



Transfers of funds of the migrants, governance and economic growth in the WAEMU

KEYWORDS

Transfers, Growth, Governance, dynamic panel.

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ABSTRACT

This article aims at putting forward the role of the governance in the relationship between transfers of funds and economic growth in the countries of the WAEMU from a dynamic panel data covering the period of 1996-2011. The estimates indicate that the transfers of the emigrants are much less vectors of growth in the countries of the WAEMU. The introduction of variables of governance rendered significant this negative relationship between transfers and GDP per capita in particular for the variables: "corruption control", "freedom and responsibility", and "state of right". However, the analysis of the interaction between the variables of governance and the transfers reveals that the variables "freedom of word and responsibility" and "State for right" and to a lesser extent "the Political stability and absence of violence" appear as the factors of governance which can more influence the relationship between transfers and growth.

Introduction

Several cross-sectional studies highlight the positive impact of the transfers on education and health in the developing countries, thus supporting the economic development (Adams and Page (2005)).

On the other hand, some researchers support that the transfers are only complementary incomes with weak impact which do not lead to any acceleration of the economic development. In general, it is supported that the migrations and particularly the transfers cannot alone solve the structural development problems such as political instability, the dysfunctions in the macroeconomic policies, the insecurity, bureaucratic heaviness, the corruption and the insufficiency of infrastructures (De Haas (2008); Catrinescu et al., (2008)).

The question to be asked is of knowing what it is of this cleavage for the countries of the WAEMU. What is the impact of the transfers on the economic growth in WAEMU zone and which role can play the governance?

Very few studies, to our knowledge, evaluate in an empirical way the effect of institutional characteristics on the relationship between transfers and growth. However, the work undertaken by Catrinescu et al. (2008) allowed to show from the estimate of a model of panel of Arellano and Bond (1991) that the addition of variables of governance in a dynamic panel estimate increases the magnitude and the significance of the estimated coefficient of the variable of transfers. Their work particularly does not differentiate the case of the countries of sub-Saharan Africa from those of the WAEMU which more intensively face with a deficit of saving and foreign direct investments and including whose significant part is confronted to the instability socio-economic policy and problems of governance.

The present study is interested specifically in the problems of the impact of the transfers on the growth in the countries of WAEMU by highlighting the role of the governance. From an econometric analysis of dynamic panel we seek to understand if better governance can improve the relationship between transfers of funds and growth in these countries.

1. Transfers of funds of the migrants and economic growth: A literature review

Within the literature, the links between the transfers and the growth are ambiguous. One can distinguish three tendencies in the analysis of the relationship between the transfers and the economic growth:

First it is about the "developmentalist" thesis which emphasis on the beneficial effects of the transfers of funds. Indeed, many studies stressed the positive effect of the transfers in the construction and the re-establishment of the habitat, the improvement of education (Docquier and al(2011)), the reinforcement of health (Adams (2004)), the financial investment (Stark and Lucas (1988), Lucas (2005)), the reduction of the volatility of the incomes, the development of the financial sector or labor productivity (Chami et al. (2009)) (Giuliano and Ruiz-Arranz (2009)).

To corroborate these theoretical results, Brinkerhoff (2006) and Kapur (2004) indicate that the emigrants who turn over in their country can be a source of entrepreneurship, technological progress, investment and promotion of the trade.

Adams and Page (2005) from an estimate on 71 developing countries show that an increase of 10% in the international transfers per capita reduced by 3.5% the proportion of the poor. For Rock and Furrier (2008), a significant share of the transferred funds is generally spent in current consumption goods. This has as consequence the improvement of the demand of consumption goods.

Establishing a link between the transfer of the funds and the quality of the institutions, Ahoure (2008) shows that the positive effect of the transfers on the GDP increases with a good governance. Consequently, good institutional quality is a necessary factor for the transfers of funds to positively affect the GDP of the country of emigration. In the same direction, Ratha (2003) by differentiating the countries having a level of corruption higher than the median from those below the median shows that corruption could negatively affect the transfers of funds received in a country.

