

The Impact of Political Instability on School Performance: The Case of African Countries in The Franc Zone

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ABSTRACT

The aim of this paper is to analyse the impact of political instability on school performance in the African countries of the Franc zone. Based on Houssaye's (1988) pedagogical triangle, we develop a theoretical model in which political instability has a negative impact on knowledge production factors and, in turn, on school performance. These factors include teachers, teaching infrastructure and equipment, and teaching time. Empirical analysis shows that an increase of one percentage point in the synthetic index of internal conflict (reflecting an increase in political instability) leads to a significant drop of 0.07 percentage points in the primary completion rate. The same applies to the pupil-teacher ratio, where an increase (relatively fewer teachers) leads to a reduction in the completion rate. In addition, public spending, official development assistance, and real GDP per capita each have a positive and significant effect on the primary completion rate. A number of recommendations are put forward with a view to limiting the risk of internal conflict.

Keywords: Political instability; School performance; Internal conflicts; Completion rate; Franc zone.

INTRODUCTION

One of the 17 Sustainable Development Goals (SDGs) adopted by UN member states in 2015 is to ensure equal access to quality education for all and to promote lifelong learning opportunities. Achieving this goal has led governments to take a range of measures to improve not only enrolment levels but also educational performance. School performance is generally defined as the overall results produced by an education system (Diagne, 2003). They are determined by a number of indicators, including pass rates, drop-out rates, and completion rates in the various cycles of education.

In contrast to other regions of the world, educational performance remains low in Franc zone countries. By way of illustration, in the year 2020, the completion rate in primary education averaged 60%, far behind that of South Asia (87%), the European Union (96%) and North America (99%) (World Bank, 2024). In one Franc zone country, the Central African Republic (CAR), more than half of pupils do not complete primary education (OQE, 2018). The completion rate is even lower at higher levels of education. Massive repetition of years is becoming commonplace, as is dropping out.

Poor school performance has prompted researchers to look into the factors that explain it. They have mainly highlighted the lack of educational infrastructure,

equipment, teaching materials, and qualified teachers (Card and Kruger, 1996; Parcel and Dufur, 2001). Their work has inspired several governments to adopt measures such as building and equipping schools and lycées in the districts, introducing free education, and subsidising textbooks. In Cameroon, for example, the government abolished primary school fees in the early 2000s (Difouo, 2019). The poor performance of schools despite the adoption of various measures once again prompts researchers to look for other explanatory factors, such as political instability.

Political instability refers to the destabilisation of governments through coups d'état, armed conflicts, and terrorist attacks (Alesina et al., 1996). Compared with other sub-Saharan African countries, the Franc zone countries have been characterised over the last two decades by an intensification of internal armed conflicts, manifested in terrorist acts perpetrated by armed gangs, rebel groups, secessionist movements, and religious extremists, as well as by ethnic and tribal conflicts. These various crises are responsible for the loss of human lives, the destruction of numerous socio-economic investments, and the forced displacement of populations both within and outside the country. For example, between 2013 and 2020, armed conflict in CAR led to the displacement of 30% of the population, i.e. 54% of internally displaced persons and 21% abroad (Andakpaoue, 2022).

Furthermore, since 2015, the spread of armed violence by jihadist groups has led to the closure of more than 2,000 schools in Burkina Faso, 750 in Mali and 100 in the Tillabéri region of Niger (Assanvo et al., 2019). In addition to armed conflicts, there has been a resurgence of military coups d'état in the Franc zone. Indeed, of the 14 cases of successful insurrection in Africa in recent years, 7 have been recorded in Franc zone countries. The cases of Mali in 2021, Burkina Faso in 2022 and Gabon in 2023 are illustrative in this respect (Gaudiaut, 2023).

