

## Do Migrant Transfers Cause Dutch Disease in Albania?

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### Abstract

Dutch Disease is the model, which tries to explain the contradictory relationship between the greater exploitation of natural resources and a decline in the sector of natural resources. Theory suggests that an increase in foreign inflows currency from export of natural resources is associated with overvaluation of the real exchange rate, which makes tradable sector less competitive, resulting in less competitive country and even reduced exports in natural resources sector. The purpose of this article is to study the possibility of occurrence of Dutch Disease phenomenon in Albania, as a result of increased foreign currency inflows, not from increased resource exports, but from migrant transfers. Almost 30% of Albanian population is living and working abroad, most of them in Europe. Due to high trade balance deficit, migrant transfers in Albania are important source of ease pressures on the domestic currency lek. Recently, migrant transfers from abroad accounted for 10% to 20% of GDP and constitute the largest influx of foreign finance, even more than foreign direct investment and official development assistance. In the empirical model, real exchange rate is the dependent variable and migrant transfers, real GDP per capita, government consumption and trade openness are explanatory variables. All the variables are tested for stationary through Augmented Dickey-Fuller test. The results of test showed that are not stationary in the level, but become stationary in First Difference I(1), so they are included in model in First Difference. Johansen Cointegration test results showed that there is a long-run relationship between real exchange rate and the variables included in the model. Results suggest that migrant transfers have a significant impact on the real exchange rate in Albania and an increase in their flows lead to the overvaluation of the real exchange rate in the country, causing the Dutch Disease phenomenon to occur.

**Keyword:** Dutch Disease, real exchange rate, migrant transfers, overvaluation, unit root, cointegration.

### Introduction

Dutch Disease is the model, which tries to explain the contradictory relationship between the greater exploitation of natural resources and a decline in the sector of natural resources. Theory suggests that an increase in foreign inflows currency from export of natural resources is associated with overvaluation of the real exchange rate, which makes tradable

sector less competitive, resulting in less competitive country and even reduced exports in natural resources sector. Dutch Disease model was suggested by Corden and Neary (1983). The model consists of three sectors: non-tradable sector (service sector), the manufacturing sector and resources sector (both are tradable products sectors). Resource sector is the booming sector. They suggested that the effect of the boom in the resource sector will affect the rest of the economy through two channels: the effect of movement of manufacturing resources and the expenditure effect.

The effect of the movement of manufacturing resources: resources sector boom increases exports of these resources. This means an increase in income level of the country as well as increased demand for labor in this sector, leading to reduction of labor supply in other sectors of the economy. This decrease in labor supply could lead to increased costs to other sectors of the economy and the reduction of their activity.

The expenditure effect: the resource sector boom and export growth leads to an increase in income of the country, accompanied by increased imports and increased domestic expenditure in tradable as well as non-tradable products. Prices of tradable goods, especially for small open economies, are determined in international market and increased domestic demand for them does not increase their prices. However, increased demand for non-tradable good leads to increase in wages and prices in non-tradable sector, resulting in an increase in the relative price of the two sectors, or real overvaluation. In this case, resources are transferred to the manufacturing sector.

Economists have suggested that the Dutch Disease phenomenon can also occur due to other flows of foreign currencies, besides flows from exports of natural resources, such as migrant transfers.

Migrant transfers are funds that migrant workers sent to their families in the countries of origin. Migrant transfers represent significant inflows for a country's financial reserves. They increase the level of income of recipient households, resulting in the increase in consumption and saving. Also, migrant transfers can increase investment in economic activities (Kule et al,2002). Migrant transfers represent the most reliable flows of foreign currency, rather than FDI or ODA (World Bank, 2006). The high levels of migrant transfers help to prevent financial crises (Bugamelli and Parteno, 2005). Existing empirical evidence indicates that high level in migrant transfers inflows tend to be associated with lower poverty indicators and higher growth rates in recipient country (Fajnzylber and Lopez, 2005).But migrant transfers can have negative effects in the host countries. Because of the increased income in the host families, migrant transfers may affect the level of reserved wage of members of these families, thus leading to the reduction of their participation in the labor force and increasing unemployment (Acosta, 2007). Also, large inflows of migrant transfers can lead to appreciation of the real exchange rate. Migrant transfers represent additions to the household income level. This will be accompanied by increasing demand for tradable and non-tradable products. For the non-tradable goods, demand growth leads to increase their price (spending effect). Increase in the price of non-tradable sector leads to the expansion of this sector by shifting resources from the tradable sector towards the non-tradable sector (resource movement effect). The relative increase in the price of non-tradable to tradable will lead to real exchange rate appreciation.

