
Emigrants' Remittances and the "Dutch Disease" in Small Transition Economies: the Case Of Albania and Moldova

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Abstract

An exogenous inflow of foreign exchange can lead to an appreciation of the currency of the receiving country, a deterioration of its competitiveness and a fall in net exports. Economic theory identifies this as the "Dutch Disease" although it is more often observed in emerging economies. The origin of the real exchange rate appreciation can differ from country to country but the inflow of remittances, the main and clearer gain for the emigration countries, has been accused for such an outcome. This paper tests the applicability of the "Dutch Disease" for two small transition economies under a free floating exchange rate regime, namely Albania and Moldova. In recent years, these countries have experienced impressive outflows of emigrants and even more impressive inflows of remittances. However, the econometric results, based on the ordinary least squares fixed effects, show that the impact of the workers' remittances on the real exchange rate varies among the countries examined. The results confirm that the macroeconomic implications of these large capital inflows have been actually different between the countries.

Key Words: "Dutch Disease", Emigrant's Remittances, Transition Balkan countries

INTRODUCTION

Most Balkan countries are still struggling to complete their transition to market economies. During this process, their governments had to surpass huge economic and structural obstacles while other, new ones, were turning up. Initially, they all experienced a substantial decline in their output. Later, they experienced growth rates higher than those corresponding to advanced economies.

Among the late reformers were Albania, Moldova, Bulgaria and Romania, though the last two actually managed not only to overcome their transition problems, but also to become members of the European Union. This fact shows that they carried out all the necessary reforms more decisively than the other transition Balkan countries. Besides that, the more extended the structural reforms are and the earlier the macroeconomic stabilization is achieved, the more rapid the growth is (Fischer and Sahay, 2000, p.15).

One common obstacle for the transition countries was the appreciation of the exchange rate, which made the currencies overvalued and the exports of the countries non-competitive. The origin of this problem may differ from country to country. This paper tries to explain the Dutch Disease part of the phenomenon. In Rutherford's dictionary of Economics (1992, in Dobrynskaya and Turkisch, 2009, p. 13), the term determines the decline in traditional industries due to the rapid growth and prosperity of a new industry. Moreover, "Dutch Disease" is the name used to express the procyclicality of capital flows in a country (Frankel, 2009, p. 4). Generally, it is the reduction in the export performance of a country, on account of an appreciation of the exchange rate (Barder, 2006, p. 4). The "Dutch Disease" hypothesis refers to the crowding out of the rest of the export sector exactly due to the large capital inflows caused by the booming one (Beja, 2010, p. 2). As far as the capital inflows are concerned, they are the increases in net international indebtedness of the private and public sectors and such increases are usually identified through wider current account deficits and/or reserve accumulation (Calvo et al., 1994, p. 54).

This economic phenomenon affects the emerging economies as well as the advanced ones (Bandara, 1995, p. 312), especially when they are liable to shocks that trigger foreign exchange inflows, such as the discovery of natural resources or the inflow of emigrants' remittances. The currencies of West Balkan countries for example have been found to be overvalued, while the ones of the East Balkans ones undervalued (Holzner, 2006, p. 10).

The paper will focus on the analysis of the "Dutch Disease" phenomenon, starting with the origin of the expression, continuing with the detailed presentation of its causes and consequences as they are discussed in the literature and the relationship between remittances and the real exchange rate. We shall conclude with the presentation of the real effective exchange rate values in two transition countries namely Albania and Moldova. These two countries have been recipients of large amounts of remittances since the early 1990s. Furthermore, they both adopted floating exchange rates arrangements on their currencies during the transition process whereas Bulgaria (since the mid 1990s) and Romania after the accession to the E.U. pegged their currencies

to stronger ones. The aim is to reveal the “Dutch Disease” symptoms and the differences the phenomenon seems to present among the countries under examination and if possible suggest policies measures.

“DUTCH DISEASE”: A THEORETICAL SURVEY WITH PARTICULAR REFERENCE TO REMITTANCES

“Dutch Disease” was the title of an article published in the *Economist* (1977, pp. 82-3) about the effect of the discovery of natural gas in the North Sea on the economy of the Netherlands. The gas exports led to large foreign exchange earnings. It is actually true, that the name initially referred to the situation in Netherlands, after the discovery of natural gas deposits back in the 1960s. Due to this discovery, the wealth in the Netherlands increased, the Dutch currency, the guilder, appreciated and the country’s non-oil exports became less competitive. Since then, “Dutch Disease”, or else the “natural resource curse”, has been used to describe every appreciation of a currency, caused by a significant capital or foreign exchange inflow that makes the tradables sector of an economy less competitive (Tuano-Amador et al., 2007, p.5).

