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Sustainability of D.R. Congo Current Account: Risks and Outlook

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ABSTRACT

The DRC current account balance is characterized by a structural deficit in spite of the long cycle of economic growth, driven by the large influx of Foreign Direct Investment (FDI). With the ARDL model, in the context of a BOP intertemporal approach, this research shows that the economic growth rate and FDI are the main variables that explain the current account in the short and long terms. Moreover, periods of significant influx of FDI are accompanied by a deterioration of the current account. That fact is explained by a significant connection between the growth of private income and taxes, induced by capital inflows, and the growth of imports of goods and services because of less competitiveness of local product. The coming back on a sustainable path of BOP, the DRC government should attack structural weaknesses of Congolese economy. This action should be realized by implementing credible strategies of industrial, infrastructural and educational development. Those strategies will increase improve productivity and competitiveness of goods and services oriented to local market. They will also reduce progressively the inertial vulnerabilities that block the sustainability path.

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Introduction

As a result of the growing commercial and financial interconnection between countries, the monitoring of external accounts has become a key element of economic policy. In the case of developing countries in particular, their high exposure to commodity price volatility, their internal and external vulnerabilities, and the brutality and magnitude of the effects of the shocks they have experienced over the past 50 years should lead them to draw lessons, particularly in terms of the need to strengthen their capacity to monitor and analyses external accounts.

Indeed, most of the crises that systemically shook developing countries between 1970 and 2020 were balance of payments crises (Mexican crisis, Asian crisis, Brazilian crisis, Russian crisis, developing country debt crisis, commodity crisis, etc.). Often, it was the accumulation of deep and lasting balance-of-payments imbalances that, after reaching a threshold, triggered the crisis.

Like the ostrich, economic policymakers pay only limited attention to the early stages of the build-up of external imbalances, wrongly assuming that the shock is minor or only transitory. Basically, economic policy-makers only react when the critical threshold for triggering the crisis has been reached and the effects have begun to take on abnormal proportions. The slow response appears to be one of the factors aggravating imbalances. This inattention, slowness and passivity have often ended up being costly in terms of economic and financial losses, as the crisis may spread beyond national borders. If governments were to adopt a forward-looking approach, along the lines of macroprudential surveillance, balance of payments vulnerabilities would have been identified much earlier. This would help to reduce internal and external delays and policy responses, and mitigate the effects of external shocks. To analyze factors of external vulnerability, it is essential to put in place analytical frameworks and monitoring systems that consider the dynamic dimension of international trade. This is how intertemporal current account approach was developed.

The intertemporal approach of the current account of the balance of payments considers the current account as the difference between national savings and investment. It highlights the disconnection over time between expenditure and income, an expected gain from the international mobility of capital. It means when a country runs a current account deficit, then it invests more than it saves. However, today's current account deficit would help improve its future solvency (intertemporal solvency) due to the positive impacts expected from investments make today.

Since the investment projects would create a surplus export capacity, which would in future enable the repayment of previous debts. In the long term, the scale of its deficit would gradually decline as the country reached higher levels of development, bringing its savings and investment closer together. Today's deficit countries will be tomorrow's surpluses.

The intertemporal current account approach was developed to address the weaknesses of the IS-LM-BP model. As a reminder,

during the second half of the 20th century, the IS-LM-BP model, popularized by Keynesian economists (Robert Mundell; John Fleming), was the main framework for macroeconomic diagnosis and for steering fiscal, monetary and exchange rate policies, particularly for developing countries, with a view to simultaneously achieving internal and external equilibrium. Though, in these first two decades of the 21st century, many developing countries continue to use it as their sole analytical tool, in their relations with international financial institutions.

However, like its ancestor (the IS-LM model), the IS-LM-BP model has suffered from a number of criticisms. These include the lack of microeconomic foundations and the impossibility of analyzing long-term current account dynamics. In response to these weaknesses, the intertemporal approach of the balance of payments of the current account was developed. As noted above, this approach analyzes the current account from a savings-investment perspective. The current account thus appears as a tool for smoothing consumption over time.

It's worth noting that several economists have proposed improvements to the intertemporal approach. Some have suggested the introduction of warning indicators, such as sustainability thresholds, to assess potential or actual risks to the current account. Moreover, analyzing the sustainability of a country's current account is essential for designing economic policy. It contributes not only to assessing a country's external competitiveness, but also to strengthening surveillance of potential sources of risk that could eventually lead to an exchange rate crisis which has a lot of headwind consequences for the whole economy.

It is with regard to this framework that this study was conducted to analyze the sustainability of the DRC's current account. Besides, this paper looks thoroughly at the nature and role of the determinants of the DRC's current account problems. To reach this goal, the study will use an intertemporal approach to the current account in order to spotlight the factors explaining the latter's long-term behavior, identify points of vulnerability and guide Congolese economic policy.

