



## **Emigrants' remittances and economic growth in small transition economies: The cases of Moldova and Albania**

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ABSTRACT: The breakdown of the socialist system and the following collapse of the Balkan and Eastern European economies led to large-scale emigration outflows. These flows in turn, led to massive inflows of remittances to the emigration transition economies. Remittances are considered to be the basic gain of migration for the emigration countries and their main compensation for losing (temporarily or more permanently) a part of their labor force. Whether remittances contribute to the economic development and growth of the country receiving them depends on the way they are used, that is what activities they finance. There are examples of countries that use them for productive investment which is considered more development-stimulating than consumption or imports.

This paper investigates the macroeconomic effects of remittances in two small, transition emigration countries namely Moldova and Albania. The econometric investigation, based on time series analysis and Keynesian macroeconomic modeling, examines the impact of remittances on three key macroeconomic variables of these economies: consumption, imports and investment, in order to assess the use of the growth potential of remittances.

Keywords: Moldova, Albania, emigrant's remittances, economic growth.

JEL Classification: J61, F22, F24

## **Introduction**

Emigration continues to be a very hot issue for developing countries, since it determines a series of factors among which the inflow of foreign exchange in the form of emigrants' remittances. Economic theory identifies remittances as the most important implication of migration on the basis of their development potential role for the emigration-remittance receiving countries. In fact the inflow of remittances is considered as the main compensation for the emigration country in return for the loss of a considerable part of its labor force and human capital. This is the main reason why remittances are considered to be even more important than foreign aid for the alleviation of poverty in developing countries (Nikas, 1991). The development potential of remittances is the main reason they have recently attracted so much attention as a subject in international research literature.

In Europe, after the breakdown of the socialist system, large scale emigration took place from the former communist countries. In most cases emigration was driven by economic forces such as poverty and high unemployment and underemployment in countries that "lost" up to 40% of their GDP in the early years of the transition process. The Balkan as well as the former Soviet Union countries lost a large part of their active labor force to emigration with Albania and Moldova being good examples of countries which appear on the top of the remittance recipients' list and try to find the appropriate way to make the most of such money inflows.

The purpose of this paper is to examine and compare the impact of remittances on three key variables of the economy, consumption, imports and investment, in these two countries which have common things to commend on. The existing literature on the past and present situation with regard to the use of remittances and their macro-economic implications is presented and an econometric analysis based on the Keynesian macroeconomic model is applied to measure the impact of remittances on these economies. Finally, suggestions and policy recommendations towards remittance management policies will be provided, taking into consideration the econometric results and the performance of other countries.

## **Migration history and remittance behavior**

The postwar history of both countries is marked by the Communist rule. Moldova was part of the Soviet Union while Albania was its ally. After the fall of the communist regime, the two countries found themselves in a complete decomposition with economic stagnation, poverty and unemployment pushing people to emigrate.

Albania is a unique case due to its geographical position and economic isolation even vis-à-vis the other European socialist countries. Its recent migration starts at the beginning of the 1990s, when after the fall of the Iron Curtain about 250,000 Albanians left their country and after the pyramid scheme collapse (De Zwager *et.al.*, 2005:9-10) and the Kosovo crisis, the number of migrants exceeded one million (King *et.al.*, 2006: 413). Given that Albania's population is in the area of three million, one can understand why Albanian emigration is considered one of the largest ever in relative terms. The higher amounts of remittances sent to Albania came from Greece and Italy and their size was affected by the number of emigrants abroad, and characteristics such as age, civil status, qualifications, legal status, family unification and location abroad. Moreover, labor conditions, the speed and safety of transferring money, the political, economic and social situation as well as the type of emigration all influenced remittance transfers (Gedeshi, 2002: 52). The size of remittances also seems to have depended on the performance of the domestic banking sector which leads to higher remittances when it is low, the increasing international integration and the better quality of institutions which help the inflow of monetary transfers (Schrooten, 2006: 24). Migrants in steady jobs remit less money than those in unsteady ones, while relative deprivation does not affect the size of remittances (Lianos and Cavounidis, 2008: 137).

