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Title

The impact of the IMF recommendations on macroeconomic variables in the Republic of Congo: 2022 Extended Credit facility case

Author: Eliade Kibangoud Mboundou

Thesis Director: Joseph Flavian Gomes

Academic Year 2022-2023

Master's in economics – 60 credits

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Acknowledgements

I would like to express my first gratitude to my supervisor, Joseph Flavian Gomes, without whom this thesis would not have been possible. A CEPR Research Affiliate and Assistant Professor of Economics at the Economics School of Louvain and the Institute of Economic and Social Research (IRES) at the University of Louvain. Mr. Gomes guided me throughout this project from the beginning to the end and has never ceased giving feedback and guidance when necessary. He has helped me find out the topic that fits my interest best and that I am passionate about. He has always made himself available for meetings to explain how things should work for my thesis to have a good essence. Another person who has been of tremendous help is Mrs. Jing-Rong (Rosa) Zeng, an economics graduate (PhD) student of UCLouvain who focuses on development economics. She also works under the supervision of Mr. Gomes and has been put in touch with me to fill out the gap for quicker feedback when Mr. Gomes is not available. Mrs. Rosa has done more than that; she has always suggested precise articles and publications to me for reading so that I could understand a specific concept or things related to my thesis. Furthermore, Mrs. Rosa provided me with the right packages that could be needed to properly make my event study in RStudio. Before ending, I would like to thank the group of friends and classmates, who made themselves available as readers of my thesis all along while providing me feedbacks which helped improve my writings and get rid of some typing mistakes that I did not see or notice at first. I would also like to thank my family and my wife Vanille Van Groeningen who supported me, encouraged me, and offered deep insight into my study.

To end, I would like to express all my deep appreciation to the Economic School of Louvain and particularly to Solange du Jardin (Student Secretariat - master's in economics) and Geraldine Carette (Administrative Manager of Economics School of Louvain) who have been so helpful and responsive, when necessary, from day one until the end of my studies of this Master 60 in economics at UCLouvain.

Abstract

This paper examines the impact of the extended credit facility program of the IMF on Macroeconomic variables and ends up with a discussion on the current extended credit facility agreement between the IMF and the Republic of Congo to tell if the ECF can boost growth and stabilize the protracted balance of payments problems of the Republic of Congo.

The international monetary fund has different loan programs to help countries to fight against protracted economic issues and financial crises, maintain economic stability and sustainable balance of payment.

Mainly abbreviated as ECF, the Extended Credit Facility program of the International Monetary Fund is a form of financial aid meant to provide medium-term support to low-income countries experiencing external or fiscal imbalances. The program is applied under the supervision of the IMF which can at any time decide to halt, update, or totally change the program if the conditions are not properly applied. The benefits and appeal of the program are due to its 0% interest rate, 5^{1/2} year grace period, and 10-year final maturity.

There has been a lot of back and forth over the years about whether the program accomplishes its objectives or not. As a result, there has been a surge in research into quantifying how the ECF initiative affects macroeconomic variables.

To evaluate the effectiveness of the ECF program on important macroeconomic variables we found it accurate to use GDP, Inflation rate, and the Unemployment rate as dependent variables for our panel data analysis. Thus, we considered an observation period of 26 years; from 1995 to 2021; to see how those variables have behaved over time; we have decided, through Stata, to run some fixed effects models with amount agreed, GDP and other macroeconomic variables of interest as dependents variables and see if there is a correlation between the amount agreed of the ECF and those variables in countries the program has been applied. The econometrics model used is based on panel data built with sample data of 118 countries, all members of the IMF. For our analysis, we used 3 models; All the three models are control for year and country effect. Model-1 and model-2 investigate the association between the amount agreed of the loan (ECF) program, GDP, and inflation rate. Model-1 indicates that GDP and the amount agreed between IMF and member countries are inversely associated, while model-2 indicates that inflation and the amount agreed of the extended credit facility (ECF) move in a similar direction. Unemployment is a major macroeconomic challenge that can be caused by domestic or global factors. Model-3 estimates indicate that the IMF extended credit facility (ECF) tends to enhance the unemployment rate. The empirical result shows that the relative association of the agreed amount of the loan (ECF) has a negative relationship with economic growth. Thus, we think that policymakers must adopt alternative

policies to boost economic growth, curb inflation and unemployment rates, and solve their protracted balance of payment issues.

Furthermore, in the discussion part of this research which is about our opinion of the current ECF agreement between the IMF and the Republic of Congo, we tried to predict through a different analysis and methodology using the same panel dataset, if the program is going to boost the economy of the republic of Congo and decrease the unemployment rates; Thus, we decided to run a second analysis, through R this time.

The empirical result of the study in the discussion part shows that the two variables; amount agreed, and program treatment have different conclusion regarding the extended credit facility. The amount agreed between IMF and member countries suggests that an increase of amount agreed in thousand SDRs tends to increase GDP by a very small margin of 0.0000385. On the other side, program treatment dummy indicates that countries which did not receive loan from the IMF under the extended credit facility could grow 0.289 percent faster than those countries which received the loan under the ECF. Thus, it might be appropriate to consider that a support to the balance of payment through IMF bailout might hurt the economy rather than enhancing growth.

After controlling the amount agreed and program treatment, we noticed that unemployment rate and inflation rate are the key factors that influence the economic growth of a country. The coefficient on unemployment rate has same sign as expected and thus concluded that in case of downward pressure on the balance of payment that led to the extended credit facility agreement between the IMF and member countries, special attention must be given to curb the unemployment rate in the economy.

We provided new evidence that extended credit facility program from the IMF is not the right solution to solve the protracted balance of payment issues and economic crisis if the matter is analyzed by how GDP fluctuates from the amount agreed. Furthermore, after the implementation of the program, most countries tend to become dependent on the same program by contracting loan again and again through the ECF program; a repetitive move showing that the result of previous program applied have not fully been reached.

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1. Introduction:

Throughout the years, we have been hearing the IMF intervention program does not help countries to develop or recover from economic turmoil. In the contrary, it deepens countries into debts which just make the economy more vulnerable. However, governments and many countries, in Africa particularly, have never ceased requesting IMF intervention when facing economic crisis. My interest is to investigate the impact of the IMF extended credit facility on macroeconomics variables, to see analytically the impact of the ECF on the economic variables of countries where it has already been applied in general, and then tell or predict the impact the 2022 extended credit facility (ECF) agreement between the IMF and the Republic of Congo could have on macroeconomics variables (GDP, Unemployment rate, Inflation rate, Government debt, ...) of the Republic of Congo.

I am from the Republic of Congo and since I left my country when I was 18 years old (right after I graduated from high school), one of the biggest economic events has always been the IMF intervention role in general and the extended credit facility program particularly which even made certain politicians make promises of better economic and living standard in the country in case the country could get a loan from the IMF (The ECF in this case). Thus, in people's minds, and in mine as well during my teenage years, the IMF intervention had become the last option, not to say the best option for the country to solve financial crises and boost development. Many years ago, till now, this has always triggered my curiosity which conducted me into reading economic and financial books, learning about financial institutions (The IMF, the WTO, and The WB mostly) and now choose this topic as a topic of research for my thesis to find out some answers and run an applied analysis of the IMF extended credit facility program.

This paper examines the effects the IMF loan had on macroeconomic indicators of the recipient countries to determine whether there is a connection between the approved loan amount and those variables. The 118-nation panel data sample used in the study includes both treated and untreated nations. Treated nations are nations which benefited from a loan from the IMF through the extended credit facility agreement, and the untreated or non-treated nations are those which did not get a loan from the IMF through the extended credit facility program. The study's 26-year time span runs from 1995 to 2021. The research compares the variation of the selected variables in treated nations to determine the effectiveness of the ECF program. By doing so, we would evaluate the possibility that the present IMF-Republic of the Congo Extended Credit Facility agreement would encourage growth and address the country's balance of payments issues.