Several authors have attempted to analyse the effect of political instability on educational performance in various contexts (Collier et al., 2003; Shemyakina, 2006; Blattman et al., 2007; Lai and Thyne, 2007; Justino, 2011; Poirier, 2012; Bilal et al. 2016; Cervantes Duarte and Fernandez Cano, 2016; Adi, 2018; Manzoor and Gowhar, 2020). Overall, the results of their work show that political instability has a negative effect on school performance. However, at the theoretical level, most authors analyse the effect of political instability on educational returns intuitively and few have attempted to formalise the theory. Moreover, the econometric specifications of many empirical studies derived from theoretical work are likely to bias the results. Finally, to our knowledge, no study has been devoted to the Franc zone, with the exception of the work of Dabalen and Saumik (2012), which focuses specifically on Côte d'Ivoire.

The aim of this study is to assess the effect of political instability on school performance in African countries in the Franc zone. This zone is one of the regions of Africa where internal conflicts are becoming increasingly recurrent. This study adds to the existing literature in that it not only focuses on the Franc zone but also attempts to formalise this effect theoretically before testing it empirically. The study is structured as follows: The first section examines the literature on the subject in order to make our modest contribution to it. The second section is devoted to formalising the theoretical model. The methodology is the subject of the third section, and the results and educational policy recommendations are presented in the fourth section.

LITERATURE REVIEW

1. Theoretical review

Although almost all authors are unanimous on the negative effect of political instability on educational performance, the debate has focused on the channels through which this effect is transmitted. Some authors have focused their analysis on the direct effect, while others have emphasised the indirect effect. Directly, armed conflicts have a negative impact on school results through the demotivation they cause among learners and the increase in drop-outs from education systems. Many adolescents are withdrawn from schools and forcibly recruited by rebel groups or armed gangs, where they are used as fighters, cooks, messengers and/or "sexual objects" (Justino, 2011). This phenomenon helps to reduce school enrolment rates and increase drop-out and

failure rates in conflict zones (Blattman et al., 2007). There have also been a number of deaths of pupils during attacks on schools by belligerents.

Armed conflict also creates an atmosphere of fear and terror that prevents many children from continuing to attend school. Fearing that their children will be exposed to physical violence, parents are forced to keep them at home or move them to safe areas where there are often no schools. The exposure of schoolchildren to armed conflict also causes serious psychological effects and trauma that persist after the war and affect their performance at school (Blattman and Annan, 2010). Similarly, many children whose parents have died in the attacks are unable to attend school due to a lack of financial resources (Evans and Miguel, 2004). Some children are even forced by certain households to stop their studies to work to replace parents who have died, been injured, or become unfit for work (Rodriguez and Sanchez, 2009; Akresh and de Walque, 2008; Swee, 2009).

On the other hand, several authors have focused on the indirect effect of political instability on educational performance. They analyse the transmission channels. The first channel appears to be educational infrastructure and equipment. Political instability leads to looting, burning, bombing, and even anarchic occupation of schools by belligerents. As well as causing pupils to flee, these attacks, which are often violent, cause teachers to lose interest in their profession (O'Malley, 2007; 2010). Teachers are therefore the second channel through which political instability affects school performance. The demotivation of teachers is exacerbated by abuses committed against education staff, including torture, abduction, rape, and even murder (O'Malley, 2007; Mulkeen 2007). The resulting loss of human life is a loss of human capital, especially as the incidence of casualties in armed conflict seems to have shifted from combatants to civilians (Collier, 1999; Collier et al., 2003).

The third and by no means least important channel is public spending. Wars lead to a substantial reduction in investment spending in social sectors such as education in favour of military spending, thus reducing the accumulation of human capital by individuals (Sochira et al., 2008). This reduction in educational spending in times of conflict is also attributable to the difficulty of collecting budget revenues (tax and non-tax) during this period.

Despite the relevance of the theoretical developments presented above, a few critical remarks can be made. First of all, most authors focus on the effect that political instability has on educational public goods and on public actions in favour of education. However, in the context of African countries in the Franc zone, a non-negligible proportion of educational expenditure is borne by parents or learners themselves. This specifically concerns expenditure on school supplies (books, exercise books, school uniforms, school bags) and school fees.

