The long-term effect of migrants remittances on the exchange rate in Algeria : An ARDL model

تأثير التحويلات المالية للمهاجرين في المدى الطويل على سعر الصرف في الجزائر: دراسة قياسية وفق نموذج ARDL

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Abstract:
The study measured the effect of migrants' remittances on the real effective exchange rate (REER) in Algeria in the long term during the period (1994-2020) by estimating the relationship between the latter and remittances with a number of other specific variables of the exchange rate, according to an ARDL model. The results showed the absence of a statistically significant relationship between migrants' remittances and the REER, in contrast to some countries of the Maghreb and some other emerging economies. The absence of the effect of remittances on the REER is due to the weak volume of their flows compared to the size of the Algerian economy, in addition to their flow through informal channels, feeding the parallel exchange market as a result of the premium offered by the latter, thus the inability to measure the actual size of these flows, which was confirmed by the results of the study.
Keywords: remittances, the real effective exchange rate, ARDL , the Algerian economy, migrants.
JELClassificationCodes: C32, F24, F31

ملخص:

هدفت الدراسة إلى قياس أثر التحويلات المالية للمهاجرين على سعر الصرف الحقيقي الفعال في الجزائر في المدى الطويل خلال الفترة الزمنية (1994–2020) عن طريق تقدير العلاقة بين هذا الأخير و التحويلات المالية رفقة عدد من المتغيرات الأخرى المحددة لسعر الصرف، و ذلك بالإعتماد على أدوات الإقتصاد القياسي وفق نموذج الانحدار الذاتي للابطاء الموزع (ARDL). بينت النتائج عدم وجود علاقة ذات معنوية إحصائية بين التحويلات المالية للمهاجرين و سعر الصرف الحقيقي الفعال على عكس بعض دول المغرب العربي و بعض الإقتصاديات الناشئة الأخرى التي وجد فيها هذا الأثر. يعود غياب أثر التحويلات عل سعر الصرف الحقيقي الفعال إلى ضعف حجم هذه التحويلات مقارنة بحجم الإقتصاد الجزائري بالإضافة إلى تدفقها عبر القنوات غير الرسمية مغذية بذلك سوق الصرف الموازي نتيجة للعلاوة الذي يقدمها هذا الأخير و بالتالي عدم القدرة على قياس الحجم الفعلي لهذه التدفقات الأمر الذي أكدته نتائج الدراسة.

كلمات مفتاحية: التحويلات، سعر الصرف الحقيقي الفعال، ARDL، الإقتصاد الجزائري، المهاجرين.

تصنيفات JEL : C32, F24, F31

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INTRODUCTION:

The unique characteristics of remittances and their potential economic impact have attracted the attention of policy makers and researchers in recent years, As evidenced by the increasing studies aimed at analyzing remittances and their effects on countries (especially in the receiving countries). Considering that these flows are completely distinct from other international financial flows such as official aid or private capital (foreign direct investment).

The growth of remittances flows of migrants can be viewed as an additional effect of globalization, as it certainly has effects at the macro level, affecting market prices and interactions between economic agents.

This effect appears on the macroeconomic variables, and among these variables we mention the exchange rate, which is a very important indicator for drawing foreign economic policy because it plays the important role in moving the country's foreign trade by giving a competitive advantage to its exports. It is an effect that has not been treated in the Algerian economy, since previous studies have proven the existence of an effect of remittances on the exchange rate in developing economies, and considering Algeria as one of these economies with a significant mass of immigrants in various countries of the world, especially in the European region , We posed the following problem.

The problematic:

Do the migrants remittances affect in the long run the real effective exchange rate in the Algerian economy?

The study hypotheses:

- In the long run, migrants remittances raise the real effective exchange rate in Algeria.
- In the long run, migrants remittances reduce the real effective exchange rate in Algeria.
- migrants remittances do not affect the real effective exchange rate in Algeria In the long run.

The objective of study:

Measuring the the long-term effect of migrants remittances flows on the real effective exchange rate in the Algerian economy during the periode between 1994 and 2020.