An econometric model through Stata and RStudio was used to assess the selected variables and their reaction from the ECF program. The findings of this study will enable us to comprehend the role played by the International Monetary Fund and the ECF program in averting and resolving global economic and financial crises.

Far from only seeking answers about the ECF, as an economist student, my mission is to contribute to economic research and analysis related to IMF intervention in one side and make an empirical analysis available for the use of financial institutions, governments, and any individual or entities interested to have a clear framework analysis from the impact of the IMF extended credit facility on macroeconomic variables. The last and not the least goal out of this writing, is to bring my part of intellectual contribution in the economic & finance literature world to make available more analytical papers related to my country.

2. Background

2.1 Knowledge of the Country (The Republic of Congo)

The Republic of Congo is a country located in Central Africa situated astride the equator. It is well known as Congo Brazzaville; “Brazzaville” which is its capital. The country is mainly called Congo Brazzaville to make a difference and avoid confusion with the other Congo (The Democratic Republic of Congo) well known as Congo Kinshasa which has Kinshasa as its capital.



More than half of Congo's people live in metropolitan regions, making the entire nation sparsely populated. The capital, Brazzaville, which is situated in the southeast of the nation is a significant inland port on the Congo River and the city with the most population.

Congo's neighboring countries are Cameroon (to the northwest), the Central African Republic (to the north), the Democratic Republic of the Congo (to the east and south), the Angolan exclave of Cabinda (to the southwest), and Gabon to the west. The nation also has a 100-mile (160-km) long Atlantic Ocean coastline south of its border with Gabon.

Climate of the Republic of the Congo

The nation experiences a tropical climate, which is characterized by scorching temperatures, frequent downpours, and excessive humidity. Just to the north of Liranga, the Equator traverses the nation. A dry season lasts from November through March and a rainy season from April through October in the north, whilst the opposite is true in the south. Yet, there are regional climates with two dry and two rainy seasons on both sides of the equator.

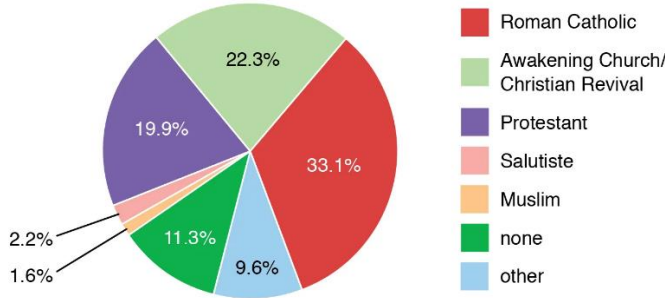
Languages

All the indigenous peoples speak Bantu languages, aside from the Pygmies and the groups in the northeast who speak Adamawa-Ubangi. Lingala and Kituba, two trade languages, which were

developed through intergroup commerce and communication. In northern Brazzaville, Lingala is widely spoken, and between the capital and the coastal city (Pointe-Noire), Kituba is mostly spoken. The official language, the language teaching in schools and used in the administration is French.

Religion of the Republic of the Congo

Religious affiliation (2010)



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Christians make up almost three-fourths of the population. Roman Catholics make up around one-third of all Christians in the nation. The Evangelical Church of the Congo has members who belong to the Protestant community. There are independent churches in Africa as well; the largest independent church in Africa, the Kimbanguism, is a part of the World Council of Churches. The Matsouana Church and the Bougiste Church are two further autonomous churches. Most of the modest Muslim population in Brazzaville or Pointe-Noire are foreigners.

Demographic trends

The largest cities are Pointe-Noire on the Atlantic coast and Brazzaville. Like many African nations, Congo has a young, rapidly expanding population: two-fifths of the population is under 15 years old, and the birth rate is among the highest in the world. Nonetheless, the nation was a member of the low-fertility belt in the early 20th century, which ran from Gabon to Uganda and was home to several communities that had little or no population growth. Before 1950, life expectancy there was among the lowest on the continent. Nevertheless, it rapidly increased in the second half of the 20th century, and by the early 2000s, it had surpassed sub-Saharan Africa's average.

A significant demographic trend for a long time has been urban in-migration. African immigrants were drawn to the new colonial cities throughout the colonial era, particularly Brazzaville. With almost two-thirds of the population living in urban areas, Congo has since become one of the most urbanized nations in sub-Saharan Africa. Conflict patterns in the local area and neighboring countries have also been connected to demographic dynamics. The civil war in the late 1990s is said to have uprooted more than one-third of the population; many people started moving back home around

2000. Moreover, refugees fleeing war in nearby nations have sought asylum in Congo, most notably the Democratic Republic of the Congo but also Rwanda, Angola, and other places.

Constitutional framework

According to its 2015 constitution, Congo is a republic. The president, who is popularly elected to a maximum of two five-year terms and who simultaneously acts as chief of state and head of government, oversees the executive arm of the government. The Council of Ministers is chosen by the president. The National Assembly and the Senate make up the bicameral legislative branch; their members are chosen to serve terms of six and five years, respectively.

Local government

Congo is divided into districts and regions for administrative reasons. Since Pointe-Noire hosts most of the country's oil output, it is regarded as the economic capital while Brazzaville has the status of a capital district or political capital holding most of diplomatic representation offices and major government offices.

Justice of the Republic of the Congo

The Supreme Court, Courts of Appeal, and Constitutional Court make up Congo's judicial system. A Superior Council of Magistrates, which the president chairs, makes recommendations for Supreme Court nominees. Judges of the Supreme Court cannot be dismissed.

Economic features

Currency	Central African CFA France (XOF)	Economic Regime	Fixed exchange rates
GDP	13.37Billion USD (2021)	Economic classification	Lower-middle income economy; considered as a developing or emerging country
GDP per capita	2 290.38 USD (2021)	Population	5 244 363 (Data from 2018)
Unemployment rate	23.01% (2021)	Main exports partners	UAE (\$1.75B), China (\$1.12B), Greece (\$531M), Vietnam (\$521M), and Italy (\$376M)
Public debt to GDP	85% (2021)	Main imports partners	China (\$661M), France (\$300M), Belgium (\$158M), India (\$151M), and United Arab Emirates (\$137M)