Literature Review

The question of the current account's sustainability has been widely debated, because of its interest for both researchers and economic policy-makers. It is in this context that we can assess the substantial contribution made to the debate by the work of particularly with regard to understanding of the economic openness influence to trade and capital mobility on a country's economic performance. By simulating shocks, notably fiscal or monetary, their model made possible the assessment of the impact on the current account of these latter and the interaction between a country's internal and external imbalances.

Some researchers have proposed a proofreading of the Mundell-Fleming model, using a roughly different approach, called the intertemporal approach. Where the current account is regarded as the difference between savings and investment. Under this approach, the emergence of a current account deficit is accounted for a shortfall in domestic savings compared to the financing needs of domestic investment. This low level of savings is explained either by pressure from consumption, or by low national income. Consequently, raising the level of savings would require action on income or consumption.

Some other authors have developed sustainability thresholds, constituting warning indicators of potential risks to the current

account sustainability, based on the intertemporal approach. For summers (1996), a current account deficit more than 5% of GDP should be considered an indicator of unsustainability. A deficit that exceeds this threshold, but is covered by capital inflows, can be tolerated, while tightening surveillance. The current account deficit should be considered critical and dangerous when it is financed by external debt or by the depletion of foreign exchange reserves. It is in this context that it is important to analyze in depth the determining factors of the current account deficit, as well as the structure of its financing. Such an analysis would make it possible to assess the degree of vulnerability of the current account [1].

Have come up with a different framework for calculating the sustainability threshold, based on various economic indicators likely to influence savings and investment [2]. Reisen (1996) and Steiner and Losada (1996) have developed a conventional function of external debt dynamics to analyze long-term intertemporal solvency. They developed a method for establishing the optimal sustainability threshold known as the Reisen method which considers the important role of foreign exchange reserves in current account dynamics. One of the advantages of their method is that it introduces inventory variables and memory effects into current account analysis.

Urges caution when analyzing the behavior of the current account balance of payments [3]. He recommends avoiding hasty conclusions which would regard a current account surplus as a good thing and a deficit as a bad thing. He shows that the current account imbalances can be both a sign of good health and a symptom of macroeconomic and financial tensions. Seeing that, analyzing the current account becomes much more complex and would require an in-depth study, not only of the factors behind a deficit, but also the macroeconomic and financial implications.

Points out that the current account deficit is wrongly interpreted as an indicator of competitiveness [4]. He fleshes out his thesis with the case of the United States, whose current account deficit is structural and astronomical. He shows that a current account deficit is not a problem if it is offset by stable capital inflows. The author stresses that the attractiveness of the US financial market (deep, liquid and easy to enter) means that the current account deficit can be financed without difficulty.

Show that when a country accumulates large deficit, it tends to accuse its trading partners of unfair practices-which are meant to be the cause [5]. They pointed out the growing tensions between the USA and China, who blame each other for their large trade imbalances. The authors also argue that deficits reflect underlying economic trends, which may or may not be desirable. So, they arrive at the conclusion that a deficit can only be qualified good or bad only based on the factors behind them.

The International Monetary Fund has, for several years, developed a system intended to facilitate the assessment of the sustainability of the current account. This instrument is called "External Balance Assessment", abbreviated EBA. It makes possible the upstream identification of unsustainability risks and the providing of recommendations to the countries (concerned) on how to deal with imbalances likely to cause disruptions for the economy being studied, for the countries of its sub-region or for the global economy since the more-and-more openness of economies. The implementation of the EBA is an empirical step forward in understanding balance of payments problems.

The empirical analysis on current account deficit has been greatly expanded over time. The OECD, for example, collects data from all its member countries and carries out analyzes on bilateral and multilateral external imbalances as well as their consequences. In a research entitled "the challenges of reducing the current account deficit of the United States", the OECD (2004) points out that the current account deficit of the United States had reached, in the middle of the 2000 decade, its highest historical level, resulting in the appearance of surpluses in several Asian and European countries, notably Germany, Japan and China. The OECD believes that reducing these global imbalances would have consequences, not only for the United States, but also for other countries. However, the accurate effects of these adjustments would depend on the way in which the correction takes place. With regard to adjustment policies, the OECD proposes exploring three avenues, namely action on the exchange rate, the savings rate and non-export price competitiveness. It concludes that the least costly way for USA partners would be the combination of reducing the budget deficit by 2 percentage points and depreciating the US dollar by 15%.

Focuses on France's current account [6]. He notes that France's deficit is the result of favorable price trends for goods not subject to international competition. Speaking of it, he arrives at the conclusion that a reform of the market for products which are not subject to external competition (sheltered goods), via intensified competition and wage moderation, would exert downward pressure on the internal exchange rate (relative prices of goods not subject to competition compared with products subject to external competition) and, ultimately, on the current account balance.