Moldova on the other hand, due to its complete dependency on Russia before the breakdown of the Soviet Union and its geographical position, is, even more than Albania, a typical case of an emigration country. Moldova faced a sustained recession during the 1990s when poverty, unemployment, and corruption pushed people to emigrate. Its output declined all through the 1990s. The limited natural resources and the trade dependence (Borodak, 2007: 3), due to energy imports from Russia, made Moldova the poorest country in Europe. Moreover, the 1998 Russian economic crisis deeply affected Moldova's economy, since 60% of its exports were aiming at Russia (Pantiru *et.al.*, 2007: 4). As a result Moldova had to find alternative trade partners. The conflicts with the separatist province of Transnistria were also harsh for the government to overcome, because control was lost on over 55% of the industry and 11% of the population (Munteanu, 2005: 41) who lived there. However, the weak economic recovery, made emigration flows persistent. In 1998, 80% of the Moldovians lived below the poverty line (Pantiru *et.al.*, 2007: 5). By the late 1990s it was clear that remittances were the main, if not the only, mechanism for poverty alleviation in that country (Marandici, 2008: 1).

Moldova's migration is mostly seasonal and the main group of migrants as well as remittance senders are temporary ones (Hagen-Zanker and Siegel, 2008: 3), who send around 30% more money than the permanent ones (Pinger, 2009: 167). The largest part of remittances in Moldova comes from European countries. A smaller

part comes from the Commonwealth of Independent States (CIS), where most of the temporary migrants head for and especially its construction sector (Luecke *et.al.*, 2009: 22). However, according to Marandici (2008: 2), migrants to CIS send larger portions of their income back home. It is widely believed that migration towards CIS is needs-driven, while the emigrants who choose to go to European countries look for better opportunities (IOM and SIDA, 2007: 9). This, along with the cost of emigrating, explains why the better educated and richer migrants choose to go to European countries while the less educated and poorer ones head for CIS and mostly Russia.

### **Main economic indicators and the inflow of remittances**

According to more recent World Bank estimates, Albania faces a lower poverty rate than Moldova, its GDP is almost twice the Moldovian one in current US \$, despite the fact that its gross capital formation and its exports as percentages of GDP are smaller. Albania's current account balance as a percentage of GDP is -13.8% while for Moldova it is -16.3%. Both the size of imports and household final consumption expenditure as percentages of GDP are larger in Moldova.

As far as the structure of the economy is concerned, the service sector dominates in both countries while the agricultural sector constitutes 20% of GDP in Albania, twice as much as in Moldova. The market reform in transition economies, in general, is believed to have a positive impact on both traditional and newer types of infrastructure with the stronger one on the latter (Feinberg and Meurs, 2008: 245).

Regarding the inflow of remittances, they increased in Albania between 1992 and 2008 at very high rates, though they were also hit by the financial crisis. In particular, emigrants' remittances in the period 1993-2003 were five times higher than the inflow of foreign investment and represented 64.3% of the country's imports (Nikas in IOM, 2005: 58). For the period 1992-2009, remittances represented on average 17% of the Albanian GDP but according to the World Bank, they even reached 27% of GDP, which is the size of a key sector of the economy, such as manufacturing. These comparisons and estimations however are based on official data. Given that a considerable part of remittances was transferred through the informal channels (DeZwager *et al.*, 2005), the official data on remittances to Albania underestimate the real figures. One could therefore safely conclude that during the period of transition, Albania's main exportable was its labor force.