Then, the thesis known as "deteriorated" emphasis on the negative consequences of the transfers. The Holders of

this thesis conclude through their studies that the transfers of the migrants weaken the competitiveness of the receiving country, weigh down the external deficit and unbalance the balance of the payments (Kireyev (2006), Luth and Ruiz-Arranz (2007)), or that they have a negative total effect on the economic growth, because they reduce the offer of work (Chami and al(2005)). Indeed, for them the transfers could influence the rates of exchange by supporting the appreciation of the currencies of the receiving countries or the deceleration of the depreciations (*Dutch syndrome*) with the harmful effects on exports, employment and growth (Chami et al., 2005).

Another aspect not often approached in the literature is that the migrants by the means of the sending of funds can also contribute to the aggravation of the conflicts started in their countries of origin by providing for example supports to the protagonists of the wars (Van Hear, 2004; Nyberg-Sorensen et al. 2002). Thus, the diaspora could contribute negatively to political stability.

Lastly, thesis of "neutrality" of transfers which stipulates that the transfers are simple compensatory incomes, which are often used to finance consumption expenditure, and which does not exert any significant effect on the economic activity in the countries of origin of the migrants (Chami et al. (2005, 2009)).

It should be stressed that the results of the principal empirical studies available did not make it possible to establish a stable relationship between transfers of funds of the migrants and long-term growth of the recipient countries.

2. General situation of Sending of funds

The sending of funds to developing countries account for 75% of the sending of world funds. Sub-Saharan Africa accounts 6% of the sending of funds of world funds. With regard to the distribution of the sending of funds by categories of country, they are the countries with intermediate incomes which profit from the greatest part with 67 percent of the sending of world funds followed by the countries of high incomes which add up 26 percent of the sendings of world funds and finally the countries with low incomes with 6 percent of the world sendings.

On the level of the countries of WAEMU, the share of the transfers of the migrants in the GDP is higher in Senegal and Togo with respectively a ratio of 7.41% and 6.95%. However, it is only 1.14% in Ivory Coast and 1.35% in Niger.

3. Method of analysis

This section initially makes it possible to present the variables and data of the study before putting forward the econometric model for the analysis of the impact of the transfers on the economic growth.

3. 1 variables of the model

In a practical way, our dependent or explained variable is the GDP per capita (*GDP*). This variable, is observed for each country over the period of 1996-2011. The explanatory variables are:

The ratio (expressed as a percentage) of the transfers and remunerations of the non-residents received in the country, on the GDP (*Trf*).

The indicators of governance represented by:

- *control of the corruption (corr)* which measures the use of the authorities at ends of personal enrichment, including

the large one and small corruption, like "the catch as an hostage" of the State by the private elites and interests.

- *the political Stability and absence of violence (stab)* which measures the perception of the probability of a destabilization of government by unconstitutional means or violent one.

- *State of right (etad)*: All indicators which measure the confidence of the citizens in the social rules and the compliance with these rules. It is about the public perception of the level of the delinquency, the effectiveness and the foreseeability of the legal system and the possibility of making respect the contracts.

- *Freedom of word and responsibility (liber)* : All indicators which measure the various aspects of the political process in particular public freedoms, political and human rights and the extent to which the citizens of a country can choose their government.

- *dummy variables of governance* for the political stability, the effectiveness of the authorities, the quality of the regulation and the control of the corruption, which take value 1 if the value of the indicator of governance is above the median during the year *T* and 0 if this value is lower or equal to the median.

- *a composite variable of governance (gouv)* which takes value 1 for a country *I* during the year *T*, if the values of at least 3 indicators out of 4 are above the median in *T*. This variable makes it possible to check if the effect of the governance more significant within the framework of good a governance is generalized or not restricted.