2.2 Knowledge of the International Monetary Fund

<p>What is the IMF</p> <p>The International Monetary Fund (IMF) is a significant United Nations financial agency and an international financial organization with 190 member nations and headquarters in Washington, D.C. Its stated objectives are to support international monetary cooperation, ensure financial stability, facilitate international trade, support high employment, sustained economic growth, and reduce poverty on a worldwide scale. It was established in 1944 and officially began on December 27, 1945, during the Bretton Woods Conference, largely because of the theories of Harry Dexter White and John Maynard Keynes. Its aim was to rebuild the global monetary system, and it had 29 member nations at the time. It now greatly influences how global financial crises and balance of payments problems are handled. With a quota system, nations contribute money to a pool from which nations with balance of payments issues can borrow money. The IMF currently has roughly SDR 977 billion in total resources and approximately SDR 713 billion (nearly US\$1 trillion) in loan capacity. The IMF is considered as the last-resort lender of nations.</p>	<p>How is the IMF financed?</p> <p>Member quotas, bilateral borrowing agreements, and multilateral borrowing agreements make up the IMF's three funding sources.</p> <p>Most of the IMF's funding comes from the financial contribution that nations provide as quotas or capital subscriptions when they join. Each IMF member is allocated a quota that is largely determined by how important they are to the global economy. Nations can borrow from this pool when they are having financial problems.</p> <p>Around 6% of quota shares are transferred from overrepresented to underrepresented members, as well as to dynamic emerging market economies and developing nations.</p> <p>The Special Drawing Rights (SDRs), the IMF's unit of account, are used to measure quotas. As of April 30, 2016, the United States held the greatest IMF quota at SDR 83 billion (or \$118 billion), while Tuvalu held the smallest quota at SDR 2.5 million (or \$3.5 million).</p> <p>For the most recent SDR exchange rate, visit imf.org, the IMF's home website.</p>
<p>Assistance and Development</p> <p>Governments, including central banks, finance ministries, revenue administrations, and financial sector supervisory agencies, can get technical assistance and training from the IMF. The IMF's key areas of competence, which range from taxation through central bank operations to the reporting of macroeconomic statistics, are at the center of these capacity development activities. Additionally, such training aids nations in addressing universal problems like wealth inequality, gender equality, corruption, and climate change.</p>	<p>Lending goals</p> <p>The IMF offers loans, including emergency loans, to its members who are now experiencing or at risk of experiencing balance of payments issues. The objective is to assist them in replenishing their foreign reserves, stabilizing their currencies, continuing to pay for imports, and reestablishing the prerequisites for robust economic growth while addressing underlying issues.</p>
<p>How does the IMF support Low-income countries?</p> <p>The IMF provides financial and other support to low-income countries (LICs). The economic and financial policies of IMF members are regularly monitored by the organization's monitoring program. The main topics of discussion with national policymakers are how</p>	<p>What is the extended credit facility?</p> <p>The Extended Credit Facility (ECF) allows for the provision of financial aid to nations with ongoing balance of payments problems. As part of a larger reform to make the Fund's financial assistance more flexible and more targeted to the various needs of low-income countries (LICs),</p>

<p>their economic strategies affect stability and growth as well as the best course of action. The primary areas of focus in capacity building for LICs are frequently their capability to increase domestic revenue, manage public finances and monetary policy, govern their financial system, and develop statistical systems. IMF members can create sound policies, put them into action, and advance the UN Sustainable Development Goals by building capacity.</p>	<p>especially during times of crises, the ECF was established under the Poverty Reduction and Growth Trust (PRGT). The ECF is the Fund's main resource for providing medium-term assistance to LICs.</p>
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Conditionality of loans

IMF conditionality is a list of rules or specifications that the IMF asks for in exchange for financial support. The IMF does demand collateral from nations in exchange for loans, but it also expects the government to apply for help to implement policy changes to address its macroeconomic imbalances. The money is withheld if the requirements are not met. The concept of conditionality was first introduced in a 1952 executive board resolution and then incorporated into the Articles of Agreement.

Conditionality is a technique for enforcing payback that has connections to economic theory. The "monetary approach to the balance of payments," which mostly arose from the work of Jacques Polak, served as the theoretical underpinning of conditionality.

Example of a loan program condition "Structural adjustment program"

For a possible structural adjustment program agreement with between a country and the IMF, some of the conditions could be:

- Austerity, also referred to as government spending reductions or revenue increases.
- focusing economic activity on resource extraction
- Currency depreciation
- The liberalization of trade, or the removal of import and export limitations,
- enhancing investment stability (by bolstering foreign direct investment with the opening of facilities for the domestic market)
- balancing budgets and avoiding overspending
- Eliminating state subsidies and pricing controls
- Privatization or selling all or a portion of state-owned businesses
- Strengthening foreign investors' rights in relation to national laws, enhancing governance, and combating corruption,

These conditions are well known in the financial world as the "Washington Consensus".

Benefits

These loan requirements guarantee that the borrower will be able to pay back the IMF and won't try to resolve their balance-of-payment issues in a way that would hurt the global economy. Conditions are used to lessen the incentive problem of moral hazard, which happens when economic agents maximize their own utility to the detriment of others because they do not bear the full consequences of their actions.

Additionally, conditionality guarantees the IMF that the nation will be able to address its structural and macroeconomic imbalances and that the funds given to them would be used for the purposes outlined in the Articles of Agreement. According to the IMF, if a member adopts specific remedial actions or policies, it will be able to pay back the IMF and ensure that there would be funds available to support other members.

As of 2004, borrowing nations had a solid history of paying back loans obtained under the IMF's standard lending facilities in full and on time. Given that lending, countries receive market-rate interest on most of their quota subscription, any own-currency subscriptions that the IMF loans out, and all the reserve assets they supply the IMF, this suggests that IMF lending does not place a burden on creditor countries.

2.3 Knowledge of the Extended Credit Facility

Low-income countries with persistent balance of payments issues can receive financial aid under the Extended Credit Facility (ECF). As part of a larger reform to make the Fund's financial assistance more adaptable and more adapted to the varied requirements of low-income countries (LICs), including during times of crisis, the ECF was established under the Poverty Reduction and Growth Trust (PRGT) program. The ECF is the Fund's primary resource for giving LICs medium-term support.

Purpose. The ECF supports national economic plans aiming at achieving macroeconomic stability and sustainability in line with robust and long-lasting poverty reduction and growth. The ECF might also act as a catalyst for more international aid.

Eligibility. Any PRGT-eligible member nations that experience a protracted balance of payments issue—that is, when the underlying macroeconomic imbalances are projected to take a while to resolve—can use the ECF.

Duration and repeated use. Support under an ECF arrangement is given for a minimum initial period of three years and a maximum overall period of five years. Further ECF arrangements may be approved after the expiration, cancellation, or termination of an ECF arrangement.

Access. Access to ECF financing is based on a case-by-case analysis that is guided by access norms and considers the country's need for balance of payments support, the strength of its economic plan and ability to pay back the fund, the amount of outstanding fund credit, the member's history of using fund credit, and the amount of outstanding fund credit.

The PRGT caps the total amount of outstanding concessional credit at 225 percent of quota and limits annual total access to concessional finance to 75 percent of quota. These restrictions may be breached in rare cases. If necessary, access can be expanded while a deal is in place.

Streamlined and focused conditionality. In accordance with the ECF, member nations commit to putting into practice a set of measures that will advance them toward a stable and sustainable macroeconomic position over the medium term. These commitments are fully described in the nation's letter of intent, along with any other conditions. The program conditionality for the IMF is condensed and concentrated on political measures that are essential to attaining the program's goals. Programs funded by the ECF should be based on the nation's own development strategy and work to protect societal goals. The first and subsequent program reviews may be conducted if there is a legitimate poverty reduction strategy document covering the review dates in question, thus loosening the requirements for related documentation.

Quantitative conditions. are used to track macroeconomic policy indicators that represent the nation's program goals, such as monetary aggregates, foreign reserves, fiscal balances, and external borrowing. Programs funded by the ECF seek to protect spending on social and other priorities, including when practical, by setting explicit quantitative goals.

Structural benchmarks. help in macro-critical reform monitoring to meet program objectives. Depending on the program, these benchmarks may for instance include actions to increase public financial management, expand social safety nets, or enhance financial operations in the banking sector.

Program reviews by the IMF Executive Board are essential for evaluating program performance and enabling the program to change in response to economic events. In the framework of reviews, the program's development is evaluated, particularly in comparison to quantitative criteria and structural standards. The interval between reviews is no more than six months.

