T-statistic</i>	-2.54	0.11
<i>Informal authority</i>	-0.08	0.28
<i>Significance level</i>	10%	1%
<i>T-statistic</i>	-1.81	4.80

*From Maxfield's 1994 "Financial Incentives and Central Bank Authority in Industrializing Nations."

⁶ Independence ratings for countries with data missing for the 1970s have been computed using the averages for the decades preceding and the decades following the missing decade where possible.

Table 2
Index of Informal (Actual) Central Bank Independence

Variable Number	Variable Description	Weight	Numerical Coding
1.	Tenure overlap w/political authorities	0.10	
	Little overlap		1.00
	Some overlap		0.50
	Substantial overlap		0.00
2.	Limitations on lending in practice	0.20	
	Tight		1.00
	Moderately tight		0.66
	Moderately loose		0.33
	Loose or nonexistent		0.00

Country	Legal Independence Rating	Informal Independence Rating
Botswana	.33	.41
Ethiopia	.40	.20
Ghana	.36	.28
Kenya	.44	.17
Nigeria	.37	.19
South Africa	.25	.10
Tanzania	.44	.13
Uganda	.38	.34
Zaire	.39	.23
Zambia	.38	.38
Zimbabwe	.21	.10

Average .36 .23

3.	Resolution of conflict	0.10	
	Some clear cases of resolution in favor of bank		1.00
	Resolution in favor of government in all cases		0.00
	All other cases		0.50
4.	Financial independence	0.10	
	a.) Determination of the central bank's budget		
	Mostly central bank		1.00
	Mixture of executive or legislative branches		0.50
	Mostly legislative or executive branches		0.00
	b.) Determination of the salaries of high bank officials and the allocation of bank profits		
Mostly by bank or fixed law	1.00		
	Mixture of bank and executive or legislative branches		0.50
	Mostly executive or legislative branches		0.00

5.	Intermediate policy targets	0.15	
	a.) Quantitative monetary stock target		
	Such targets exist and are usually met		1.00
	Such targets exist: mixed adherence		0.66
	Such targets exist: poor adherence		0.33
	No stock targets		0.00
	b.) Formal or informal interest rate targets		
	No		1.00
	Yes		0.00
6.	Actual priority given to price stability	0.15	
	First priority		1.00
	First priority assigned to a fixed exchange rate		0.66
	Price or exchange rate stability are among the bank's objectives, but not first priority		0.33
	No mention of price or exchange rate objectives		0.00
7.	Function as a development bank, granting credit at subsidy rates?	0.20	
	No		1.00
	To some extent		0.66
	Yes		0.33
	The central bank is heavily involved in granting subsidized credits		0.00

*Table reproduced from Cukierman, et. al's "Measuring Central Bank Independence & Its Effect on Policy Outcomes," pages 21-22.

Table 3
Index of Legal (Formal) Central Bank Independence

Variable Number	Description of Variable	Weight
1.	Chief executive officer	0.20
	a.) Term of office	
	b.) Who appoints CEO?	
	c.) Dismissal	
	d.) May CEO hold other offices in government?	
2.	Policy formation	0.15
	a.) Who formulates monetary policy?	
	b.) Resolution of conflict	
	c.) Role in the government's budgetary	
3.	Objectives	0.15
4.	Limitations on lending to the government	0.50
	a.) Advances	
	b.) Securitized lending	
	c.) Terms of lending	
	d.) Potential borrowers from the bank	
	e.) The limits on central bank lending are determined by:	
	f.) Maturity of loans	
	g.) Interest rates on loans must be:	
	h.) Is the central bank prohibited from:	

*From Cukierman et. al's "Measuring Central Bank Independence & Its Effect on Policy Outcomes."
For a more detailed explanation of weighting, please refer to Cukierman, et. al, pages 6-9.

