

# The Impact of the COVID-19 Crisis on the Remittance of the Migrants Transfer of Funds in Central Africa

Elham Jafarzadeh<sup>1</sup>, He Shaquan<sup>2</sup> & Bambi Prince Dorian Rivel<sup>3</sup>

<sup>1</sup> Ph.D. Student in International Trade at Shanghai University, Shanghai, China

<sup>2</sup> Ph.D. Professor, School of Economics, Shanghai University, Shanghai, China

<sup>3</sup> Ph.D. Student in Finance at Shanghai University, Shanghai, China

Correspondence: Elham Jafarzadeh, Ph.D. Student in International Trade at Shanghai University, Shanghai, China. E-mail: Jafarzadehelham50@gmail.com

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## Abstract

The main objective of our work was to examine the impact of the COVID-19 crisis on the remittance of the migrants transfer of funds in Central Africa. The ordinary least squares (OLS) technique was used to carry out this work and was inspired by the empirical work of de la Brière et al (2002) who also use the OLS technique in his study. It emerges from our study after the empirical results obtained that, 65.5% of the sending of money of migrants living abroad to their respective families in Central Africa is due to the confinement measures observed in all countries of the world in the time of COVID-19 in 2020; in order to eradicate the COVID-19 virus, a measure resulting in the cessation of economic activities including the closure of exchange offices and money transfer agencies such as western union and money gram.

**Keywords:** impact, COVID-19 crisis, remittance, migrants transfer of funds, Central Africa

## 1. Introduction

### 1.1 Background

Remittances from migrants to families are increasing and playing an increasingly important role in the world of development finance. The total amount of remittances from migrants increased from \$58 billion in 1995 to \$160 billion in 2004 according to the World Bank (Andreassen, 2005) and (Jose, 2005). It exceeded that of private debt and equity, as well as the amount of official development assistance. Remittances now occupy second place, just behind foreign direct investment.

The onset of the COVID-19 crisis in the 2000s, and its spread, caused global disruption affecting the economy of many countries as well as the transfer of funds constituting a major challenge for countries providing trade on a global scale and facilitating the transfer of funds. Due to the COVID-19 crisis, micro-credit financial institutions in Central African countries mainly serving this clientele find themselves largely exposed to increased credit risks, financial losses and deterioration in prudential ratios. The impact of the economic crisis on customers to systematically lead to an increase in demand for short-term loans with the risk of accumulation of defaults. Due to the COVID-19 pandemic, the updated 2020 growth prospects for the African continent are now negative. According to financial sector specialists, operational risks are increasing:

- Credit activity contracts and induces a relative increase in the operating expenses of financial institutions, which could lead to a risk of default in the coming months if the fall in income continues or worsens;
- The working relationship with employees and customers is changed, due to the application of preventive measures of physical distancing;
- The rotation system also affects the short-term productivity and quality of service of financial institutions.

### 1.2 Problematic

In Africa, the remittance impact linked to the COVID-19 pandemic implies a significant loss of income for states, banks and microfinance institutions, especially those engaged in the international money transfer business via western union, money gram, etc. and are directly affected by the COVID-19 health crisis. Faced with the health

emergency and the scarcity of available or immediately mobilizable resources, the governments of Central African countries very often have to make trade-offs between the costs of managing the health risks induced by the pandemic and measures in favor of the disease. Stimulation of the economy and the financial sector. In addition, the scale and urgency of the needs and the severity of external shocks make access to international markets costly and problematic; the sharp drop in resources from international remittance trade creates a currency shortage due to the COVID-19 crisis and threatens the stability of domestic currency markets. Finally, the significant increase in credit and counterparty risks has a negative impact on the liquidity and solvency of financial institutions, as well as on the financial markets. Remittances to African countries represent up to a third of the economy of poor countries.

### *1.3 Objective of the Study*

The main objective of this work being to assess the impact of the COVID-19 crisis on the remittance of the migrants transfer of funds in Central Africa, will allow us to answer the following question:

What is the impact of COVID-19 on the remittance of the migrants transfer of funds in Central Africa?

From the general objective derives the specific objectives:

- Identify the indicators measuring the migrants transfer of funds;
- To see the impact that the COVID 19 had on migrant remittances in Central Africa in 2020 when the COVID virus spread.