Highly concessional lending terms. With a grace period of 5^{1/2} years, a final maturity of 10 years, and zero interest rates at least through the end of 2018, the ECF offers financing. PRGT interest rates will continue at zero for however long and whenever there are exceptionally low worldwide market rates, according to a revision of the process regulating interest rate setting for PRGT facilities that the Executive Board authorized on October 3, 2016. Every two years, the Fund examines the level of interest rates for concessional facilities under the PRGT.

3. Methodology, Results, and Interpretation

3.1 Data and Sources

The prime goal of this study is to empirically investigate the impact of the IMF extended credit facility (ECF) on macroeconomics variables; with Gross Domestic Product (GDP) considered as the main variable for the panel of 118 countries around the world. GDP, unemployment rate and inflation rate are taken as dependent variables in each separate model while the amount agreed which indicates that a country received a loan was taken as explanatory variables. The period of the study is 1995 to 2021. Data on key macroeconomic variables consolidated in this study were obtained from macrotrends.net. Data of the extended credit facility amount agreed, and program treatment were taken from the International Monetary Fund database. For countries economic classification the World Bank classification is used.

Table 1 report the description of data, data unit and source of data.

Table 1 Data source

Variable	Description	Unit	Source
GDP	GDP measure the output produce in the economy during a specific period.	\$US Billion	Macrotrends.net
Amount Agreed	The total amount received by a country during a specific period.	Thousan ds of SDRs	International Monetary Fund
Program Treatment	Dummy variables which take 1 when a country receive loan and 0 otherwise.	Dummy	International Monetary Fund
Inflation rate	A percentage change in general price level of a country.	Percenta ge	Macrotrends.net
Unemployment rate	A percentage change in the unemployment rate of a country.	Percenta ge	Macrotrends.net

Why did we choose these sources for?

The reason for our choice differs from each organization, but has one common point, which is: "credibility". Indeed, as we all know, the credibility of the data lies on the credibility of the institution or organization providing that data. The IMF is the

international monetary fund; an organization created after the World War II with the mission to oversee the international monetary system, to ensure exchange rate stability and encourage countries to open economically and drop-down restrictions or protectionism jeopardizing trade between its member countries and the rest of the world. Thus, its credibility is well recognized all over the world and its data are more than reliable for research work. In my panel data set, all the data related to the extended credit facilities (Treatment year, amount agreed, ...) are from the IMF.

The other reason I chose the IMF as source of data is because this research topic is about a loan program settled and run by the IMF only, thus the only reliable platform related to the ECF for data collection is the IMF. So, my understanding of the extended credit facility program comes mainly from numerous readings of documentation on the matter from the IMF.

As for the world Bank, its creation period is basically the same as that of the IMF but was created in its case, to fight against poverty and help the reconstruction of countries after the war. Though they had a different goal than that of the IMF, they all benefit from the same credibility globally; that of the most reliable and trustworthy financial organizations.

In the other hand, the World Bank data has mainly helped us concerning countries classification. In fact, in our data panel we divided into 4 all countries between economics group defined by the world bank:

Low-income economies (\$1,085 or less)

Lower-middle income economies (\$1,086 to \$4,255)

Upper-middle-Income economies (\$4,256 to \$13,205)

High-income economies (\$13,205 OR MORE).

As this paper is ending by a discussion which would basically be my opinion on the current extended credit facility program between the Republic of Congo and the IMF in terms of its impact on the macroeconomic variables. This classification also helps us to have a clearer view of everything and make a better analysis of what things are.

Furthermore, we have also used data from Macrotrends.net; Users can screen and explore equities, commodities, precious metals, oil, gas, and global metrics using Macrotrends' platform. The platform is specialized in gathering all sorts of data that could help for investment decision and set different metrics and graphs from all the data. The platform has existed since 2010 and is well settled to find Macroeconomic data of countries. In this research topic, all the data of macroeconomic variables (GDP, GDP per capita, unemployment rate, ...) are from Macrotrends.net.

To avoid the adjusted panel to be unbalanced or unsuitable for our estimation, we decided to use a panel dataset based on country level instead of income group.

So, what is panel data?

In econometrics, it is a collection of quantities or data obtained from multiple individual(variables) that are assembled over the same period and ordered chronologically. In this research topic, the study period is about 26 years (1995-2021); that is to say, the data of all variables collected for all the countries are within this specific period.

3.2 Empirical Models

The following functional forms, the equation (1) show the relationship between GDP and amount agreed, equation (2) shows the relationship between inflation and amount agreed and finally equation (3) exhibit the relationship between unemployment rate and amount agreed.

$$GDP_{it} = (Amount\ Agreed_{it})\dots\dots\dots (1)$$

$$INF_{it} = (Amount\ Agreed_{it})\dots\dots\dots (2)$$

$$UNEMP_{it} = (Amount\ Agreed_{it})\dots\dots\dots (3)$$

Where GDP measure the macroeconomic performance of a country i and at time t . $Amount\ Agreed_{it}$ shows the amount agreed between IMF and member country i and at time t . INF_{it} and $UNEMP_{it}$ is the inflation rate and unemployment rate in a country i and at time t .

The econometric form of the above equation is given below:

$$GDP_{it} = \alpha_0 + \alpha_1 Amount\ Agreed_{it} + \mu_{it}$$

$$INF_{it} = \beta_0 + \beta_1 Amount\ Agreed_{it} + \mu_{it}$$

$$UNEMP_{it} = \gamma_0 + \gamma_1 Amount\ Agreed_{it} + \mu_{it}$$

Where $\alpha_0, \alpha_1, \beta_0, \beta_1, \gamma_0, \gamma_1$ are unknown parameters that need to be estimated while μ_{it} is error term which include all those elements which might impact the GDP, Inflation and unemployment but were not taken into account in the above model.

3.3 Estimating Technics

The relevant economic literature that is now available demonstrates that three modeling methodologies—Pooled, Random Effect (RE), and Fixed Effect (FE) methodologies—remain used for panel data analysis. Assuming the slope coefficient constant and variable intercept across people or slope coefficient constant and varying intercept across persons and time is one strategy for dealing with the individual impact or time effect. This estimator is referred to as a Fixed Effect estimator. Thus, this study is intended to use the fixed effect model with time and country effect as year dummy and country dummy.

Results and Interpretations

3.4 Scatter Plot

Figure 1 (Annex 1) shows the scatter plot between GDP and amount agreed by program treatment. A program treatment takes the value of 0 when loan is not received and 1 when loan is received from IMF. The scatter plot between GDP and amount agreed shows that the GDP first increases with increase in amount received and then initiate to diminish in terms of loan received. In terms of loans not received, the GDP and amount agreed doesn't show any pattern.

Figure 2 (Annex 2) shows the scatter plot between inflation rate and amount agreed by program treatment. From this visualization we could see that there is a positive association between inflation rate and the amount agreed for countries which received a loan from the ECF program. For those which did not receive the loan (non-treated countries), the inflation rate and amount agreed doesn't show any trend.

Figure 3 (Annex 3) shows the relationship between unemployment rate and amount agreed. There exists a positive relationship between the unemployment rate and the amount agreed through the ECF program for treated countries while for non-treated countries the scatter plot shows that the unemployment rate is independent of ECF loan bailout program.

3.5 Summary Statistics

Table 2 reports the results of inferential statistics for each variable consolidated in this study. The total number of observations is 3185 while number of cross-sectional are 118 while time period (T) is 26. Gross Domestic Product measure in billion U.S dollars, inflation rate and unemployment rate are the key dependent variable variables in this study. The average GDP per country is 383.75 billion \$US. Where the highest GDP recorded is 23315.0 and minimum GDP recorded as 0.1418. Inflation is another key macroeconomic variable that oscillates output within the economy. The average inflation rate per country is 9.0618 percent where the highest inflation rate of 4145.1 percent is recorded. The unemployment rate is another key macroeconomic variable that alters growth. In increase in unemployment rate is negatively associated with GDP. Thus, GDP and unemployment rate move in opposite directions. The average unemployment rate per country is 7.7901 percent.