The importance of the subject:

Migrants remittances and the exchange rate have received a lot of attention in recent studies, Remittances are a major source of cash inflows and are an important determinant of the exchange rate (Mughal, 2013), It also turns out that both variables are of great importance, especially in shaping economic policy in Pakistan, In addition, volatility in remittances and the exchange rate can affect macroeconomic variables such as interest rate, unemployment, prices, wages and exports, while their stability reduces risks to both investors and households (Khurshid and others, 2017).

The methodology used in the study:

In this study, the researchers used the descriptive analytical method to present a simplified picture of the main variables of the study and to highlight the theoretical relationship between them, while the study of the quantitative relationship between remittances and the exchange rate was according to the econometric methodology.

The previous studies:

Considering Pakistan as one of the top 10 recipient countries of remittances in the world, (Khurshid and others, 2017) tested the effect of remittances on the exchange rate and the dynamics of exports in Pakistan, and the results revealed that remittances lead to a depreciation of the exchange rate and have an Positive impact on export competitiveness. In addition, the influx of remittances raises the exchange rate only if it is used for saving and does not adversely affect competitiveness unless it is directed towards consumption. The change in the exchange rate regime from multiple to flexible also led to the depreciation of the exchange rate, while the global financial crises pushed up the currency rate and negatively affected exports. (Brahim and others, 2018) agreed with the results of the above-mentioned study through their study, which aimed to study the effect of remittances on the real effective exchange rate in the countries of the Middle East and North Africa (MENA), using the ARDL model on data from 9 countries. in the Middle East and North Africa for the period 1980-2015. They found that in the long run, migrants remittances towards the entire MENA region negatively and significantly affect the real effective exchange rate. Indeed, an increase in remittances leads to a depreciation of the real exchange rate, which means that remittances do not deteriorate the competitiveness of recipient countries in the long run.

On the contrary, after testing the effect of workers' remittances on the real exchange rate on a sample of 13 countries in Latin America and the Caribbean (Amuedo-Dorantes & Pozo, 2004) found that workers' remittances have the ability to impose economic costs on the export sector in receiving countries by reducing its international competitiveness. The findings of this study raise concerns similar to those raised by the Dutch disease or resource boom models, whereby resource discoveries drive up the real exchange rate and divert resources from the commercial to the non-commercial sectors of the economy. In the same direction, (Acosta and others, 2009) found that remittances in themselves tend to exert pressure on the real exchange rate that leads to its appreciation. But this effect is weaker in countries with deeper and more developed financial markets, which seem to retain trade competitiveness, as the researchers believe in this study that advanced financial sectors can more effectively direct these remittances to investment opportunities. (Barajas and others, 2011) found that this rise in the real equilibrium exchange rate in response to continuous remittance flows tends to be small in quantitative terms and this effect may be through a variety of macroeconomic channels . Not only that, but even (Chnaina & Makhlouf, 2015) after they studied the impact of migrants remittances on an important macro variable in the Tunisian economy represented in the effective real exchange rate, by estimating the mutual integration relations, where they found that an increase of 1 % in the ratio of remittances to GDP leads to an increase in the real equilibrium exchange rate by 0.39%, which confirms the Tunisian economy's suffering from the Dutch problem.
Similarly (López-Marmolejo and others, 2021) noted that many countries in Central America receivea large amounts of remittances from abroad, the increase in these inflows tends to raise the local currency, which is a phenomenon, according to The literature has a potential negative impact on the growth and competitiveness of the export sectors of these countries.

The first two studies we discussed, under the title of The literature review, indicated the positive effect (decreasing the exchange rate), unlike the rest of the studies that followed, which reported the negative impact (increasing the exchange rate), but what was observed in

the study of (Lopez and others, 2007) that its results were a combination of the results of the all aforementioned studies, because the researchers' view was that this effect may lead to either an increase or a decrease in the exchange rate, the reason is that the acceleration of the growth rate would reduce the stock of net foreign assets as a percentage of GDP, leading to a depreciation in the real exchange rate. However, if the position of net foreign assets is negative vis-à-vis the rest of the world, an increase in the growth rate will lower the liabilities to the GDP ratio causing an increase in the real exchange rate.