Remittances, apart from their positive effects for the receiving economies, are believed to have a few negative ones including the appreciation of the real exchange rate. However, as mentioned above, other factors such as foreign aid, grants, foreign direct investment and all kind of capital inflows is also likely to cause such problems. The reason for deepening into the remittances – “Dutch Disease” relationship in transition countries is based on the fact that the Dutch Disease related problems are considered to be much worse in the case of a transition economy (Kuralbayeva et al., 2001, p. 6). Furthermore, many Balkan and Eastern European transition economies have received sizeable capital inflows in the form of remittances due to the large outflows of emigrants they experienced since the early 1990s. .

The main task for policy makers is to understand and control the way this phenomenon known as “Dutch Disease” takes place, so as to prevent the economy from undergoing it. There are two effects going on, that can both cause the real exchange rate to appreciate, making the country less competitive in the world market, the spending effect and the resource movement effect.

When the disposable income increases due to the capital inflows, a spending effect occurs. The boost in disposable income leads to a rise in aggregate demand and expenditure in the economy, both for tradable and non-tradable goods. This pushes the price of non-tradable goods upwards and leads to the appreciation of the real exchange rate. The prices of the tradable goods will also tend to increase, but since they are determined in the world

market and most countries are price takers, this cannot happen. As a result, the real exchange rate (defined as the domestic relative price of tradable to non-tradable goods) will appreciate, given that the price of the non-tradables will be the only one to rise (Bourdet and Falck, 2006, pp. 271-2).

Capital inflows can also cause a resource movement effect. The boom raises the marginal products of the mobile factors employed in this sector and draws resources out of other sectors, giving rise to various adjustments in the rest of the economy, like the appreciation of the real exchange rate (Corden and Neary, 1982, p. 827). The increase in the price of non-tradables makes their production more profitable and their growth raises factor demands, especially for the intensively used ones. It is true that the non-tradables sector uses labor more intensively. As a result, the wages in this sector relatively to other sectors increase and this motivates the labor force, which is a mobile production factor, to move from the tradables to non-tradables sector. This is called factor reallocation (Bayangos and Jansen, 2011, p. 3).

Firms in the tradable goods sector (e.g., manufacturing), will be forced to raise wages and following that, prices as well, and since this cannot happen in the world market, output will decline and profits will fall. The resource movement effect gives rise to direct de-industrialization, since employment in manufacturing falls. Both the resource movement and the spending effects cause indirect de-industrialization (Corden, 1984, p. 361). Brahmhatt et al. (2010, p. 2) believe that the resource movement effect is less likely in low-income economies, because most of the inputs used in the natural resource “enclave” are imported from abroad.

Factor reallocation and de-industrialization are two symptoms of the “Dutch Disease” that harm the economy, by making it less competitive and disturbing its economic order. Real exchange rate appreciation will make the tradable goods that used to be exported less competitive and the export sector will be crowded out by the non- tradable goods one, the growth of which cannot by itself lead to the economic development of the country.

However, it should also be noted, that apart from the above mechanism demonstrated in the Salter-Swan-Conder-Dornbusch model, there is also another mechanism of exchange rate appreciation, discussed by Acosta et al. (2007, p. 2). This one refers to the substitution of work for leisure by the labor force, due to the increasing household aggregate wealth, which is caused by the capital inflows. Since there is a smaller labor supply and wages start to increase the result is pushing production costs up and shrinking the tradable goods sector, since the rising cost cannot be shifted to the consumers through the prices.

In a “Dutch Disease” situation it is worth mentioning that the real exchange rate appreciation can also occur due to productivity gains mostly common in the tradable goods sector of the developing countries. This effect is called the Balassa-Samuelson effect (Holzner, 2006, p. 5). This means that when the gains are higher in the tradable than the non-tradable goods sector and the wages between the two sectors are equalized, the real exchange rate appreciates (Grafe and Wyplosz, 1998, p. 1). In detail, there has been less technological growth in the booming, non-tradable goods sector, than in the non-booming tradable goods sector of a country. As a result, firms do not invest in the non-booming tradable goods sector, since the comparative advantage of the country has shrunk and this sector has been affected. In this model, the real economy productivities have not changed, but the money price productivity in tradable goods is affected due to the currency appreciation. The effect describes the situation when wages are determined in one single national market and they tend to increase in both sectors (Holzner, 2006, p. 5).

Having seen how the “Dutch Disease” works, the remaining questions refer to how remittances get involved in the appreciation of the real exchange rate. Remittances have turned out to be the booming sector of several transition economies, after the collapse of communism, but also of other developing countries around the world. Remittances are stable and countercyclical to the receiving economy. They play the stabilizing role the capital flows promise, but do not deliver (Frankel, 2009, p. 2). They provide an international risk sharing mechanism, they alleviate the costs of forgone monetary policy autonomy and consequently, they increase the viability of a fixed exchange rate. They support the family income, protect emerging economies from the side-effects of globalization and they are also a form of insurance for developing countries against exogenous shocks. They generally have a systematic influence on how governments design their macroeconomic policies. Remittances are “unrequited”, meaning that they do not result in claims on assets, debt service obligations or other contractual obligations. Moreover, they can be taken away from a country ex post without causing house insecurity or income volatility, as foreign investment does (Singer, 2010, pp. 307-8).

