Security, Investment and Economic Growth in Sub-Saharan Africa

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This paper analyses the relationship between security and economic growth through investment, in 28 countries in Sub-Saharan Africa (SSA). The analysis of this relationship is done using the model of Borensztein et al. (1998) and uses data for the period 1996-2015. Estimation is done by the system generalized method of moments (GMM). The results show that security positively influences the level of economic growth in SSA countries both through domestic investment and Foreign Direct Investment (FDI). The study therefore recommends that policies to support economic growth should incorporate security provisions such as guaranteeing property rights, strengthening the quality of institutions and reducing armed conflict in the area.

Keywords: Sub-Saharan Africa, economic growth, FDI, domestic investment, security

INTRODUCTION

The relationship between security and economic growth is at the heart of the economic debate. The focus of the debate is on the existence and nature of this relationship. Assuming the existence of the relationship, some authors argue that it is necessarily direct relationship. This implies that security directly influences growth. Security according to Dhonte and Kapur (1997) encompasses the existence of laws and institutions. It also takes into account good governance, good social management, assurance of investors, political stability and protection against external threats. For North (1991), a good quality institutional framework, i.e. a secure environment and reduction of transaction costs. This has a favorable effect on wealth production. Sen (1999) adds that what is essential for the individual are the rights and freedom to lead a fulfilling life. Security for the individual, therefore, has an effect on the freedom of choice available to economic agents and consequently on economic growth. In the same vein, Stewart (2004) points out that the absence of human security has negative consequences on economic growth and can lead to unbalanced development.

By studying the case of 125 countries over the period from 1950 to 1999, Bodea and Elbadawi (2008) show that insecurity has a negative influence on long-term economic growth. They also find that compared to East Asia, institutional and other insecurity in Sub-Saharan Africa (SSA) accounts for a substantial share of its economic decline and income gap. As a result, security has the effect of promoting increased production. In the same sense as the authors mentioned above, Umaru (2015) shows that when the level of insecurity rises by 1%, Gross Domestic Product (GDP) falls by 2.816% in the case of Nigeria. This result corroborates that of Ukpere (2012) who finds a positive effect between security and growth in the same country. The author finds that when security expenditure increases by one unit, GDP also increases by 0.97 units.

For others, however, the relationship between security and growth is not direct, but indirect through investment. For them, a secure economic environment is a key factor in promoting private property, investment and hence the growth in countries, especially developing countries, as it reduces uncertainty about the return on investment (Dhonte and Kapur, 1997; (Alesina et al., 1992; Lucas, 1990). The authors point out that insecurity may imply a substitution of productive domestic investments in favor of consumption, thereby reducing domestic production. Conversely, foreign investors prefer a political environment with less uncertainty and where property rights are guaranteed. Indeed, according to the theory of property rights, the law guarantees private possession, anything that affects the behavior of individual agents and thus the functioning and efficiency of the economic system. Moreover, according to decision theory, deciding in an uncertain universe involves an intertemporal choice (Serven, 1997). When the environment is unpredictable, unstable, or risky, economic agents abstain, reduce, or postpone their investment decisions over time, thereby influencing the evolution of economic variables.

Thus, for Hernández-Catá (2000), the main reason for the low level of private investment in Sub-Saharan Africa, both domestic and foreign, may be explained by the perception that the rate of return on capital is low to account for risk. These risks may include macroeconomic instability, inadequate legal systems, including the difficulty of enforcing contracts, and the political risk posed particularly by armed conflict.

In a study of 53 developing countries, Poirson (1998) finds that countries with a high level of security also have a good level of investment and consequently see their growth improve because insecurity increases the cost of investment. Ewetan (2014), in the context of Nigeria also finds that insecurity hinders local and foreign investment and therefore economic growth.

Other authors using cross-sectional or panel data have tried to link several aspects of safety to growth. These authors can be divided into two groups. With regard to the first group of authors, Levine (1997), for example, shows that ethnic divisions affect economic growth through investment in the case of Sub-Saharan Africa. Mauro (1995; 1996) adds that corruption, the judiciary and the rule of law also affect investment and economic growth. Barro and Sala-i-Martin (1995) point out that apart from civil laws and political rights, other security factors affect investment and economic growth. As for the second group of authors, they show that political stability, institutional quality and the rule of law affect economic growth mainly through private investment (Alesina et al., 1992; Traynor and Gyimah- Brempong, 1996; Serven, 1996).

While many authors in the economic literature demonstrate that security affects growth through investment, not everyone agrees with this thinking. Indeed, McMilan et al. (1991) argue that even if the security of investment is provided through institutional stability, it may have a negligible effect on economic growth than that created by market forces. This idea is based on the neoclassical theory that the market is the best way to allocate resources.

In Sub-Saharan Africa, statistics show a low level of growth compared to the world level. Over the period 1996-2015, the average per capita income was $1385.59, compared with a world average of $8906.03. At the same time, the ratio of FDI to GDP is of the order of 2.65 in SSA against 2.76 in the world. In addition, the ratio of domestic investment to GDP is 15.28 in SSA compared to 21.68 in the world.

At the same time, the region is experiencing an unstable security situation which can be explained by several factors (World Bank, 2017). The factors include ethnic, political and religious conflicts, in addition to precarious socio-economic conditions and weakness in good governance (Hugon, 2001). This situation can create systemic uncertainties within the region (Hugon, 2001) and as long as this situation persists, no foreign investor will take the risk of investing. Worse still, nationals with the means to participate in the economic take-off will be more inclined to channel their financial reserves abroad to secure them rather than invest them. This raises the question: does the level of security affect growth in SSA through investment?

The answer to this question requires answering specific questions: Does security affect growth through domestic investment? Is growth in SSA countries not influenced by security through FDI?

In order to answer these questions, the general objective of this work is to analyze the effect of security on economic growth through investment in SSA countries. More specifically, it will first (i) analyze the effect of security on domestic investment and then (ii) analyze the effect of security on FDI.