Finally, we conclude that the theory may suggest a strong assumption in favor of the viewpoint that links an increase in remittance inflows with an increase in the real exchange rate, there are different circumstances under which this correlation may be weak, and some may not be at all, so the traditional view may be reversed, thus the effect of changes in remittance flows is an empirical matter. And this was confirmed by (Barajas and others, 2011), that what led us to study and experience the impact of remittances of Algerian immigrants on the exchange rate in Algeria.

1-Migrants remittances :

According to the Balance of Payments Manual (Fifth Edition) of the International Monetary Fund, migrant remittances are defined as special current transfers that include goods and financial assets from migrants and/or workers residing outside the country for a period of one year or more to people (usually members of their families) in their countries of origin., But it may also be money invested, deposited or donated by the immigrant to the country of origin. This definition can be changed to include in-kind personal transfers and donations, Some researchers have gone further, trying to include skills, technology, and social transfers to migrants remittances (ملحاوى و دربال، 2019) , So we can say that they represent the financial flows associated with migration.

 the balance of payments is determined by the trade balance in addition to the net movement of capital to and from the country, thus the migrants remittances necessarily affect the balance of payments consedering these transfers as cash flows from abroad to the country.

Consequently, these remittances became a major component of the balance of payments. In this aspect, India ranked first in the world in receiving remittances from migrants, with a value of 70 billion dollars in 2013, followed by China with 60 billion dollars, and regarding the Arab countries, Egypt ranked first in the Arab world with 18 billion dollars in 2015. All these funds is pumped into the mentioned economies and contributed to improve the deficit in the balance of payments. (بزارية و أيت سي معمر، 2017).

On the other hand, the migrants remittances contribute to support the foreign reserves of the receiving countries, as(Lueth & Ruiz-Arranz, 2006) confirmed that remittances constitute the most important source of foreign exchange for many low and middle income countries, He also emphasized that remittances can bring important economic benefits to recipient countries, It provides financing and supports consumption and investment.

Given their importance, some developing countries have made migration and these remittances a part, if not central, of their development strategies, for example Philippines, Mexico, and other countries in Central America and the Caribbean, as well as Pakistan, where remittances to this last country boost growth and reduce economic inequality and poverty. (Mughal, 2013).

Remittances in developing countries are no longer used only as a mechanism to get out of poverty, but they are also considered as a mechanism for dividing risk, a stable resource for investment and a flow of future consumption. (Vargas-Silva & Huang, 2006).

Even the developing countries are intrested in remittances, where (Taylor, 2004) sees that the United States of America wants to raise the value of remittances to developing countries because this can enhance economic growth in these countries. In addition the fact that these remittances, if they are through official channels, would enhance and attract the banking industry in developing countries.

Regarding the determinants of migrants remittance, (Lucas & Stark, 1985) while studying the determinants of remittances in Botswana, saw that immigrants are remitting because they are interested in consumption in the houshold sector, but altruism is not enough to explain the dynamics of remittances, but rather there is a personal interest (the future inheritance from his family, Investing in assets in the vicinity of where his family is located, the return of the immigrant and his obtaining the gratitude of his family), in the same vein (Schiopu & Siegfried, 2006) concluded that altruism is the most important motivator of remittances, in addition to the GDP difference between sending and receiving countries which is related Positively with average remittances per immigrant.

It is estimated that in 2009 migrants from developing countries sent more than $315 billion to their countries of origin (Ratha and others, 2010). Where in 2010 the recorded remittances received by developing countries amounted to 325 billion US dollars (World Bank, 2011), and according to World Bank statements in 2011, remittances nearly quadrupled during the period 1976-2010.