**Table 1: Remittances (R) to Albania and Moldova in mil. \$ US (R), their growth rate (RG) and as a percentage of GDP (R/GDP) (1992-2009)**

Y	Moldova			Albania		
	R	RG	R/GDP	R	RG	R/GDP
1990						
1991						
1992				151.800.000		21,40
1993				332.000.000	118,71	27,03
1994				307.100.000	-7,50	15,47
1995	1.020.000		0,06	427.300.000	39,14	17,62
1996	87.170.000	8446,08	5,14	550.900.000	28,93	18,28
1997	114.410.000	31,25	5,93	300.300.000	-45,49	13,67
1998	124.310.000	8,65	7,58	504.140.000	67,88	18,48
1999	111.860.000	-10,02	9,55	407.200.000	-19,23	11,86
2000	178.600.000	59,66	13,86	597.800.000	46,81	16,22
2001	243.320.000	36,24	16,43	699.300.000	16,98	17,09
2002	323.740.000	33,05	19,48	733.570.000	4,90	16,49
2003	486.630.000	50,32	24,57	888.748.600	21,15	15,72
2004	705.240.000	44,92	27,14	1.160.672.000	30,60	15,55
2005	920.310.000	30,50	30,80	1.289.704.000	11,12	15,40
2006	1.181.720.000	28,40	34,67	1.359.467.000	5,41	14,89
2007	1.498.230.000	26,78	34,03	1.468.020.000	7,98	13,55
2008	1.897.300.000	26,64	31,34	1.495.152.000	1,85	11,53
2009	1.210.760.000	-36,19	22,40	1.317.469.000	-11,88	10,96

Sources: a) World Bank, 2010

b) Authors calculations

Moldova on the other hand figures in the first places of the world's top remittances' recipients. In the period examined almost two of Moldova's annual budgets could be entirely financed by remittances (Munteanu, 2005: 42). Between 2004 and 2008, remittances as a percentage of GDP were 31% on average while the foreign direct investment's percentage was only 8.14% (World Bank, 2010). Moreover, the size of remittances to Moldova in 2003 exceeded the size of the Moldovan government's social assistance and pensions (European Social Watch Report, 2009: 12). 40% of Moldovan households received remittances, of which 26% were monetary and 15% of them in-kind ones (Orozco, 2007: 7). At this point, it is important to note that after 2007, remittances reached a peak, and started

to decline as a percentage of GDP (Luecke *et.al.*, 2009: 5). They fell even more in 2009, during the global economic crisis.

Comparing the size of remittances between the two countries, it is quite clear that Moldova is more dependent on remittances, since they have reached up to 34% of its GDP, although in absolute terms they are smaller than Albania's. However, there are some views about the impact of the global economic crisis on the growth of emigration countries according to which, the poor countries are affected through remittances, the decline of which promotes emigration, decreases savings, tax revenues and public expenditure on education (Ziesemer, 2010:1242-3). The magnitude and the relative importance of these flows can be seen in table 1.

Remittances represent a net gain for the receiving countries (Bourguignon *et.al.*, 2009: 1) similar to development aid. According to Olesen (2002:139-41), they constitute one of the elements in the development equation, along with foreign direct investment, trade liberalization, aid and improved governance. In fact, on many occasions they proved to be the solution to the problem described by the "dual gap model", (i.e. they are necessary that is, in order to cover the Balance of Payments deficit, when capital goods are imported or when there are no sufficient savings for financing investment in order to achieve economic development) (Nikas and King, 2005: 242). The current account deficit is much smaller than the trade one because of the contribution of remittances. This however strengthened the domestic currency and undermined the competitiveness of the Albanian exportables (the "Dutch Disease" problem). In 2004 the Albanian currency, Lek appreciated by 7.2% vis-à-vis the Euro and 15.7% vis-à-vis the USD (Germeñji in IOM, 2005: 53) Furthermore, a comparison between the Albanian per capita GDP and the amounts invested in the pyramid scheme leads to the conclusion that a large proportion of these amounts probably came from remittances (Korovilas, 1999: 409). Moreover, Albania's imports of both capital and building material necessary for the reconstruction of its infrastructure was made possible by remittances and the foreign exchange they offered. Furthermore, the country's low inflation rates and the stability of its currency during the period 1993-1996 were also a result of remittances balancing the current account (op.cit: 407). It is also important to note that remittances contributed considerably to the anti-inflation program in Albania by directly affecting exchange rates and foreign reserves and stabilizing the nominal exchange rate, thus lowering inflationary expectations (Haderi *et.al.*, 1999: 135).