Analyzed the determinants of G3 current account trends [7]. He distinguishes between cyclical and structural factors that determine the behavior of G3 current account imbalances. He notes that the latter are explained by a combination of these two groups of factors. In Jacob's view, the rise in external imbalances largely reflects the United States' relative advantage in terms of productivity and the expansionary stance of its fiscal policy. He believes that reducing the US deficit requires a combination of structural reforms aimed at boosting growth potential and making regions outside the US more attractive to investors. In addition, significant adjustments to real exchange rates will be needed in the medium term to support external positions. He also emphasized that the correction could be painful for major trading partners and hence it should be carried out in an orderly fashion to reduce costs. Furthermore, he notes that an orderly correction would not compromise financial stability at all.

Highlight the role of the US dollar in the global economy — which gives the USA a favorable position. This thesis is filled out by Greespan during his presidency of the Fed. For him the United States' opportunity to finance their external deficit by using their money namely USD increase their ability to contract external loans, unlike most other countries.

Studying the dynamic of Morocco, current account points out that the later can't only be explained by variables linked to internal factors like growth, the investment and the savings rate. But also, by variables linked to external factors, notably the exchange rate, oil price, foreign direct investment (FDI), foreign exchange reserves and the openness rate. In the long term, the oil price is considered to be the most influential variable in explaining current account dynamics. To correct the unsustainability of the Moroccan current account, they recommend export diversification. Fadlallah (2014) adds, in his study on the exchange rate and the sustainability of the Moroccan balance of payments that in the case of overvaluation, resorption of the misalignment would require a depreciation of the real effective exchange rate.

Studying "the causes of Senegal's structural current account deficit", highlighted the existence of a cointegrating relationship between the current balance, the exchange rate, the import rate, the investment gap, and the budget balance [8]. According to these authors, the exchange rate, the propensity to import and the lagging current account balance explain deficits in the long term, while in the short term, the exchange rate, the propensity to import and the investment gap are the main determining factors. To ensure the sustainability of Senegal's current account, the authors recommend a policy of trade rebalancing, given that the import/ export ratio is very significant (the country imports goods that it could produce locally, such as rice, corn and milk), a depreciation of the currency and an increase of the interest rate.

In a study of Brazil, point out that most empirical studies assume that current account adjustment is linear. In reality, current account adjustment does not always follow a linear path. With this in mind, the authors use a smooth transition vector auto regressive model (ST-VAR) to study the sustainability of Brazil's current account. They conclude that current account responses to income, investment and fiscal shocks depend on the variables used as transition factors, and on the sign and magnitude of the results. A fiscal expansion (contraction) has different effects on the current account depending on whether it is preceded by a period of expansion or contraction (and vice versa).

In studying current payments in sub-Saharan Africa, noted that a large number of African countries were running current account deficits, with levels in some countries exceeding the 5% threshold [9]. Moreover, in several African countries, current deficit is associated with low levels of investment and economic growth. This suggests that current account deficits do not profit to the economy over the longer term. Furthermore, they found that countries with less democratic governments are also more exposed to the risk of deficit. They conclude that higher real GDP growth, trade openness and the existence of an acceptable democratic political regime reduce the probability of high current deficit. Conversely, an increase in the share of natural resource exports in total merchandise exports increases the probability of a high deficit.

The analysis of previous research has shown that the determinants of current account sustainability are internal for developed countries and external for developing ones. In the case of emerging countries, both kind of factors (internal and external) explain current account dynamics at the same time.

In the case of the DRC, no empirical study has been carried out to analyze the sustainability of the balance of payments. The Central Bank of Congo, which published a first report on the balance of payments and international investment position, covering the period 2016-2018, limited is study to a descriptive presentation of the evolution of the current account, without addressing the question of its sustainability. This is where the contribution of this study lies. Indeed, this research aims to analyze the determinants of the sustainability of the DRC's current account. Within this framework, it will use an intertemporal approach, via autoregressive delayed lags model.

Methodology
This paper delves into the sustainability of the D.R. Congo's

current account by applying the intertemporal approach developed by Buiter (1981), Obstfeld and Sachs (1981), Svenson and Razin (1983). This section outlines the methodological approach followed by the study and presents the results.

To explain the dynamics of the Congolese D.R. current account, an econometric approach was adopted. However, before presenting the model used, it is useful to briefly present the main variables retained by the study.

Variable Overview
Four variables have been selected for their importance in analyzing the current account dynamic. These variables are linked to both internal and external factors. The chart 1 below briefly presents each of the variables and the ways they're expected to modify the current account behavior.

Chart 1: Presentation of Variables

	Variables Related to External Factors	Comments
1.	Terms of Trade (Terch)*	For countries that have a reliance on commodity exports, a deterioration in the terms of trade leads to a deterioration in the current account, compromising intertemporal solvency. And vice versa. A positive impact is expected
2	Foreign Direct Investment/FDI Inflows (Ider)*	FDI can have a positive influence on the current account, when used to increase the country's export capacity. They can have a negative impact if they are misallocated (particularly white elephants). Debt repayment capacity is thus compromised. Depending on the case, the expected sign of the elasticity may be positive or negative.
	Variables Explained by Internal Factors	
3.	Investissement Rate (Tinv)*	According to the intertemporal approach, an increase in investment worsens the current account balance. In the long term, investment to improve the productive base, which translates into increased exports, improves the current account. So the expected sign is mitigated.
4.	Economic Growth (Tcrois)*	For economic growth, all depends on the magnitude of the relationship between the growth rate and the import/export rate.