Over the past decade, remittances to low- and middle-income countries have increased by 51% (an average rate of 4.2% annually), from $296 billion in 2007 to more than $554 billion in 2019. These flows exceed three times Official development assistances (ODA), it also outnumbered total foreign direct investment (FDI) in nearly every low- and middle-income country. It is estimated that between 2015 and 2030 (the time frame of the Sustainable Development Goals), migrants will send $8.5 trillion back to their communities of origin in developing countries. Of this amount, more than US$2 billion will be saved or invested (IFAD)

2-The exchange rate :

The exchange rate is the price of a country's currency in relation to another currency. Thus, the exchange rate consists of two components, the local currency and the foreign currency, so the exchange rate basically allows you to determine how much one currency you can exchange for another, Therefore, the value of currencies against each other changes frequently, because most currencies are based on flexible exchange rates. The value of currencies changes because there is a change in the demand to hold that particular currency.

The exchange rate guarantees the link of the national currency to other currencies, In addition to comparing the macroeconomic indicators of different countries. In the end, the exchange rate determines the purchasing power of a particular currency, in addition it has a great impact on the country's foreign trade as the competitiveness of the country's products in world markets. therefore It is necessary for the exchange of currencies in the trade of products and services and also for the movement of capital and credit .

International payment or exchange transactions assume a mandatory comparison of local and foreign exchange rates because every product bought or sold costs a value expressed in money. This leads to the emergence of the exchange rate and the need to determine it. Thus, the exchange rate is the ratio between the monetary units of different countries, which is determined by their purchasing power and some other factors.

The exchange rate is necessary for international currency, payments, credit and financial operations. Moreover, the exchange rate is not just a ratio, it is the currency price in relation to other currencies, and therefore this rate determines the cost of all foreign goods.

Many factors influence foreign exchange rates, and understanding these factors is often a complex process. Exchange rates depend on changes in capital markets, international trade balances, political events and government policies, and economic news around the world, and these factors determine the supply and demand for currency (Hamilton, 2018).

The latter plays an important role in the country's commercial performance. Whether determined by external shocks or politics, the relative valuations of currencies and their volatility often have important implications for international trade, balance of payments and general economic performance, because increased exchange rate volatility according to (Nicita, 2013)leads to lower international trade due to the emergence of risks and transaction costs associated with volatility exchange rate, and they reduce incentives for trade, so policy makers have to pay attention to the exchange rates of their own countries and those of other countries.

Foreign exchange rates have become increasingly important, especially with the emergence of globalization due to international money transfers between countries becoming more important in capital markets, where (Anlas, 2012) considered it as national and international political, social and economic indicator, because in developed countries the exchange rate reacts quickly to events such as war and terrorism and also with changes in the political situation as well as to key economic indicators such as unemployment and interest rate

3- The theoretical relationship between remittances and the exchange rate :

 The balance of payments and foreign reserves are among the determinants of the country's currency exchange rate, and as previously mentioned, remittances are a component of the balance of payments and contribute to strengthening the foreign reserves of receiving countries, and from here we note the channel which the impact of remittances on the exchange rate can pass through it.

This is confirmed by (Lopez and others, 2007), who see that migrantsremittances as remittances of foreign currency that have no obligations attached to them, unlike other types, their impact on the real exchange rate passes directly through the rise in net foreign assets for the country.

As (Brahim and others, 2017) reported that remittances may lead to an increase in the demand for non-traded goods, which leads to an increase in the price of non-traded goods in relation to the prices of traded goods, which leads to an increase in the real exchange rate. This effect could also be through their effect on growth, although in this case the effect on the exchange rate is likely to be uncertain (Lopez and others, 2007). The above was expressed mathematically according to the following relationship:

$$q = \mathrm{fsr}\big((W^{+/-}, X)$$

where :

X: other determinants of the real exchange rate (Technological development difference government expenditure, terms of trade, foreign interest rate, foreign aids, GDP per capita, net international investment, demographic growth rate, black market premium, managed agricultural prices).

q : the real exchange rate

W: migrantsRemittances

(+): an increase

(-): a decrease

4- The impirical Study:

4-1 Study variables:

Depending on the aforementioned studies under the title of literature reviews, the effective real exchange rate was adopted as a dependent variable and remittances, foreign investment, exchange index, growth rate as independent variables, and basing on (2016 ،سي محمد) we added another independent variable represented in the oil price, given the peculiarity of the Algerian economy within reason it is a rentier economy whose economic policy depends largely on oil incomes.