In Moldova, one out of five households depend completely on these amounts while for 44.5% of them, remittances represent their main source of income (IOM, 2009: 18). The impact of remittances on poverty was greater than foreign direct investment's one (Marandici, 2008: 2). A Moldovian household with a member

working abroad is on average 30% richer per household member compared to a household without remittances (Luecke *et al.*, 2009: 30).

There is an ongoing debate in the relative literature on whether a country can really rely on remittances as a source of financing economic growth. Some authors stress that the people involved in the remittance management process are mostly elderly and rural, that remittances are irregular (Grant *et al.*, 2009: 13) and they have seasonal variations. Others stress that they are highly persistent and they portray additional advantages compared to the other sources of financing (Ratha, 2003:160-3). According to King *et al.* (2006: 411) remittances are more stable than private capital flows, less vulnerable to economic cyclical fluctuations and more widely distributed than external aid. Furthermore, the remittance multiplier is greater than the exports one, especially if the emigrant was unemployed in his country of origin.

### **The use of remittances and an overall assessment of their growth impetus**

Concerning the patterns of the use made of remittances by their recipients and their positive and negative consequences from a microeconomic and a macro-economic point of view, there are a lot of studies and surveys that try to answer such questions. The decisions on the use of remittances are part of the wider life-cycle considerations (Nikas and King, 2005: 241) and immigrants face the dilemma of accumulating savings or purchasing consumer or capital goods. Given that savings could be seen as retarded consumption or future investment, an emigrant is expected to decide how he will use his savings, spending them on consumption or investment.

Gallina (2006: 7), investigating emigration from the Mediterranean countries, found that the lack of infrastructure, access to financing and the absence of a developed market, play a crucial role on the decision to invest. Moreover, financial markets, share an important position to the channelling of remittances, by reducing transaction costs and the substitution effect of remittances, as a source of financing new productive activities (Giuliano and Ruiz-Arranz, 2009: 4). It has also been found that the positive implications of remittances on development are more important for countries with a primitive or well structured financial system and less substantial for countries at an intermediate level (Catrinescu *et al.* 2009: 92).

Straubhaar (1985) also concluded that only under specific circumstances, remittances provide substantial benefits for the balance of payments and the output produced of a country. However by relating the potential impact on the GDP growth of the emigration country to its overall level of development, he concludes that the impact of remittances on GDP is substantial only for the less developed

remittance receiving countries. What is more important however, is the relation between remittances and capital returns. The lower these returns are (the case of less developed countries), the faster the development and the convergence to the developed ones as capital inputs increase, due to the inflow of remittances (Pradhan *et.al.*, 2008: 501).

The contribution of remittances to the economic development of the receiving countries also depends on the kind of consumption they finance, (domestic or imported, durables or non-durables, necessities or luxury goods). In other words, it depends on the extent the productive sector of the receiving country's economy benefits from their inflow. It has been reported that capital inflows and domestic savings are negatively related. This could be interpreted as a sign that foreign aid, even in the form of remittances, substitutes investment (Glytsos, 2002: 14).

Most of the research findings for Albania converge to the conclusion that remittances, particularly the initial flows, were spent on the financing of basic needs, which can also be explained by the fact that more than one quarter of the Albanian population in the 1990s was living below the poverty line (Duval and Wolff, 2010: 75). Remittances were mainly used in order to construct or repair houses, purchase clothes and medical care, acquire land and animal stock and finance the everyday needs of people, even at the level of provision of electricity and water. As far as the construction of houses is concerned, it has been pointed out that it absorbed a large proportion of remittances, Dalakoglou (2010: 774) claims that this process is very common in Albania, because it connects the migration experience, the transition one and the monetary or capital transfers from abroad, with one material element.