Works Cited

- Bank of Tanzania. General information. www.bot-tz.org
- Bautista, Romeo M., Lofgren, Hans, Muir-Leresche, Kay, and Thomas, Marcelle. *Macroeconomic Policy Reforms and Agriculture: Towards Equitable Growth in Zimbabwe*. International Food Policy Research Institute, Research Report No. 128. Washington, 2002.
- Bernhard, William. "A Political Explanation of Variations in Central Bank Independence." *The American Political Science Review*. Vol. 92, No. 2, June 1998.
- Biermann, Werner, and Wagao, Jumanne. "The Quest for Adjustment: Tanzania and the IMF, 1980-1986." *African Studies Review*. Vol. 29, No. 4, December, 1986.
- Caprio, Gerard and Honohan, Patrick. "Restoring Banking Stability: Beyond Supervised Capital Requirements." *The Journal of Economic Perspectives*. Vol. 13, No. 4, 1999.
- Cargill, Thomas F. "The Statistical Association Between Central Bank Independence and Inflation." *Banco Nazionale del Lavoro Quarterly Review*, XLVIII, June 1995.
- Chabal, Patrick. "A Few Considerations on Democracy in Africa." *International Affairs*. Vol. 74, No. 2, April, 1998.
- Clark, William Roberts and Hallerberg, Mark. "Mobile Capital, Domestic Institutions, and Electorally Induced Monetary and Fiscal Policy." *The American Political Science Review*. Vol. 94, No. 2, June 2000.
- Coulson, Andrew. *Tanzania, 1800-1980: A Political Economy*. Clarendon Press: New York, 1982.
- Cukierman, Alex and Webb, Steven B. "Political Influence on the Central Bank: International Evidence." *World Bank Economic Review*. Vol. 9, No. 3, 1995.
- Cukierman, Alex, Webb, Steven B., and Neyapti, Bilin. *Measuring Central Bank Independence and its Effect on Policy Outcomes*. San Francisco: ICS Press, 1994.
- Davies, Rob and Rattsø, Jørn. "Zimbabwe: Economic Adjustment, Income Distribution, And Trade Liberalization." *CEPA Working Paper Series 1*. Working Paper No. 21. New York, 2000.
- Friedman, Steven. "Agreeing to Differ: African Democracy, Its Obstacles and Prospects." *Social Research*. Vol. 66, Issue 3, 1999.
- Goodman, John B. "The Politics of Central Bank Independence." *Comparative Politics*. Vol. 23, No. 3, April 1991.
- Haque, A.S.M. Shahidul. "Economic Malaise in Argentina." *The Independent*. February 18, 2002.
- Harvey, Charles. "The Limited Impact of Financial Sector Reforms in Zimbabwe." *IDS Working Papers*. No. 36. University of Sussex: Brighton, UK, 1996.
- Henning, C. Randall. "Finance, Industry, and External Monetary Policy." Mimeo, International Institute for Economics, September, 1991.
- International Monetary Fund. *International Financial Statistics Yearbook*. 1990 and 2001.
- Jenkins, Carolyn. "The Politics of Economic Policy-Making in Zimbabwe." *The Journal Modern African Studies*. Vol. 35, No. 4, December, 1997.
- King, Gary, Keohane, Robert O., and Verba, Sidney. *Designing Social Inquiry*. Princeton University Press: Princeton, 1994.
- Klugman, Jeni, Neyapti, Bilin, and Stewart, Frances. *Conflict and Growth in Africa: Vol. 2: Kenya, Tanzania, and Uganda*. Organisation for Economic Co-operation and Development, 1999.

- Loxley, J. "The Monetary System of Tanzania Since 1967: Progress, Problems, and Proposals." In *Papers on the Political Economy of Tanzania*. Edited by Kwan K. Kim, Robert B. Mabele, and Michael J. Schultheis. Heinemann Books: Nairobi, 1979.
- Maxfield, Sylvia. "Financial Incentives and Central Bank Authority in Industrializing Nations." *World Politics*. Vol. 46, No. 4, July 1994.
- Mittelman, James H. "Underdevelopment and Nationalisation: Banking in Tanzania." *The Journal of Modern African Studies*. Vol. 16, No. 4, December 1978.
- Reserve Bank of Zimbabwe. General information. www.rbz.co.zw
- Rwegasira, Delphin. "Inflation and Monetary Expansion: The 1966-73 Tanzanian Experiences." In *Papers on the Political Economy of Tanzania*. Edited by Kwan K. Kim, Robert B. Mabele, and Michael J. Schultheis. Heinemann Books: Nairobi, 1979.
- Treisman, Daniel. "Decentralization and Inflation: Commitment, Collective Action, or Continuity." *The American Political Science Review*. Vol. 94, No. 4, December, 2000.
- United States Department of State. *Country Background Notes*. Washington, 2004.
Available at: www.state.gov/r/pa/ei/bgn
- Woolley, John T. *Monetary Politics: The Federal Reserve and the Politics of Monetary Policy*. New York: Cambridge University Press, 1984.