To achieve these objectives, we make the following assumptions: (i) security has a positive effect on domestic investment, (ii) security has a positive effect on FDI. Previous studies in SSA on the relationship between security and growth have focused heavily on the direct relationship. To our knowledge, very few have invested in analyzing the indirect relationship between security and growth through different types of investment. Hence the interest of this work. The remainder of the analysis is organized into four sections. The first section reviews the security and investment literature. The second section discusses the method of analysis. The third section presents and discusses the results of the model estimates. Section four concludes the research and draws policy implications.

SECURITY AND INVESTMENT: AN OVERVIEW OF THE LITERATURE

Much research has analyzed the effect of security on investment, especially in developing countries, with mixed results. In this section, we review the relationship between security and foreign investment on the one hand and the relationship between security and domestic investment on the other.

SECURITY AND FOREIGN INVESTMENT

For most people, a country that presents the least risk, i.e. a country where there is political stability, where corruption is lower and where there is institutional transparency, is more attractive for investment. Thus, Wilhelms (1998), in analyzing the determinants of FDI inflows in emerging countries, finds that they are essentially explained by institutional variables, namely laws and their applicability. In the same sense, Bhattacharya et al. (1997) show that the risk represented by investments in SSA would explain why the latter has not benefited much from FDI flows. Asiedu (2002) finds the same results and shows that the low attractiveness of FDI by SSA countries is due to the political risk in the region. Globerman and Shapiro (1999) point out that corruption and bad governance have an impact on US FDI inflows to developing countries. In the same vein, Morisset and Lumenga (2002) argue that poor governance and corruption increase administrative costs and therefore discourage FDI. Wang and Swain (1995) find that political instability, corruption, institutional non- transparency, wars and coups d'état are situations that harm the business environment and therefore reduce FDI inflows.

However, Kolstad and Villanger (2004) explore the impact of security variables on investment using panel data from 75 countries over the period 1989-2000 and find in their work that reducing corruption has no effect on FDI inflows. Kobrin, (1976) also find that political instability does not influence the level of attractiveness of FDI by countries.

SECURITY AND DOMESTIC INVESTMENT

The effect of security on domestic investment can be analyzed through investment theory, which emphasizes the phenomena of irreversibility, uncertainty and risk. Indeed, traditional investment analysis referred to financial concepts such as net value added, payback period, etc. without integrating the business environment for a better analysis of the investment choice (Marshall, 1924; Keynes, 1936). This consideration will first take place at the microeconomic level before being extended to the macroeconomic level. Thus, at the microeconomic level, much emphasis is placed on the uncertainty of profitability and the risk of profit in an irreversible or non-irreversible investment framework. Indeed, Arrow (1968) takes into account in his model the irreversibility that constrains the possibility of redeploying capital in the event of inconvenient situations. He finds that it significantly influences the investment decision. Other authors analyze the irreversibility of investment in an uncertain environment. For Henry (1974), the irreversibility of investment leads to uncertainty, which can restrict investment. For Bernanke (1983), the irreversibility of investment in an uncertain environment may explain cyclical investment. Following these authors, others will make an analysis at the macroeconomic level, taking into account economic uncertainty that takes into account financial market uncertainty and shocks to macroeconomic indices that accompany a major event (a terrorist attack, for example) or a change in policies, whether fiscal or monetary. (Bloom, 2009). Sandmo (1970) explains the difference between income risk and capital risk, which have opposite effects on the behavior of individuals in the market. On the one hand, investors want to save in order to maintain a stable level of consumption throughout their lives. On the other hand, investors' savings induce a risk of capital loss that encourages immediate consumption. According to the OECD (2005), certain risk factors and the resulting shortcomings in the environment represent obstacles to the activities of all businesses. These include discriminatory practices, bribery and corruption, weak respect for the rule of law, high transaction costs, regulatory burdens, lack of transparency and poor administration. Institutional reforms play an important role in mobilizing domestic investment. The implementation of country-specific institutional reforms and policies is therefore at the heart of efforts by financial partners and developing countries to mobilize investment and maximize its development impact.

However, Kolstad and Villanger's (2004) findings also indicate that political rights and civil liberties appear to have a negative effect on domestic investment. They add that religious tensions have no impact on this type of investment.

ANALYSIS METHOD

The observation of facts and the review of the literature have made it possible to hypothesize the existence of links between security, investment and economic growth in the context of Sub-Saharan African countries. The objective of this section is to test these hypotheses on the basis of a theoretical model and an empirical model, the outlines of which must first be defined.

THEORETICAL FRAMEWORK OF THE ANALYSIS MODEL

In the literature on economic growth, many works have emerged. Thus, in a neoclassical conception Solow (1956) proposes to highlight the determinants of growth and to characterize its behavior in the long term. He finds that it is based on technical progress but is nonetheless exogenous. In addition to this exogenous character of technical progress, capital in this model has diminishing returns, which leads to a certain halt in the growth process in the long term.

To address the shortcomings of the Solow model's design while remaining within a neoclassical framework of analysis, the theory of endogenous growth appeared in the 1980s. The first models in this direction were developed with Romer, Lucas and Barro. Romer (1986) develops a model that brings together several hypotheses that make it possible to influence economic growth even if the representation of the concept of innovation and technical progress is unsatisfactory. To compensate for this shortcoming, Lucas (1988) introduces into his model human capital, which for him does not require any physical capital. Barro (1991), using a model similar to Romer's (1986), introduces an externality of public expenditure through infrastructure.

These three (3) models do not allow us to introduce foreign direct investments (FDI) because they are carried out within the framework of a closed economy. The openness of the economy is taken into account only from the models of Romer (1990), Grossman and Helpman (1990), Aghion and Howitt (1992).

EMPIRICAL MODEL

In order to establish the link between security and investment and to assess their effect on economic growth, it is necessary to propose the construction of a growth model. This model is based on the various works of Borensztein et al. (1998). The starting point is a model initiated by Romer (1990) with the introduction of technical progress characterized by the widening of the product range. This model is improved by Grossman and Helpman (1991), Barro and Sala-i-Martin (1995) and refined by Borensztein et al. (1998).