Entrepreneurship is believed to be positively related to schooling, foreign language proficiency, better infrastructure and savings accumulated abroad (Piracha and Vadean, 2010: 1153). Moreover, Nikas and Baklavas (2009: 482) found that the size as well as the investment perspective of remittances is positively associated to the educational level, the stable character of employment, the existence and the use of a bank account and intermediation and the availability of a medium to long-term investment plan. According to Germenji and Milo (2009:505), the returnees invest their savings much more than the money of remittances. However, a big proportion of those who repatriate do not work after their return. This is the case especially in rural areas and half of the returnees use their money to buy land, though only 24% of them are self-employed in agriculture. It is quite obvious, that agriculture, migration and human capital assets all play a different role which varies by age and gender and affect livelihood choices (Azzarri *et.al.*, 2006: 9).

Regarding Moldova, the existing literature also converges to the conclusion that due to the inappropriate investment and business environment, most of the amounts

are spent on consumption. According to Lücke *et.al.* (2007: 10), Moldovan remittances' recipients use the income from remittances in order to cover the expenses of their daily needs and buy consumer durables. Moreover, they spend considerable parts of these amounts on their childrens' education but even on luxury goods and on health (Hristev *et.al.*, 2009:32-3).

Migrants themselves show higher entrepreneurial activity than the members of migrant families who receive remittances. Ghencea and Gudumac (2004:64-65) found that the largest share of remittances have been used for business investments, such as house purchase and construction or the purchase of cars and other household expenses, while a substantial part is saved and only a small part is used for financing business activities. They also found for Moldova that factors such as the emigrants' backgrounds and life experiences, level of education, the qualifications of the family heads, local cultural particularities, socio-economic conditions, the family composition, the existence of welfare benefits, future intentions and the way remittances have been earned, all matter highly to their decision. Furthermore, the lack of infrastructure, good governance, access to banking services and trust to financial institutions play an important role in the investment decision (Hristev *et.al.*, 2009: 9). Other factors such as an increase in the migrant's income lead to an increase in optimal invested remittances, while transaction or migration costs reduce them (Naiditch and Vranceanu, 2010: 469).

Moral hazard problems and the initial low rates of return also negatively influence the funding of productive activities (Culiuc, 2006: 11). IOM (2009: 20) for example, found that many of the Moldovians migrants' businesses fail soon after their establishment for a number of different reasons. Fewer skills, less professional experience, lower entrepreneurial skills, vulnerability and definitely the overall investment environment led to these business failures (IOM, 2009: 20). However, there are few who do choose to invest in local financial and real assets but they pay significant set-up costs (Lücke *et.al.*, 2007:50-51). The decision to use remittances for the financing of investment also depends on the potential investor's perception on factors such as availability of skilled labor, investment opportunities and the country's socio-economic situation. Consequently, it should come as no surprise that most of the emigrants do not think very highly of the business environment in their homeland because of the corruption, inflation, inefficient governance and lack of skilled labor (IOM, 2009: 9).

Remittances also cover to a large extent the foreign currency shortages of the emigration countries. Whether they will contribute to a more permanent equilibrium on the balance of payments however, depends on whether they will cause a shift of production from non-tradable to tradable goods, which will be exported, or substitute imports (Glytsos, 2002: 6). They can also finance investment through imports of intermediate products (Brown, 2006: 65). In

Albania, for example, the research findings indicate that although both imports and exports of industrial consumer goods increased faster than those for capital equipment, exports represent less than 50% of imports and these exports are not positively related to the inflow of remittances (IOM, 2005: 53). Furthermore, it has been argued that in the case of Albania, the invested remittances were mainly used in the tertiary and construction sectors of the economy, rather than agriculture and manufacturing. On the other hand, some people believe that labor migration and micro-enterprising are interrelated (Nicholson, 2001:39). That is, the setting up of 17% of Albanian businesses has been considerably supported by migrant's income (Kule *et al.*, 2002: 236). Moreover, private domestic investment gradually increased especially in the construction sector which along with the service sector represented more than 60% of the GDP.