Finally, we formulate the following equation:

$$reer_t = \beta_0 + \beta_1\ rem_t + \beta_2\ fdi_t + \beta_3\ Oil_t + \beta_4\ tot_t + \beta_5\ grow_t + e_t$$

Where :

reer: The real effective exchange rate (log)

rem: Migrant remittances (% of Gdp)

fdi: Foreign investment (% of Gdp)

Oil: Oil price (log)

tot: Terms of trade (log)

grow: Growth rate (%)

e: Random error

t: Time

4-2 Data :

During our astimation of this relationship, we relied on the international financial data released by the World Bank and related to the Algerian economy, in addition to the data of the American Energy Information Administration, which are all annual data for the period between 1994 and 2020.

We chosed this time periode because of The reforms made by Algerian authority to move to a market economy after the oil crisis in 1986, and one of the most important of these reforms is taking initial steps to restore the Algerian dinar to its true value, and the monetary authorities' adoption of a policy of gradual devaluation of the Algerian dinar since the end of 1987, which ended with the abandonment of the peg system in 1994 (بربري).

The behavior of the both main variables during the study period can be observed in the following figure:

Figure (1): Annual remittances inflows to Algeria and the changes of real effective exchange rate(1994-2020)
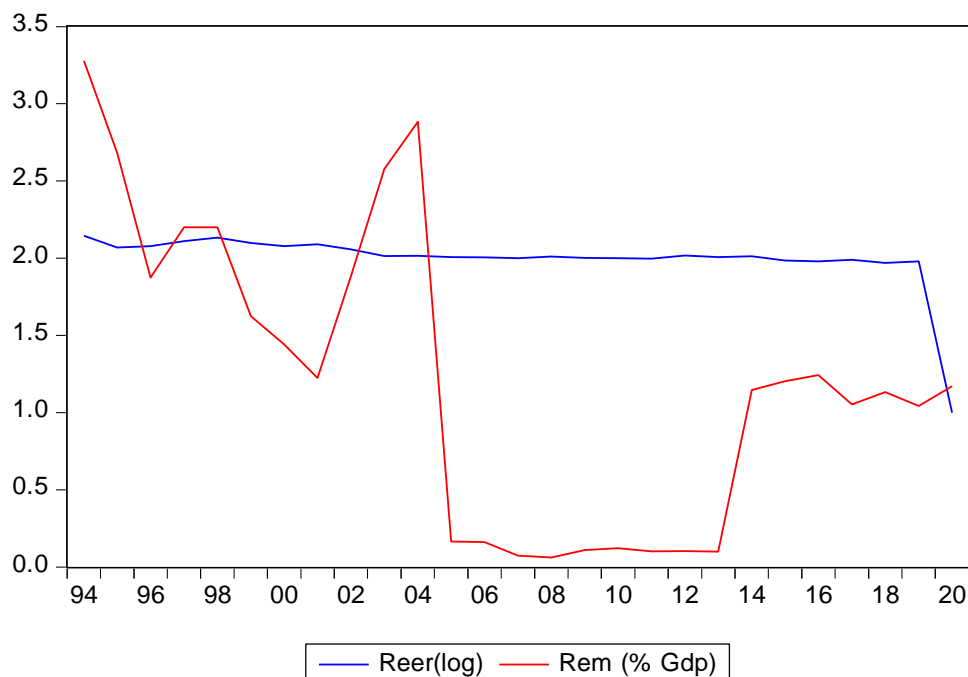
Source: Created by authors from the data using Eviews

4-3 Stationarity of the time series of variables:

Relying on (Dickey & Fuller, 1981) and (Phillips & Perron, 1988) testing for a unit root in time series in order to study their stationarity, the results obtained are shown in table (1).