The amount agreed for Extended credit facility (ECF) is the prime independent or explanatory variable. It is the amount that IMF management and individual countries agree during financial crunch to support country's balance of payment and to boost economies during downturn. It is anticipated that both GDP and amount agreed with move together. The average amount agreed between IMF and

individual countries is 22592.4 thousand SDRs per country. The maximum amount granted is 1733051 thousand SDRs.

Table 2 Descriptive Statistics

Variable	N	Mean	Standard deviation	Minimum	Maximum
GDP	3185	383.7549	1528.56	0.1418534	23315.08
Amount Agreed	3183	22592.43	91671.51	0	1733051
Inflation rate	3171	9.061809	89.49631	-16.1173	4145.106
Unemployment rate	3186	7.790187	6.032049	0.14	38.8

3.6 Correlation Analysis

Table 3 reports the outcomes of correlation matrix for variables consolidated in this study. The first column of table 3 reports the pairwise correlation between response variable and explanatory variables. The outcomes in column-1 show the relationship between GDP and amount agreed. The sign of correlation coefficient is negative which indicates that Extended credit facility (ECF) tends to worsen economic performance of a country. Thus, any increase in the explanatory variable led to diminishing the GDP or output of a country.

column-2 of the table 3 shows the correlation between inflation rate and amount agreed under Extended credit facility (ECF). The sign of the correlation coefficient indicates that Extended credit facility (ECF) leads to an increase in inflation rate. Finally, the pairwise correlation between unemployment and amount agreed under Extended credit facility (ECF) indicate the Extended credit facility (ECF) leads to dwindle the unemployment rate in the economy. Summing-up, the outcomes of correlation coefficient indicate that IMF Extended credit facility tends to diminish economic growth and unemployment rate and upsurge inflation rate.

Table 3 Correlation Matrix

	GDP	Inflation rate	Unemployment rate
Amount Agreed	-0.0933	0.0267	-0.0709

3.7 Regression Analysis

Table 4 report the results of fixed effect model. The model incorporates both time effect and country effect in the model. Since the amount agreed is time invariant for some countries thus the country effect is omitted by the statistical application. All the three models are control for year and country

effect. Model-1 reports the outcomes of the fixed effect model when GDP is taken as response variable and amount agreed as explanatory variable. The total number of observations is 3182 in the model 1. The R-squared (within) indicates that 80.51 percent variation in the response variable is explained by the explanatory variable consolidated in the model-1. This goodness of fit of the regression is affirmed by the highly significant F-statistics which indicate the overall significance of the model-1.

Table 4 Regression Results

	Model-1	Model-2	Model-3
	DV=GDP	DV=Inflation Rate	DV=Unemployment rate
Amount Agreed	-1.14e-07 (6.45e-08) [-1.77]	0.00002 (0.00001) [1.47]	7.84e-08 (5.42e-07) [0.14]
Cons	2.6677* (0.0258) [103.38]	50.345* (7.9575) [6.33]	8.255* (0.2171) [38.01]
Year Effect	Yes	Yes	Yes
Country Effect	Yes	Yes	Yes
N	3182	3168	3183
Groups	118	118	118
R-Squared (within)	0.8051	0.0198	0.0469
F (27,3037)	464.69*	2.26*	5.53*

The coefficient on amount agreed has negative impact on the economic growth. Thus, any increase in the amount agreed for loan between IMF and members countries tends to decrease output. The coefficient on amount agreed is -1.14e-07 which indicates that an increase in thousands of SDR from IMF tends to diminish economic growth by -1.14e-07 billion \$US. However, the coefficient on amount agreed is statistically insignificant. The rest of the row shows the impact of time effect of the model. The time effect dummies are statistically significant which indicates that the amount agreed significantly varies across the time.

The model-2 reports the outcomes of fixed effect regression model when inflation rate is used as response variable and amount agreed as use as explanatory variable. The total number of observations in model-2 is 3168. The R-squared (within) indicates that 1.98 percent variation in the response variable, inflation rate is explained by the explanatory variable consolidated in model-2. The highly significant F-Statistic indicates the overall significance of the model. Thus, it is concluded that the model is well specified. The coefficient on the amount agreed shows that the extended credit facility and inflation rate moves in same direction. A thousand od SDRs increase in loan from IMF tends to increase the inflation rate by very small increase of 0.00002. However, the coefficient on amount

agreed on inflation rate is statistically insignificant. Thus, in terms of inflation it is concluded that inflation and extended credit facility of IMF moves in same direction.

The model-3 reports the outcomes of fixed effect model when unemployment is used as dependent variable and amount agreed as independent variable. Thus, the model-3 shows the association between unemployment rate and extended credit facility of IMF. The total number of observations from 118 cross-sectional countries is 3181. The coefficient on amount agreed with respect to unemployment rate shows that extended credit facility program and unemployment have positive association. Thus, any increase in the amount agreed between IMF and members countries tends to increase the unemployment rate. The coefficient on unemployment rate is $7.84e-08$ which indicates that a thousand increase in SDRS loan from IMF tends to increase the unemployment rate by $7.84e-08$ percent. However, the coefficient on amount agreed is statistically insignificant. Thus, both variables move together.

4. Conclusion

The prime objective of this study was to empirically investigate the impact of the IMF extended credit facility (ECF) on macroeconomics variable; Gross Domestic Product (GDP), inflation rate and unemployment rate. Data were obtained for 118 countries and for the period of 26 years starting from 1995 to 2021. For this analysis, we found it better to use the fixed effect model. The outcomes in table 4 disclose three different parts. In model-1 GDP is used as dependent variable. In model-2 and model-3, inflation rate and unemployment rate are used as dependent variables. The outcome of model-1 is the prime interest to this study due to the fact the GDP is one of the key macroeconomic variables that measure the overall performance of the economy.

The outcomes of model-1 indicate that GDP and amount agreed between IMF for loan to member countries are inversely associated with each other. Thus, the amount agreed between IMF and member countries has an adverse effect on the output of the economy. Policymakers must consider the adverse effect of IMF extended credit facility (ECF) between reaching out IMF for diminishing balance of payment imbalance. Another prime concern of macroeconomic is inflation. Worldwide inflation is considered as the prime factor that has a large impact on the livelihood of the masses. To investigate the association between IMF extended credit facility (ECF) program and inflation rate, model-2 is estimated. The outcomes model-2 indicate that inflation and IMF extended credit facility (ECF) moves in similar direction. An increase in the amount agreed between IMF and member countries, the inflation rate is enhanced around the world. Thus, globally, IMF extended credit facility (ECF) and inflation rate are positively associated.

The last most important macroeconomic challenge for economies throughout the world is the unemployment rate. Unemployment is considered one of the key factors that have a severe impact on the livelihood of the people. Unemployment can be caused by domestic factors such as a fall in output or global factors such as pressure on the balance of payment of country. To investigate the relationship between the unemployment rate and pressure on the balance of payment, model-3 is estimated. The outcomes of model-3 indicate that both unemployment rate and loan amount both the IMF and member country agreed are positively associated with each other. Thus, globally it is concluded that IMF extended credit facility (ECF) tends to enhance the unemployment rate.