The purpose of this paper is to study the possibility of occurrence of Dutch Disease phenomenon in Albania, as a result of increased foreign currency inflows, not from increased resource exports, but from migrant transfers. Almost 30% of Albanian

population is living and working abroad, most of them in Europe. Due to high trade balance deficit, migrant transfers in Albania are important source of ease pressures on the domestic currency lek. Recently, migrant transfers from abroad accounted for 10% to 20% of GDP and constitute the largest influx of foreign finance, even more than foreign direct investment and official development assistance. The study will cover the period 2004-2011 with quarterly data.

### **Literature Review**

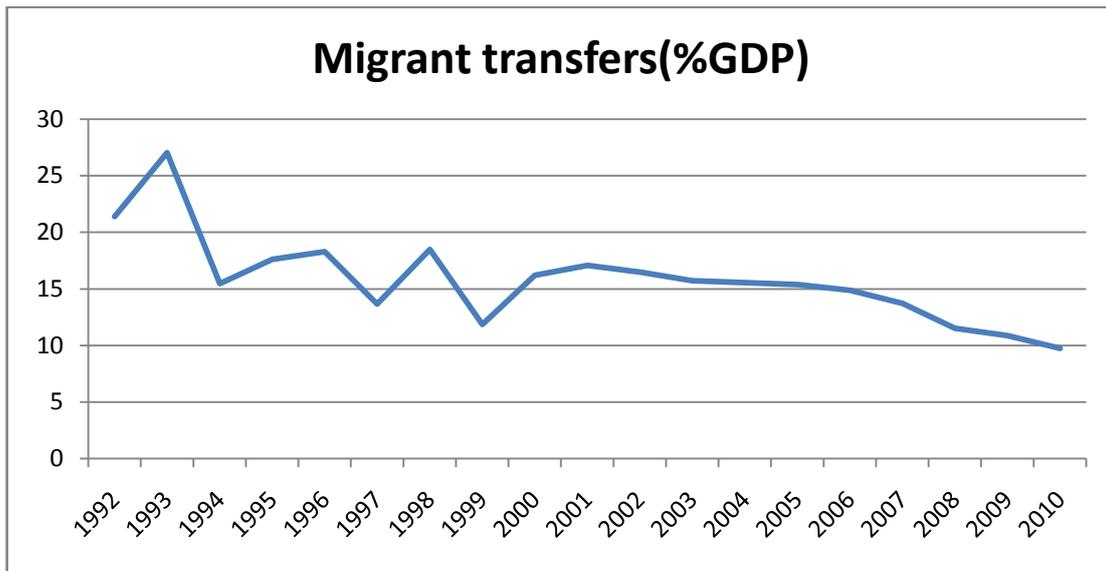
Studies on the effect of migrant transfers on the real exchange rate are not numerous and have contradicting conclusions. Bordet and Falck (2006) studied the effect of migrant transfers on the real exchange rate in Cape Verde. Using Engle-Granger cointegration test they came to the conclusion that migrant transfers lead to overestimation of the real exchange rate. Lopez, Molina and Bussolo (2007), in a study of Latin American countries suggested that the increase in the flow of migrant transfers leads to important overvaluation of RER. Chowdhury and Fazl Rabbi (2011) used cointegration and Error Correction Model in a study on Bangladesh. They came to the conclusion that migrant transfers significantly affect the assessment of the real exchange rate by lowering the relative price of tradable to non-tradable in the country in comparison with main partners of Bangladesh. This result is also confirmed by other studies made by Lartey et al (2009), Barajas et al (2011), et al. However, even if it turns out that migrant transfers affect the assessment of the real exchange rate, Acosta et al (2009) in a study of 109 developing and transition countries for the period 1990-2003 reached the conclusion that this effect is weaker in countries with developed financial markets, which seem to retain trade competitiveness.