Table (1): Stationarity test results

time series	At level		Athe first difference		The result
	p- value		p-value		
	ADF	PP	ADF	PP	
Reer	0.0015	0.0007	/	/	The time series is stationary at level
Rem	0.03	0.03	/	/	The time series is stationary at level
Fdi	0.0318	0.0377	/	/	The time series is stationary at level
Tot	0.90	0.92	0.001	0.0018	The time series is stationary at first difference
Grow	0.15	0.15	0.000	0.000	The time series is stationary at first difference
Oil	0.465	0.452	0.005	0.007	The time series is stationary at first differeence

Source: Author's own calculation by Eviews.

It is clear from table (1) that each of the time series of the real effective exchange rate (log), remittances of migrants (% gdp), foreign investment (% gdp) is stationary at the level, while the remaining variables are represented in each of the growth rate) %), the trade exchange index (log) and the oil price (log) are stable at the first difference in both ADF and PP tests. Therefore, the researcher had to estimate the relationship according to the ARDL model suggested by (Pesaran, 1997) and(Pesaran and others, 2001).

4-4 Estimation results:

To investigate the co-integration relationship after determining the number of time gaps for the model by using the AIC criterion, we tested the ARDL Bounds Test by comparing the calculated F-statistic with its tabulated value at the maximum and the minimum, the result was that the calculated F (3.42) was significant at 10% since it is greater From the tabulated at a maximum of (3.35), so we accept the alternative hypothesis H_1, which mean, there is a long-term co-integration relationship between the study variables as shown in table (2).

Table (2): ARDL Bounds Test

Test Statistic	Value	K
F-statistic	3.424389	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Author's own calculation by Eviews.

To test the quality of the model estimation, we did the Breusch-Godfrey Serial Correlation LM Test, and we found that it is not significant (0.63), meaning that there is no serial correlation between the study variables, which gives us the quality of the studied tests as shown in table (3).

Table (3): Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.488467	Prob. F(2,8)	0.6307
Obs*R-squared	2.720678	Prob. Chi-Square(2)	0.2566

Source: Author's own calculation by Eviews

The coefficient of determination (R- squared) was 0.89(i.e), we succeeded in selecting the explanatory variables by 89%, as for the probability of the Fisher statistic (Prob(F-statistic)) for the model, it amounted to 0.00004, which indicates the significance of the estimate used,

and the error correction parameter sign is negative and statistically significant, which indicates the existence of a co-integration relationship, as shown in the following tables (Table (4) and (5))

Table (4): Short-run coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
REER(-1)	-0.888876	1.353767	-0.656594	0.5238
OIL	0.389523	0.138836	2.805637	0.0159
FDI	-0.014954	0.055713	-0.268414	0.7929
FDI(-1)	-0.032687	0.046895	-0.697025	0.4991
FDI(-2)	-0.100904	0.047449	-2.126573	0.0549
REM	0.031290	0.048099	0.650532	0.5276
REM(-1)	-0.106495	0.054652	-1.948617	0.0751
TOT	-1.809693	0.566291	-3.195696	0.0077
TOT(-1)	0.358669	0.367804	0.975161	0.3487
TOT(-2)	-0.475129	0.273310	-1.738425	0.1077
GROWTH	0.067721	0.013801	4.906889	0.0004
GROWTH(-1)	0.016455	0.015670	1.050090	0.3144
C	5.796908	3.461247	1.674803	0.1198

R-squared	0.892502	Mean dependent var		1.985355
Adjusted R-squared	0.785003	S.D. dependent var		0.210232
S.E. of regression	0.097480	Akaike info criterion		-1.512308
Sum squared resid	0.114028	Schwarz criterion		-0.878492
Log likelihood	31.90384	Hannan-Quinn criter.		-1.336514
F-statistic	8.302469	Durbin-Watson stat		1.678370
Prob(F-statistic)	0.000441			