These propose a model specified by the introduction of foreign investment in the form of capital goods produced by foreign firms in the host country.

$$n^* = N - n$$

with n, the number of local varieties of capital goods, N the total number of available capital varieties and n^* the number of foreign varieties.

The production function involves a single good intended for consumption and using the following technology:

$$Y_t = AH_t{}^{\alpha} K^{1-\alpha} \quad (1)$$

A: represents a set of exogenous factors that influence the output of the economy
H : represents human capital
K : represents physical capital

The accumulation of the domestic capital stock is as follows:

$$K = \{\int 0^N X(j)^{1-\alpha}\, dj\}^{1/(1-\alpha)} \quad (2)$$

Total capital is the continuity of the varieties of capital assets, with each asset noted X (j).
Specialized firms are assumed to produce every variety of capital good and make a profit m(j)

The optimization condition is realized when the demand for each capital good is equal to the marginal productivity profitability of the capital good incorporated into the final products:

$$m(j) = A(1 - \alpha)\, H^{\alpha}\, X\,(j)^{-\alpha} \quad (3)$$

Indeed, the widening of the varieties of capital goods requires the contribution of technology from foreign countries and this generates a fixed cost F. The foreign investment represented by the relative share of foreign firms in the economy is measured by and n^*/N thus makes it possible to reduce the costs of introducing new varieties into the economy; this makes it possible to capture the technical progress transferred by foreign firms to the local economy. In addition, it is assumed that there is a "catch-up" effect that reflects the possibility of imitation and on the assumption that the number of varieties produced locally by foreign firms N^* compared to those produced in more advanced countries F depends positively on the number of varieties produced locally.

Thus, the function of the cost of installing a new technology is as follows:

$$F = F(n^*/N, N/N^*) \text{ with } \partial F/\partial(n^*/N) \prec 0 \quad \partial F/\partial(N/N^*) \succ 0 \quad (4)$$

An interpretation of the equation can be given in terms of "quality ladders", as in Grossman and Helpman (1991). An increase in the number of varieties could be interpreted as an improvement in the quality of existing products. If the presence of foreign firms reduces the cost of improving the quality of existing capital goods, it will generate the same negative relationship between foreign direct investment and installation costs. Moreover, the catching- up hypothesis could be reinterpreted in the sense that when the cost of existing capital is low, the worse its quality will be.

In addition to the fixed installation cost, once a capital is introduced, the owner must do constant maintenance per period. This assumes that there is a constant marginal cost of production of x (j) equal to 1, and that capital goods depreciate fully. Assuming a steady state where the interest rate (r) is constant, the profit for the producer of a new variety j of capital is as follows:

$$\Pi = -F(n_t^* / N_t, N_t / N_t^*) + \int_t^{+00} \left[m(j)\,x(j) - x(j)\right] e^{-r(s-t)} ds \tag{5}$$

The equilibrium maximization of the latter equation provides the level of production of each good x (j):

$$X(j) = HA^{1/\alpha}(1-\alpha)^{2/\alpha} \tag{6}$$

We note that x (j) is independent of time and at each instant t the level of production of each new good is the same. Moreover, the level of production of the different varieties is constant due to the assumption of production symmetry.

By replacing equation (6) in equation (3), we obtain the following rate of return:

$$m(j) = 1/(1-\alpha) \tag{7}$$

Finally, it is assumed that there is free entry, and therefore the rate of return r will be such that the profits will be zero in the long run and so we will have:

$$r = A^{1/\alpha}\,\phi\,F(n^*/N, N/N^*)^{-1}\,H \tag{8}$$

with $\phi = \alpha(1-\alpha)(1-\alpha)^{(2-\alpha)/\alpha}$

To finalize the model, it is assumed that individuals maximize their utility, which makes it possible to describe the process of capital accumulation:

$$U_t = \int_t^{+\infty} (C_s^{1-\sigma}/1-\sigma)e^{-\sigma(s-t)} ds \tag{9}$$

with the C consumption unit of a final good Y

Optimal consumption is given by the following conditions:

$$C_t^{\bullet}/C_t = (1/\sigma)(r-\sigma) \tag{10}$$

At equilibrium, the growth rate of consumption must be equal to the growth rate of production g.

Finally, substituting equation (8) into equation (10) yields the following expression for the growth rate of the local economy *g* that is positively dependent on foreign investment:

$$g = 1/\alpha\left[A^{1/\alpha}\phi F(n^*/N, N/N^*)^{-1}\,H - \sigma\right] \tag{11}$$

Equation (11) shows that foreign direct investment, which is measured by n^*/N reducing the costs of introducing new varieties of capital by increasing the stock of new capital goods.

The cost of introducing new capital goods N/N^* is lower for most least developed countries. Countries thus benefit from the low cost of adapting technology and will tend to develop more rapidly.

They further assume that the effect of direct investment on the growth rate of the economy depends positively on the level of human capital in the host country. The model states that FDI contributes to growth directly through technology transfer, human capital and indirectly through infrastructure, institutions and public expenditure. Their model thus becomes:

$$g = c_0 + c_1 FDI + c_2 FDI \times H + c_3 H + c_4 Y_0 + c_5 A \quad (12)$$

where FDI represents foreign direct investment, H human capital, Y_0 initial GDP per capita and A all other variables that can influence economic growth.

Thus, the present research is based on the same model while integrating into our first equation the variables that are determinants of economic growth in SSA. The equation is expressed as a function of the three variables of interest, which are FDI, domestic investment, security, and as a function of some control variables such as inflation, human capital, financial development and trade openness.