Furthermore, the surpluses stimulated by the remittances in the balance of transfers can finance the deficit in the trade balance (Holzner, 2006, p. 3). The net asset position of a country is increased by the inflows of remittances and as a result, the external equilibrium of an economy is certainly influenced (Lopez et al., 2007, p. 6). However, there is a strong cross-sectional correlation between the changes in the real exchange rate and the changes in the net foreign assets in both the industrial and the developing countries, which is commonly known as the transfer problem (Lane and Milesi-Ferretti, 2004, p. 841).

Since “Dutch Disease” has been used as a common term to express the problems caused by a booming sector of the economy on the rest of it when this particular sector is responsible for a significant growth in the country’s income (Younger, 1992, p. 1588), this could also be the case in the remittances receiving countries too. The booming export sector of the economy is a country’s labor force, which is exported as immigrant workers and as for the capital inflows, which immigrants are responsible for, these are the remittances, which usually cause such problems in an economy, if not properly managed.

When it comes to the extent of the appreciation due to the capital inflows and remittances, there are also many factors that play a key role in smoothing it. A fact, that is unambiguous, is that the extent of the appreciation varies from country to country. Actually, Bandara (1995, p. 328) supports that the impact of the profits of capital inflows on the economic structure of a country, as presented by the traditional “Dutch Disease” model, cannot always be generalized for all the developing countries.

Acosta et al. (2009, p. 11), using panel data for 109 developing and transition countries examined with a generalized method of moments estimator, have supported the argument that the problem is less damaging for the economy, the more developed the financial sector is. Mature and developed financial sectors can more effectively channel remittances into investment opportunities. Bayangos and Jansen (2011, p.2) have also concluded that the liquidity on financial markets can soften the appreciation of the nominal exchange rate. When, for example, the financial sector is well developed, then the investment rates are high and the remittances received will be channeled to investment.

Furthermore, according to Fielding (2010, pp. 933-4) and the simple time series model he developed for 10 territories with a high level of openness to trade, a high level of measured government effectiveness and poorer states are less prone to a large appreciation. In contrast, states with a high level of measured political stability are more likely to experience a large appreciation. According to him, the most likely country to suffer from “Dutch Disease” is a middle-income economy that is relatively closed, with a stable but inefficient government. Beja (2010, pp. 11-2), based in a dataset of twenty countries estimated with the seemingly unrelated regression procedure, confirms this conclusion

According to Barajas et al. (2010, pp. 42-45) and the panel cointegration techniques they used to test a large set of countries, there are other various factors affecting the “Dutch Disease” root, such as the degree of openness of a certain economy, the factor mobility between the different domestic sectors, the countercyclicality of the capital inflows, the share of consumption in tradables and the sensitivity of a country’s risk premium to capital inflows.

All these characteristics have the potential to change the results of the impact of the international transfers on the real exchange rate. On the other hand, Mongardini and Rayner (2009, p. 15) focus on the way the capital flows have been used and not on the international transfers themselves, as the approach to mitigate the problem.

Generally, to determine the exact link between remittances and the exchange rate, domestic policies, international developments and the relative importance of remittances in total economic activity and in the external sector should all be taken into consideration. Moreover, the behavior of the exchange rate depends on the impact of emigration on domestic output and the spending pattern of those receiving them (Loser et al., 2006, p. 18).

Another important factor in this relationship is the possible increase in savings because of remittances, which would have a dampening effect on the “Dutch Disease” effect related to the exchange rate. As interest rates tend to decrease, capital flows will decelerate and this brings on a partial turnaround of the exchange rate. The impact of remittances on the exchange rate will slow down when the domestic interest rates decline, because the exchange rates tend to depreciate (Loser et al., 2006, p. 20).

The bidirectional relationship between remittances and the real exchange rate should also be referred (Vargas-Silva, 2009, p. 12). Faini (1994, p. 236) for example, claims that a real exchange rate depreciation exerts a negative impact on the real value of remittances. According to Égert (2009, p. 19), remittances may influence the exchange rate via net foreign effects, via demand effects on services (if not spent on consumption rather than investment) and via economic growth. An interesting argument also related to the “Dutch Disease” and remittances is that through labor migration, “Dutch Disease” can be transmitted to sending countries and the appreciation of the real exchange rate can result from the transfer of remittances (Wahba, 1998, p. 362).

In a research on the impact of capital flows on 57 countries, Naceur et al (2012) used a dynamic panel data approach estimated with the generalized method of moments, to report that while portfolio investments, foreign borrowing, aid and income appreciate the real exchange rate, remittances’ effects present diversifications across regions. However, when remittances lead to such an appreciation, it is the second strongest impact after the one caused by income. According to Cruz Zuniga (2011) and his analysis with the use of panel vector autoregression method, the impact of remittances on the real exchange rate appreciation applies only to countries with high remittances participation in economic activity.