Armed conflict increases economic risk and destroys production tools, leading to the closure of many existing businesses and discouraging potential investors. As a result, many parents find themselves unemployed, unable to cover the costs of their children's education.

Secondly, the authors give the atmosphere of terror, the phenomenon of child soldiers, and the financial difficulties of parents as the main reasons why pupils drop out of school during political instability. Although some of these factors are an integral part of the opportunity cost of studying during a period of conflict, it must be said that political instability considerably increases this opportunity cost. These include the increased cost of school supplies and the cost of traveling to schools that are more or less secure.

Finally, the analyses do not take into account the impact of political instability on teaching time. However, in a context of permanent internal conflict such as that of several Franc zone countries, this time is considerably reduced because of the constant interruptions to teaching activities.

2. Empirical review

Almost all empirical studies find that political instability has a negative and significant effect on educational performance. However, there is debate about the measurement indicators and the magnitude of the effect. As far as indicators are concerned, educational returns have been measured through completion rates in a specific grade (Shemyakina, 2006; Akresh and De Walque, 2008), enrolment rates (Shemyakina, 2006; Swe, 2009; Poirier, 2012; Manzoor and Gowhar, 2020), enrolment rates (Akresh and De Walque, 2008); the number of years of study (Dabalen and Saumik, 2012; Agüero and Majid, 2015; Omoeva et al, 2018), student scores, i.e. the marks obtained by students in examinations in different subjects (Agüero and Majid, 2015; Adji, 2018; Manzoor and Gowhar, 2020) and education expenditure (Lai and Thyne, 2007; Poirier, 2012). Political instability was measured using: (i) number of armed conflicts between states and/or within a state (conflict between government and opposition group) (Poirier, 2012; Dabalen and Saumick, 2012; Omoeva et al., 2018); (ii) type of civil conflict (Lai and Thyne, 2007); (iii) total number of people killed during clashes between belligerents (Akresh and De walque, 2008, Jamal et al, 2016); (iv) total number of cities with multiple deaths related to internal conflicts (Yamada and Matsushima, 2020) and (v) dichotomous variables indicating the number of years of civil war (Lai and Thyne, 2007).

On the other hand, research shows that the effect of political instability on educational performance is particularly noticeable in the long term. However, some authors find that the magnitude of the effect is very large (Agüero and Majid, 2015; Jamal et al., 2016; Adji, 2008; Omoeva et al., 2018), while others show that the effect is relatively small (Yamada and Matsushima, 2020).

A number of critical comments can nevertheless be made following the empirical work. First of all, while some of the indicators used to measure educational performance, particularly enrolment and enrolment rates, provide information about children's access to education, they are not suitable for assessing their educational results. Similarly, the other indicators do not provide a reliable assessment of the completion rate, which in our view is one of the main indicators of human capital accumulation and output in education. Moreover, taking education expenditure as an indicator would constitute a major bias in the case of African countries in the franc zone. Some education spending is misappropriated or misused because of widespread corruption and the inefficiency of public administrations (CONAC, 2021; OFNAC, 2022). This could lead to situations in which high levels of public spending on education are matched by low levels of educational achievement.

Secondly, African countries in the Franc zone are more affected by internal conflicts than external ones. These internal conflicts take many forms, including civil wars, acts of terrorism, political violence, civil unrest, and coups d'état. To our knowledge, existing empirical studies have not fully integrated the different facets of internal conflicts. The omission of one of these facets could lead to an underestimation of the effect of political instability on school performance. For example, social unrest lasting just a few hours or even a few days (as in the case of the hunger riots at the end of the first decade of the third millennium) can lead to the destruction of many infrastructures, including those directly affecting the education system (school buildings, libraries, laboratories). The use of a synthetic index of internal conflicts is therefore much more relevant in the context of African countries in the Franc zone.