In order to directly assess the effect of safety on growth, the following model is considered:

$$GDP_{it} = a_0 + a_1 GDP_{it-1} + a_2 FDI_{it} + a_3 SEC_{it} + a_4 Idom_{it} + a_5 Def_{it} + a_6 TOU_{it} + a_7 KH_{it} + a_8 INF_{it} + \varepsilon_{it} \quad (13)$$

With GDP_{it} the growth rate of the country at *i* period t, FDI_{it} the country *i* foreign direct investment at period t, SEC_{it} the security level of the country *i* at period t, $Idom_{it}$ the domestic investment of country i at period t, the control variables, $Def_{it}, TOU_{it}, KH_{it}, INF_{it}$ represent respectively the level of financial development, the openness rate, the human capital, the inflation level of country i at period t and ε_{it} the error term.

In order to analyse the indirect effect of security on growth through the channel of FDI and domestic investment, it is necessary to create interaction variables by crossing the security variable with the FDI variable on the one hand, and the security variable with the domestic investment variable (Idom) on the other hand. This makes it possible to specify model 14 below.

$$GDP_{it} = b_0 + b_1 GDP_{it-1} + b_2 Sec_{it} + b_3 Def_{it} + b_4 TOU_{it} + b_5 KH_{it} + b_6 INF_{it} + b_7 FDI_{it} * SEC_{it} + b_{11} Idom_{it} * SEC_{it} + \varepsilon_{it} \quad (14)$$

DATA AND CHOICE OF VARIABLES

The analysis is based on a panel of 28 SSA countries constructed according to the availability of data on the variables of interest for the period 1996 to 2015. Thus, with regard to the variables considered, the annual data come from World Bank statistics (WDI: World Development Indicators), with the exception of data relating to the security variable and human capital. The data on the security variable come from the International Country Risk Guide (ICRG) of the Political Risk Servicies (PRS) group. For the human capital variable, we use the Human Assets Index (HAI) from the Foundation for International Development Research and Studies (FERDI) group.

The dependent variable in the model is the economic growth rate (GDP) and foreign direct investment (FDI), domestic investment (Idom), security (SEC) are the three (3) variables of interest. The GDP variable corresponds to the sustained and sustainable increase in the production of space countries. It is measured by the World Bank's rate of change in output expressed in current currency.

The FDI variable is measured by foreign investment inflows net of outflows in relation to GDP. This variable is widely used in the literature to measure FDI (Asiedu 2002, Chakrabati 2001). As for domestic investment, it is measured by the investment made at the country level in current currency. (Ngouhouo, 2008). This indicator has the advantage of isolating domestic investment from foreign investment. Like Poirson (1998), the aggregate political risk index of the RGCI is used here to approximate security. The index is based on a total of 100 points across 12 political criteria including social and institutional stability. Since 1984, the PRS group has provided a ranking for its political risk variable based on 12 components, the aim of which is to provide an average assessment of political stability in a country. These components are set out in a table in the appendix.

Other independent variables include, among others, lagged growth, inflation, financial development, human capital, and trade openness.

Lagged GDP per capita growth is introduced into the model to test the convergence assumption. Indeed, this hypothesis assumes catching-up between countries and is conditional when initial income has a negative effect on growth (Barro 1991, Barro and Sala-i-Martin 1991, Mankiw et al., 1992). Otherwise, catch-up is only possible when countries have similar economic characteristics or structures.

The inflation rate is assumed to have an ambivalent relationship with growth. Indeed, according to Keynesian theory, through the illustration of the Phillips curve, the rate of inflation may reflect the result of a demand effect, which could generate positive effects on growth. However, inflation could induce a negative effect on growth via a fall in aggregate supply. In fact, the increase in the inflation rate, by raising the price of goods, leads to a fall in aggregate demand, thus weighing on economic growth. The sign of this variable on economic growth is indeterminate.

Human capital is included in the function because it plays an important role in economic growth. As Lucas (1988) mentioned, it can be an alternative to technological improvement and can lead to long-term growth even in the absence of technological progress. Barro and Sala-i-Martin (1995) also attach great importance to the labour force, since investment in education and human capital increases skills and makes it possible to increase production efficiency through the development of new technologies.

The role of financial development in growth dates back to Schumpeter (1911). Empirical studies provide evidence for this link (King and Levine, 1993; Roubini and Sala-i-Martin, 1991; Savvides, 1995), while others suggest a negative or insignificant relationship between financial development and economic growth (De Gregorio and Guidotti, 1995). The measure generally used in the literature is credit to the private sector as a share of GDP.

According to Levine and Renelt (1992), openness provides access to investments that lead to growth. On the other hand, Grossman and Helpman (1994) believe that a country that protects its economy can stimulate economic growth. Some authors show that this relationship is verified (Frankel and Romer, 1999; Harrison, 1996) while Jin (2004) shows in a study in China that trade openness acts positively on coastal provinces and negatively on landlocked areas. In the literature, this rate is measured by relating the sum of imports and exports to GDP.

The expected signs of the variables are consigned in the following table:

TABLE 1
SUMMARY OF EXPLANATORY VARIABLES AND EXPECTED SIGNS

Variables	Rating	Expected signs
Foreign direct investment	FDI	(+)
Domestic investment	Idom	(+)
Security	SEC	(+)
Inflation	INF	(+/-)
Human capital	KH	(+)
Financial development	Def	(+/-)
Commercial opening	TOUV	(+/-)

Source: Author's construction

VALUATION METHOD

In order to take into account, the temporal dynamics of the model, the technique of dynamic panels is indicated. The ordinary least squares (OLS) estimator does not provide unbiased estimates of such a model.

Therefore, estimation by the generalized method of moments (GMM) is recommended as it solves this problem and even those related to the simultaneity, inverse causality, omission and endogeneity of the variables. However, there are two variants of GMM, namely, the first difference GMM estimator and the system GMM estimator. While the first does not allow for time-invariant factors and gives biased results in finite samples with few instruments, the second, on the other hand, performs better and gives better results (Blundell and Bond, 1998). Before moving on to the specification of the latter and the presentation of results, it is appropriate in the remainder of this section to do some preliminary testing and testing of instrument choices.