Source: Authors
*The Abbreviation Used Is of Authors

Model Specifications
To analyze current account dynamics, this study uses the Autoregressive Distributed Lag (ARDL) model. The ARDL model, which belongs to the range of dynamic models, will use the four variables presented above. As a reminder, in dynamic models, the dependent variable is explained by its own values (its history), the present values of the independent variables and their lagged values over time.

The chosen ARDL model would determine the effect of the

determinants of the current account in the short and long term, and examine the coefficients of each variable as well as their significance, in order to identify the variables that weigh most heavily in explaining the dynamic of the D.R. Congo's current account. The aim is to determine and in which extend the growth rate, the investment rate, foreign direct investment and the terms of trade influence on the current account.

The functional presentation of the relationship between the current account and the four selected variables is as follows:

$$ccr = f(tcrois, tinv, ider, terech).$$

long-term effects of the explanatory variables on the current account, is as follows:

$$\Delta ccr_t = a_0 + \sum_{t=1}^{p} a_{1i} ccr_{t-1} + \sum_{t=0}^{q} a_{2i} tinv_{t-1} + \sum_{t=0}^{q} a_{3i} tcrois_{t-1} +$$

$$\sum_{t=0}^{q} a_{4i} ider_{t-1}$$

$$+ \sum_{t=0}^{q} a_{5i} terech_{t-1} + b_1 ccr_{t-1} + b_2 tinv_{t-1} + b_3 tcrois_{t-1} + b_4 ider_{t-1}$$

$$+ b_5 iterech_{t-1} + e_t$$

With:
Δ Differential operator;
a_0 intercept;
$a_1 ... a_5$: short-term effects;
$b_1 ... b_5$: long-term dynamics of the model;
e_t: error term (white noise).

It should be noted that the implementation of an econometric model-here an ARDL model-requires a few preliminary steps, which are briefly explained in the next section.

Series Stationarity Analysis
In order to study the stationarity of the data, the Augmented Dickey-Fuller (ADF) test was used (Chart 2). The results of this test show that the current account and investment rate series are stationary at level, while the FDI, terms of trade and real GDP growth rate series are stationary after first difference. Overall, the series are thus integrated at different orders.

Chart 2: Stationarity Test

Variables	Level		First Difference		Intercept
	ADF	VCM	ADF	VCM	I(0)
Ccr	-4.6* (0.00)	-4.3	-	-	
Tcrois	-	-	-4.8* (0.00)	-2.6	I(1)
Tinv	-4.2** (0.01)	-3.5	-	-	I(0)
Ider	-	-	-9.3* (0.00)	-2.6	I(1)
Terech	-	-	-5.8 (0.00)	-2.6	I(1)

Source: Authors
(.): Probabilities;
*: stationary at 1%;
**: stationary at 5%;
VCM: Mackinnon's Critical Value.

Pesaran Cointegration Test

As a reminder, two steps must be followed to perform the Pesaran cointegration test, namely determining the optimal lag and then performing the Fisher test, which is designed to verify cointegration between variables.

• Determining the optimal lag and estimating the ARDL model

To this end, the Schwarz Information Criterion (SIC) was used to select the optimal ARDL model (the one offering statistically significant results with the least lags). After iterating with respect to the criterion above-mentioned, the ARDL model (1, 1, 4, 4, 4, 1) was selected.

• Boundary cointegration test

In accordance with the procedure, the comparison must be made between the calculated test statistic, i.e. Fisher's F-value, and the critical values (which form bounds):

• If the value of Fisher more than the upper bound, then the cointegration exists;

• It doesn't exist in case the value of Fisher is less than the lower bound

• While there is no conclusion when the lower bound is less than Fisher upper bound,

Chart 3: Results of Test Pesaran Cointegration Test

Variables	Ccr, Tcrois, Tinv, Ider, Terech	
CalculatepoF-stat	12.96	
Critical threshold	Boundary <	Boundary >
1% 5% 10%	2.2 2.56 3.29	3.09 3.49 4.37

Source: Authors

The results of the cointegration test confirm the existence of a cointegrating relationship between the series under study since the value of F-stat is greater than that of the upper bound. And thence, it possible to estimate the long-term effects on the current account of the real GDP growth rate, the terms of trade, the investment rate and foreign direct investment flows.

Modeling

The choice of the optimal equation was made considering the results of the Schwartz information criterion, the boundary cointegration test and the analysis of the regression residuals. The model estimated below appears to best reflect the long-term relationship between the current account and the factors considered by the study.

$$ccr = -0.031747 * tinv + 0.508311 * tcrois - 1.000998 * ider + 0.008464 * terech.$$

The scrutiny of the error correction coefficient shows that it is significantly negative, suggesting the existence of a long-term relationship between the investment rate, the growth rate, FDI and the terms of trade, on the one hand, and the current account balance, on the other.