3.2. Data

To privilege the homogeneity of the data, all these data result from the database of the World Bank (World Development Indicators (WDI, 2013) and cover the period 1996-2011. With regard to the governance, we use four Indicators of Governance out of six published by the World Bank (Worldwide Governance Indicators). The indicators of the governance are expressed on a scale of [- 2,5 +2,5] where -2,5 means very bad governance and +2,5 very good governance. A good governance affects Gross Domestic Product per capita positively.

3. 3 Specification of the model

Our econometric model of analysis is based on the method dynamic panel which incorporates a delay of the dependent variable (Logarithm of the GDP per capita) like explanatory variable. We estimate a log linear Cobb-Douglas model. The form estimated are presented below:

$$\ln \text{PIB}_{i,t} = \alpha \ln \text{PIB}_{i,t-1} + \beta_1 \text{Lntrf}_{i,t} + \beta_2 \text{GOUV}_{i,t} + \beta_3 \text{GOUV}_{i,t} * \text{Lntrf}_{i,t} + u_i + v_t + e_{i,t}$$

Where the α , β_j $j = 1, 2, 3$, are the parameters to be estimated, u_i , the fixed effect or the factor of heterogeneity of the countries, takes into account all the factors (not observed) constant which has an impact on the growth. v_t is the temporal specific effect and I.E.(internal excitation) a particular term of error which takes into account the factors not observed (which vary in time) having an impact on the growth of the GDP per capita.

3. 4 Method of estimate

In this model the presence of the delayed dependent variable does not make it possible to use the standard econometric techniques. The Generalized Method of the Moments (GMM) in dynamic panel gives an efficient es-

estimate of such a model (contrary to the Least Squares) while making it possible to control for the individual and temporal specific effects and to mitigate endogeneity bias of the variables such as those of the transfers. This endogeneity is justified by the fact that the countries having a weak economic performance are those which would tend to receive more transfers on behalf of their emigrants who will want to help their parents and close relations remained in the country of origin to escape misery and poverty. This method also makes it possible to bring solutions to the problems of simultaneity bias and variables omitted.

There are two alternatives of the GMM: moments generalized in first difference used for the first time by Arellano and Bond (1991) and the generalized moments in system of Blundel and jump (1998). The generalized moments in system, because it provides estimates relatively more robust compared to the generalized moments in first difference, is chosen in this study.

4. Interpretation of the results

We present and discuss first the statistical results on the variables of our study before turning to the econometric results which highlight the impact of the transfers on the temporal variations of the growth rate of the GDP per capita in the countries of WAEMU.

4.1 Descriptive analysis of the variables

Table 1 following offers the statistics on the various variables for the whole of the countries (1996-2011).

Table 1: Descriptive statistics of the variables

Variable	Obs	Mean	Std.Dev.	Min	Max
piibt	128	266437.1	127650.5	94143.95	598217.9
transfer	128	3.729891	2.989016	2262873	11.4947
corr	128	-.6530078	3623101	-1.24	31
stabp	128	-.373125	6918707	-2.31	96
liber	128	-.4905078	5774318	-1.83	38
etad	128	-.7334375	4670188	-2.07	04
v_muet_corr	128	5	5019646	0	1
v_muet_stab	128	46875	5009833	0	1
v_muet_liber	128	5	5019646	0	1
v_muet_etad	128	5078125	5019034	0	1
v_muet_gouv	128	359375	4817026	0	1