Finally, we believe that this study will contribute to the debate on the extent of the effect of political instability on school performance. In this sense, we believe that political instability has a very significant impact on education systems and consequently on school performance in the African countries of the Franc zone. This hypothesis is formulated taking into account the fact that, contrary to almost all existing research, an analysis of the effect of political instability on school performance requires the implementation of a theoretical formalisation that would highlight the different transmission mechanisms. This theoretical formalisation will form the basis of the empirical analysis.

FORMALISATION

Drawing on Houssaye's (1988) educational triangle, we assume from the outset that in an education system, academic performance is an increasing function of knowledge production and acquisition. We also assume that the production of knowledge leads to its acquisition. In other words, when the quantity and quality of knowledge produced is high, it is easy for learners to acquire. This translates into appreciable school results in terms of exam pass rates and completion rates.

We also take a representative economic agent who is rational. To simplify the economic calculation, we assume that political instability only affects the production of knowledge, the function of which must first be defined.

1. Definition of the knowledge production function

The production of knowledge depends on a number of factors. These include teachers, teaching infrastructure and equipment, and teaching time. Teachers are a fundamental component of the education system. Their actions are decisive for pupils' success and are based essentially on the design, preparation, and transmission of knowledge, know-how, and expertise (Gueudet and Trouche, 2008). We will mark teachers in the knowledge production function with the letter L.

Like teachers, teaching infrastructure and equipment are also crucial to the production of knowledge. These mainly consist of classrooms, laboratories and workshops, libraries, and multimedia rooms. The provision of these inputs in schools facilitates the teacher's work since it is these inputs that the teacher uses to produce (research) and make knowledge available to pupils (Pasquale, 2019). Infrastructures are noted by K in the knowledge production function.

Teaching time is the third factor in the production of knowledge. In particular, this involves the periods devoted by the teacher to teaching activities. These periods are set aside by teachers to gather together the teaching and learning materials needed to prepare lessons. This is the case, for example, for reading textbooks in libraries and researching on the internet. Teaching time also includes the time taken by the teacher to deliver lessons and assess pupils. If teachers respect the amount of time allotted to them (timetable) through their regular attendance and punctuality, lessons progress smoothly and the curriculum is fully covered. Assessment also makes it possible to adjust teaching methods to help students progress (Le Manitoba, 2006). We will note the teaching time factor by T in the knowledge production function.

We assume that the knowledge production function is of the Cobb-Douglas form and that economic agents each seek to maximise their profit or utility function given the constraints they face. The knowledge production function (Q_s) is thus given by the following mathematical expression:

$$Q_s = AK^\alpha L^\beta T^\gamma \quad (1)$$

With $0 < \alpha < 1$; $0 < \beta < 1$; $0 < \gamma < 1$.

In Equation 1, α , β , and γ represent the elasticity coefficients associated with educational infrastructure and equipment, teachers, and teaching time respectively.

2. The effect of political instability on knowledge production

Political instability has an influence on knowledge production through the effect it has on the factors of knowledge production. Indeed, political instability through internal conflict leads to the physical destruction of the educational infrastructure and equipment necessary for knowledge production. In addition, many of the infrastructures and equipment that are not destroyed are used by the belligerents to set up logistical bases, makeshift hospitals or shelters for civilians. In addition to the destruction or occupation of existing infrastructure and facilities, political instability is reducing the construction and equipping of new infrastructure, not only because part of public social spending is being redirected towards security spending, but also because of the reduction in public revenue linked to the slowdown in economic activity and the capture of rents by rebel groups. Thus, contrary to a climate of peace, the quantity of infrastructure and school equipment available will be K' , the mathematical expression of which is as follows:

$$K' = aK \quad \text{with } 0 < a < 1 \quad (2)$$

As far as teachers are concerned, the political instability caused by wars and security crises is leading to a loss of teaching resources. In addition to cases of abduction and death, these include: (i) the relocation of many teachers to safer areas or even outside the country (brain drain); (ii) the freeze on recruitment of teachers to the civil service; (iii) the freeze on salaries, bonuses and other benefits offered to teachers; and (v) the restriction on travel with the "dead town" phenomenon. Thus, in contrast to an environment characterised by peace, political instability leads to a reduction in the labour factor in both quantitative and qualitative terms. The quantity of teachers available would be calculated by the following mathematical expression:

$$L' = bL \quad \text{with } 0 < b < 1 \quad (3)$$

Finally, political instability has a negative impact on teaching time through the climate of insecurity it creates. Security crises generally cause major disruptions to teaching activities, which can lead to their suspension. Untimely power and internet cuts, as well as restrictions on travel, prevent teachers from carrying out research to support their teaching. Out of an instinct for survival, they prefer to spend their time taking refuge in safer places rather than going to schools where they could suffer reprisals from the belligerents. Examples of this are the Anglophone crisis and Boko Haram in Cameroon, where teachers suffer serious consequences as a result of their presence on school campuses. The mathematical expression of teaching time used in an education system faced with great political instability is as follows:

$$T' = cT \quad \text{with } 0 < c < 1 \quad (4)$$

The coefficients a , b and c measure the extent of political instability on the factors of infrastructure and teaching facilities, labour (teachers) and teaching time respectively. The new knowledge production function, which results from merging equations 1 to 4 above, is given by the equation below:

$$Q_s = AK'^{\alpha}L'^{\beta}T'^{\gamma} \tag{5}$$

The objective of the national education system is to maximise the knowledge production function subject to production cost constraints. In order to simplify the economic calculation, we will assume that the educational infrastructure and equipment (here K) are homogeneous and have a unit cost equal to i . The unit cost of labour is equal to the wage rate paid to the teacher, noted w . The unit cost of labour is equal to the wage rate paid to the teacher, denoted w_L . Teaching time, in particular the time spent by the teacher on research activities outside the classroom, would represent a sort of loss of earnings for the teacher. The teacher could, for example, use this time to undertake an activity (farming, sewing, business) or to work for a third party (company). If they work for a company, they should receive remuneration based on the hourly wage rate. Let's assume that the opportunity cost of teaching time is w_T for each unit of time. The cost function is therefore as follows:

$$CT(K,L,T) = i * K' + w_L * L' + w_T * T' \tag{6}$$

The Lagrangian derived from the knowledge production function and the associated cost function is written as follows:

$$L_g = AK'^{\alpha}L'^{\beta}T'^{\gamma} - \lambda [i * K' + w_L * L' + w_T * T'] \tag{7}$$

Applying the first-order conditions gives us the following equations:

$$\frac{\partial L_g}{\partial K'} = 0 \Rightarrow \alpha AK'^{\alpha-1}L'^{\beta}T'^{\gamma} = \lambda i \tag{8}$$

$$\frac{\partial L_g}{\partial L'} = 0 \Rightarrow \beta AK'^{\alpha}L'^{\beta-1}T'^{\gamma} = \lambda w_L \tag{9}$$

$$\frac{\partial L_g}{\partial T'} = 0 \Rightarrow \gamma AK'^{\alpha}L'^{\beta}T'^{\gamma-1} = \lambda w_T \tag{10}$$

If we divide equation 8 by equation 9 and replace L' and K' by their respective values, we obtain the following mathematical expression:

$$L^* = \frac{i\beta a}{w_L \alpha b} K^* \tag{11}$$

Equation 11 makes it possible not only to determine the optimal number of teachers needed to maximise knowledge production, but also to establish the substitution ratio between teachers and school infrastructure and equipment. The parameters i , a , w_L , α and β being strictly positive, it can be seen that when political instability has a strong impact on teachers (case of coefficient b close to 0), the quantity of teachers required to achieve optimal knowledge production is very high and tends towards infinity, since a large proportion of them will not be operational due to abductions and voluntary departures.