Table 1 shows the effect of remittances on macroeconomic variables such as output expenditure, the exchange rate, the interest rate and the current

account. One can see the unambiguous positive effect of remittances on output expenditure, which could turn into a problem like the “Dutch Disease” hypothesis one.

Effect of remittances on macroeconomic performance

Table no. 1

| Effecton variable Macro Adjustment | output, expenditure | Exchange rate (in trem of local currency per unit of FE - depreciation is increase) | Interest Rate | Current Account, excluding remittances (increased deficit, smaller surplus (-)) |
|--|------------------------|--|------------------|--|
| 1. Remittances | + | - | - | - |
| 2. Fiscal Policy (Tightening) | - | + | - | + |
| 3. Monetary Policy (Tightening) | - | - | + | - |
| 4. Decline in income abroad | - | + | + | - |
| 5. Increase in country risk | - | + | + | + |
| Net effect in crisis (1+2+3+4+5) | +/- | +/- | +/- | +/- |
| Secular Change in remittances | + | - | - | - |

Source: Loser et al., 2006, p. 23

In order to fully understand the impact of remittances on the exchange rate, one has to take into account the analysis provided by Kamas (1986, p. 1178) who uses the Corden and Neary model (Corden and Neary, 1982), to explain the phenomenon. The fact that the booming sector increases its profits pulls resources out of the tradables and non-tradables sectors. Consequently output declines, while the increased spending, raises the relative price of non-tradable goods, pulling resources out from both the booming and the other tradables sectors and reducing their output. There is an explicit decline in the other tradables sectors, while the net effect on output in the non-tradables and the booming sector is uncertain. While, in the final equilibrium, the overall trade balance will be back to zero, net exports of the other tradables sectors will have fallen, following the fall in their production, while consumption will increase.

Despite the fact that this effect has received less attention than the de-industrialization one, it represents an increased reliance on the primary

export to the detriment of manufacturing or other non-booming sectors. This is particularly undesirable for the less developed countries attempting to diversify exports. The increased inflows of remittances raise the supply of foreign exchange and lead the nominal exchange rate to appreciate. However, the increased liquidity on financial markets, because of the increased remittances, may smoothen the appreciation of the nominal exchange rate. Moreover, an increased spending by the households receiving the remittances both on tradable and on non-tradable goods will follow and since the supply of non-tradable goods is constrained in the short-run, this will lead to an increase in the price of non-tradables or an appreciation of the real exchange rate (Bayangos and Jansen, 2011, p. 2).

However, Bourdet and Falck (2006, p. 272) performing multivariate Engle and Granger co-integration tests suggest that the impact of remittances on domestic savings and investment, will enhance capital accumulation. This increases the production of both tradable and non-tradable goods, in the long-run. Factor accumulation by remittances will affect the relative non-tradables to tradables prices.

Vos (1998, pp. 98-9) applied a computable general equilibrium model, the simulations of which suggested that remittances can generate “Dutch Disease” effects and that the foreign income injection in the form of remittances allows the economy to enlarge in the first year, but in the next years there are some side-effects leading to a lower overall growth. That is, the extra demand due to remittances results in food price inflation, which is transmitted with a lag to nominal wages and prices in the markup sectors, resulting in lower competitiveness. As a result, exports decrease while domestic demand declines with falling real incomes. Import demand also increases and part of the increase in foreign exchange earnings leaks abroad.

There is also the research of Amuedo-Dorantes and Pozo (2004, p. 1414) who found, using the instrumental variables method, that remittances appreciate the exchange rate, while foreign aid does not. Saadi-Sedik and Petri (2006, pp. 25-6) using the Johansen cointegration methodology, support that in Jordan, both grants and remittances appreciate the equilibrium real exchange rate and the effect of remittances is not as big as the grants’ one is (it is actually less than half that of grants), because they are spent mostly on tradables, with a smaller effect on relative prices between tradables and non-tradables.

The appreciative effect of remittances is usually weakened by the productivity enhancing depreciative effect of simultaneous foreign direct investment (Fayad, 2010, p. 4). The “Dutch Disease” may not happen due to the role of large emigrant networks behind such remittances transfers in channeling productive foreign direct investment to home countries. However,

even in the extreme case where remittances are exclusively channeled to investment and capital accumulation in the tradables sector, the “Dutch Disease” hypothesis can apply (Acosta et al., 2007, p. 19).

REMITTANCES AND THE “DUTCH DISEASE”: EVIDENCE FROM ALBANIA AND MOLDOVA

This paper actually tries to answer whether the remittances inflows in small transition economies affect the real exchange rate and consequently influence the transition process. For this reason, the reference set will consist of countries where remittances have been found to play a major macroeconomic role.