Chart 4: Significatively of the Coefficients of The Long-Term Relationship

Variables	Coefficient	significatively
Error correction term	-1.080995	-10.80390
Tinv	-0.031747	-0.727586
Tcrois	0.508311	3.938389
Ider	-1.000998	-7.070075
Terech	0.008464	0.506010

Source: Authors

The growth rate and FDI are the exogenous variables identified as best able to explain current account behavior, since they are significant in the long term at the 5% level. As for the terms of trade and the investment rate, they are statistically insignificant.

Results Interpretation

The estimated model shows that, in the short term, both the growth rate and the terms of trade have a positive impact on the current account. A 1% increase in both the growth rate and the terms of trade improves the current account by 0.32% and 0.06% respectively. The lack of statistical significance and the low coefficient of the terms of trade reveal a reality that deserves attention.

Given that in developing countries, it is customary to explain that unfavorable terms of trade are at the root of current account unsustainability. The results obtained from ARDL model show that the problem of current account sustainability it's quite the reverse of the terms of trade fluctuations alone.

Saying that, developing countries (in this case, the D.R. Congo) should reconsider the problem of current account sustainability.

FDI and investment rates have a negative influence on the current account. A 1% increase in these two variables worsens the current account by 0.08% and 0.10% respectively. An in-depth analysis of the influence of FDI on the current account reveals a complex reality. So, three phases of effects emerge from the estimates. In the first and last phases, the impact of FDI is negative. While in the second phase, FDI has a positive influence on the current account. On the other hand, we would have to wait at least one year before expecting FDI to have a positive impact on the current account.

In the long term, the effects of growth and the terms of trade remain positive, but in different proportions. And the effects of growth on the current account become greater than in the short term. A 1% increase in real GDP growth translates into a 0.51% improvement in the current account. In the long term, the terms of trade become less important. A 1% rise in the terms of trade improves the current account by 0.01%.

FDI and the investment rate have a negative impact on the current account in the long term. A 1% increase in FDI inflows and in the investment, rate translates into a 1% and 0.03% deterioration in the current account respectively. FDI is the most important

determinant of current account behavior. As the figure below shows, periods of strong FDI inflows are correlated with current account deficits. This is due to the large share of investment income in the current account capital repatriation. This share is estimated, in absolute terms, at 6.6% of GDP on average over the study period. In an uncertain environment such as that prevailing in the DRC, investors amortize their capital over a relatively short period of time in order to protect themselves against the volatility of the political and economic environment. This finding corroborates a World Bank Group study on the DRC.
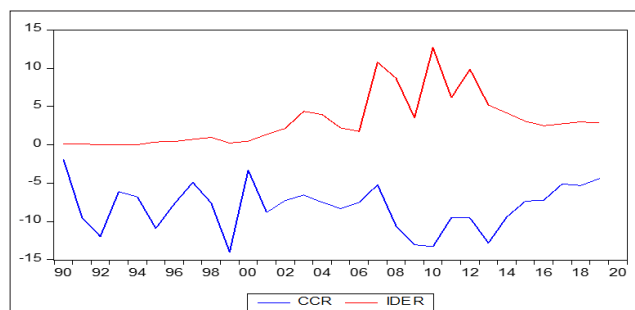

Figure 1: Foreign Direct Investment and Current Account Ratios (as% of GDP)
Source: Authors

It may seem paradoxical that the results show that the coefficient of the investment rate is insignificant while of FDI, which is a component of investment, is significant and has an influence on the current account balance. These results are explained in the next sections.

Insensitivity of the Current Account to The Rate of Investment: A Question of Quality and Competitiveness

The insignificance of the coefficient associated with the investment rate can be explained by several factors. Basically, the investment rate captures all recorded expenditure on domestic fixed capital formation and changes in inventories, by both the public and private sectors. One aspect that should be considered is the nature and quality of the investments made. In the DRC, as in other African countries, the public investment accounts for a very big chunk of the total and has no link with the current account.

In the public sector, we could mention public buildings constructed to house public administration, memorial monuments, the acquisition and rehabilitation of small-scale transport infrastructures with no knock-on effect on export sectors, etc. As for investment projects, these have no link with the current account. As far as investment projects are concerned, they are riddled with corruption, in this way some expenditure actually incurred and accounted for (and included in the calculation of the investment rate) does not reach the projects for which it was disbursed. As a result, an increase in the rate of investment is unlikely to have a significant impact on the current account.

While in the private sector, investment is not necessarily channeled into sectors with a direct link to the current account. Since 2002, growth has picked up again, with an average rate of 5.7%. However, the timid upturn in industrial activity has not yet been accompanied by the gains in competitiveness needed to face up to international competition, create an international market for DRC goods and improve its current account. Therefore, business investment has yet to be translated into the production of goods that can be traded internationally, and thus improve the current account.