On the other hand, the most attractive sectors for business investments in Moldova according to Mosneaga (2006: 6) have to do mainly with the services sector such as trade, transport, communications, catering, hotel or public services. In Moldova, there is a lack of diversity in products exported that do not conform to international standards and they are exported only seasonally, and there are raw goods exported to be subsequently imported as final goods (Timus and Timus, 2008: 71).

Economic growth can also be encouraged by the consumption pattern Albanian and Moldovan emigrants adopt. Even if migrants and their families do not choose to get involved with entrepreneurship, others may do, due to increased demand (Mosneaga, 2007: 14). Moreover, through the multiplier effect, part of the increased disposable income is spent on the consumption of domestically provided goods and services, instead of imported ones (Culiuc, 2006: 9). Thus, it can be said that remittances represent a large share of the private expenditure and domestic consumption thus motivating GDP growth (Pinger, 2009: 146). They also reduce the household consumption instability by dampening the effects of different sources responsible for that, such as agricultural shocks. They play an insurance or risk avoidance stabilizing role, especially in countries with a less developed financial sector and even more, when the private credit ratio exceeds 20% of GDP and remittances exceed 6% of it.

Remittances also imply a fiscal gain in turns of tax revenue on them and the activities they finance an injection to national savings and currency reserves and a support to the real exchange rate of the national currency (Culiuc, 2006: 8). The country's credit worthiness for external borrowing is enhanced (Sharma, 2010:559-60) enabling it to borrow at lower interest rates (European Social Watch Report, 2009: 11). When countries receive remittances, it is easier to sustain higher fiscal deficits (Ghencea and Gudumac, 2004: 27). Remittances also increase the stock of international reserves and promote financial stability by reducing the possibility of

current account reversals, especially when they reach 3-4% of GDP (Bugamelli and Paterno, 2009: 1821).

Nevertheless, remittances have been accused for many different negative consequences, not only at the level of the household, but also of the society and the economy. First of all, there is the case of the already analysed “Dutch Disease” which mainly affected Albania and to a smaller extent Moldova. Another important negative implication of migration and remittances is that migrants do not contribute to the pension system and sometimes the recipients, but also migrants who come back home, prefer not to work but live on their earnings. There is a reduction of labor supply that can also cause “Dutch Disease” (Chami *et. al.*, 2003). Nonetheless, there is still the opinion that migration manifests economic activity (Hristev *et.al.*, 2009: 8). At this point, it is noteworthy to mention that according to the findings of Borodak and Piracha (2010: 3), the recipients of monetary remittances are more likely to be wage earners than self-employed or non participants in the labor market.

The economic implications of remittances could be summarised as follows:

- They facilitate transactions with other countries and they finance balance of current account deficits by providing foreign exchange.
- They provide foreign exchange for the imports of capital equipment and raw materials necessary in industry.
- They are a potential pool of savings and investment capital for future investment and capital formation.
- They facilitate investment on education and human capital creation.
- They raise the standard of living since they represent a net income gain for households and reduce poverty and inequalities.

On the other hand,

- They press governments to implement reforms and reduce external imbalances.
- They increase aggregate demand and consequently inflation and wages.
- They reduce savings and work effort and therefore growth in the longer run.
- They increase the level of dependence and inequalities and they are often accompanied by money laundering (De Zwager *et.al.*, 2005: 37).

### **The econometric investigation**

The main problem for researchers working on remittances, especially to developing countries, is the lack of reliable data. In transition economies, it is true that a data collection and assessment system does exist, mainly due to the pressure of their participation to European institutions. However, the harmonization of these

practices to the international standards is a rather recent project and reliable data can be found only for years after 2000. The data used in this paper have been sourced from the world development indicators database of the World Bank. .