There are cases supporting the argument that an increase in the inflows of emigrants’ remittances causes an appreciation of the real exchange rate and finally, a loss of competitiveness of the country’s exports. In fact, there are two papers focusing on both developing and transition countries. Acosta et al. (2009) and Lartey et al. (2008) use panel data from 109 developing and transition countries and estimate them with a generalized method of moments estimator. Both papers conclude that remittances are responsible for the appreciation of the real exchange rate, though the first one focuses on the exchange rate regime that favors such a situation and the second on the financial sector development level which may prevent it. Among the transition countries involved in these results one can find Albania and Moldova.

Holzner (2006) investigating the real exchange rate distortion on seven Southeast European countries (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, FYROM, Romania and Serbia & Montenegro) concluded that the national currencies of most West Balkan countries were overvalued, whereas the East Balkan ones were undervalued. Especially in the case of Albania, he believes that remittances may be the most possible reason for the overvaluation of the country’s currency.

In fact, Albania has been widely referred to in the literature as a “Dutch Disease” victim. Germenji (2005) based on specific data from the Bank of Albania, indicates that the Albanian Lek experienced an appreciation, partly due to the large volume of remittances. Moreover, Nikas and Baklavas (2009) consider the Albanian “Dutch Disease”, due to the remittances inflows, as a fact that could be prevented with the use of bank intermediation for the transfers. Barisitz (2004) interpreting official data of the exchange rate arrangements of the Southeast European countries under transition including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, FYROM, Montenegro, Romania, Serbia and Turkey attributes them to a number of factors including the use of informal transfers.

Before proceeding with the detailed analysis of each country's data, it is also necessary to refer to the variable to be used so as to derive conclusions on the loss of competitiveness of the countries under examination. The variable chosen is the real effective exchange rate. It has been widely used in the related literature to assess a country's competitiveness in terms of prices and costs, against its main competitors in international goods and services markets. The effective exchange rate, or else the trade weighted index, is a multilateral exchange rate, which is a weighted average of a basket of exchange rates of foreign currencies, with the weight of each foreign country equal to its share in trade. It is usually viewed as an overall measure of the country's external competitiveness despite the fact that some authors find it inappropriate (Nenova, 2004, p.26, Horobet and Dumitrescu, 2008, p. 114). The real effective exchange rate is the nominal effective exchange rate (which is weighted with the inverse of the asymptotic trade weights) deflated by the home country price level. When the index increases, the purchasing power of the currency is higher, there is an appreciation of that currency and there is less of that currency to pay for imports.

Besides the real effective exchange rates, the tables also include the average official exchange rate of the national currency of every country, against the US dollar, so as to show that the real sector distortions usually differ from the financial sector. Emigrants' remittances inflows' values during the transition period are also used so as to illustrate their possible connection with the loss of competitiveness.

Starting with the Albanian currency, one can see that the Lek has appreciated significantly in the last fifteen years. The current account deficit of the country has been much smaller than the trade deficit, exactly due to the presence of remittances (Germeñji, 2005, p. 58). Remittances inflows grew at very high rates between 1992 and 2008 and the country's balance of payments was affected considerably by these inflows. In 2004 alone, the Albanian Lek appreciated by 7.2% vis-à-vis the Euro and 15.7% vis-à-vis the USD (op. cit., p. 49). The appreciation of the Lek since the beginning of transition can be seen in table 2. The Albanian real effective exchange rate between 1995 and 2012 has undergone a significant appreciation, part of which can be certainly attributed to the inflows of remittances and result to the operation of the "Dutch Disease" hypothesis. This gets more obvious in the years after 2000 and until the outbreak of the global financial crisis.

Both the nominal and the real exchange rate values show that the purchasing power of the Lek has increased, making the country's exports less competitive. It was only during 1997 and the pyramid crisis¹ that the nominal exchange rate of the Lek against the dollar reached a peak and the Albanian

1. For a detailed analysis of the implications of the "pyramid crisis" see Korovilas, 1999.

currency depreciated. However, at the same time due to rising inflation, the real exchange rate of the country did not change as much as the nominal one (Schautzer, 2005, p.116). Moreover, remittances magnitudes show that they increased all through that period and a large part of them was spent on non-tradable or imported goods, rather than being directed to development activities (Vullnetari and King, 2011).