Especially when it comes to services (transport, financial services, tourism, education, healthcare, etc.), there are virtually no companies investing in the development of a competitive offer capable of attracting international demand, in order to improve the current account. Investment expenses made by all the above-mentioned companies are accounted for in the investment rate, whereas the resulting output is not necessarily linked to the current account.

The Impact of Foreign Direct Investment (FDI) on the Current Account: The Controversy

The estimations showed that FDI was the crucial variable in explaining the behavior of the current account. This result can be explained by the fact that FDI in the DRC, as in most developing countries, is generally business-driven and is to a large extent directed towards the natural resource production and export sectors, which are linked to the current account. Although, the results also revealed that the nature of this influence was complex. Overall, the influence was negative, but was manifested in two phases.

So, some empirical studies show that the expected gains from FDI can be quite relative. For instance, emphasize the role of the macroeconomic and institutional environment, which is reflected in the absorptive capacity of host countries to grow and exploit foreign direct investment efficiently [10]. As for, he highlights the negative impacts of FDI that can be observed, notably through the repatriation of capital [11]. Point out that FDI, in the form of foreign savings, leads to an increase in consumption [12]. This implies borrowing to consume rather than to invest. They therefore have a negative impact on the current account balance.

In DR Congo case, foreign direct investment (FDI) has a negative impact on the current account through the repatriation of capital (investment income), which deteriorates the current account balance. As noted above, this situation is partly explained by the orientation of FDI, mainly in the natural resources production sector (mining, hydrocarbons, and gas). In its 2015 report on the DRC's economic and financial situation, the World Bank points out that industrial mining is capital-intensive, and most of the induced revenues are transferred abroad to remunerate investors, most of whom are non-residents [13-19].

These net income transfers contribute to maintaining a high negative current account balance and low levels of foreign currency reserves. In addition, the major mining companies, thanks to their negotiating power and mastery of comparative regulatory issues, are developing sophisticated mechanisms that facilitate the outflow of illicit financial flows, which the Congolese administration is barely able to detect. It was this observation that pushed the Congolese government to revise its mining code in 2018. One can note this feeling of regret in the Congolese government's explanatory statement: "...the boom in the mining sector, which is supposed to bring in substantial revenues for the State's economic and social development, has failed to meet these expectations..."

Impact of GDP Growth and Terms of Trade on The Current Account

Alongside FDI, the rate of real GDP growth is the other key variable in explaining the current account. The growth rate influences the behavior of the current account balance via the increase in exports, mainly of raw materials such as copper, cobalt, etc. Since the launch of the stabilization and recovery programs initiated by the Congolese government, the production of minerals,

export-oriented, has grown considerably-as shown by the figure 2 -with a consequent improvement in the DRC's current account.
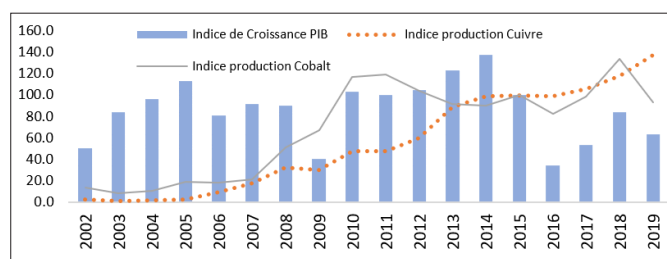

Figure 2: Indices of GDP Growth, Copper and Cobalt Production in the DRC
Source: Authors (based on data published by BCC).

In times of global economic boom, the rise in commodity prices, driven by strong international demand, boosts exports (mainly commodities) and accelerates the DRC's economic growth. The result is an improvement in the current account, which benefits the DRC, particularly in terms of taxation and accumulation of international reserves. This relative advantage is a real boon for the country. But in times of global economic downturn or crisis, the Congolese economy succumbs to external forces [20-25].

The negative effects of external shocks on the economy are often exacerbated by behavioral patterns developed during commodity booms. Unlike Asian oil-producing countries, which channel the windfall from soaring oil prices into infrastructure and development financing, African countries increase unproductive spending (public consumption, construction of white elephants) during a commodity boom. If the boom lasts longer, this behavior becomes institutionalized. In the event of an external or internal shock, a ratchet effect occurs, making macroeconomic adjustment difficult. This accelerates the economy's entering into choppy waters.

Concerning the terms of trade, the insignificance and weakness of the coefficient associated with (0.01) shows that the latter is not a major determinant of the DRC's current account vulnerability. So, the unsustainability of the D.R. Congo's current account is attributed primarily to the poor quality of public policies and the misallocation of investments, particularly in foreign direct investment (FDI). These two factors prevent the development of sectors capable of generating diversified, internationally competitive growth, which could improve the DRC's current account position [26-31].

