

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

Oscar Kuikeu

Department of International Management of International Trade, Higher School of Economics and Commercial Studies, University of Douala, Cameroon.

ABSTRACT: The Macroeconomic policies are those actions to put the economy on a high growth trajectory of North countries, already put forward by Keynes with an emphasis on stimulating local demand from an accommodating fiscal and monetary policy. In fact, according to the economic textbook, stimulating investment, preserving purchasing power, avoid economy of high debt ratio compare to expenditures as public expenditures. Thus the aim of this paper is to account on this view of the economic taught even during the coronavirus crisis. For this purpose we investigate on spatial autocorrelation since according to the convergence hypothesis countries were close to each other in terms in standard of living for having know in the majority of cases an economic crisis. According to the results, the regularities about the living standard determinants have been well observed during the coronavirus crisis.

KEYWORDS: standard of living determinants, coronavirus crisis, spatial autocorrelation, convergence hypothesis, sub Saharan Africa

I. INTRODUCTION

Some of studies on monetary policy transmission channel in Central Africa Economic and Monetary Community (CEMAC)¹ – Ekomane (2017), Ekomane and Yanb (2016), Bikai and Kenkouo (2015), Kamgna and Ndambendia (2008), Saxegaard (2006) have undertake to identify the best channel for his members states concerning the transmission to the real sectors of the monetary policy actions. These studies lie on the assumption that some of the traditional channels are inadequate or inoperant into the area this is the case, in the one hand of the interest rate channel with the argument that the bank sector is on surliquidity and thus with setting of his money supply inelastic to those of the main central Bank's refinancing rate. In the other hand of exchange rate channel with the argument that the fixed parity of the local currency unit toward the single European currency unit the namely euro account for a large size in the driving of the exchange rate policy into the area. Finally, the stock's price channel namely the Tobin's q channel due to the less development or the inexistence of a financial market into the area.

In general, this kind of studies stress that the most suitable of those channels for the monetary transmission is the credit channel a mechanism based fundamentally on bank's money creation function following a credit multiplier process. On the ground that this channel lies fundamentally on the multiplier effect of investment it's therefore straightforward to know if this mechanical effect on output increasing by the investment is well established.

To this end when investigating standard of living it's relevant to rely on the subset of variables of investment level, the purchasing power and the public expenditures that constitutes the building block of the standards of living determinants from the Keynesian view where are coming the main mechanism attached to the monetary policy transmission channel with the large strand of the debate on multiplier effect of investment. In fact, stimulating economy with this subset of variables is consider to

¹ CEMAC is the monetary union of the six central African countries (Cameroon, Central African Republic, Chad, Congo Republic, Equatorial Guinea and Gabon) which have in common the sharing of the CFA franc as a common currency, issued by BEAC (Bank of Central African States) and pegged by a fixed parity to the French franc, at the rate of 1 French franc per 100 CFA franc since the devaluation of 1994 or since 1st January 2002, with the advent of the euro, at the rate of 1 euro for 655.957 CFA francs, or 1 euro for 6.55957 French francs.

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

have successful effect on the economy. This issue have notably been stressed by Fisher (1993) concerning the design of a good macroeconomic policies or a stable macroeconomic framework coming from the consensus of Washington.

Giving lessons from coronavirus crisis about living standard determinants in Africa is relevant. In fact, these subset of economies match with the fact that pessimistic expectations about future growth as during the coronavirus crisis can give rise to "Stagnation traps" (Benigno and Fornaro 2018) in the sense that the managing of the crisis have been made with worse episodes of corruption against public and external aid in the Region. This is proof that agents suddenly turn pessimistic about future growth. Anticipating a fall in future income, they cut their aggregate demand. The drop in aggregate demand may be strong enough to push the policy rate as the main central Bank's refinancing rate against the zero lower bound, at which point conventional monetary policy loses its traction. The economy experiences a recession driven by lack of demand. This recession negatively affects firm's profits and their investment. Low investment translates into weak productivity growth, validating the initial low-growth expectations. It's this fact that the authors call "Stagnation Traps". Thus with the scandal as the "covidgate" in Cameroon about the distraction in an important part of the Aid coming from the multilateral institutions as contribution for resilience against the crisis, the Sub-Saharan Africa economies represent an interesting case study for the assessment of the standard living determinants in a respective period corresponding to the covid-19 crisis in order to judge on the building capacity of the economy in making resilience policy to economic growth.