PRELIMINARY TESTS

In this section, we discuss stationarity and specification tests.

Stationarity Test

Given the risks of spurious regressions, this section aims to test the panel stationarity of the dependent variable and the explanatory variables of the model. To do so, the panel stationarity test of Im, Pesaran and Shin (1997) is recommended because, in addition to being stable and efficient, it is applicable to both small and large panel data models. The Im, Pesaran and Shin test considers an individual effect model without a deterministic trend. The null hypothesis of the test assumes that all series are non-stationary against the alternative hypothesis that all series are level stationary. When the probability is greater than 5%, the variable concerned is non-stationary, otherwise it remains so.

TABLE 2
STATIONARITY TEST RESULTS

Variables	p-value	Level of differentiation	Decision
SEC_{it}	0.0056	0	stationary
GDP_{it}	0.0000	0	stationary
GDP_{it-1}	0.0000	0	stationary
TOU_{it}	0.0000	1	stationary
KH_{it}	0.0000	1	stationary
Def_{it}	0.0000	1	stationary
INF_{it}	0.0000	0	stationary
FDI_{it}	0.0000	0	stationary
$Idom_{it}$	0.0151	0	stationary

Source: Author's construction

After the test, variables such as SEC_{it}, GDP_{it}, GDP_{it-1}, INF_{it}, FDI_{it}, $Idom_{it}$ are stationary at level while the variables TOU_{it}, KH_{it}, Def_{it} are in first difference.

Specification Test

First the Fischer test, then the Breusch and Pagan test and finally the Hausman test will be carried out. These different tests are used to discriminate between fixed and random effects.

The Fisher test shows the presence or absence of a fixed effect in the model. Otherwise, it refers to the question of whether the model studied is perfectly identical for all the individuals in the sample, or on the contrary, specificities specific to each individual exist. The null hypothesis of the test assumes the absence of a fixed effect against the alternative hypothesis which assumes the presence of a fixed effect. When the p-value is greater than 5% then the null hypothesis is not rejected and when it is less than 5% then the alternative hypothesis is not rejected. As the probability of the test is less than 5% (Prob > F = 0.0000), the test does not in this case reject the presence of a fixed effect in the model.

Breusch and Pagan Test

The Breusch-Pagan test contrasts the null hypothesis of the absence of random effects with the alternative hypothesis of the presence of random effects. If the probability associated with the Breusch-Pagan test statistic is less than 5%, the hypothesis of the presence of random effects cannot be rejected. In our case, the test does not allow us to accept the presence of random effects (Prob > chibar2 = 1.0000).

Hausman Test

The Hausman test allows to discriminate between fixed and random effects. The null hypothesis assumes the presence of a random effect against the alternative hypothesis that there is the presence of a fixed effect. When the probability associated with the test is greater than 5% then the null hypothesis is accepted and when it is less than 5% then the alternative hypothesis is accepted. The test in our case confirms the results of the presence of a fixed effect (Prob>chi2 = 0.0000).

TABLE 3
SUMMARY OF SPECIFICATION TESTS

Tests	Dependent variable	Hypotheses
Fisher	F(27, 212)=2.89 Pob>F=0.0000	H0: No fixed effects H1: Presence of fixed effects
Breusch and Pagan	Chibar2(01)=0.0000 Prob>Chibar2(01)=1.0000	H0: No random effects H1: Presence of fixed effects
Hausman	Chi2(9)=152.78 Prob>chi2=0.0000	H0: Presence of random effects H1: Presence of fixed effects

Source: Author's construction

CHOICE OF INSTRUMENTS

To evaluate the efficiency of the GMM estimator, two tests are used, namely Sargan's (1958) instrument validity test and Arellano and Bond's (1991) first-order and second-order autocorrelation test.

Sargan's Test

To test the validity of the instruments, Arellano and Bond (1991) and Blundell and Bond (1998) propose the Sargan over-identification test.

The Sargan test is a test of the validity of instrumental variables. The objective of this test is to test the orthogonality of the instrumental variables with respect to random deviations. It is based on the following assumptions: H0: the instruments are valid (instrumental variables uncorrelated with the perturbations), H1: the instruments are invalid (instrumental variables correlated with the perturbations). If the null hypothesis is statistically confirmed (i.e., not rejected), the instruments pass the test, i.e., they are valid by this criterion (Sevestre, 2002).

Arellano and Bond Test

The Sargan test is complemented by the autocorrelation test of Arellano and Bond (1991). The objective of this test is to verify the absence of second order autocorrelation (AR2) in the residues and negative first order autocorrelation (AR1). The hypotheses are as follows: H0: the absence of order 1 autocorrelation between the variables and the error term, H1: absence of order 2 autocorrelation between the variables and the error term. The null hypothesis of the absence of the first-order autocorrelation of the errors in the level equation must be rejected. By construction, the first-difference error term is correlated to the first order but should not be correlated to the second order.

PRESENTATION AND DISCUSSION OF RESULTS

In this section, the results are first presented and then discussed.

Presentation of Results

The results of the model estimation are presented in Table 4. The probability associated with the Fisher statistic is less than 5% for both models, meaning that the models are significant overall. Moreover, the Sargan test and the second-order autocorrelation test of Arellano and Bond do not allow the 5% threshold to reject the hypothesis of validity of the instruments used and the hypothesis of the absence of second-order autocorrelation in these two equations. Indeed, the probability associated with the Sargan and the absence of second-order autocorrelation tests (AR(2)) are greater than 5% and are respectful of the order of 0.206 and 0.780 for the first model and 0, 228 and 0.66 for the second.

As for individual significance, in Model 1 we note that security, domestic investment and foreign investment positively influence the level of economic growth with marginal effects of 1.80; 67.82; 87.10 respectful. Financial development and openness have a negative impact on growth with marginal effects of -22.86 and -138.7. The coefficient associated with human capital in this model is not statistically different from zero.