Summing up, the empirical result of the study shows that relative association between the loan amount the member countries and IMF agreed have negative relationship with economic growth throughout the world. After this prime association between amount agreed and GDP, this study also investigates the relationship between amount agreed and inflation rate and amount agreed and

unemployment rate. The results unveil that both unemployment rate and inflation rate are positively enhanced by the IMF extended credit facility (ECF) program. Thus, policymakers must adopt alternative policies to boost economic growth, curb inflation and unemployment rate and control balance of payment mismanagement through IMF extended credit facility (ECF).

5. Discussion About the current agreement between the IMF and the Republic of Congo

As an economist student, we decided to start our discussion part by another empirical analysis to verify and counter argument the first analysis made above and found out if the current extended credit facility program between the republic of Congo and the IMF is going to boost the economy of the republic of Congo and the decrease the unemployment rates. Here, we have to mention that this agreement between the IMF and the Republic of Congo under the extended credit facility program is the first one, thus we could not rely on any previous empirical data between the IMF and the republic of Congo for this subject. So, we decided to rely on a previous agreement between the IMF and other member countries of the organization.

5.1 Data and Sources

The dataset used for the analysis of this discussion part is the same used in the main analysis part of the fixed model applied above. For this counter argument analysis part, GDP is taken as a dependent variable in the model while the amount agreed, program treatment (which indicates whether a country received a loan or not), unemployment rate and inflation rate were taken as explanatory variables (or independent variables). The period of the study remains the same, 26 years; from 1995 to 2021.

Table 1 report the description of data, data unit and source of data.

Table 1 Data source

Variable	Description	Unit	Source
GDP	GDP measure the output produce in the economy during a specific period.	\$US Billion	Macrotrends.net
Amount Agreed	The total amount received by a country during a specific period.	Thousan ds of SDRs	International Monetary Fund
Program Treatment	Dummy variables which take 1 when a country receive loan and 0 otherwise.	Dummy	International Monetary Fund
Inflation rate	A percentage change in general price level of a country.	Percenta ge	Macrotrends.net
	A percentage change in the unemployment rate of a country.	Percenta ge	Macrotrends.net

5.2 Empirical Model

The following functional form shows the relationship between GDP and amount agreed, program treatment, inflation rate and unemployment rate.

$$GDP_{it} = (Amount\ Agreed_{it}, Program\ Treatment_{it}, INF_{it}, UNEMP_{it})$$

Where GDP measure the macroeconomic performance of a country i and at time t . $Amount\ Agreed_{it}$ shows the amount agreed between IMF and member country i and at time t . $Program\ Treatment_{it}$ shows if a country i and at time t received loan or not. INF_{it} and $UNEMP_{it}$ is the inflation rate and unemployment rate in a country i and at time t .

The econometric form of the above equation is given below:

$$GDP_{it} = \alpha_0 + \alpha_1 Amount\ Agreed_{it} + \alpha_2 Program\ Treatment_{it} - \alpha_3 INF_{it} - \alpha_4 UNEMP_{it} + \mu_{it}$$

Where $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$ are unknown parameters while μ_{it} is error term which include all those elements which might impact the GDP but were not considered in the above model.

5.3 Estimating Techniques

The relevant economic literature that is now available demonstrates that three modeling methodologies—Pooled, Random Effect (RE), and Fixed Effect (FE) methodologies—remain used for panel data analysis. The Pooled Model is employed when it is assumed that the intercept and coefficient terms are both constant and that the error term encompasses all variation over time and individuals. According to the pooled model, "individual effect" is an explanatory variable that does not specifically depend on any one state trait.

Assuming the slope coefficient constant and variable intercept across people or slope coefficient constant and varying intercept across persons and time is one strategy for dealing with the individual impact or time effect. This estimator is referred to as a Fixed Effect estimator. By incorporating a hypothetically random individual specific intercept into the model, the Random Effect Model attempted to address the issue of the individual specific effect. REM is useful when individual effects are random and not connected to explanatory variables.

The sole distinction between the REM and the pooled model is that while the individual unobserved effects in the latter are present and pooled, those in the former are either random or unrelated to the explanatory variable. to choose between REM and FEM. It uses the Hausman test. Null Hypothesis, in contrast to H1, who claimed that random effects are inconsistent, Ho asserted that random effects are reliable and competent.

5.4 Scatter Plot

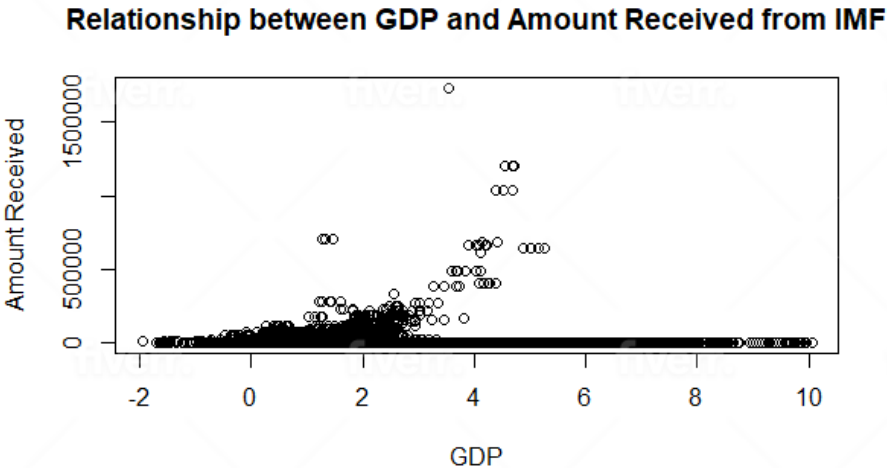
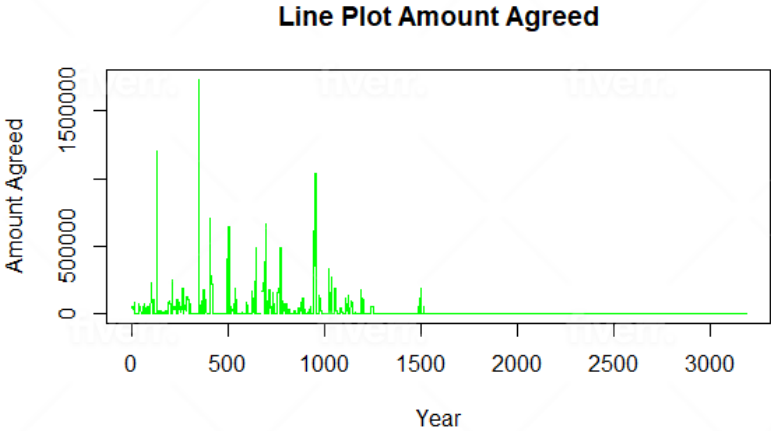


Figure 1 shows the association between GDP of the members countries and the amount agreed by the IMF and member countries. The relative association between the two variables shows a weak and positive bond and thus moves together with each other.