During the covid-19 crisis the majority of economies in the African Region have experienced a decline in sandard of living so that according to the convergence hypothesis these one were close to each other in terms of standard in living. Then is this relevant for relying on spatial autocorrelation in assessing the regularities of standard of living determinants during the covid-19 ? This is our main hypothesis here.

This study were organized as follow, in the next section (section 2) we present the Literature Review, in section 3 the Methodology, in section 4 the Results and finally a summary of the main results as concluding remarks.

II. LITERATURE REVIEW

Then this study could dispute on the traditional effect of standard of living determinant according to the following benchmark:

Considering the place of investment level as standard of living determinant he seems that this is not dispute. To explain this note that following Ekomane and Yamb (2016, pp. 747-749), Ekomane (2017), the overall increase in production from transmission channels of the monetary policy as the interest rate channel, the Tobin's q channel, and the credit channel lie on increasing investment expenditures which operates through multiplier. In fact, increasing investment level means much more use of production factors which generates an overall increase in production level and thus of the standard of living that means much more revenues per capita and consumption level.

Considering the place of inflation as standard of living determinant much more time into the study while with the right sign the level of prices change do not significantly enters the standards of living determinants of the country contrary to the level of investment. Because the standard Keynesian stimulus emphasize a great role to the preserving of purchasing power this last result concerning the place of inflation as determinant of the living standard needs to be reconsider. In fact, for any theory to be taken seriously, and in particular used as a basis for policy analysis and prescription (no matter what its pedigree ore its elegance), it is essential for its empirical relevance and veracity to be established. Hence there is not surprising that there is a large literature concerned with the empirical underpinnings of the major tenets of the theories which purport to identify the costs of inflation and therefore the place of inflation as living standard determinant. The basic issue of interest is whether there is a negative association between the aggregate level of inflation and the living standard on the ground that aggregate inflation is more variable when its average level is higher, that having been conjectured to be the case by Okun (1971) and Friedman (1977) by reporting in Okun (1971) that there was a positive association between the standard deviation of the annual increase in the GNP deflator and its average value using data for 17 OECD countries during the period 1951-68. In fact, the finding that there is a positive association between two variables of interest does not convey any information about their causal ordering in the sense that many authors have employed the Granger causality concept to explore the nature of the relationship between the two the aggregate inflation and price variability and as Marquez and Vining (1984) summarise much of the literature the conclusion is invariably that neither price variability or aggregate inflation appears to unidirectionally Granger-cause the other, and that they are best described by a joint process with feedback.

Considering the place of public expenditures as standard of living determinant, particularly meaningful when we assessing on Real Exchange Rate behavior, the place of this aggregate as economic fundamentals is very dispute. In fact, while the Keynesian economy assess that this public expenditure is the main arm of central government in stimulating economy the Model on Real

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

Exchange Rate behavior as those of Baffes, Elbadawi and O'Connel (1999) reveals that this public expenditures appreciates the Real Exchange Rates while it's well proof and assess that this Overvaluation currency have misleading effect on economy as the regression in standard of living (Kuikeu 2011). Finally with the issue of fiscal policies convergence he appears that in a monetary union this subject takes another ground (Kuikeu 2020).

III. RESEARCH METHODOLOGY

In a seminal example, Anselin (1988) exploit reporting observations for 49 contiguous Planning Neighborhoods in the city of Columbus, Ohio, for the year 1980. The three variables of interest are crime, income and hoval, which denote the aggregation of burglaries and vehicle thefts (per 1000 households), income (in thousand USD) and housing values (in thousand USD), respectively. The aim of this example is to include some sort of spatial dependence in a linear model where the dependent variable is crime.

A. Econometric Model

Our main variable of interest is the Real per capita GDP of African countries in 2020. As determinants of this we rely on the 26 indicators reported frequently into the AFR Regional Economic Outlook. We have choose 13 of them named according to this in this paper:

Table 1. List of Variables

Variables	Definition
TOT	Terms of Trade (Index 2010 = 100)
CPI	Consumer Price Index, End of Period (Annual % change)
<i>pb</i>	Overall Fiscal Balance including Grants (% of GDP)
Mo	Broad Money (% of GDP)
X	Exports of Goods and Services (% of GDP)
M	Imports of Goods and Services (% of GDP)
FDI	Net Foreign Direct Investment (% of GDP)
NEER	Nominal Effective Exchange Rate (2010=100)
ExtDebt	External Debt (% of GDP)
CA	Current Account including Grants (% of GDP)
INV	Total Investment (% of GDP)
S	Gross National Saving (% of GDP)
RPCGDPGrowth	Real Per Capita GDP Growth (Annual % change)

Source: Regional Economic Outlook - Sub-Saharan Africa.