The greater the coefficient of elasticity associated with the labour factor, the greater this quantity. Similarly, when political instability has a strong impact on educational infrastructure and equipment (case of coefficient a close to 0), the marginal rate of substitution between labour input and educational infrastructure and equipment will be low. In other words, in equilibrium, enough teachers would be needed to compensate for one lost unit of educational infrastructure and equipment.

If we divide equation 8 by equation 10 and replace K' and T' by their respective values, we obtain the following mathematical expression:

$$T^* = \frac{i\gamma a}{w_T \alpha c} K^* \tag{12}$$

Equation 12 makes it possible not only to determine the optimal amount of teaching time needed to maximise knowledge production, but also to establish the substitution ratio between teaching time and school infrastructure and equipment. The parameters i , a , w_T , α and γ being strictly positive, it can be seen that when political instability has a significant impact on teaching time (case of coefficient c close to 0), the time needed to obtain optimal knowledge production is very high and tends towards infinity, since a large proportion of teachers' time is devoted to activities that have nothing to do with knowledge production. The higher the coefficient of elasticity associated with teaching time, the greater this amount. Similarly, when political instability has a strong impact on teaching infrastructure and equipment (the case of coefficient a close to 0), the marginal rate of substitution between teaching time and teaching infrastructure and equipment will be low. In other words, in equilibrium, a lot of teaching time would be needed to compensate for one lost unit of teaching infrastructure and equipment.

If we divide equation 10 by equation 11 and replace T' and L' by their respective values, we obtain the following mathematical expression:

$$L^* = \frac{\beta w_T c}{\gamma w_L b} T^* \tag{13}$$

Equation 13 makes it possible not only to determine the optimal quantity of teachers needed to maximise knowledge production, but also to establish the substitution ratio between teachers and teaching time. It can be seen that when political instability has an intensive impact on teaching time (the case of coefficient c close to 0), the marginal rate of substitution between teachers and teaching time will be low. In other words, in equilibrium, many more teachers would be needed to compensate for one lost unit of teaching time.

We will now try to test empirically the theoretical predictions presented above.

METHODOLOGY

1. Specification of the empirical model

Our starting point is equation (5), which is recalled below:

$$Q_s = AK^\alpha L^\beta T^\gamma$$

If we replace K , L and T by their respective values and linearise this equation, we obtain the following equation:

$$\ln Q_s = \ln A + \alpha \ln K + \beta \ln L + \gamma \ln T + (\alpha + \beta + \gamma) \ln(a * b * c) \quad (14)$$

Let $B = \ln A$, $\theta = \alpha + \beta + \gamma$ and $I = a * b * c$ we obtain:

$$\ln Q_s = B + \alpha \ln K + \beta \ln L + \gamma \ln T + \theta \ln I \quad (15)$$

In this study, we have assumed that the production of knowledge implies school performance. For this reason, the explained variable is measured using an indicator of returns to education, namely the primary school completion rate. School infrastructure and facilities are approximated by public spending on education and official development assistance (ODA). In most developing countries, like the African countries in the Franc zone, public goods are the most important component of the education system. These educational public goods are achieved through public investment and ODA. In Cameroon, for example, ODA has enabled the construction and equipping of primary schools (Japanese support) and technical high schools (Canadian support) (Dontsi et al., 2024). The teacher's variable is approached by the pupil-teacher ratio (number of pupils per teacher). Political instability, the main variable of interest in the study, is measured by the synthetic index of internal conflicts. An increase in the value of the index reflects an increase in conflict in the country. Finally, the final econometric specification will not consider learning time for two reasons. The first relates to the fact that the theoretical model shows that it is closely linked to teachers and educational infrastructure. The second is that it is difficult to find statistical data that would allow us to assess it on a national scale. Integrating these adjustments into equation 15 gives the following equation:

$$\ln TA = B + \alpha_1 \ln DP + \alpha_2 \ln APD + \beta \ln RE + \theta \ln I \quad (16)$$

With TA, the completion rate; PD, public expenditure; ODA, official development assistance; ER, the pupil-teacher ratio and I, the synthetic index of internal conflict.