5.5 Line Plots



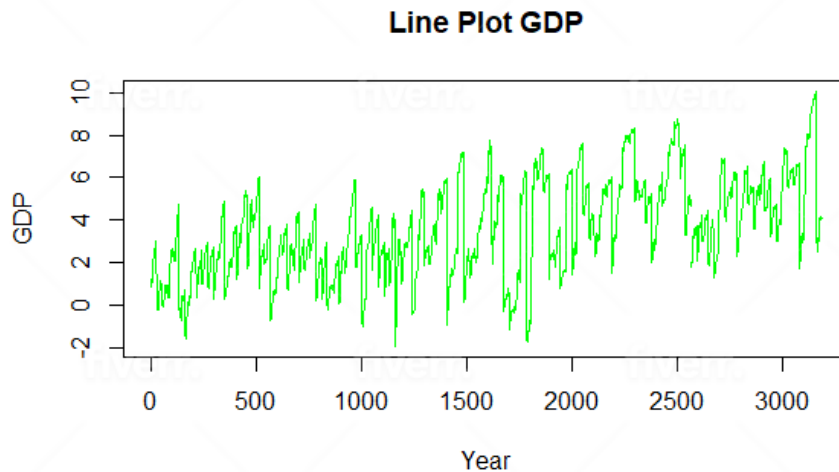


Figure 2 displays the line plot for amount agreed from the ECF and Gross Domestic Product (GDP), respectively. The first figure shows the line plot of amount agreed over time and cross-sectional. The plot shows that the IMF bailout tends to volatile during early period and then becomes smothered over time. The line plot for GDP shows that the GDP tends to grow over time and cross-sectional.

5.6 Summary Statistics

Table 2 reports the results of inferential statistics for each variable consolidated in this study. Gross Domestic Product measure in billion U.S dollars are the dependent variable. The total number of observations is 3185 while the number of cross-sectional are 118 while period (T) is 26. The average GDP per country is 383.75 billion \$US. Where the highest GDP recorded is 23315.0 and minimum GDP recorded as 0.1418.

The amount agreed for the Extended credit facility (ECF) is the prime independent or explanatory variable. It is the amount that IMF management and individual countries agree during financial crunch to support country's balance of payment and to boost economies during downturn. It is anticipated that both GDP and amount agreed with move together. The average amount agreed between IMF and individual countries is 22592.4 thousand SDRs per country. The maximum amount granted is 1733051 thousand SDRs.

Table 2 Descriptive Statistics

Variable	Mean	Minimum	Maximum
GDP	383.75	0.1418	23315.0
Amount Agreed	22592.4	0	1733051
Program Treatment	0.1817	0	1
Inflation rate	9.0618	-16.1173	4145.1
Unemployment rate	7.7901	0.14	38.8
N	3185		
n	118		
T	26.9		

Treatment program is dummy variable which takes the value of 1 when a country received credit from the IMF and 0 otherwise. Inflation is another key macroeconomic variable that oscillates output within the economy. The average inflation rate per country is 9.0618 percent where the highest inflation rate of 4145.1 percent is recorded. The unemployment rate is another key macroeconomic variable that alters growth. The increase in unemployment rate is negatively associated with GDP. Thus, GDP and unemployment rate move in opposite directions. The average unemployment rate per country is 7.7901 percent.

5.7 Correlation Analysis

Table 3 reports the outcomes of correlation matrix for variables consolidated in this study. The first column of table 3 reports the pairwise correlation between response variable and explanatory variables. The outcomes in column-1 show that GDP and all independent variables have negative associations. Thus, any increase in these explanatory variables tends to diminish the GDP or output of a country.

The rest of column shows the pairwise correlation between pair of variables. The prime significance of this is to check for possible multicollinearity between the explanatory variables. Since all pairwise correlations are less than 75 percent thus, we reject the possible presence of multicollinearity in the model.

Table 3 Correlation Matrix

	GDP	Amount Agreed	Program Treatment	Inflation rate	Unemployment rate
GDP	1				
Amount Agreed	-0.0933	1			

Program Treatment	-0.3929	0.5241	1		
Inflation rate	-0.0418	0.0267	-0.0036	1	
Unemployment rate	-0.0937	-0.0704	-0.1012	-0.0082	1

5.8 Hausman Test

Table 4 reports the results of the Hausman test between the random effect and fixed effect model. Since the model this study is implementing has dummy variable, thus random effect model is more appropriate.

This finding is also affirmed by the highly significant Hausman Test between random effect and fixed effect model.

Table 4 Hausman Test between Random Effect (RE) and Fixed Effect (FE)

Test of H0: Difference in coefficients not systematic	
chi2(28) = 710.294	Prob > chi2 = 0.000

5.9 Regression Analysis

Once it is established that random effect model is more appropriate, the next step is to carry out the empirical section of this study. Table 5 reports the results of random effect model. The model incorporates both time effect and cross-sectional effect and thus adjusted for both. The R-squared (overall) indicates that 19.046 percent variation in the response variable is explained by the explanatory variables consolidated in this study. This goodness of fit of the regression is affirmed by the highly significant Chi2 test which indicates the overall significance of the model.

Table 5 Regression Results

N= 3,167	Number of groups =118	Chi2(147) = 710.294	Prob > chi2 =0.0000
	R-Squared= 0.19046	Adjusted R-Square	0.15105

Ln GDP	Coefficient	Standard error	z	P> z
Amount Agreed	3.6250e-06	4.8072e-07	7.5409	0.000
Program Treatment	-2.6982e+00	1.5509e-01	-17.3979	0.000
Inflation rate	-8.0159e-04	4.1460e-04	-1.9334	0.000
Unemployment Rate	-4.8306e-02	6.2149e-03	-7.7727	0.000
C	4.5925e+00	4.5451e-01	10.1042	0.000
Year Effect		Yes		
Cross-Sectional Effect		Yes		

Amongst the explanatory variables, program treatment is the most influencing variable. The coefficient on program treatment is highly statistically significant with negative signs. This indicate that country which receive credit from IMF performed -2.6982e+00 percent low than those countries which don't receive loan/credit from IMF in other words, countries without IMF bailout program can grow - 2.6982e+00 percent faster than those countries which received IMF bailout program.

After controlling for program treatment dummy, unemployment rate is the most statistically and economically significant variable of the model. The coefficient on unemployment rate is highly significant while the sign of coefficient on unemployment rate is as anticipated. The coefficient on unemployment rate indicates that a percent increase in unemployment rate is associated with - 4.8306e-02 percent fall in GDP. Thus, GDP and unemployment rate move in opposite directions.

After control for the rest of variables, inflation rate tends to diminish the GDP by a very small margin. A percent increase in inflation rate is associated with -8.0159e-04 percent decrease in GDP. Thus, inflation rate seems not a key macroeconomic variable that influences economic growth of a country.

Finally, the amount agreed between IMF and member country is the last and least key macroeconomic variable that fluctuates the economic growth of a country. The coefficient on amount agreed between IMF and member country is statistically significant with positive sign which shows that the two variables; GDP and amount agreed move in same direction. However, the coefficient on amount agreed is economically not significant. The amount received in thousand SDRs of country tends increase GDP of that country by 3.6250e-06 percent. Thus, to stimulate the economy during financial crunch, the policy makers of a country must consider the impact of the IMF program more crucially.

Using a panel data of 118 countries set across a period of 26 years, we provided new evidence that extended credit facility program from the IMF is not the right solution to solve the protracted balance

of payment issues and economic crisis that need serious investment. The research compared the fluctuation of macroeconomic variables in countries that were treated and those that were not treated. Our findings suggest that the extended credit facility program is not as effective as it said. After the implementation of the program, most countries tend to become dependent on the same program by contracting loan again and again through the ECF program; a repetitive move showing that the result of previous program applied have not fully been reached. Technically, we could say that the impact of the extended credit facility on macroeconomic variables was not significant.

Of course, all the blame cannot be put on the IMF; from numerous reading we did, we realized that in some countries, precisely those in Africa, the IMF struggles to implement its conditions for the program to be effective; Saying so does not change the fact that those countries have received the funds and are using those funds under the supervision of the IMF to tackle the issues it is supposed to resolve.