However, in other studies is not confirmed this impact of migrant transfers, and even resulted in the opposite effect. Ozcan (2011) in a study of 10 developing countries, using FMOLS estimator, found no support for the overvaluation of the RER because of migrant transfers in these countries. He found that workers' migrant transfers have the potential to devalue the real exchange rate, thereby helping to increase the competitiveness of exports in these countries. Izquierdo and Montiel (2006) studied six Central American countries using VAR models. They came to different conclusions: in one case (in El Salvador), they found that migrant transfers lead to appreciation of the RER, in one case (in Dominican Republic) migrant transfers were associated with undervaluation of the RER, while in other cases they not found link between migrant transfers and the real exchange rate. Also, Mongardini and Rayner (2009) in a study for Sub-Saharan African found no link between migrant transfers and the real exchange rate.

### **Migrant transfers in Albania**

After the collapse of communist dictatorship, a large number of citizens left Albania and migrate abroad, especially those in working age. Originally Albanians flocked to neighbor countries Italy and Greece. Greece today counts about 700,000 Albanians who make up about 50% of the Albanian migratory population, while Italy counts about 500,000 Albanians (United Nations Report, 2012). Emigrants abroad count for 1,438,000 Albanians and represent approximately 45.4% of the Albanian population (Migration and Remittances Factbook, 2011). Albania is a low income country and migrant transfers constitute a very important additional income for Albanian families. A study of AGENDA Institute (2011) revealed that average monthly migrant transfers go up to \$ 150. Most of migrant transfers spent on consumption goods and medical services.

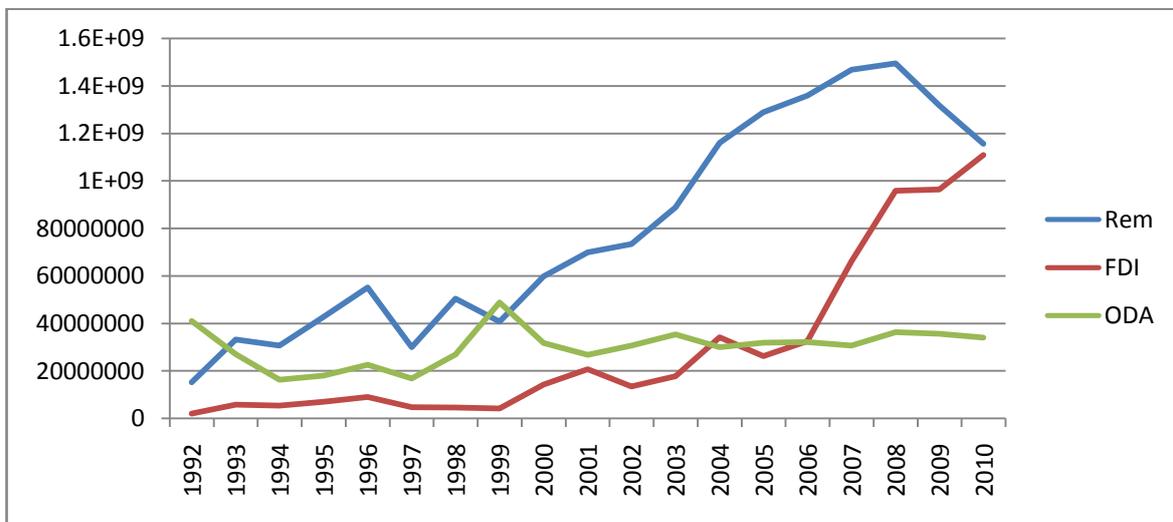
Figure1 Ratio of migrant transfers to GDP