This study is distributed as follows: first we will present the literature review which content the theoretical and empirical review, then methodology will intervene with data source and processing, model specification for a better understanding and finally descriptive approach and empirical results and interpretation of the study.

## **2. Literature Review**

### *2.1 Theoretical Review of the Elements Determining the Transfer of Funds*

The question of the impact of remittances has already been the subject of much research. Transfers depend above all on the number of emigrants. And as practice indicates, all other things being equal, the elasticity of transfers in relation to the number of emigrants should be close to 1. In order to restore the balance, transfers should therefore increase. There are many signs that remittances are counter-cyclical and, all other things being equal, higher when they go to poor countries. Conversely, an increase in wages or incomes in the host country should translate into higher earnings for emigrants (YM) and, in higher transfers. This analytical framework can be enriched in several ways. First, there is no reason to presume the altruism of emigrants. In the family contract model (Lucas & Stark, 1985), transfers are part of an agreement between the family and the emigrant, where the latter's motivations are explained by the need to ensure that goods left in the country of origin are properly maintained. While in the altruistic model, a fall in family income a priori leads to larger transfers, this is no longer the case in the contractual model, where a fall in potential family income should reduce transfers or have no effect. An increase in the income of emigrants should generate larger transfers. However, earning higher incomes in the host country may allow emigrants to bring in the closest family members, to whom they tend to send relatively more money. The overall amount of transfers could therefore decrease if the traditional "salary" effect is more than offset by the "consolidation" effect (Faini, 2006). In all cases, the degree of qualification of emigrants is undoubtedly an important determinant of the level of transfers. Finally, the literature on remittances generally focuses on the role of the (nominal) exchange rate. According to the investment approach, for example, emigrants decide to place a certain part of their wealth in their country of origin. The misalignment of the exchange rate, as well as the anticipation of a correction in the nominal exchange rate, can encourage emigrants to modify their investments and, consequently, their transfers. The impact of the real exchange rate is a different and perhaps more relevant mechanism, at least in the long run.

### *2.2 Empirical Review*

The basic question that is generally elucidated in the majority of empirical studies on background transfer concerns the degree of motivation that can be deduced from the behavior of migrants in caring for the family. Before detailing the results of selected studies on remittances, it may be useful to keep in mind that similar studies on the determinants of private remittances in developed countries have generally rejected the pure altruism hypothesis. The reference on this subject is probably Altonji, Hayashi, and Kotlikoff (1997); using US data on private interpersonal transfers reject the altruistic hypothesis. Indeed, they estimated a derivative of transfer income in the range of 0.04 to 0.13, far from the unit value predicted by the pure altruism model. This result confirms their previous conclusions (Altonji, Hayashi, & Kotlikoff, 1992) which showed that the

distribution of consumption within the family depended on the distribution of income. Most studies on the determinants of migrant remittances in developing countries also conclude that pure altruism is unlikely to be a good working hypothesis.

One of the pioneering empirical studies, by Lucas and Stark (1985) on Botswana found that remittances increase steadily with migrants' incomes, which is consistent with a variety of motives, as explained above, including the 'altruism. However, pure altruism would imply that remittances are primarily directed to low-income households, while Lucas and Stark's estimates show a positive relationship between the level of remittances received and household pre-transfer income. This suggests that exchange, investment, and inheritance could play a key role in determining the flow of remittances.

The work of Lucas and Stark (1985) generated further empirical work on remittances in different contexts. In particular, positive relationships between transfer amounts and recipient incomes have been repeatedly demonstrated in developing countries, notably by Donald Cox and colleagues (Cox, 1987; Cox & Rank, 1992, Cox, Eser, & Jimenez, 1998). This last study was devoted to the analysis of private transfers in Peru, which consist largely of remittances. Unlike Lucas and Stark (1985), whose study encompassed a number of possible motivations, Cox, Eser, and Jimenez (1998) focused on altruism versus exchange and tested the effect pre-transfer income from recipient households on the size and likelihood of remittances. Remember that a negative sign is compatible with both altruism and exchange, but a positive sign is in principle incompatible with altruism and compatible with exchange. More specifically, the type of exchange considered in their study is a loan repayment of educational investments. This implies that liquidity constraints are significant and that the implicit non-market interest rate reflected in remittances depends on the respective bargaining power of the parties.