Source: Author from the World Bank (2013) data

Table 3: Results of the econometric estimates

	LPibit I	LPibit II	LPibit III	LPibit IV	LPibit V	LPibit VI	LPibit VII	LPibit VIII	LPibit IX	LPibit X	LPibit XI
L.LPibit	1.029 (14.20)***	0.973 (18.44)***	0.967 (17.17)***	0.956 (10.44)***	0.970 (8.80)***	1.007 (18.22)***	0.995 (24.34)***	0.984 (17.69)***	0.963 (23.17)***	1.042 (11.93)***	1.025 (11.86)***
Ltransfer	-0.015 (0.60)	-0.051 (2.04)*	-0.022 (0.16)	-0.023 (0.64)	0.049 (1.22)	-0.040 (2.29)*	0.004 (0.14)	-0.058 (2.19)*	0.012 (0.35)	-0.028 (1.12)	-0.014 (0.35)
corr		-0.064 (0.69)	-0.101 (0.55)								
LTranscorr			0.042 (0.23)								
stabp				-0.093 (1.52)	-0.167 (1.88)						
LTransstabp					0.108						

The share of the transfers of funds in the GDP is on average 3.73% over the period of study. All the indicators of governance are negative in all the countries of the WAE-MU. For the political stability and absence of violence, the average value over the period is -0.37. It is -0.73 for the state of right, -0.49 for the freedom of word and responsibility, and -0.65 for the control of corruption.

Table 2: Relationship between share of the transfers in the GDP and the variables of governance

		Transfer/PIB	
		Mean	Std.Dev.
v_muet_corr	0	4.1013965	3.6264782
	1	3.3583853	2.1397403
v_muet_stab	0	3.1236959	2.5116574
	1	4.4169118	3.3412503
v_muet_liber	0	3.5698099	3.0538189
	1	3.8899718	2.9380898
v_muet_etad	0	4.1765043	3.5287386
	1	3.2970194	2.2976756
v_muet_gouv	0	3.8770262	3.296026
	1	3.4676063	2.3557923

Source: author from the data of the World Bank (2013)

Table 2 reveals that the share of the transfers in the GDP is on average higher for the group of countries whose value of the indicator of governance "political stability and absence of violence" and "freedom of word and responsibility" is above the median. This result is of (4.41% against 3.12%) for the political stability and absence of violence and of (3.89% against 3.57%) for freedom of word and responsibility. The opposite is however observed on the level of the state of right (3.30% against 4.18%) and on the level of the corruption mastering (3.36% against 4.10%). As for the composite variable of governance, it reveals that the share of the transfers in the GDP is on average low for the group of countries whose good governance is generalized. This result is contrary with the one found by Ratha (2003).

4.2 Empirical results

The objective of our analysis is to evaluate the impact of transfers of the emigrants on the GDP per capita growth in WAEMU zone and to check how the governance in WAE-MU countries influences this relationship. The estimates are based on the GMM method in dynamic panel of Blundell and Bond (1998) as discussed previously.

The results of the estimates are presented in table 3 below:

					(2.10)*							
liber						-0.031	-0.043					
						(1.77)	(1.27)					
LTransliber							0.042					
							(2.42)**					
etad								-0.083	-0.066			
								(1.15)	(1.65)			
LTransetad									0.062			
									(2.66)**			
v_muet_gouv										-0.049	-0.006	
										(1.03)	(0.05)	
LTransgouv											-0.034	
											(0.44)	
cons	-0.304	0.393	0.436	0.578	0.323	-0.016	0.091	0.243	0.484	-0.430	-0.232	
	(0.33)	(0.63)	(0.60)	(0.51)	(0.24)	(0.02)	(0.19)	(0.37)	(0.97)	(0.40)	(0.22)	
N	120	120	120	120	120	120	120	120	120	120	120	120
Nombre de Pays	8	8	8	8	8	8	8	8	8	8	8	8
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan/Hansen test	0.183	0.355	0.843	0.559	0.616	0.752	0.513	0.836	0.663	0.553	0.743	
AR(2)	0.057	0.166	0.175	0.378	0.303	0.149	0.133	0.157	0.157	0.219	0.089	

* p<0.10 ** p<0.05;*** p<0.01

Table 3 shows first that the transfers of the emigrants do not influence significantly the GDP per capita growth in the WAEMU countries over the period of 1996 to 2011 (Column I). The estimated coefficient is negative but non-significant. The addition of one of the indicators of governance involves that the coefficient of the variable of the transfers slightly becomes significant with the threshold of 10% but increases slightly in absolute value. It is however not significant for the political Stability variable (column IV). This result shows the relevance to take into account the governance in the evaluation of the impact of the transfers on the growth.