B. Methods

Then the aim of this section is to demonstrate that the spatial autocorrelation is relevant when we build on standard of living determinants during the covid-19 episodes. In fact, this crisis was an unpreceding one with a amount of economies needing stimulation in the sense that they have experienced the covid-19 crisis with a sharp decreasing in the standard in living. Especially, according to the AFR Regional Economic Outlook a database that covers the 45 African countries coming from the October 2025 World Economic Outlook (WEO) of the IMF the country's economic growth in this area was set to in 2020 during the crisis at -1.40%, -1.46%, and -3.63% respectively for the Real GDP, the Real non Oil GDP, and Real per capita GDP.

Since the absolute convergence hypothesis states that there are few disparities on living standard among economies (Mankiw, Romer and Weil, 1992 ; Kuikeu, 2017) we can use it to present a simple neighborhood definition considering the preceding stylized facts. Given this spatial neighborhood definition we can construct a spatial neighborhood matrix that can help us to build on spatial autocorrelation. In this study, a random gaussian weight matrix has been used. A Gaussian (or kernel) weight matrix defines the intensity of the relationship between two units using a normal distribution based on distance (d_{ij}) :

$$w_{ij} = \exp \left(- \frac{d_{ij}}{2\sigma^2} \right),$$

where w_{ij} defines the proximity or neighborhood structure between observational units.

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

This Spatial Weight Matrix conveys to our spatial neighborhood definition that relies on absolute convergence hypothesis. In fact, with this Spatial Weight Matrix the strength of the connection declines with distance. That means much closer are countries they then share same structure so that we can observe the absolute convergence hypothesis (Barro (1991) demonstrated that this is true for the States of the USA, Barro et Sala-i-Martin (1992) and Mankiw, Romer et Weil (1992) for OECD member's States, Barro et Sala-i-Martin (1995) for European economies and Japanese regions). σ^2 (variance) dictates how rapidly the influence of nearby points decays; a small σ results in high local focus, while a large σ allows influence over a broader range. We have set σ to 1 to row-standardized (each row sums to 1) the Spatial Weight Matrix (Gómez, Jesús and Ruiz, 2012). Globally Speaking, using inappropriate spatial weights, such as a random or poorly chosen neighbor structure, can lead to incorrect inferences in spatial econometric models (i.e., incorrect coefficients or errors type). However, as it is shown in LeSage and Pace (2011), the sensitivity of these coefficients to the weight matrix is less strong than commonly believed.

The first step is to calculate Moran's I statistic to detect spatial autocorrelation in a cross-section. The null hypothesis of the test is: the series does not exhibit any spatial autocorrelation. The moran function prints: Moran's I, the expected value (E(I)), the standard deviation (sd(I)), and the z-score, with the related (1-tail) p-value. It returns the scalar value of the Moran's I. For the calculus of the Moran's I statistic, since with the use of a random Gaussian (or kernel) weight matrix the number of spatial weights does not match the number of observations we have used a slightly different weight matrix that consist to row-standardized the square² matrix of dataset. Cliff and Ord (1981) show that this test can be conducted under the null hypothesis of spatial randomization under which the statistic asymptotically follows a standard normal distribution:

$$Z(I) = \frac{I - E(I)}{\sqrt{Var(I)}} \sim N(0, 1)$$

In a second step, to estimate spatial models via Maximum Likelihood three types of Models are available (Casoli et al, 2019) : Spatial Autoregressive Models (SAR), Spatial Durbin Models (SDM) and Spatial Error Models (SEM). Computation of the Hessian matrix is performed in the analytical way as well as Different speed-up procedures for the computation of the log-determinant term. For further details on the topic we suggest to see LeSage and Pace (2009).