Inertial Vulnerabilities off the D.R. Congo's Balance of Payments: Clouded Outlook for Sustainability
The evolution of the current account is considered sustainable when its deficit is covered by sustainable capital inflows, without resorting to drastic measures such as the depletion of foreign exchange reserves or the accumulation of arrears on foreign debt payments. It follows that an assessment of the sustainability of the current account can only be made by carrying out a global analysis of the balance of payments.

The analysis of the D.R. Congo's balance of payments shows the persistence, for decades, of various vulnerabilities which are becoming increasingly accentuated and institutionalized. This situation is not likely to facilitate adjustment in case of a major external or internal shock. It should be emphasized that the balance of payments reflects the domestic economy. Thus, structural weaknesses in the economy have a direct impact on the balance of payments. So, profound vulnerabilities introduce intricacies into the journey towards sustainability.

Let's consider the balance of payments of the D.R. Congo. A long-term analysis reveals, for example, that the current account consistently exhibits a deficit throughout the entire study period (30 years), with an average level of current deficit standing at 8.1%. During certain years, this deficit could reach concerning proportions, regardless of whether or not the economic conditions are cloudy.

As an example, during the 1990s, which can be described as the DRC's economic and financial Bermuda Triangle, the current account deficit reached significant depths (-12.0% in 1992; -10.9% in 1995; -14.0% in 1999). Basically, during the boom period of 2002-2019, when the DRC's economy experienced its longest growth cycle, in a context of relative monetary stability, notable improvements should be observed, which would suggest the possibility of achieving sustainability. Quite the reverse took place since the current account has continued to record significant deficits, similar in scale to those of the 1990s (-10.6% in 2008, -13.0% in 2009; -13.3% 2010; -12.8% in 2013) [32-34].

By breaking down the current account deficit and conducting a long-term analysis of its components, three main periods emerge:

The first of these is the 1990-1994 period. During these years, the current account deficit is essentially attributable to recurrent deficits in the balance of services. These are explained by the accelerated disappearance of the domestic supply of services in the wake of the long and severe political and economic crisis, accentuated by looting and other popular demonstrations (dead city days, frequent general strikes by various bodies). This crisis led to widespread destruction of production equipment and massive disinvestment.

In this context, many companies in the service sector (transport, travel, banking, insurance, tourism, and other financial and non-financial business services) closed down or went bankrupt. In order to satisfy the domestic needs of various resident sectors, it was imperative that a substitute supply of services (massive recourse to service imports), provided by non-residents, and filled the domestic gap. This situation explains the deterioration in the services balance, which is the main factor behind the current account deficit.

The second period is 1995-2002. These eight years are characterized by the fact that the current account deficit is mainly influenced by the primary income balance. The excessive macroeconomic and political volatility of this period (institutionalization of hyperinflation, wars, disintegration of the monetary and political space), having amplified uncertainty about the future, resulted in increased repatriation of income (dividends and salaries). In an environment marked by a deterioration in the services account balance, the influence of the primary income deficit on the current account deficit has become predominant.

The last one is he period 2003-2019. It is characterized by far-reaching reforms aimed at stabilizing the currency and revitalizing economic activity. This was the second and longest golden age of the Congolese economy (over 15 years of interrupted growth)-marked by significant capital inflows, particularly in the natural resources sector, the creation of numerous new businesses, the intensification of trade and financial transactions with other countries, and the expansion of migratory flows.

All these activities require the use of a chunk of services. However, in view of the weak development of the domestic supply of those services (transport, travel, telecommunications, insurance and other financial and non-financial business services), residents are forced to make massive recourse to imports of services from non-residents. As a result, the balance of services deficit has widened, once again becoming the account with the greatest influence in determining the current account deficit of the balance of payments.

A Structural Need for Financing
It is important to note that, over the long term, the level of the capital account balance has gradually improved, as a result of capital transfers from foreign public administrations. The substantial financial support received by the country is the consequence of the resumption, since 2001, of economic and financial cooperation between the DRC and its main bilateral and multilateral partners.

Analyzing the respective behaviors of the current account and the capital account, in the long term, the D.R. Congo displays a structural financing need. The latter is on a rising trend. Before the reforms launched in 2001 by the government and the Central Bank of Congo, this need was covered by the central bank's foreign reserve. The consequence was a depletion of D.R. Congo's international reserves and a currency crisis of unprecedented scale.

New Inflows of FDI: the Lifesaver for the Current Account
Since January 2001, the DRC government has implemented a number of economic and financial reform programs. Combined with a number of favorable external factors (good international economic conditions, resumption of international and regional partnerships, external debt relief), these actions have improved the country's economic outlook and environment.

These advancements have played a pivotal role in driving a substantial flow of capital, predominantly through foreign direct investment. A significant portion of this capital has been absorbed by the mining sector.
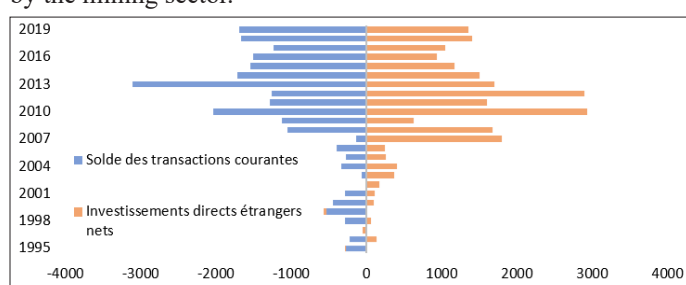

Figure 3: Current Account and Net Foreign Direct Investment Flows to the DRC (In Millions of USD)
Source: Authors (based on data published by BCC).