The equation is improved by including a control variable, namely the level of per capita income. A significant proportion of education expenditure is borne by the parents of pupils, in other words the population. It is assumed that the higher the level of per capita income in a country, the greater the opportunity for citizens to devote significant resources to education in order to obtain good school results for their offspring. Furthermore, for a sample of countries whose data covers a fairly long period, as is the case in this study, the econometric model must be specified using panel data. This results in the following mathematical expression:

$$\ln TA_{it} = B + \alpha_1 \ln DP_{it} + \alpha_2 \ln APD + \beta \ln RE + \theta \ln I + \gamma \ln Pibh + u_i + v_t + \varepsilon_{it} \quad (16)$$

Where RGDP is real GDP per capita with γ is the elasticity coefficient. The indices i and t represent the country and time respectively. u_i captures unobserved country fixed effects. v_t measures the time fixed effect common to all countries and ε_{it} is the error term.

2. Data

The data used to estimate equation (16) covers 8 African countries in the Franc zone (Burkina Faso, Cameroon, Congo, Ivory Coast, Mali, Niger, Senegal and Togo) over the period from 2000 to 2020. The choice of sample was dictated by the availability of data on all the variables in the model. These data come from: (i) the United Nations Educational, Scientific and Cultural Organisation (UNESCO) for the completion rate and pupil-teacher ratio; (ii) World Development Indicators (WDI) for real GDP per capita, public spending on education and ODA; and (iii) the International Country Risk Guide (ICRG/PRS) for political instability. The completion rate expresses the percentage of learners who complete primary education. The pupil-teacher ratio indicates the number of pupils taught by one teacher. Real GDP per capita is measured in constant USD. Public expenditure on education is captured through the share of government expenditure allocated to the education sector in GDP. ODA is also expressed as a proportion of GDP. Political instability is measured by the internal conflict index. This index ranges from 0 (low political instability) to 12 (high political instability). Table 1 below presents the descriptive statistics for the variables in the study.

TABLE 1: Descriptive statistics of the data used.

Variables	Comments	Average	Standard deviation	Minimum	Maximum
Primary school completion rate	168	57	15,67	18,37	92,71
Internal conflict index	168	8,23	1,11	5,79	11
Pupil-teacher ratio	168	44,59	7,90	31,74	82,79
Public spending on education	168	3,54	0,89	1,68	5,72
GDP per capita	168	1075,36	603,46	389,07	2493,08
Official development assistance	168	51,45	40,60	4,81	388,13

Source: calculations based on data from the above-mentioned databases.

Table 1 shows that Franc zone countries have a low primary school completion rate, averaging 57%. Similarly, the average internal conflict index in this zone is 8.23, with a maximum of 11. This shows that the countries in this part of the world are faced with a high level of political instability. In addition, the average level of teaching staff in these countries is one teacher for every 44 pupils, a far cry from UNESCO standards. Apart from the decisive contribution of official development assistance, which represents an average of 51.45% of GDP, the data for the other variables indicate that their contribution to GDP is very low in the Franc zone countries. This is the case for real GDP per capita and public spending on education. In fact, public spending on education accounts for only 3.5% of GDP on average.

PRESENTATION AND DISCUSSION OF RESULTS

Table 2 below presents the results of the econometric estimation of the impact of political instability on educational performance. The probability of the Hausman test is less than 5%, which means that only the fixed-effects model (FEM) and therefore the ordinary least squares method can be used. There are therefore no country specificities that influence the results.

TABLE 2: Econometric Estimation Results.