Source: Compiled by the authors from data of the WDI

In years, migrant transfers made a significant part of GDP. In the early years of transition, migrant transfers made over 20% of GDP, even in 1993 reach up to 27% of it (figure 1). Later this percentage has decreased. The lowest level is up in 2010 by 9%. However nowadays, migrant transfers constitute the largest influx of foreign finance, even more than foreign direct investment FDI and official development assistance ODA. In years, migrant transfers have shown an upward trend, although there were small variations in certain periods. Until 1996 there has been continued growth of migrant transfers, increasing from \$ 150 million in 1992 at \$ 550 million in 1996. In 1997 it was observed a decrease in the level of migrant transfers with the level of \$ 300 million. Then growth has been stable, while in 2008 they reached a level of \$ 1.5 billion. As a result of the crisis engulfing neighbor countries, Italy and Greece, migrant transfers in recent years have decreased.

Figure 2 Comparison of migrant transfers, FDI and ODA



Source: Compiled by the authors from data of the WDI

## Econometric Methodology

In this paper, beside migrant transfers as explanatory variable will be used: real GDP per capita, foreign direct investment, the ratio of tradable to non-tradable products and trade openness. The dependent variable will be real effective exchange rate. Data will be obtained by the Bank of Albania, Eurostat and the Ministry of Finance, Albania. Variables are defined as follows:

-**The real effective exchange rate REER**, will be calculated as a weighted geometric average of the price index of partner countries compared to domestic prices.

$$(1) \quad REER = E \frac{P^*}{P} = \prod_{i=1}^I \left[ S_i \frac{P_i^*}{P} \right]^{W_i}$$

Where  $S_i$  is the nominal exchange rate between euro and Albanian lek,  $P_i^*$  is the price level of the  $i^{th}$  country and  $W_i$  is the weight corresponding to the  $i^{th}$  trade partner. According to this definition, a fall in the index will show a real overvaluation, and an increase will show a real depreciation of the domestic currency.

- **Migrant transfers (MIG)** in relation to GDP: their effect on the real exchange rate is unclear.

- **Trade openness (OPEN)**, defined as the sum of exports and imports in relation to GDP. An increase in trade openness is considered as an indicator for reducing the trade restrictions. The aim of trade restrictions is the protection of domestic products. Reducing trade restriction, domestic products prices are expected to fall, leading to a depreciation of the RER. So, an increase in trade opening leads to the devaluation of the RER

-**Foreign Direct Investment (FDI)** in relation to GDP will be used as a measure of financial globalization, as suggested by Xing and Zhang (2004). Elbadawi (1994) showed that an increase in inflows in the long run will result in appreciation of the real exchange rate in the long run. Elbadawi (1994) also showed that even in the short-term, inflows tend to be associated with the overvaluation of the real exchange rate in comparison with its value in the long run. Thus, foreign direct investments have negative effect on the real exchange rate.

- **Relative price of tradable to non-tradable (TNT)**, used to measure the Balassa-Samuelson (1964) effect. This effect explains the deviation from purchasing power parity (PPP). According to this effect, countries, which have relatively low productivity in tradable sector than in the non-tradable sector, should have lower prices than those, where this ratio is reversed. Thus, in these countries, productivity in the tradable sector will increase more rapidly than in the non-tradable sector. But, since the prices of tradable products for small countries are determined on the international market, productivity growth in the tradable sector will lead to wage growth in the economy. Wage growth will be accompanied by increasing the price of non-tradable sector. Since the real exchange rate is also defined as the ratio of the price of tradable to non-tradable products, an increase in the latter will lead to real exchange rate appreciation.

- **Real income per capita (PROD)**. According to Summers and Heston (1991), due to “Penn Effect”, higher-income countries have higher price levels. This means that there is a positive correlation between per capita real income and real exchange rate.