Other results from the recent empirical review by: Mubinzhon and Ricardo (2019); Jude, Onwuchekwa, and Christian (2011); John, Akaniyene, and Chris (2020); Joao-Pedro, Michael, Pedro, and Eduardo (2020); German, Maria, and Julieta (2021); Eleni, Mario, and Christos (2021); Azizi (2020); Anarfo, Amewu, and Dzeha (2020); Abubakar and Normaz (2013); Yang (2011); having addressed various questions on the impact of remittances from migrants concluding and affirming the positive impact transfers of funds to households

A number of empirical studies have also focused on inheritance as an enforcement device in securing remittances. Hoddinott (1994) provides strong evidence supporting this theory using data from western Kenya. Hoddinott estimated a remittance function after controlling for two sources of selection bias: (i) the fact that migrants are a non-random group, and, (ii) the fact that remittance behavior depends on the parents' information about migrants' earnings abroad (since migrants with uninformed parents would tend to remit less). Both sources of selectivity-bias were controlled for, using an extension of the Heckman procedure. An interesting implication of this approach is that since rich families only may secure remittances through inheritance, migration tends to increase inter-household inequality. A limit to this approach may be the fact that many resources are collectively-owned in the rural communities rather than family-owned, thus limiting the scope for inheritance-seeking through remittances; however, Osili (2004) finds that the same behavior seems to apply at a community level, with migrants investing more in wealthier communities so as to secure their membership rights. It has already mentioned that evidence of an insurance mechanism was found in contexts as different as Botswana (Lucas & Stark, 1985) or Peru (Cox, Eser, & Jimenez, 1998). Similar results were found for West African countries, notably by Lambert (1994) in the case of Cote d'Ivoire and by Gubert (2002) for Western Mali. The first study showed that risk-aversion positively influences migration, and the second study showed that remittances are instrumental in providing insurance to remaining household, but in a way that depends on the nature of the shock (eg climatic change, sickness of a household member, etc.). By contrast, Agarwal and Horowitz (2002) found a negative effect of the number of migrants on remittances sent to Guyana; building on their argument on multiple-migrant households, they took this finding as supportive evidence of altruism instead of insurance. The study by de la Bri ère et al. (2002) explores whether remittances to a poor rural region of the Dominican Republic are better explained by reference to insurance or inheritance, two motives for remittances that are not exclusive one of the other. Their data reveal that remittances should be treated as censored data (remittances in small amounts are frequently observed) and that more than 75 percent of households with migrants have more than one migrant. Four alternative estimation procedures are compared: OLS, a random-effect model (to account for the clustering effect of the presence of a sibling from the same household), a standard tobit, and a censored remittance model. They show that the relative importance of each motive is affected by the migrant's destination (U.S. or Dominican cities), the migrant's gender, and the composition of the receiving household. Interestingly, insurance appears as the main motivation to remit for female migrants who emigrate to the U.S.; the same result holds true for males as well, but only when they are the sole migrant

member of the household and when parents are subject to health shocks. Investment in inheritance, on the other hand, seems to be gender neutral and only concerns migrants to the U.S.

### 3. Methodology

This work proposes to study the impact of the COVID-19 crisis on the remittance of the migrants transfer of funds in Central Africa. It will shed light in order to see the impact that the COVID-19 had on migrant remittances in Central Africa in 2020 when the COVID virus spread.

#### 3.1 Data Source and Processing

The database used for the estimation of this study comes from the Bank of Central African States (BCAS) which is made up of six (6) member countries including: Cameroon, Central African Republic, Republic of Congo, Gabon, Equatorial Guinea, Chad. The data of its six (6) member countries were generally collected on the website of the Bank of Central African States from 2008 to 2020 forming a single data group in terms of economic and monetary community. The data collected will be processed using Microsoft Excel 2016 and SPSS Statistics software.