Source: Author's own calculation by Eviews

Table (5): Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(OIL)	0.394612	0.127166	3.103120	0.0065
D(FDI)	0.009775	0.051426	0.190085	0.8515
D(REM)	0.018555	0.046828	0.396235	0.6969
D(TOT)	-2.001264	0.522236	-3.832105	0.0013
D(GROWTH)	0.064278	0.012412	5.178706	0.0001
CointEq(-1)	-1.675478	1.039290	-1.612136	0.0953

Cointeq = REER - (0.2355*OIL -0.0355*FDI -0.0424*REM - 1.1944*TOT +
   0.0384*GROWTH + 3.2725)

Source: Author's own calculation by Eviews

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Table (6): Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OIL	0.265522	0.169094	1.392848	0.0916
FDI	-0.035503	0.037029	-0.958775	0.3511
REM	-0.042358	0.036206	-1.169900	0.2582
TOT	-1.194444	0.667093	-1.790520	0.0912
GROWTH	0.038364	0.021898	1.751941	0.0978
C	3.272502	0.525009	6.233232	0.0000

Source: Author's own calculation by Eviews

Table(6) shows the coefficients of independent and explanatory variables of the real effective exchange rate in the long term, and it shows that all coefficients are statistically significant at 10%, except for the foreign direct investment coefficient (percentage of domestic product) and the migrants remittances coefficient (percentage of domestic product), which showed Weak effect on the real effectivel exchange rate (log), and it is not statistically significant, which indicate the ineffectiveness of the policy adopted by decision-makers in Algeria in attracting foreign direct investment. The same applies to migrants remittances, which indicates that they are transferred through informal channels feeding the parallel market as a result of the premium offered by the latter.

The results also showed that there is a positive relationship in the long term between each of the oil price (log) and the real effective exchange rate (log), as every 1% increase in the price of oil leads to an increase in the real effective exchange rate by 0.26%, this result is consistent with the reality of Algeria's rentier economic policy, given that hydrocarbons represent 90% of the country's exports.

The coefficient of the terms of trade was negative (-1.19), meaning that there is a long-term inverse relationship, and it means that the rise of the latter leads to a decrease in the real effective exchange rate, which is a result that does not agree with the economic theory, the reason for this result, as we mentioned is that the hydrocarbon sector takes the largest share in country's exports, Although the increase in the prices of the latter, the real exchange rate remains low due to the increase in imports as a result of the financial affluence provided by the process of exporting oil. Therefore, imports witnessed a significant increase as a result of the rise in oil prices during the last two decades of the study period and the Algerian authority attempt to reduce these imports through the exchange rate policy (raising the real exchange rate).

Finally, the growth rate coefficient appears positive, opposite to the theory, and has a weak long-term impact, which does not exceed 3.8%, and this indicates that all economic theories in developing countries are not achieved, unlike developed countries, and this is due to the nature of these emerging economies.

Conclusion:

We studied the impact of migrants' remittances on the real effective exchange rate in Algeria during the period 1996-2020, using the Algerian economy data related to the real

effective exchange rate and remittances in addition to a vector of other variables determining the exchange rate and trying to estimate this effect based on Econometric tools according to the ARDL model. The results concluded that there is no statistically significant relationship between migrants remittances and the real effective exchange rate. This is due, on the one hand, to the weakness of their size compared to the size of the Algerian economy,(which appears in their percentage of the gross domestic product), on the other hand, to their flow through informal channels destined to the parallel market. In this case, the official statistics become unrepresentative of the reality of the actual size of these financial flows to Algeria.

Thus, we rejected the first and second hypotheses, which state that there is an effect (increase/decrease) and accept the third hypothesis, which states that migrants remittances do not affect the real effective exchange rate in Algeria. It is a phenomenon that, according to literature review, has a neutral effect on the growth and competitiveness of the export sectors of this country.

Finally, we highlight that the results of our study were not compatible with the results of the aforementioned previous studies, but as emphasized by (Barajas and others, 2011) that conditions differ, where in some this correlation can be weak, and in others there may be no correlation at all, that's why the effect of remittance flows on the effective real exchange rate is an empirical matter.

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