The SAR model includes spatial lags of the dependent variable only, whereas the SDM adds also spatial lags of the covariates. Generalising, and defining $Z = [I_n \ X \ WX]$ and $\delta = [\alpha \ \beta' \ \theta']'$, it is possible to write:

$$y = \rho WY + Z\delta + \varepsilon \quad (1)$$

$$y = (I_n - \rho W)^{-1} Z\delta + (I_n - \rho W)^{-1} \varepsilon \quad (2)$$

$$\varepsilon \sim N(0 \ \sigma^2 I_n)$$

where Equation (1) denotes the SAR if $Z = [I_n \ X]$ or the SDM if $Z = [I_n \ X \ WX]$, and Equation (2) the related DGP. We denote y as an $n \times 1$ vector of the dependent variable, W as the $n \times n$ spatial weight matrix, I_n as the constant term, X as the $n \times k$ matrix of explanatory variables, and ε as the error component. Spatial dependence is captured by the parameter ρ . The SEM contains spatial dependence in the disturbances, as shown in Equation (3), with Equation (4) being the DGP.

$$y = X\beta + u \quad (3)$$

$$u = XWu + \varepsilon$$

$$y = X\beta + (I_n - \rho W)^{-1} \varepsilon \quad (4)$$

$$\varepsilon \sim N(0 \ \sigma^2 I_n)$$

Here the spatial dependence is expressed by the parameter λ ; the other variables follow the notation described in the previous section.

C. Data

With the requirement to have a square Spatial Weight Matrix as the AFR Regional Outlook have a total of 25 indicators we have choose the first 25 of the 45 African countries (see appendix 1 for the list of countries). The following Table 2 presents some descriptive statistics for the 13 chosen variables among the 25 which serve as standard of living determinants.

² See the next section on Data.

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

Table 2. Descriptive Statistics

Variables	Mean	Standard deviation	Min	Max
TOT	117.90	72.822	52.864	435.52
CPI	5.6825	6.7367	-4.7733	25.103
<i>pb</i>	-4.3301	4.1973	-17.443	1.2354
Mo	44.647	43.626	15.089	232.07
X	25.413	13.440	5.6660	63.853
M	35.291	17.744	17.650	93.691
FDI	1.3044	3.2630	-8.7367	9.5792
NEER	87.820	29.472	19.601	133.03
ExtDebt	38.533	25.105	12.201	128.83
CA	-3.1394	7.5901	-16.348	14.372
INV	22.317	7.3606	7.5761	35.915
S	19.933	8.7809	1.1330	37.226
RPCGDPGrowth	-3.6348	4.9757	21.129	3.8233

Source: Author

According to the characteristics of central tendency and dispersion reported in the preceding Table 2 the Variables with variation coefficient (Mean/Standard deviation) not less than one are considered as not stables (Dama, 2020). These are CPI, FDI, and RPCGDPGrowth.

IV. RESULTS

As discussed, precedently we first present Moran's I statistic. The Table 6 below presents this one for each of our variable.

Table 3. Test of Spatial autocorrelation

Variables	Moran's I	E(I)	sd(I)	z	p-value (1-tailed test)	Conclusion
TOT	-0.07	-0.04	0.05	-0.56	0.71	No Spatial autocorrelation
CPI	-0.05	-0.04	0.03	-0.36	0.64	No Spatial autocorrelation
<i>pb</i>	-0.04	-0.04	0.03	-0.02	0.51	No Spatial autocorrelation
Mo	-0.02	-0.04	0.05	0.40	0.34	No Spatial autocorrelation
X	0.02	-0.04	0.03	2.43	0.00	Spatial autocorrelation
M	0.09	-0.04	0.03	3.73	0.00	Spatial autocorrelation
FDI	-0.02	-0.04	0.03	0.43	0.33	No Spatial autocorrelation
NEER	-0.11	-0.04	0.02	-2.58	0.99	No Spatial autocorrelation
ExtDebt	-0.092	-0.04	0.03	-1.29	0.90	No Spatial autocorrelation
CA	0.01	-0.04	0.03	1.83	0.03	No Spatial autocorrelation
INV	-0.03	-0.04	0.02	0.46	0.32	No Spatial autocorrelation
S	-0.07	-0.04	0.02	-1.05	0.85	No Spatial

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

						autocorrelation
RPCGDPGrowth	-0.05	-0.04	0.03	-0.37	0.64	No Spatial autocorrelation