Although the issue of the economic implications of remittances has been thoroughly and intensively investigated by many researchers, neither a universal model, nor a specific economic theory has been formulated to this end. Most researchers investigated this issue on the basis of the existing literature and tailored their analyses to the specific characteristics of the country they studied. The present paper adopts the methodology of a previous article by Blouchoutzi and Nikas (2010) examining the macroeconomic implications of emigrants' remittances in three Balkan countries, based on the Keynesian macroeconomic model and using three simple functions on consumption, investment and imports and an identity for the disposable income previously used by Glytsos (2005). More specifically,

$$\begin{aligned}(1) \quad C &= a + b_1 Y + b_2 RIR \\(2) \quad IM &= + b_1 Y \\(3) \quad I &= a + b_1 Y + b_2 RIR + b_3 PI, \quad \text{and} \\Y &= C + I + G + X - M + R\end{aligned}$$

According to this methodology, disposable income (Y) is derived from GDP, measured using the income approach, minus remittances (R) in order to avoid the correlation between these two variables in the regression, plus remittances [ $Y = (GDP - R) + R$ ]. In the consumption function (C), apart from the other disposable income, remittances and also real interest rate (RIR) are included as explanatory variables. Imports (IM) are a dependent variable on both remittances and the other disposable income while the investment function (I) involves gross fixed capital formation with the other disposable income, remittances and real interest rates. Dummy variables will have to be used in both cases. Albania as well as Moldova faced exogenous shocks exogenous shocks in their economies, in the twenty years since the beginning of the transition process such as the pyramid crisis in Albania and the Russian economic crisis that affected Moldova. As a result, main economic indicators were influenced by these shocks. The econometric investigation is based on time series analysis, it uses the Ordinary Least Squares method and the results for the twenty years examined between 1990 and 2010 are presented below.

The findings of the econometric investigation confirm the above estimations on the patterns of the use of remittances in Albania and Moldova. According to the results presented below, remittances have played an important role in the households' decision both on consumption and on investment spending. In detail, remittances' contribution to all the three sectors of Moldova's economy examined is of great importance and it is larger than the other disposable income's one. That is, because

the coefficient of the remittances variable in the regression analysis used, is almost double than the other disposable income's one in all the three functions and their significance in terms of the t-ratios is almost the same.

More specifically, in the consumption function, the coefficient for remittances is a bit more than two times higher than the other disposable income's one and there is also a dummy for the year 1996 in the regression that is equally significant, possibly due to the electoral fever which Moldova experienced that year. Regarding imports, the results show an obvious push on the imported goods and services by the amounts received by the migrants, since the coefficient of remittances is larger than those of the other sources of the disposable income and the dummy. The latter refers to the years 2008 and 2009 because of a fall in imports, probably due to the economic crisis.

The investment function deserves a thorough investigation, since apart from the significance of all the variables included and the clear positive consequence of remittances, though smaller than that on consumption and imports, one should take into account the dummies. They refer to the crises that Moldova had to face during the period of the twenty years examined. As far as the quantitative relationship between the coefficients of the remittances and the other disposable income variables is concerned, the role of remittances is greater since their impact on the gross fixed capital formation is almost twice as much as the other disposable income's while there is also a negative time trend in the regression.

When it comes to Albania, the findings also agree with the above estimations since remittances seem to have a great impact on all the three variables tested, even greater than the other disposable income and it is obvious that their effect on consumption patterns is much bigger than on investment ones.

Starting with the consumption function, the coefficient of remittances in the regression is higher than in the other two functions, that of imports and investment, and a bit smaller than the one of the other disposable income variable in the same regression. Moreover, there is a positive and significant dummy variable present in the regression for the years 1993-7 and 2008 due to an irregular progress in the private household consumption before normalization in the years that followed the pyramid scandal and the consequent financial crisis. The coefficients of the real interest rate and the time trend variables regression are negative and significant.

Regarding imports, it shows a greater impact of remittances compared to the other disposable income on the imported goods and services, while the dummy variable in the function represents the years 1994, 1995, 1997 and 2009 when imports had declined mainly due to the pyramid and the financial crisis. Moreover, for 1994

and 1995, there was political instability due to a constitutional referendum held in 1994 and the changes that followed, after the defeat of the governing party.