Remittances and exchange rates in Albania and Moldova

Table 2

| YEAR | ALBANIA | | | | MOLDOVA | | | |
|------|------------------|--------|-------|------------------|------------------|--------|------|-------|
| | R (CURRENT US\$) | R %GDP | ER | RER ¹ | R (CURRENT US\$) | R %GDP | ER | RER |
| 1990 | | | | | | | | |
| 1991 | | | | | | | | |
| 1992 | 150.000.000.0 | 21.4 | 75.0 | | | | | |
| 1993 | 274.800.000.0 | 27.0 | 102.1 | 123.1 | | | | |
| 1994 | 264.700.000.0 | 15.5 | 94.6 | 139.3 | | | | 109.8 |
| 1995 | 384.600.000.0 | 17.6 | 92.7 | 154.7 | 1,020,000.0 | 0.1 | 4.5 | 93.8 |
| 1996 | 499.600.000.0 | 18.3 | 104.5 | 128.1 | 87,169,998.2 | 5.1 | 4.6 | 92.8 |
| 1997 | 266.900.000.0 | 13.7 | 148.9 | 73.3 | 114,410,003.7 | 5.9 | 4.6 | 106.9 |
| 1998 | 452.270.000.0 | 18.5 | 150.6 | 61.4 | 124,309,997.6 | 7.6 | 5.4 | 103.8 |
| 1999 | 356.600.000.0 | 11.9 | 137.7 | 68.6 | 111,860,000.6 | 9.6 | 10.5 | 79.2 |
| 2000 | 530.800.000.0 | 16.2 | 143.7 | 70.2 | 178,600,006.1 | 13.9 | 12.4 | 91.5 |
| 2001 | 614.900.000.0 | 17.1 | 143.5 | 69.8 | 243,320,007.3 | 16.4 | 12.9 | 95.4 |
| 2002 | 643.430.000.0 | 16.5 | 140.2 | 66.5 | 323,739,990.2 | 19.5 | 13.6 | 90.2 |
| 2003 | 778.114.262.3 | 15.7 | 121.9 | 79.1 | 486,630,004.9 | 24.6 | 13.9 | 85.3 |
| 2004 | 1.028.347.573.0 | 15.5 | 102.8 | 96.3 | 705,239,990.2 | 27.1 | 12.3 | 97.7 |
| 2005 | 1.160.733.884.3 | 15.4 | 99.9 | 100 | 920,309,997.6 | 30.8 | 12.6 | 100.0 |
| 2006 | 1.175.553.649.8 | 14.9 | 98.1 | 101.2 | 1,181,719,971.0 | 34.7 | 13.1 | 102.8 |
| 2007 | 1.304.560.000.0 | 13.7 | 90.4 | 109.6 | 1,498,229,980.0 | 34.0 | 12.1 | 111.5 |
| 2008 | 1.225.543.134.2 | 11.5 | 83.9 | 122.8 | 1,897,300,049.0 | 31.3 | 10.4 | 132.8 |
| 2009 | 1.091.199.593.4 | 10.9 | 95.0 | 102.5 | 1,210,760,010.0 | 22.3 | 11.1 | 135.4 |
| 2010 | 924.317.333.1 | 9.7 | 103.9 | 91.1 | 1,369,910,034.0 | 23.6 | 12.4 | 127.2 |
| 2011 | 964.979.428.9 | | 100.9 | | | | 11.7 | 134.7 |

Sources: a. World Development Indicators, 2012

b. Author's calculations

R: workers' remittances

ER: official exchange rate (LCU per US\$. Period average)

RER: real effective exchange rate index (2005=100)

At this point, one should take into account that in the early 1990s all the transition countries experienced depreciations of their national currencies. This was also caused by the political and economic uncertainty. By the time the overall economic climate started to improve, the currency appreciation that followed was considered as a mere adjustment towards the equilibrium levels (Boeva, 2009, p. 7).

The emergence of “Dutch Disease” looks very possible in the case of Moldova, another major remittances receiving country. Remittances have not been exclusively channeled to investment purposes. As a result, the real exchange rate of the country has also been appreciated and remittances have been accused of being responsible for this. At this stage, it is important to make clear that capital inflows such as remittances can lead to the appreciation of the equilibrium real exchange rate in the short-run, by stimulating excess demand for non-tradable goods, which will lead to an increase in the prices of this sector. However, in the long-run, if the capital inflows are used to increase the competitiveness of the national economy, the real exchange rate will undergo a sustainable appreciation. If, on the other hand, they continue to trigger only consumption, the result will be a depreciation of the real exchange rate (Herciu and Toma, 2006, p. 6).

The data in table 2 is indicative of the development of remittances inflows in Moldova along with the real effective exchange rate path. Both the official exchange rate and the real effective exchange rate depict an appreciation of the Moldavian currency especially after 2004. It is ambiguous whether Moldova has been a victim of the “Dutch Disease” and even more if remittances hold the responsibility for such an outcome. Previous research findings however clearly indicate the considerable role remittances played in the consumption patterns of those receiving them in this country and the rise in imports they have caused. One could therefore presume that Moldova is a “Dutch Disease” example due to the remittance inflows the country experienced.

THE MODEL

As far as the determinants of the real exchange rate distortion are concerned, the existing literature identifies a large number of variables that have been used to test an economy for “Dutch Disease”. Holzner (2006, pp. 20-7), for example, tested a variety of variables and concluded to a model that included the nominal exchange rate, the trade openness, the indicators for the International Financial Organisations’ disbursements, the aid, the gross fixed capital formation, the foreign direct investments, the remittances and

the government consumption. The first five were negatively related to the real exchange rate distortion, while the last three positively.