Source: Author

It's just with the exports and the imports of goods and services (X and M) that there is Spatial autocorrelation. In all other cases we cannot reject the null of No Spatial autocorrelation. Considering this result we will first present to the spatial spaces models the OLS results. This is done in the following Table 3:

Table 4. OLS results

RPCGDPGrowth	OLS
Constant	-18.76*** (2.84)
TOT	0.03*** (0.00)
CPI	0.70*** (0.06)
<i>pb</i>	-0.38*** (0.05)
Mo	-0.07*** (0.00)
X	-0.31*** (0.03)
M	0.15*** (0.01)
FDI	0.94*** (0.14)
NEER	0.14*** (0.01)
ExtDebt	-0.02 (0.01)
CA	0.81*** (0.14)
INV	0.15 (0.15)
S	-0.11 (0.16)
Statistics	
<i>Nobs</i>	25
<i>Adjusted R²</i>	0.99

Source: Author, *** (**, *) null hypothesis is rejected at the 1% (5%, 10%) significance level. *Nobs* is available observations, (.) standard deviation.

Multicollinearity occurs in a regression model when numerous variables show substantial correlations with both the dependent variable and each other (Shrestha, 2020). The Variance Inflation Factor (VIF) can be used as an indicator to determine the presence of multicollinearity (Oke, Akinkunmi and Etebefia, 2019). $VIF(j) = 1/(1 - R(j)^2)$, where $R(j)$ is the multiple correlation coefficient between j the variable and other explanatory variables. The value of VIF is not less than 10 for the exchange rates (NEER), the Current Account (CA), the Investment (INV) and Savings (S) indicating that there is multicollinearity (Table 4).

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

Table 5. Multicollinearity test

Variables	VIF
TOT	7.133
CPI	9.143
<i>pb</i>	3.572
Mo	5.361
X	9.038
M	7.896
FDI	5.261
NEER	13.357
ExtDebt	2.309
CA	18.650
INV	25.772
S	43.106

Source: Author

We will proceed now with the estimation of the three different Models that underlying the spatial autocorrelation (SAR, SDM, SEM). The results are presented in the following Table 5.

Table 6. The spatial Models estimate

RPCGDPGrowth	SAR	SDM	SEM
Constant	-19.28** (7.93)	-100.580*** (0.00)	18.35** (7.86)
TOT	0.04** (0.01)	0.21*** (0.00)	0.04** (0.01)
CPI	0.69*** (0.19)	1.66*** (0.00)	0.67*** (0.18)
<i>pb</i>	-0.46** (0.19)	-1.23*** (0.00)	-0.44** (0.18)
Mo	-0.08*** (0.02)	0.08*** (0.00)	-0.08*** (0.02)
X	-0.33*** (0.09)	-0.73*** (0.00)	-0.33*** (0.09)
M	0.16** (0.06)	0.24*** (0.00)	0.15** (0.06)
FDI	0.92*** (0.29)	-3.63*** (0.00)	0.94*** (0.29)
NEER	0.14*** (0.05)	0.33*** (0.00)	0.13*** (0.05)
ExtDebt	-0.03 (0.02)	-0.05*** (0.00)	-0.03 (0.02)
CA	0.87*** (0.24)	1.48*** (0.00)	0.89*** (0.23)
INV	0.15 (0.29)	0.21*** (0.00)	0.18 (0.28)
S	-0.08 (0.31)	-0.11 (0.00)***	0.10 (0.30)
W_TOT		-0.63*** (0.00)	

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

W_CPI		1.25*** (0.00)	
W_ <i>pb</i>		2.20*** (0.00)	
W_Mo		-0.49*** (0.00)	
W_X		2.53*** (0.00)	
W_M		0.58*** (0.00)	
W_FDI		0.79*** (0.00)	
W_NEER		0.71*** (0.00)	
W_ExtDebt		-0.23*** (0.00)	
W_CA		3.94*** (0.00)	
W_INV		6.67*** (0.00)	
W_S		-7.29*** (0.00)	
Rho	-0.00 (0.01)	-1,37*** (0.00)	
Lambda			0.00 (0.00)
sigma2	4.20*** (0.20)	0.0000*** (0.00)	0.08*** (0.17)
Log-likelihood	-44,27281	496.21093	-44,44114

Source: Author, *** (**, *) null hypothesis is rejected at the 1% (5%, 10%) significance level. (.) standard deviation.