In Model 2, apart from the interaction variables, financial development and opening rate, the coefficients of the other variables are not significant. Cross-security to domestic investment and FDI positively influence growth with marginal effects of 9.92 and 13.08 respectively. Also, for financial development and openness, the associated coefficients are -24.36 and -151.5 respectively.

Discussion of the Results

The first equation was to test the direct relationship between security and economic growth. The results show that when the level of security increases by one-unit, economic growth increases by 1.8 units, all other things being equal. This result was also found by some authors such as Bodea and Elbadawi (2008) in a study in SSA and Ukpere (2012) in Nigeria.

The second equation, on the other hand, wanted to test the fundamental research hypothesis that security positively influences growth through investment. This hypothesis is verified for both domestic investment and FDI because the signs of the coefficients of the cross-variables are as expected and it is found that a good level of security encourages both types of investment which, in turn, propels economic growth. This is consistent with the prediction of the theory and the results found by several authors. Indeed, Dhonte and Kapur (1997) had argued that a secure environment is a condition for growth in the sense that it is a guarantee for the realization of a return on investment. As for Poirson (1998), he finds that all aspects of economic security contribute considerably to improving private investment and economic growth in developed countries.

The signs of the other variables are also predicted by the literature. Indeed, the sign of stunted growth is consistent with that found by Zahonogo (2017), and it verifies the hypothesis of growth convergence (Barro 1991, Barro and Sala-i-Martin 1991, Mankiw et al. 1992). As for the signs associated with the coefficients of the financial development and openness variables, they can be explained by the work of De Gregorio and Guidotti (1995) and Jin (2004), respectively. Indeed, the former found that financial development negatively influenced growth in Latin American countries, while the latter found that openness negatively affected growth in some provinces of China.

TABLE 4
RESULT OF ESTIMATES

Independent Variables	Model 1	Model 2
L.GDP	-0.368* (-1.70)	-0.388 (-1.59)
Idom	67.82*** (2.87)	
FDI	87.10*** (2.73)	
D.KH	1.181 (0.42)	2.139 (0.70)
SEC	1.804** (2.56)	0.0922 (0.10)
Def	-22.86*** (-3.37)	-24.36*** (-2.98)
D.TOU	-138.7** (-2.08)	-151.5* (-1.93)
D.INF	3.966 (1.16)	4.498 (1.18)
sec_Idom		9.922** (2.50)
Sec_FDI		13.08** (2.39)
Constant	-15.76** (-2.21)	-5.361 (-0.80)
Observations	306	307
Number of Code	28	28
Arellano-Bond AR(1)	0.000	0.000
Arellano-Bond AR(2)	0.206	0.228
Sargan	0.780	0.661

Source: Author's estimation
(*) (**) and (***) the significance threshold at 10%, 5% and 1% respectively. ( ) t- statistics

CONCLUSION AND RECOMMENDATIONS

The security situation is currently a matter of concern in the SSA. This can create systemic risks that can affect the region's growth through investment. To verify this relationship, the main objective of this research is to assess the effect of security on economic growth through investment in SSA over the period 1996-2015. More specifically, the effect of security on economic growth through domestic investment on the one hand and the effect of security on growth through FDI on the other hand were analyzed.

Thus, the model of Borensztein et al (1998), which takes into account investments in the endogenous growth model, inspired the specification of the empirical model. To avoid spurious regressions, a set of preliminary tests such as the stationarity test, the specification test and the absence of autocorrelation were carried out.

Estimation of the model using the system Generalized Method of Moments (GMM) shows that the effect of security on economic growth through both types of investment is significantly positive. This confirms the assumptions made in this study.

However, the results obtained provide a number of policy implications. Indeed, security is a public good by its very nature (Hobbes 1996) and if it influences growth through domestic and foreign investment in SSA, then action can be taken in this direction. Thus, we suggest that in the framework of growth-support policies, states should put in place security arrangements that can reassure both domestic and foreign investors. In a pragmatic way, by improving the security of people and goods, especially by:

- Guaranteeing property rights
- Strengthening the quality of their institutions
- Reducing armed conflict in the area

However, the extension of this document is possible through a comparative study of the level of security and investment between the countries of the region.

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APPENDIX 1
STATIONARITY TEST

```
. xtunitroot ips SEC , lags(1)

Im-Pesaran-Shin unit-root test for SEC
--------------------------------------
Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  17.04

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                       sequentially
Time trend:   Not included

ADF regressions: 1 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar             -2.5371        0.0056
------------------------------------------------------------------------------
```

```
. xtunitroot ips GDP , lags(0)

Im-Pesaran-Shin unit-root test for GDP
--------------------------------------
Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  19.96

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                        sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar            -13.4781        0.0000
------------------------------------------------------------------------------

. xtunitroot ips L.GDP , lags(0)

Im-Pesaran-Shin unit-root test for L.GDP
----------------------------------------
Ho: All panels contain unit roots           Number of panels  =     28
Ha: Some panels are stationary              Number of periods =     19

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                        sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar            -13.3826        0.0000
------------------------------------------------------------------------------

.
. xtunitroot ips D.TOU , lags(0)

Im-Pesaran-Shin unit-root test for D.TOU
----------------------------------------
Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  16.57

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                        sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar            -11.5629        0.0000
------------------------------------------------------------------------------
```

```
. xtunitroot ips D.KH , lags(0)

Im-Pesaran-Shin unit-root test for D.KH
---------------------------------------
Ho: All panels contain unit roots           Number of panels  =     28
Ha: Some panels are stationary              Number of periods =     18

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                       sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar             -5.6927        0.0000
------------------------------------------------------------------------------

. xtunitroot ips D.Def , lags(0)

Im-Pesaran-Shin unit-root test for D.Def
----------------------------------------
Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  18.54

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                       sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar            -14.7864        0.0000
------------------------------------------------------------------------------

. xtunitroot ips INF , lags(0)

Im-Pesaran-Shin unit-root test for INF
--------------------------------------
Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  19.07

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                       sequentially
Time trend:   Not included

ADF regressions: 0 lags
------------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------------
 W-t-bar            -13.3764        0.0000
------------------------------------------------------------------------------
```

```
. xtunitroot ips IDE , lags(0)

Im-Pesaran-Shin unit-root test for IDE

Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  19.86

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                     sequentially
Time trend:   Not included

ADF regressions: 0 lags
```