In low-income countries. We could see that most countries contracting loan from the IMF for up to 26 years now through the ECF program have remained under the same economic classification so far. Though, in this last 30 years, the world economy has faced different exogenous choc, going from financial crisis, oil crisis, pandemic, ... the resilience of countries after each program should normally be higher due to economic reforms set after each crisis to help the country amortized any other possible economic crisis to occur in the future; on the contrary, we noticed that after each exogenous chock, most of low-income countries become more fragile and vulnerable in some areas making those countries dependent on loans and raising the question; concerning the necessity of the current IMF-Republic of Congo ECF agreement which is discussed below.

To conclude this counter analysis part, we could say that; the outcomes of the Hausman test and nature of variables in the dataset suggested that the use of random effect model was more appropriate than the panel Ordinary Least Square (POLs) and Fixed Effect (FE) model. The highly significant Wald Chi2 test has indicated the overall significance of the model.

The two variables amount agreed and program treatment have different conclusion regarding the extended credit facility of the IMF. The amount agreed between IMF and member countries suggests that an increase of amount agreed in thousand SDRs tends increase GDP by a very small margin of 0.0000385.

On the other side, program treatment dummy indicates that countries which do not receive loan from IMF under extended credit facility can grow 0.289 percent faster than those countries which receive loan under extended credit facility. Thus, it might be appropriate to consider that a support to the

balance of payment through IMF bailout might hurt the economy rather than enhancing growth. So, proper attention must be given to the adverse effects of extended credit facility.

After controlling the amount agreed and program treatment, we found out that unemployment rate and inflation rate are the key factors which influence the economic growth of a country. The coefficient on unemployment rate has same sign as expected and thus concluded that in case of downward pressure on the balance of payment that led to extended credit facility agreement between the IMF and member countries, special attention must be given to curb the employment rate in the economy.

Moreover, it is recommended that policymakers should focus on the unemployment rate to enhance economic growth. Any policy related to job finding will not only reduce unemployment but also enhance economic growth.

Finally, inflation hurts the economies, but its impact is not economically very significant. Thus, prior to any extended credit facility, the policymakers must curb the two devils which are unemployment rate and the increase in price level (inflation).

As for the current ECF agreement between the republic of Congo and the IMF: Two years ago, in July 2019, the IMF signed a \$449 million ECF with Brazzaville, \$45 million of which was disbursed immediately, to help the country "restore fiscal sustainability and rebuild regional reserves while improving governance and protecting vulnerable groups of the population". Suddenly, on the 21st of January 2022 a new agreement has been signed again after the cancelation of the 2019 agreement which has not reached any of its goals.

Why was the agreement signed in 2019 cancelled?

-Non-compliance with grant conditions

After signing the agreement in 2019, a first disbursement of the loan was made directly to urgently tackle the financial crisis in the Republic of Congo. Alas, apart from this first disbursement, no other has been approved. The first "review" of the program supported by the ECF could not be concluded until February 2021. Only three of the program's "quantitative performance criteria" had been met, according to the teams from the Fund, with the results falling short of expectations in terms of "net domestic financing of the central government and the non-accumulation of new arrears on public and publicly guaranteed external debt."

However, noted the Fund, "even if the structural benchmarks were not met on time, those that are essential to improve governance and transparency were implemented, with delays".

- Debt sustainability has been restored, but significant vulnerabilities remain

Brazzaville has seen its debt increased in recent years by claims on traders Trafigura and Glencore, to the tune of \$966 million and \$732 million respectively, under an oil-backed loan system. The IMF had insisted on the rescheduling and renegotiation of these loans as a prerequisite for any new credit disbursement under the ECF.

Due to those points mentioned above and numerous other, we could argue that the main problem in stabilizing the economy of the republic of Congo and boost growth and development is not lack of fund and finance, but other problems.

We think the corruption landscape is the primary issue to solve before any financial program with the perspective to create job and reduce the unemployment rate in the republic of Congo. Injecting any finance for sustainable economic growth without seriously tackling corruption is doomed to fail. The republic of Congo has had a lot of budget surplus for many years which could be used for diversifying the economy and reducing disparities between regions. On the contrary, that money has been used for building infrastructures which has no economic impact; for instance, the airports of the villages of Kindamba, Betou, Ewo, ... which has no economic impact either for the villages themselves or for the nearby regions; that's just some examples of numerous bad public investment decisions. Public investment in the republic of the Congo is not allocated appropriately; agriculture, which should be the priority of the government and one of the most important sectors since 2001, is not satisfying the domestic demand yet, making the country heavily relying on food importation. Which is contributing to jeopardizing the balance of payment. The cost of food imported by Congo, mainly composed of meat, poultry, and fish products, varies between 500 and 700 billion CFA francs per year, according to the Council of Ministers held on May 5, 2022, in Brazzaville. Innovation is not highly encouraged like in other countries in western Africa and the country is losing its competitiveness. The Banking sector Investments towards entrepreneur is very low and not well incentivized by public policies. Without tackling those issues mentioned above, the ECF program is doomed to fail in the republic of Congo as it has been the case for the first agreement of 2019 which has been cancelled before signing this new one. Last, emphasis must be put on the quality of public investment and financial decisions. From the results highlighted above, we could see that unemployment has a huge impact on GDP, which is a key variable for economic growth. Government must draw a better trajectory on industrializing the country

through its agriculture and mining sectors which would create value and services that could be merchandised locally and internationally.

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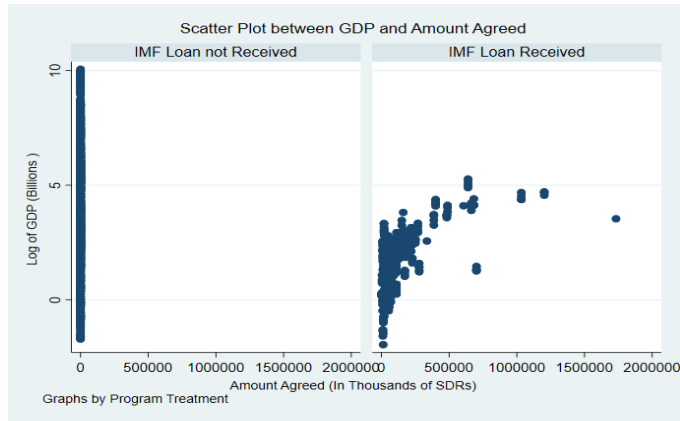
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[Washington Consensus - Wikipedia](#)

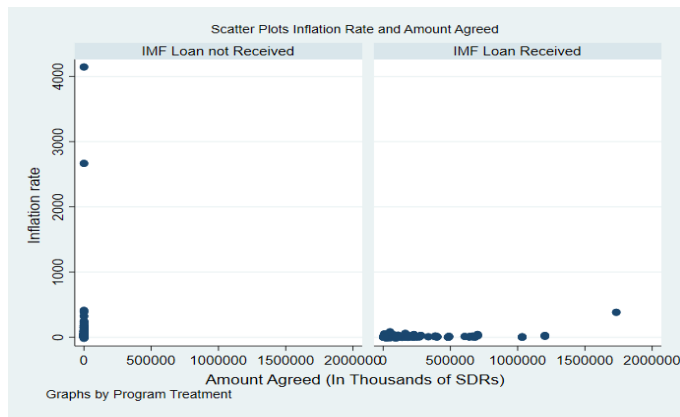
[https://doi.org/10.1016/0305-750X\(87\)90080-5](https://doi.org/10.1016/0305-750X(87)90080-5)

7. Annexes

Annex 1: Figure 1 Scatter plot between GDP and amount agreed.



Annex 1: Figure 2 Scatter plot between inflation rate and amount agreed.



Annex 3: Figure 3 Scatter plot between unemployment rate and amount agreed.