#### 3.2 Model Specification

The model is part of a framework dealing with the issue of the migrants transfer of funds. It is inspired by the work of authors cited in the empirical review among which we have Bri ère et al. (2002), Hoddinott (1994), Osili (2004), Lucas and Stark (1985). However, it differs from their model in several ways. Model therefore consists of the following variables: migrant funds transfer in Central Africa (MTF), real exchange rate (RER), income or revenue (R), good and service (GS) and interest (I).

Based on the mentioned variables the model is econometrically estimated as follow:

$$MFT = a_0 + a_1(RER) + a_2(Revenue) + a_3(GS) + a_4(Interest) + \varepsilon_{it} \quad (1)$$

With  $a_0$  the constant and  $\varepsilon_i$ : the error term,  $a_1 = a_4$  Coefficient of independent variables

#### 3.3 Descriptive Approach and Empirical Results

This section allows us to make a descriptive statistic analysis and the trends of each variable used in our study. And finally we will present the empirical results of our regression analyzing the results obtained in the way to describe the impact of the covid-19 crisis on the transfer of funds.

Table 1. Descriptive statistic for the variables

	Descriptive Statistic				
	Obs.	Min	Max	Mean	Std.Dev
Migrant Funds Transfer	13	1119.7	2171.7	1630.392	342.6567
RER	13	472.9	685.1	575.962	45.0638
Revenue	13	1266.0	4450.0	2251.938	822.1612
GS	13	1144.3	2652.3	1808.185	497.3707
Interests	13	204.4	718.0	407.385	197.6160
Listwise N=13					

Source: Author from SPSS Software Result.

The average migrants' funds transfer in the last twelve years is 1630.392%, with standard deviations of 342.6567%. The difference between the minimum value 1119.7% and the maximum 2171.7% and the standard deviations showed that there was a great variability. The result shows that the average of RER is 575.962%, with standard deviations of 45.0638% during the period 2008 to 2020, the difference between the minimum value 472.9% and the maximum 685.1%. The result of the revenue shows the average of the 2251.938%, with standard deviations of 822.1612%. The difference between the minimum value 1266.0% and the maximum 4450.0%. The result of GS shows that the average 1808.185%, with standard deviations of 497.3707%. The difference between the minimum and maximum values were respectively 1144.3% and 2652.3%. The result of Interests shows that the average 407.385%, with standard deviations of 197.6160%. The difference between the minimum value 204.4% and the maximum 718.0%.

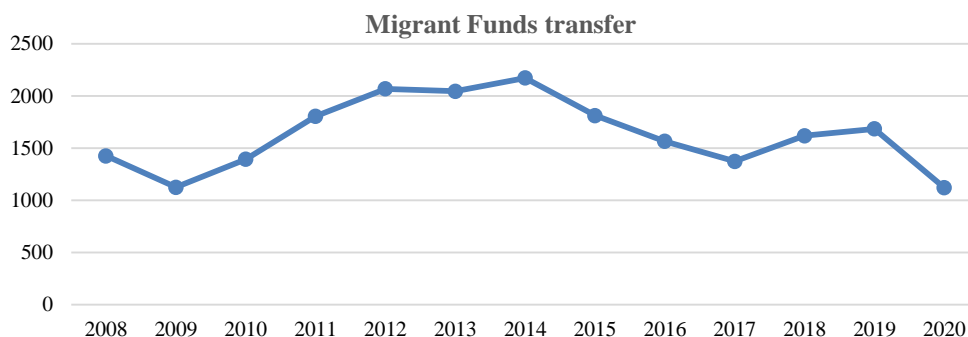


Figure 1. Migrant funds transfer 2008 to 2020

Source: Author Bank of Central African States.

In this figure 1, we can notice that the inflows of funds in the Central Africa countries knew a fall in the years 2008-2009 this fall is attributable to the repercussions of the world economic recession on the industrialized countries in 2009 and to those of the sovereign debt crisis that Europe has experienced since the second quarter of 2011. These crises have led to job losses or lower wages which affect the savings capacity of migrant workers. On the other hand, one observes over the period 2010-2012 a considerable increase in the sending of funds of migrant workers. This increase in resources has experienced strong growth since the 2000s and has taken on great importance over the years in the union of Central African countries.