	Statistic	p-value
W-t-bar	-3.9289	0.0000

```
. xtunitroot ips Idom , lags(0)

Im-Pesaran-Shin unit-root test for Idom

Ho: All panels contain unit roots           Number of panels       =     28
Ha: Some panels are stationary              Avg. number of periods =  19.93

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                     sequentially
Time trend:   Not included

ADF regressions: 0 lags
```

	Statistic	p-value
W-t-bar	-2.1663	0.0151

APPENDIX 2
VARIABLE CORRELATION TEST

```
. pwcorr GDP L.GDP SEC D.TOU D.KH D.Def INF IDE Idom, listwise star (5)
```

	GDP	L.GDP	SEC	D.TOU	D.KH	D.Def	INF
GDP	1.0000						
L.GDP	0.2018*	1.0000					
SEC	0.1355*	0.1176*	1.0000				
D.TOU	0.0431	-0.0515	0.0055	1.0000			
D.KH	0.1558*	0.0578	-0.0490	0.0786	1.0000		
D.Def	0.0432	0.1557*	0.0389	0.0061	-0.0084	1.0000	
INF	-0.3149*	-0.2719*	-0.2342*	-0.0234	-0.1525*	-0.3353*	1.0000
IDE	0.0012	0.0691	-0.0036	0.0892	0.1384*	0.0224	-0.0460
Idom	0.1131*	0.0356	0.2827*	0.0189	0.1121*	0.0180	-0.2035*

	IDE	Idom
IDE	1.0000	
Idom	-0.5925*	1.0000

APPENDIX 3
MODEL EFFECTS SPECIFICATION TEST

```
. xtreg GDP L.GDP SEC D.TOU D.KH D.Def INF IDE Idom, fe

Fixed-effects (within) regression               Number of obs     =        366
Group variable: CODE                            Number of groups  =         28

R-sq:                                           Obs per group:
     within  = 0.1120                                         min =          4
     between = 0.1934                                         avg =       13.1
     overall = 0.0563                                         max =         16

                                                F(8,330)          =       5.20
corr(u_i, Xb)  = -0.6566                        Prob > F          =     0.0000

------------------------------------------------------------------------------
         GDP |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         GDP |
         L1. |  -.0671364   .0541019    -1.24   0.216    -.1735644    .0392917
             |
         SEC |    1.57715   .4829238     3.27   0.001     .6271528    2.527148
             |
         TOU |
         D1. |  -4.582539    5.19306    -0.88   0.378    -14.79822    5.633137
             |
          KH |
         D1. |   .1324269   .3030536     0.44   0.662    -.4637337    .7285875
             |
         Def |
         D1. |  -2.756875    4.10954    -0.67   0.503    -10.84107    5.327325
             |
         INF |  -3.568215   1.140481    -3.13   0.002    -5.811746   -1.324684
         IDE |   8.064383   5.497774     1.47   0.143    -2.750721    18.87949
        Idom |   16.65929   6.037957     2.76   0.006     4.781552    28.53703
       _cons |  -8.447043   3.449105    -2.45   0.015    -15.23205   -1.662036
-------------+----------------------------------------------------------------
     sigma_u |  2.8841341
     sigma_e |  4.1539936
         rho |  .32526255   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(27, 330) = 2.64                     Prob > F = 0.0000

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        GDP[CODE,t] = Xb + u[CODE] + e[CODE,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+-----------------------------
                     GDP |   21.95922       4.686067
                       e |   17.25566       4.153994
                       u |          0              0

        Test:   Var(u) = 0
                             chibar2(01) =     0.00
                          Prob > chibar2 =   1.0000
```

```
. est store fixe

. xtreg GDP L.GDP SEC D.TOU D.KH D.Def INF IDE Idom, re

Random-effects GLS regression                   Number of obs     =        366
Group variable: CODE                            Number of groups  =         28

R-sq:                                           Obs per group:
     within  = 0.0493                                         min =          4
     between = 0.6050                                         avg =       13.1
     overall = 0.1364                                         max =         16

                                                Wald chi2(8)      =      56.37
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------
         GDP |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         GDP |
         L1. |   .1276502   .0509658     2.50   0.012      .027759    .2275414
             |
         SEC |   .2639167   .2222889     1.19   0.235    -.1717614    .6995949
             |
         TOU |
         D1. |   3.910988   5.135965     0.76   0.446    -6.155319    13.97729
             |
          KH |
         D1. |   .5513012   .2584785     2.13   0.033     .0446927     1.05791
             |
         Def |
         D1. |  -5.431163   4.143014    -1.31   0.190    -13.55132    2.688995
             |
         INF |   -3.92478   .8221119    -4.77   0.000     -5.53609   -2.313471
         IDE |  -2.158457   3.954359    -0.55   0.585    -9.908857    5.591944
        Idom |   .0845965   3.319326     0.03   0.980    -6.421163    6.590356
       _cons |   1.951537   1.581556     1.23   0.217    -1.148256    5.051329
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  4.1539936
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. hausman fixe

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |      fixe          .          Difference          S.E.
-------------+----------------------------------------------------------------
         GDP |
         L1. |   -.0671364     .1276502       -.1947866        .0181521
         SEC |     1.57715     .2639167        1.313233        .4287226
         TOU |
         D1. |   -4.582539     3.910988       -8.493527        .7679383
          KH |
         D1. |    .1324269     .5513012       -.4188742        .1582099
         Def |
         D1. |   -2.756875    -5.431163        2.674288               .
         INF |   -3.568215     -3.92478        .3565655        .7904617
         IDE |    8.064383    -2.158457        10.22284        3.819498
        Idom |    16.65929     .0845965         16.5747        5.043709
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =      147.71
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

APPENDIX 4
MODEL ESTIMATION (1)

```
. xtabond2 GDP L.GDP Idom IDE D.KH SEC Def D.TOU D.INF, gmm( GDP SEC D.INF Def, lag (2 2
> )collapse ) iv( log_pibh QI KH Idom ) small
Favoring speed over space. To switch, type or click on mata: mata set matafavor space, p
> erm.