The aim of this paper is to investigate the relationship between remittances and the real effective exchange rate distortion in the transition countries under examination. To this end, all the other determinants of the real exchange rate variable need to be taken into account. The correlations between the real effective exchange rate and the variables that could have an impact on it were investigated (other capital flows, government expenditures, capital growth, technological progress, trade restrictions etc). We ended up with remittances, foreign direct investment and the official development assistance inflows, gross fixed capital formation, the general government final consumption expenditure, the international terms of trade and the GDP per capita of each country examined, although some of the variables were not statistically significant for all the countries. In order to simplify the interpretation, the values of the variables are measured by their ratio to GDP, except for GDP per capita which is in constant 2000 US \$. The model was estimated for the 1990-2010 period for which data is available.

More specifically, GDP per capita is used as a proxy for the Balassa-Samuelson effect and it is expected to appreciate the real effective exchange rate. Fiscal expenditure, as well as capital formation, does not have a definite impact on the real effective exchange rate distortion. On the contrary, the improvement of the terms of trade is expected to appreciate the real effective exchange rate. As far as remittances, foreign direct investment and official aid are concerned, despite the fact that their increase would imply an appreciation of the real effective exchange rate, the results are ambiguous and largely depend on a variety of factors. It is actually of great interest to present the apparent differences between the countries examined.

Due to the small number of observations, part of which has been the result of our own calculations, the test methods that can be applied are restricted. We chose to make the simplifying assumption that the remittances variable is an exogenous income flow, so that the equation of the determination of the real effective exchange rate will be estimated by the use of the fixed effects Ordinary Least Squares method. It would be quite interesting to test these countries with more accurate methods which would take into consideration possible problems such as endogeneity or limited data statistics as well, but at this point we choose to focus on the primary differences these two countries present under the same simplifying assumptions, so as to have a first impression on the impact of such a drawback of the remittances inflows.

The determining factors of real effective exchange rate (REER)*

Table no. 3

| Coefficients (p-values in brackets and statistics) | ALBANIA (1992-2009) | MOLDOVA (1995-2010) |
|--|------------------------|------------------------|
| Constant term | 3.7901(0.000) | 44.5023(0.088) |
| R (remittances) | 0.036770(0.018) | -1.7235(0.000) |
| FDI (foreign direct investment) | -0.041252(0.228) | 1.7673(0.008) |
| ODA (official development aid) | -0.028110(0.001) | -2.7249(0.015) |
| GFCF (gross fixed capital formation) | -0.39420(0.0330) | N.A |
| GFC (government final consumption expenditure) | 0.11725(0.001) | N.A |
| GFC(-1) | N.A | N.A |
| GDPPCC (GDP per capita constant 2000 US\$) | N.A | 0.077506(0.309) |
| GDPPCC(-1) | 0.1244E-3(0.562) | N.A |
| TOT (terms of trade) | 0.048845(0.001) | 0.43637(0.554) |
| DUM (when ODA statistics is not available) | N.A | N.A |
| DUMMY | -0.46745(0.001) | N.A |
| T (time trend) | N.A | 4.7087(0.004) |
| R ² | 0.85009 | 0.90448 |
| F-stat | 13.0502 | 24.6738 |

* For Albania it is the log of the real effective exchange rate

DUMMY: 1 for the years 1996-1998 and 2008 and 0 for the other years as for Albania

An increase of the independent variables shows appreciation of the REER while a decrease refers to depreciation.

Each country was examined separately and the results are presented in table 3. The equations were assessed for basic diagnostic tests and they were all free of statistical problems. The signs and magnitudes of individual coefficients in each equation, such as t statistics, the adjusted R², Durbin Watson and F statistics are all examined. In general, all the behavioral equations pass these tests.

To begin with, there are obvious differences among these countries for which the different domestic policies are probably responsible. In Albania, as it was expected, remittances appreciate the real effective exchange rate, since the remittances variable is positive and statistically significant. It is noteworthy that the foreign direct investment and the official development assistance variables work in the opposite direction. They are statistically significant but they seem to depreciate the real effective exchange rate. The terms of trade present a positive effect as well as government consumption expenditure, while gross fixed capital formation shows a negative impact. The variable of productivity is statistically insignificant, while the dummy variable is attributed to the pyramid and the recent financial crises. It is unambiguous that Albania has been a “Dutch Disease” victim.

On the other hand, in Moldova remittances inflows seem to depreciate or not affect at all the real effective exchange rate. It is interesting to examine the underlying reason for this outcome. First of all, in Moldova an increase in remittances, as well as in official development assistance, seems to depreciate the real effective exchange rate. However, in Moldova foreign direct investment seems to appreciate it. The effect of the terms of trade is the expected one and there is also a time trend probably representing the progress in the transition process.

It is obvious that while in Albania remittances affect the real effective exchange rate by appreciating it, there is no such case for Moldova despite the signs. Moldova and Albania have already been tested in a previous paper for their efficiency in channeling remittances towards productive investments and these results come to confirm the fact that remittances entering the Moldavian economy are spent more effectively towards productive activities than in Albania. Moldova has found a way to protect itself from the negative macroeconomic consequences of remittances, despite the fact that it receives as large amounts of inflows as Albania does.