The increase in remittances in Central African countries is in line with the overall dynamics observed in developing economies, in particular in connection with the constant increase in the number of migrants and the rapid development of remittance companies, also called micro finance companies. Based on the available data that we have collected regarding the transfer of funds, totaling respectively 47.8% and 8.5% of the sums received from abroad. We note, however, during this recent period, with the situation of the COVID-19 crisis, a decrease in the flow of remittances of migrant workers in the Central African zone, leading to the decrease due to the temporary closure of the society of micro finance, banks and other businesses and leads to job losses, lower wages.

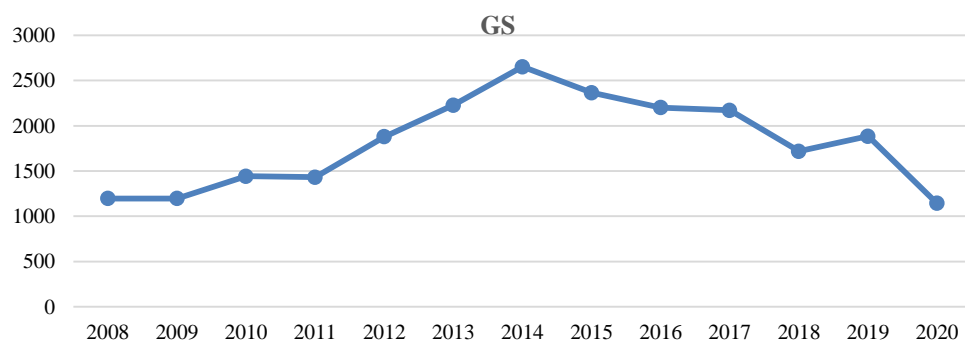


Figure 2. Good and services from 2008 to 2020

Source: Author Bank of Central African States.

In this graph we note a considerable rise in the curve of good and services from 2012 to 2014 rise characterized by the great satisfaction of the customers of the quality of goods and services rendered or offered by the credit institutions and banks carrying out the transfer of d money when sending or receiving funds via western union, money gram etc. This satisfaction is often observed at the level of banking operations in one of the currencies of the two partners or in another currency accepted by the two parties during the transaction of the funds, which leads to the balance of the balance of goods and services observe by an excellent behavior of the sending and receiving funds flows by western union or money gram. The end of 2014 and the beginning of 2015 were marked by a sharp fall in the price of a barrel of oil which slightly affected the banking sector as well as micro finance and micro credit companies pushing them to transfer large sums of money causing capital flight. The closure of banks as well as credit companies offering funds transfer services via money gram and western union

has had serious consequences due to the COVID-19 crisis preventing its latter from offering their daily services to customers. A strong demand is then observed on the part of migrants wanting to make transfers to households in need in Africa but, an impossibility on the part of credit companies and banks carrying out transfers of funds to offer goods and services to migrants living abroad and in households in Africa because of their temporary closure due to the COVID-19 crisis as well as confinement.

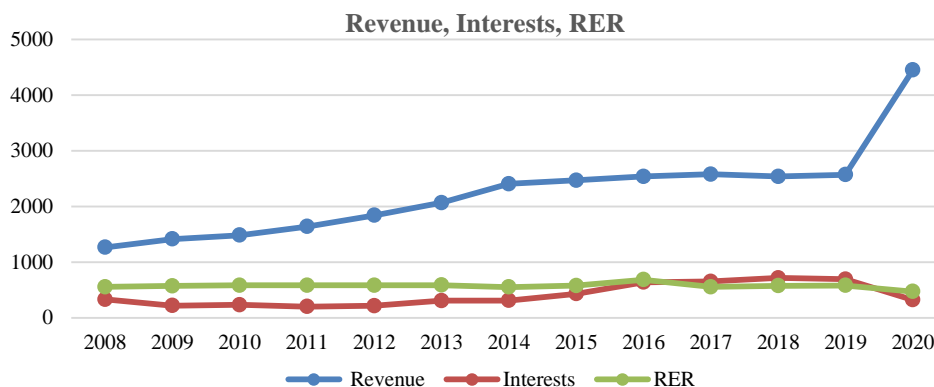


Figure 3. Revenue, Interests, RER evolution

Source: Author Bank of Central African States.