Dynamic panel-data estimation, one-step system GMM
------------------------------------------------------------------------------
Group variable: CODE                            Number of obs      =       306
Time variable : ANNEE                           Number of groups   =        28
Number of instruments = 13                      Obs per group: min =         4
F(8, 297)     =      2.34                                      avg =     10.93
Prob > F      =     0.019                                      max =        13
------------------------------------------------------------------------------
         GDP |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         GDP |
         L1. |  -.3680992   .2167045    -1.70   0.090      -.79457    .0583716
             |
        Idom |    67.8205   23.60282     2.87   0.004     21.37054    114.2705
         IDE |   87.10232   31.91203     2.73   0.007     24.29997    149.9047
             |
          KH |
         D1. |   1.181489    2.82375     0.42   0.676    -4.375606    6.738583
             |
         SEC |   1.804286   .7051776     2.56   0.011     .4165082    3.192064
         Def |   -22.8612    6.78452    -3.37   0.001    -36.21303    -9.50938
             |
         TOU |
         D1. |  -138.6549   66.56686    -2.08   0.038    -269.6574   -7.652416
             |
         INF |
         D1. |   3.966027   3.419113     1.16   0.247    -2.762731    10.69479
             |
       _cons |  -15.76312   7.120307    -2.21   0.028    -29.77577   -1.750473
------------------------------------------------------------------------------
Instruments for first differences equation
  Standard
    D.(log_pibh QI KH Idom)
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L2.(GDP SEC D.INF Def) collapsed
Instruments for levels equation
  Standard
    log_pibh QI KH Idom
    _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    DL.(GDP SEC D.INF Def) collapsed
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -5.80  Pr > z =  0.000
Arellano-Bond test for AR(2) in first differences: z =  -1.26  Pr > z =  0.206
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(4)    =   1.76  Prob > chi2 =  0.780
  (Not robust, but not weakened by many instruments.)
```

APPENDIX 5
MODEL ESTIMATION (2)

```
. xtabond2 GDP l.GDP Def D.KH SEC Sec_IDE sec_Idom D.TOU D.INF, gmm( GDP SEC D.INF Def,
> lag (2 2)collapse ) iv( log_pibh QI KH Idom ) small
Favoring speed over space. To switch, type or click on mata: mata set matafavor space, p
> erm.

Dynamic panel-data estimation, one-step system GMM
------------------------------------------------------------------------------
Group variable: CODE                            Number of obs      =       307
Time variable : ANNEE                           Number of groups   =        28
Number of instruments = 13                      Obs per group: min =         4
F(8, 298)     =      1.90                                      avg =     10.96
Prob > F      =     0.060                                      max =        13
------------------------------------------------------------------------------
         GDP |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         GDP |
         L1. |  -.3876933    .244259    -1.59   0.114    -.8683845    .0929978
             |
         Def |   -24.3617   8.176679    -2.98   0.003    -40.45305   -8.270351
             |
          KH |
         D1. |   2.139389   3.068908     0.70   0.486    -3.900088    8.178867
             |
         SEC |    .092187   .9508133     0.10   0.923    -1.778972    1.963346
     Sec_IDE |   13.07888   5.462797     2.39   0.017     2.328333    23.82943
    sec_Idom |   9.921963   3.967233     2.50   0.013      2.11462    17.72931
             |
         TOU |
         D1. |   -151.457   78.54966    -1.93   0.055    -306.0393    3.125314
             |
         INF |
         D1. |   4.498465   3.799584     1.18   0.237    -2.978952    11.97588
             |
       _cons |  -5.361375   6.685274    -0.80   0.423     -18.5177    7.794954
------------------------------------------------------------------------------
Instruments for first differences equation
  Standard
    D.(log_pibh QI KH Idom)
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L2.(GDP SEC D.INF Def) collapsed
Instruments for levels equation
  Standard
    log_pibh QI KH Idom
    _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    DL.(GDP SEC D.INF Def) collapsed
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -4.95  Pr > z =  0.000
Arellano-Bond test for AR(2) in first differences: z =  -1.21  Pr > z =  0.228
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(4)    =   2.41  Prob > chi2 =  0.661
  (Not robust, but not weakened by many instruments.)
```

APPENDIX 6
COMPONENTS AND WEIGHTS OF THE SAFETY INDEX CALCULATION

Components	Points (max.)
Stability of Government	12
Socio-economic conditions	12
Investment profile	12
Internal conflict	12
External conflict	12
Corruption	6
Military in Politics	6
Religious tensions	6
Law and Order	6
Ethnic tensions	6
Democratic accountability	6
Bureaucratic quality	4
TOTAL	100

Source: PSR Group

APPENDIX 7
LIST OF COUNTRIES

1	ZWE	Zimbabwe
2	BWA	Botswana
3	BFA	Burkina Faso
4	RMC	Cameroon
5	COG	Congo Republic
6	CIV	Ivory Coast
7	ABMS	Gabon
8	GMB	The Gambia
9	GHA	Ghana
10	GIN	Guinea
11	GNB	Guinea-Bissau
12	KEN	Kenya
13	LBR	Liberia
14	MDG	Madagascar
15	MWI	Malawi
16	MLI	Mali
17	MOZ	Mozambique
18	NAM	Namibia
19	NER	Niger
20	NGA	Nigeria
21	SEN	Senegal
22	SLE	Sierra Leone
23	ZAF	South Africa
24	SDN	Sudan
25	TZA	Tanzania
26	TGO	Togo
27	UGA	Uganda
28	ZMB	Zambia