Figure 3 shows that, since 2002, net FDI flows have gradually begun to cover the structural current account deficits in the balance of payments. FDI represented, on average, 4.1% of GDP between 2002 and 2019.

Overall, the DRC government has no longer resorted to exceptional financing measures to cover the current account deficit. In fact, for several years now, the reserve assets of the Central Bank of Congo have only been utilized on a temporary basis, particularly during periods of strong exchange rate instability induced by exogenous shocks (2008 financial crisis; 2016 commodity crisis; covid-19 choc) or endogenous shocks (macroeconomic impact of the 2006 electoral shock).

Moreover, the level of the "errors and omissions" category, also known as the "black hole" of the balance of payments, which was low in the 90s, has become much higher. This situation, which is reflected in significant differences between the financing requirements of the current and capital accounts, and those of the financial account, can affect the quality of balance of payments analyses. The increase in the "errors and omissions" line stems from the weaknesses of the DRC's statistical system, as well as from the proliferation of illegal transactions in the export and import of goods and services, and in the transfer of funds. The increase in the number of illegal ports and the vast illegal cross-border traffic means that the administrations responsible for collecting foreign trade statistics (Direction Générale des Douanes et Accises, Banque Centrale du Congo) are unable to accurately collect trade and financial flows with the rest of the world.

Conclusion and Outlook
According to the intertemporal current account approach, countries with current account deficits today, such as the DRC, would turn into net surplus countries in the long term if they increased their investments. The current account deficit, which can be experienced in the short and medium term, would help to improve intertemporal solvency due to the positive impacts expected from investments made today. The surplus export capacity created by these investments would ensure debt servicing in the future.

In line with this analysis, the return of sustainable growth in the DRC, the increasing openness of its economy and the rise in investment, particularly FDI, is expected to result in a substantial improvement in its balance of payments and a return to a sustainable path.

Thus, this paper aims at analyzing the conclusions of the intertemporal approach to the DRC's balance of payments and to examine the sustainability of its current account. It uses an ARDL model to analyze the short- and long-term effects of the investment rate, foreign direct investment growth rate and terms of trade on the current account balance. The results show that, in both the short and long term, the current account is more sensitive to the behavior of economic growth and foreign direct investment. These two indicators are the main variables explaining the current account in the long term.

Conversely to the intertemporal approach to the current account, the accumulated current account deficits of the DRC have not ensured the country's intertemporal solvency.

The inflow of foreign direct investment, mainly in the mining sector, although leading to the DRC's longest growth cycle (at least 15 years of uninterrupted real GDP growth), did not give a push to the structural transformation of the economy. It has not led to diversification of the production base, especially the emergence of a competitive production on the worldwide market, capable of leading, in the long term, to a reduction in the current account deficit. The country continues to borrow to pay off old debts and to consume (high food import bills).

The low quality of investment, particularly by the government (unproductive investment, poor infrastructure build-up), does not facilitate the expansion of industrial and commercial activities in the DRC. The country finds itself ensnared in its structural vulnerabilities, impeding the ability to steer the economy towards sustainability. This situation explains the persistence of significant long-term current account deficits, with -8% on average between

1990 and 2019, despite the long growth cycle and an FDI inflows in the extractive industries.

In addition, periods of high FDI inflows are associated with periods of significant current account deterioration. This situation reflects the fact that a significant share of the growth gains in private and public incomes, stemming from capital inflows, are redirected to spending on goods and services purchased abroad. The low competitiveness of home-produced goods and services has paved the way for the development of a consumption model based on imported goods and services (which are more competitive in terms of quality and price). These rigid behavioral patterns are a drag on current account adjustment.

Thus, in the long term, the DRC's current account balance is unsustainable. Current deficits do not profit the DRC over the long term, contrary to what the intertemporal approach predicts. Came to the same conclusion when they tried to perform a test of the intertemporal approach on a sample of 12 sub- Saharan African countries. The vast majority of African economies are characterized by similar structural vulnerabilities-lack (and/or poor quality) of critical infrastructures, reliance on raw materials which are exposed to swings of prices, weak governance, weak education system, etc. Tackling the structural weaknesses of these economies in an ordered fashion would therefore appear to be the key to placing the balance of payments on a sustainable path. As long as governments fail to implement credible structural transformation strategies, notably in the areas of industrial development, infrastructure and education, the deficits that are so characteristic of the current account in the short term will not bring the expected gains in the medium and long term, as postulated by the intertemporal approach of the balance of payments.

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