The preceding Table 6 reports the output for three different models, where spatial dependence is handled in different ways. Note that the output for the SDM Model is similar to the previous one whose interpretation should be now straightforward., but in this case the spatial lag of the regressors are reported as W_ followed by the name of the original series.

With these results, we conclude that the adequate specification to our model is the Spatial Durbin Models (SDM). In fact, Table 9 presents the ML results of this specification and in the last line of this table the log-likelihoods for the three types of spaces model (SAR, SDM and SEM). We note that these results are in favor of the SDM model in term of overall fit comparing to SAR and SEM model. In fact, the SDM Model log-likelihood is 496,21093 higher than the SAR model loglikelihood (-44,27281) which is also higher than the SEM Model log-likelihood (-44,44114). The presence of spatial heterogeneity measured by sigma is attributed to structural differences between countries (Dama, 2020).

CONCLUSIONS

Regarding the regression coefficients, we observe that in most cases the sign obtained is the same in all three models with the OLS results and for the SDM Model all the parameters are significant. To interpret these regression coefficients safely, we will partition them according to the IMF nomenclature, namely: national accounts (INV, S), government and public sector (*pb*), financial sector (Mo), external sector (X, M, CA, FDI), exchange rates (NEER), external debit and debt service (ExtDebt), and prices (CPI annual percentage change, end of period).

Concerning the prices, the inflation rate don't enter with the expected negative sign as well as the exchange rate. In fact, an increase in the nominal exchange rate will make the consumption of foreign's products relatively more profitable inducing appreciation of the currency. A decline is perfectly symmetrical. Concerning the external debt this one enter with the expected

What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

negative sign. Concerning the Government and public sector the Overall Fiscal Balance including Grants don't enter with the expected positive sign. Concerning the national accounts just the Total Investment enters with the expected positive sign. Concerning the financial sector just in the second Model (SDM) that this one (the Broad Money in percentage of GDP) enters with the expected positive sign. Finally, concerning the external sector the Terms of Trade (index 2010 = 100), the Net Foreign Direct Investment and the External Current Account including Grants enter with the expected positive sign.

Then we can conclude that the regularities about the living standard determinants have been well observed during the coronavirus crisis except for:

In the one hand, the inflation rate notably. In fact, during the Outbreak, a highly problematic report by The Economist (The Economist 2020) revealed that, due to the pandemic, the US dollar had lost a significant amount of value compared to European currencies, including the single European currency. This had the consequence of increasing the cost of living in these countries relative to other comparable cities, as Paris is now, according to the ranking, among the top three most expensive cities in the world, alongside cities that were previously not even close to it, such as the Japanese capital, Hong Kong.

In the other hand, the exchange rate, the export and import. In fact, the particular export structure of these African economies concentrated in some raw materials is such that the external competitiveness generally have limited Role, since the price of these products result from the law of supply and demand given by the international market and the literature develops the idea according to which the mechanical chain of national exports stimulation from a depreciation of the real exchange rate seems unlikely to occur in the context of Sub-Saharan Africa (SSA) resulting from the price inelasticity of their imports concentrated in basic products (manufactured goods, capital goods, etc.) necessary for the manufacture of local inputs but few substitutable to local products due in particular to the content in technological progress of these imported products not yet acquired by these economies (Kamin, 1988; Rose, 1991; Ghei and Pritchett, 1999).

The Overall Fiscal Balance including Grants. In fact, In fact, the fiscal resource-related revenues mostly comes from oil and mineral sectors, because other sectors like agriculture typically do not generate large rents that can in turn be appropriated by the government, largely originate from abroad (via export proceeds) and they do not reallocate income from the private sector to the government. Thus, changes in the primary balance arising from fluctuations in these revenues (before they are spent) should be expected to have limited effects on domestic demand (Mpatswe et al., 2012; Konuki and Villafuerte, 2016).

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What are the Regularities with the 2020 Coronavirus Crisis About Living Standard Determinants in Africa? Investigating from the Point of View of Spatial Autocorrelation

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Appendix 1. List of countries

Angola
Benin
Botswana
Burkina Faso
Burundi
Cabo Verde
Cameroon
Central African Republic
Chad
Comoros
Congo, Dem. Rep. of the
Congo, Republic of
Côte d'Ivoire
Equatorial Guinea
Eritrea
Eswatini

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Ethiopia
Gabon
Gambia, The
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia



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