The results of the interaction of the transfers with each variable of governance indicate that the variable of interaction has an overall positive and significant coefficient, except in the case with the "mastering of corruption" where it is nonsignificant. The coefficient of interaction is positive and significant at 5% (columns VII and IX) for the variables "the freedom of word and responsibility" and "State for right". For the variable "political stability and absence of violence" it is positive and significant only at 10% (column V). But in the three cases, the coefficient of the variable of the transfers is not significant. We can thus conclude that the variables "freedom of word and responsibility" and "State for right" and to a lesser extent "the Political stability and absence of violence" appear as the factors of governance can influence the relationship between transfers and growth. Thus, the transfers could have an impact significantly favorable on the growth in the countries making more efforts for good governance.

The column (XI) of table 3 offers the opportunity to check if the junction of several factors of governance is more capable to influence the impact of the transfers on the evolution of GDP per capita. The estimated coefficient of this variable is negative but nonsignificant. We note that the variable of transfers and the one of interaction with the composite variable of governance have a negative coefficient but nonsignificant. This shows that over the period of 1996-2011 the transfers negatively affect the growth in the countries of the WAEMU, but this negative impact is not significant. These results confirm for the countries of the WAEMU, the negative relationship between transfers and growth (Chami and al, 2005) which could be justified by the reduction of the offer of work and productive effi-

ciency for the beneficiary families of the transfers. Another possible reason is that the received funds are used more for consumption of final goods and could encourage the consumption of imported goods.

Conclusion

The objective of our analysis is to evaluate the impact of transfers of the emigrants on GDP per capita in the countries of WAEMU and to check how the governance in these countries influences this relationship. The estimates based on the Generalized Method of Moments (GMM) in system in dynamic panel of Blundell and Bond (1998) put forward a negative relation between transfer and GDP per capita. This relationship is not statistically significant, however it indicates that the transfers of the emigrants are much less vectors of growth in the countries of WAEMU. It is thus probable that the transfers of the migrants benefit less the entrepreneurial activities, are more used to support the poorest household consumption and create dependence which reduces the offer of work and the productivity.

We also could show that the governance plays an essential role in the analysis of the relationship between transfers and the level of the GDP per capita. Indeed, it is highlighted in the analysis a negative and slightly significant (at the threshold of 10%) of the ratio of the transfers/GDP on GDP per capita with the introduction of variables of governance in particular the mastering of corruption, the freedom of word and responsibility, and the state of right; the initial relation being not significant. The analysis of the interaction between the variables of governance and the transfers reveals that the variables "the freedom of word and responsibility" and "State for right" and to a lesser extent "the Political stability and absence of violence" appear as the factors of governance which can more influence the relation between transfers and growth. The impact of these variables on the transfer made positive the relationship between the transfers and the GDP per capita even if it is not statistically significant. This lets predict that an improvement of the governance should contribute to positively improve the effect of the transfers on the level of the GDP per capita. This should motivate the WAEMU authorities to promote the implementation of policies aiming at improving good governance.

Notes

(1) T of Student robust in absolute value are between brackets, with *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

(2) In all the regressions, the variable delayed of Log(GDP/capita) and the variable of governance are instrumented by their delays of second order. The variable Log(Transfers/GDP) and its interactions with the variables of governance are instrumented by their delays of order 3.

(3) Sargan/Hansen is the test of restrictions of suridentification for the estimators of GMM and AR(2) is the test of second order of correlations of the terms of error (p-been worth or thresholds of significance are deferred).

(4) All the estimates are made from the GMM method in system with the order xtbond2 of Stata

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