Variables	Coefficient
Internal conflicts	-0.07*** (0.00)
Pupil/teacher ratio	0.08 (0.469)
Public spending on education	0.18*** (0.006)
Parents' income	1.08*** (0.00)
Official development assistance	0.036* (0.067)
Constant	-3.4*** (0.000)
Number of observations	168
Number of countries	8
Hausman (P value)	0.00

Note: ***, ** and * denote significance at 1%, 5% and 10% respectively.

Table 2 shows that internal conflict has a negative and significant impact of 1% on the primary school completion rate. In other words, a one percentage point increase in the internal conflict index (a manifestation of political instability) leads to a 0.07 percentage point decrease in the primary completion rate. This result confirms those obtained in previous studies. Armed conflict is an obstacle to the production of knowledge and, in turn, a stimulus to school wastage (Justino, 2011; Adeyanju and Babalola, 2013; Yamada and Matsushima, 2014; Bilal et al., 2016; Manzoor and Gowhar, 2020).

The pupil-teacher ratio has a negative and significant effect at 5%. When the number of pupils per teacher increases by one percentage point, the primary completion rate falls by 0.3 percentage points. A shortage of teachers in the education systems of the countries in the zone amplifies the phenomenon of overcrowded classrooms and limited knowledge production. The result is that teachers do not monitor pupils' learning properly, leading to high failure rates. This finding corroborates those of studies by West and Wößmann (2006) and Belkhatib (2022).

Public spending on education has a positive and very significant impact on the primary completion rate. When public spending on education increases by one percentage point, the primary completion rate rises by 0.18 percentage points. This supports the idea that the allocation of a large part of the budget by governments to education spending contributes to increased investment in education and, by extension, higher returns to schooling. This result is in line with that of Tatsabong Tako et al (2020), who find the importance of public spending on the recruitment, training and remuneration of teachers, and the construction and equipping of classrooms, laboratories, practical rooms and computer centres.

The real GDP per capita variable has a positive and significant impact on the primary completion rate. An increase in real GDP per capita of one unit leads to an increase in the completion rate of 1.08 percentage points. Almost all personal expenditure on education is met from the resources of citizens (parents). This involves the payment of school fees, school supplies and other costs associated with education. Parents on low incomes are forced to cut short the education of some children, particularly older children who have to work and look after their younger siblings.

Official development assistance also has a positive and significant impact on the primary completion rate. When official development assistance increases by one percentage point, the primary completion rate rises by 0.036 percentage points. It has been pointed out above that this aid makes it possible to support governments in the recruitment and remuneration of teaching staff and in the reinforcement of infrastructure and equipment often damaged by bombardments from armed groups.

CONCLUSION AND RECOMMENDATIONS

The aim of this study was to analyse the impact of political instability on school performance in the African countries of the Franc zone. Based on Houssaye's (1988) pedagogical triangle, we developed a theoretical model in which political instability is considered to be a factor detrimental to the production of knowledge and consequently to school performance. Empirical analysis followed the theoretical formalisation. The harmful effect of political instability, particularly armed conflict, on educational performance is multifaceted. In particular, it affects the main components of knowledge production, i.e. teachers, teaching infrastructure and equipment, and teaching time. The results of the empirical analysis confirm the theoretical predictions and previous empirical work. However, this study highlights the need to focus more on indicators that better represent the outputs of the education system, i.e. human capital accumulation and socio-professional integration. Similarly, the positive effect of ODA on school performance was highlighted in this study. However, this work could be taken further in several directions. Firstly, Houssaye's educational triangle shows that knowledge acquisition is another component of the education system that needs to be developed. Secondly, depending on the availability of data, we could examine the effect of political instability on completion rates in the other levels of education. Finally, we might suspect an inverse relationship between political instability and educational performance. In other words, we observe that countries with high returns to education experience relative political stability. A number of economic policy recommendations can be made. These include (i) redistribute the fruits of growth equitably; (ii) ensure scrupulous compliance with constitutional provisions; (iii) improve the allocation of public spending on education through better organisation of the school map; and (iv) ensure preventive maintenance of educational infrastructure and equipment.

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