The macroeconomic implications of remittances for Albania, Bulgaria Moldova and Romania have also been investigated by Blouchoutzi and Nikas (2010 and 2013). According to their findings, remittances had a considerable impact on the spending patterns of these countries, but they also displayed a growth potential through financing investment. Moreover, there is no doubt that remittances have also financed a large part of the imports of the receiving countries, a fact verified by the econometric findings. However, the extent to which they have debilitated the economy, for example due to the appreciation of the real exchange rate they may cause, has not been yet clarified. The possibility of the “Dutch Disease” hypothesis applying in these countries, after the beginning of

the transition period and the remittances inflows has been discussed a lot and in some of these cases, it is considered to be a major problem for their economies.

Bulgaria and Romania were originally supposed to be included in the analysis and the investigation so as to get a deeper view of the effect of remittances on the real exchange rate, regardless of the exchange rate regime. However, our results confirmed the fact that the exchange rate regime factor plays a crucial role in the determination of the macroeconomic consequences of the remittances inflows and more complex econometric methods should be applied to have a thorough result. As far as the fixed effects ordinary least squares method results are concerned, Bulgaria, having adopted since 1997 a currency board, does not have a significant remittances' coefficient in the real exchange rate regression. Moreover, the coefficient is negative which means that the remittances inflows would depreciate the real exchange rate.

Since Romania did not follow a peg similar to the Bulgarian one at least not until their entrance to the European Exchange Rate Mechanism in 2007, we considered it necessary to run the regression of the real effective exchange rate for two periods, the whole transition period 1990-2010 and the period until 2006, during which there was a floating exchange rate regime in the country. The results are obviously different and make the remittances behavior even more important under the exchange rate regime factor. Romania, as well as Bulgaria, affected by the ERM portrays an insignificant remittances/exchange rate relationship for the period 1994-2010. Moreover, the sign of this variable is negative as in the Bulgarian case. However, before the ERM membership and while Romania was under a free floating exchange rate regime, the regression results show that remittances caused an appreciation of the real effective exchange rate of the Romanian currency.

Granger causality is a technique for determining whether a time series is useful in explaining another. Using lags up to four years, we run Granger causality tests to determine whether the null hypothesis holds: the coefficients on the lagged indicators are statistically significant in explaining the behaviour of other indicators at a 5% and a 10% level of significance.

Dealing with the Albanian data, the Granger causation runs from remittances to the real effective exchange rate with three lags. This means that at least three years pass since the entrance of the remittances inflows in the Albanian economy until the amount of savings needed to spend for certain consumption goods is finally gathered and the pressure of the spending effect on real exchange rate becomes clear. Regarding Moldova, the Granger causality tests indicate that remittances cause the real effective exchange rate change with three and four lags, at 5% significance level and one lag, at 10%

significance level. Regarding the two new E.U. members there is certainly no causality from the remittances side to the real effective exchange rate either in the Bulgarian, or in the Romanian case, in spite of the fact that in the second regression with the Romanian data (1994-2006) remittances are statistically significant in the determination of the real effective exchange rate.

CONCLUSION

The “Dutch Disease” is an economic phenomenon related to the real exchange appreciation and the loss of competitiveness of a country receiving large capital inflows or discovering a significant amount of natural resources. Since many transition countries have been receivers of remittances, this paper presented specifically the remittances – “Dutch Disease” hypothesis relationship in the countries under transition. The findings of the econometric investigation indicate that Albania has already faced the “Dutch Disease” problem while Moldova experienced a depreciation of the real effective exchange rate due to remittances. The case of Romania prior to the accession to the E.U. supports the argument that the inflow of remittances may lead to a currency appreciation especially under a floating exchange rate regime.

A constant persistence of the appreciation of the real exchange rate, without proper handling and without being accompanied by a rise in productivity and in the quality of the products offered on the external markets, will crowd out the traditional export sector, reduce manufacturing output and even lead to speculative attacks. The paper has not focused on the growth – “Dutch Disease” relationship, but it is almost certain that the economy will face difficulties towards its recovery. A combination of fiscal and other policies would be very helpful in the policymakers’ hands, so as to treat the situation in the economy’s best interest.

It is definitely the kind of shock that determines the appropriate policies. Kronenberg (2004), investigating the application of the “Dutch Disease” hypothesis on the European transition economies, (focusing however on natural resources rather than inflows such as remittances) finds that corruption and neglect of investment in human capital (education) have brought “Dutch Disease” to these countries. However, asking the rhetoric question “...*should oilfields be set on fire and the gold mines demolished?*”, he answers “...*of course. No*”. As Magud and Sosa (2010, p. 27) have so typically claimed “*When thinking about “what to do” about the Dutch Disease, policymakers should beware—in responding to the effects of the disease—of killing the goose that laid the golden egg.*”

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