Income has continued to rise and soar from 2008 to 2016, with an increase in the reception of beneficiary funds by migrants. This increase in funds is simply explained because of the increase in wages of migrants living abroad, also resulting in an increase in the flow of funds to households in Africa.

The closing of the borders within the framework of the measures adopted by the African leaders in order to fight against COVID-19 and to eradicate it, the closing of the companies, the banks and micro credit of transfer of funds then knew a drop in their own revenue and national transfers, which represent 70 to 80% of their finances. The fees and interest on funds transfers are extremely high in Central Africa and represent 8% to 10% on the amount of each transfer made. This will cause great difficulty in mobilizing additional funds from its banks and micro-credit transfer of funds which may worsen the debt and interest burden for many highly indebted Central African countries such as the Republic of Congo.

Regarding the real exchange rate linked to the transfer of funds, the CFA franc of the six countries of the economic and monetary community of Central Africa is indexed to the euro, but it appreciated better against the American dollar (USD), going from 580 CFA francs for 1 USD in 2017 to 529 in 2018 as the euro strengthened against the dollar (-8.9% change in the exchange rate). The real exchange rate index related to money transfers has not changed as much as we can see on the graph; just in 2016 we are seeing a small increase in the dollar exchange price.

#### 4. Empirical Results and Interpretation

This section will present the empirical results obtained during the regression of our data on the SPSS software from 2008 to 2020 which the general purpose to see if during the COVID-19 period the migrants funds transfer has an impact in central Africa. The section, present the results of the Pearson correlation test, the Durbin-Watson robust result, the variance test as well as the test of analysis of the coefficients measuring the robustness and the significance of the variables using OLS and following the study of Bri ère et al. (2002).

##### 4.1 Observation of the Variables

Table 2. Observation of the variables

Model	Variables Entered/Removed <sup>a</sup>		Method
	Variables Entered	Variables Removed	
1	Interests, RER, GS, Revenue <sup>b</sup>	.	Enter

a. Dependent Variable: Migrant Funds transfer

b. All requested variables entered.

Source: Author from SPSS Software Result.

The table 2 of the regression shows us that all the variables mentioned in our formula were indeed used to do our regression. Which confirms we have the variables interest, real exchange rate, goods and services and revenue as our independent variables and then our dependent variable migrant funds transfer.

#### 4.2 Pearson Correlation Matrix Regression Results

Table 3. Pearson Correlation matrix regression results from 2008-2020

		Correlations				
		Migrant Funds Transfer	RER	Revenue	GS	Interests
Pearson Correlation	Migrant Funds Transfer	1	.290	-.190	.706	-.098
	RER	.290	1	-.454	.371	.265
	Revenue	-.190	-.454	1	.111	.371
	GS	.706	.371	.111	1	.348
	Interests	-.098	.265	.371	.348	1
Sig. (unilateral)	Migrant Funds Transfer	.	.168	.267	.003	.376
	RER	.168	.	.060	.106	.191
	Revenue	.267	.060	.	.359	.106
	GS	.003	.106	.359	.	.122
	Interests	.376	.191	.106	.122	.

a. \*\*\*Correlation is significant at the 0.01 level (2 tailed)  
b. \*\*Correlation is significant at the 0.05 level (2-tailed)  
c. Listwise N=13

Source: Author from SPSS Software Result.

The table shows us 2 two positive correlations between Migrant Funds Transfer and RER and GS and two negative correlations between Migrant Funds Transfer and Revenue and interests. We notice that GS is positively correlated and significant at the 0.01 level which means that GS contributes respectively at 7.06% on migrant funds transfer in central Africa. The RER is positively correlated and significant at the 0.05 level. This means that RER contribute respectively at 2.90% on Migrant Funds Transfer in central Africa.

The Revenue and Interests as for them they have an inverse relationship which means the more Revenue and Interests increase the migrant funds transfer decreases.

#### 4.3 Durbin-Watson Robust Test Result: Impact of Covid-19 Crisis on the Transfer of Funds in Central Africa

Table 4. Durbin-Watson Robust test result

Model Summary <sup>b</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of Estimation	Change in statistics					Durbin-Watson
					Variation of R Square	Variation of F	ddl1	ddl2	Sig. Variation of F	
1	.809 <sup>a</sup>	.655	.483	246.4627	.655	3.799	4	8	.051	1.522

a. Predicted values: (constant), Interests, RER, GS, Revenue

b. Dependent Variable: Migrant Funds Transfer

Source: Author from SPSS Software Result.