All the above variables will be used in the logarithmic form. Considering these factors as determinants of the level of the real exchange rate and the expected impact of each of them, we can write the equation:

$$(2) \quad \text{REER} = f(\overset{-}{\text{TNT}}, \overset{+}{\text{OPEN}}, \overset{+/-}{\text{MIG}}, \overset{+}{\text{PROD}}, \overset{-}{\text{FDI}})$$

### Testing for Unit Root

Time series data will be tested to see if they are covariance stationary (i.e. no trend) or are trend stationary. This will be done through Augmented Dickey-Fuller test (ADF). If the exchange rate is not stationary, any stationary variable cannot be a determining variable because variables determining the exchange rate in the long run should have the same order of integration, as the exchangerate.

Table 1 Summary of Unit Root Test

Variable	ADF test	p-value	Decision
Lnrer	-5.028596	0.0004	Stationary
lnfdi	-3.239964	0.0285	Stationary at 5%
lnprod	-3.597171	0.0124	Stationary at 5%
lnopen	-6.367360	0.0000	Stationary
lnmig	-8.580327	0.0000	Stationary
lntnt	-8.733748	0.0000	Stationary

Source: own calculation

The test shows that FDI and PROD are not stationary, but become stationary after taking the First Difference. Thus, to eliminate the problem of stationary, variables should be included in the model in the first difference.

### Cointegrating Test

This test serves to identify the possibility of a long-term relationship between real exchange rate and the fundamental variables determining the real exchange rate.

The table 2 shows the results of cointegration test by using Johansen methodology. The result indicates rejection of the null hypothesis of lack of cointegration between variables and the existence of a cointegration equation in 5% level. So variables have long-term relationships between them.

Table 2 Results of Johansen test

Hypothesised No. of CE(s)	Eigenvalue	Trace statistic	0.05 Critical Value	Prob.**
None *	0.859967	137.7458	125.6154	0.0074
At most 1	0.760483	84.66718	95.75366	0.2263
At most 2	0.471637	46.08065	69.81889	0.7946
At most 3	0.434993	28.85541	47.85613	0.7752
At most 4	0.296518	13.44065	29.79707	0.8705
At most 5	0.072330	3.944410	15.49471	0.9080
At most 6	0.068547	1.917264	3.841466	0.1662

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Once the variables are tested for the possibility of cointegration, the FMOLS method is used to find the equation of the relationship. This method is suitable for small samples. The results are shown in table 3.

Table 3 FMOLS results

Variable	Coefficient	Std.error	t-Statistic
Probability			
Lnfdi	0.054902	0.034249	1.603019
Lnprod	-0.238421	0.074286	-3.209517
Lnopen	-1.113800	0.458340	-2.430073
Lnmig	-0.024253	0.044065	-0.550400
Lntnt	-0.008670	0.018299	-0.473805
C	4.028972	0.638714	6.307946

Results indicate that migrant transfers negatively affect the real exchange rate. A 1% increase in the level of migrant transfers will lead to real evaluation with 0.02% of the real exchange rate. However, although the coefficient is small, we can say that migrant transfers cause Dutch disease phenomenon. In terms of other variables, an increase in foreign direct Investment 1% causes the underestimation of RER by 0.05%. Meanwhile, all other variables cause appreciation of the real exchange rate. Among the most important influential variable is trade openness: a 1% increase in trade openness leads to a rating of 1.1% of the real exchange rate.

## Conclusions

Migrant transfers constitute the largest influx of foreign finance in the Albania. In this paper was studied the possibility of occurrence of Dutch Disease phenomenon in Albania due to migrant transfers. As other explanatory variables in the model were included foreign direct investments, trade openness, relative price of tradable to non-tradable goods and real per capita income.

Initially variables were tested for unit root. Some of the variables resulted Stationary of order zero (0), while the rest resulted Stationary of the first order (I). To eliminate the problem of Stationary, variables were entered in the model in the first Difference, then (I).

Stationary variables were tested for cointegration: the possibility of the existence of a long-term relationship between them. The test showed the existence of an integration equation at 5%.

Having shown that the variables are cointegrated, the vector of cointegration is estimated through FMOLS. Test results confirm the occurrence of Dutch Disease phenomenon in Albania. Increased flows of migrant transfers cause the appreciation of real exchange rate in Albania.

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