The result of Durbin-Watson robust test of the table 4 shows the value of 1.522, which indicates that the assumption that the error terms are independent has been well fulfilled.

The  $R^2$  as for him in its definition is the measure of the amount of variance in dependent variable that the independent variables account for when taken as a group. Its measurement is not based on how much an individual predictor or a given individual variable represents, but only when we take them all as a group, this model summary table says overall, the regression model, which is what is referred to sometimes as a model, these four (4) predictors predicting migrant funds transfer that overall model account for 65.5% of the variance. And as we can see in the table 3 the amount of the  $R^2$  is 0.655 which is equal to 65.5, which simply means taken as a set the predictor Interests, RER, GS, Revenue account of 65.5% of the variance in migrant funds transfer in the central Africa.

#### 4.4 Variance Analysis Result

Table 5. ANOVA

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	923012.789	4	230753.197	3.799	.051 <sup>b</sup>
	Residual	485950.900	8	60743.862		
	Total	1408963.689	12			

a. Dependent Variable: Migrant Funds transfer  
b. Predicted values: (constant), Interests, RER, GS, Revenue

Source: Author from SPSS Software Result.

The ANOVA table is the test to know if this R Squared is significantly greater than 0. It indicates the general probability of our model. In the ANOVA table the result shows that there is a significant relationship between the four (4) predictor variables and the dependent variable at the 0.05 level of significance, where  $p < 0.05$ .

Looking at our table here we find that in the column labeled “Sig” that p-value = 0.051 is less than 0.5 which means that the regression of our test is significant,  $R^2$  is significant at 0.

So, as the p-value is less than 0.5 we know that the value of  $R^2$  is significant and greater than 0 and this means that our independent variables are capable of taking into account a significant amount of variance in migrant funds transfer. So in other words, the regression model is significant

##### 4.4.1 ANOVA Table (Test With Alpha = 0.5)

The regression model is globally significant and here we have F (4 and 8) for the regression and residual = 3.799,  $p < 0.051$ , R square = 65.5. This confirms us that our regression analysis is statistically significant when I take these four (4) variables together as a group; they predict migrant funds transfer significantly.

#### 4.5 Coefficient Analysis Result for the Dependent Variable Migrant Funds Transfer

Table 6. Coefficient regression result analysis for the dependent variable MFT

Model	Coefficients <sup>a</sup>						
	Unstandardized coefficients		Standardized coefficients	T	Sig.	95.0% % confidence intervals for B	
	B	Std Error	Beta			Lower bound	Upper limit
(Constant)	1027.716	1312.095		.783	.456	-1997.980	4053.412
RER	-.103	2.243	-.014	-.046	.965	-5.276	5.070
1 Revenue	-.070	.121	-.169	-.580	.578	-.351	.210
GS	.581	.165	.843	3.527	.008	.201	.960
Interests	-.564	.458	-.325	-1.231	.253	-1.620	.492

a. Dependent variable: Migrant Funds Transfer

Source: Author from SPSS Statistics Result.

Opposite to the first two summary tables of the model and ANOVA which examine the regression analysis as a whole, where the variables are taken as a whole, the table of coefficients on the other hand examines each of the predictors or variables individually. Basically we can say it is the probability of each of the variables that we used in the model to make our regression also called p-value. And what we are doing here is that we are going to look at each of our predictors and we want to zero out on it the Sig column, which are again the p-values of each of the tests. However, in this analysis, our constant has absolutely no importance. We will just focus on the four (4) p-values of Real exchange rate, Revenue, good and services and interest. So we will evaluate each of these tests at an alpha of 0.5 by looking at it we see that:

- RER has a negative amount of -0.103 but it is not significant on migrant funds transfer because its p-value = 0.965 which is greater than 0.5 which is our alpha threshold. Statistically speaking this means that RER does not have influence migrant funds transfer.
- Revenue has a negative amount of -0.070 and it is significant on migrant funds transfer with its p-value = 0.578. Statistically speaking the Revenue have influence migrant funds transfer in the central Africa. The



revenue here explained a significant amount of unique variance in migrant funds transfer in the central Africa.

- The GS (Goods and services) although having a positive amount of 0.581 it is also significant on migrant funds transfer because its p-value = 0.008. Statistically speaking GS have an influence in migrant funds transfer in the central Africa.
- Interests has for him, having a negative amount of -0.564 and it is significant on migrant funds transfer because its p-value = 0.253. Interest also has an influence in migrant funds transfer. statistically speaking it simply means that Interests also explained a significant amount of unique variance in migrant funds transfer in the central Africa

## 5. Conclusion

This present work was to examine the impact of the COVID-19 crisis on migrant remittances in Central Africa in 2020 when the COVID virus spread. He was inspired by the empirical work of Bri ère et al. (2002) who also used the OLS technique in his study. The empirical results obtained show that 65.5% of remittances from migrants living abroad to their respective families in Central Africa are due to the containment measures observed in all countries of the world at the time of COVID-19; in order to eradicate the COVID-19 virus, a measure resulting in the cessation of economic activities including the closure of exchange offices and money transfer agencies such as western union and money gram in 2020.

The shutdown of economic activities in cities, linked to the COVID-19 pandemic, had severe repercussions on the ability of internal migrants to send remittances to rural areas. According to the International Labor Organization, an 81% drop in the incomes of informal sector workers during the health crisis was also observed, with serious consequences on the means of being able to survive from day to day.

### 5.1 Recommendations

To deal with the many problems that remittance financial institutions were facing due to the spread of COVID-19, recommendations such as refinancing lines with central banks and multilateral partners would be very necessary to support current levels of liquidity, while maintaining the financing of economic actors in order to face the problem of the withdrawal of household funds.

An essential implementation of measures should be implemented in partnership with external authorities in order to strengthen aid to sectors deemed less catastrophic by the pandemic of the COVID-19 crisis.

Micro-credit financial institutions should adapt their product and service offerings in the medium and long term, by putting in place mechanisms leading to a regulation of the more digital and high-speed Internet with a view to a digital transition, which will take place, will prove advantageous in terms of profitability, without losing sight of the control of prudential risks and the quality of services.

### 5.2 Limitations of the Study

This study does not aim to answer all the questions concerning the impact of the COVID-19 crisis on the transfer of funds.

The limitation of this study is due to the small sample size of the period included in the data sample. For example, this study only covers a 13 years' period from 2008 to 2020, leading to certain limitations in the total validation of the study due to the small sample size.

### 5.3 Areas for Further Research

Several other questions remain open for further studies with the construction of other variables and more recent data that will allow researchers to better represent and empirically explain the impact of COVID-19 on remittances of migrants in a greater dimension. Extending the use of other econometric techniques and empirical tests on a complementary basis would go a long way in better detecting this impact; such as for example the ARDL method (Auto Regressive Distributed Lag), GMM etc. The theme of the question, which has not been explored in depth in this article, deserves to be integrated with the methods not cited to better detect the impact of COVID-19.

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## Appendix

### Data from the Bank of Central African States

Countries	Years	Amount of variables in%				
		Migrant Funds Transfer	Good and services	Revenue	Interests	RER
• Cameroon,	2008	1425,0	1195,7	1266,0	331,9	556,0
• Central African Republic	2009	1123,4	1196,4	1416,8	219,8	575,2
	2010	1392,0	1442,0	1484,8	234,0	586,0
• Gabon	2011	1804,6	1431,2	1639,7	204,4	586,0
• Republic of Congo	2012	2067,4	1878,4	1842,8	217,0	586,0
• Equatorial Guinea	2013	2044,6	2227,3	2068,6	310,2	589,7
• Chad	2014	2171,7	2652,3	2406,7	312,9	554,3
	2015	1810,5	2365,0	2470,7	433,4	579,3
	2016	1563,6	2200,4	2538,8	639,9	685,1
	2017	1372,8	2170,4	2579,1	653,8	556,0
	2018	1616,9	1718,2	2540,0	718,0	576,9
	2019	1682,9	1884,8	2571,2	695,7	584,1
	2020	1119,7	1144,3	4450,0	325,0	472,9

Source: Author Bank of Central African States.

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