The findings on domestic investment portray a strong dynamic of remittances that should be taken into consideration. Besides the fact that the coefficient of remittances is a bit larger than that of the other disposable income, the fact that it is of great significance reveals their potential positive consequences on growth. A dummy is present for the pyramid crisis in 1997 when the size of gross fixed capital formation had fallen very much. Moreover, it should be noted that instead of the real interest rate variable, we have used the nominal lending rate and the inflation variables due to functional form problems faced in the regression. Their coefficients were also significant and negative as expected, while the time trend's one was positive.

It should also be mentioned that the econometric models summarized in tables 2-4 display excellent fits on the basis of the coefficient of determination (R Bar Squared) and F Statistic (F-STAT) and are free of statistical problems.

Comparing the results for the two countries, one could conclude that the role of remittances in Moldova's economy seems to be much more obvious and important than in Albania.

**Table 2: The determining factors of Private Consumption Expenditure**

Coefficients (t-ratios in brackets) and statistics	Albania	Moldova
Constant term	-3.09E+09(-4.6774)	-7.55E+07(-0.29197)
R (remittances)	2.4538(5.5735)	1.7115(16.8014)
YDMR (other income)*	2.5663(4.4455)	0.79350(3.3565)
D (dummy variable)**	5.28E+08(3.5511)	-2.99E+08(-4.7439)
RIR(real interest rate)	-2.02E+07(-5.1596)	N.A
T(time trend)	-2.39E+08(-1.9999)	N.A
R Bar Squared	0.97412	0.98462
F-STAT***	128.9592	278.3875

\* Disposable Income Minus Remittances

\*\* 1 for 1996 and 0 for other years as for Moldova, 1 for 1993, 1994, 1995, 1996, 1997 and 2008 and 0 for other years as for Albania.

\*\*\* F(3,10) for Moldova, F(5,12) for Albania

A comparison of the coefficient of remittances to the other disposable income, indicates that remittances in Moldova have a much more crucial role in financing the recipients' needs. On the other hand, in Albania they take part in the consumption spending procedure and though they have a smaller coefficient in the

regression than the other disposable income, the difference between the coefficients is not as high as it is in Moldova. Moreover, they seem to have played a very significant role in the investment expenditure, greater than that of the other sources of disposable income. This finding is of great importance since it supports the argument that the development potential of remittances could be further reinforced.

**Table 3: The determining factors of Imports**

Coefficients (t-ratios in brackets) and statistics	Albania	Moldova
Constant term	18.8588(206.1676)	-7.68E+08(-2.4318)
R (remittances)	0.6189E-9(5.2314)	2.7252(24.0084)
YDMR (other income)*	0.5913E-9(19.6196)	1.0573(4.0692)
D (dummy variable)**	-0.20014	-2.27E+08(-2.5140)
R Bar Squared	0.98113	0.98190
F-STAT***	295.6814	254.1445

\* Disposable Income Minus Remittances

\*\* 1 for 2008, 2009 and 0 for other years as for Moldova, 1 for 1994, 1995, 1997 and 2009 and 0 for other years as for Albania.

\*\*\* F(3,11) for Moldova, F(3,14) for Albania

**Table 4: The determining factors of Private Investment Expenditure**

Coefficients (t-ratios in brackets) and statistics	Albania	Moldova
Constant term	18.0550(76.6297)	-1.47E+08(-1.5027)
R (remittances)	0.2074E-8(14.8914)	0.52948(9.8048)
YDMR (other income)*	0.1445E-8(8.0111)	0.37117(3.6223)
D (dummy variable)**	0.57721(4.4869)	1.02E+08(6.7707)
RIR (real interest rate)	N.A	-2.83E+08(-3.4248)
LR(lending rate)	-1.3739(-2.8782)	N.A
INF(inflation)	-0.76602(-6.3229)	N.A
T (time trend)	0.26224(-6.9148)	-1.34E+07(-3.8041)
R Bar Squared	0.98879	0.97605
F-STAT***	236.3008	106.9485

\* Disposable Income Minus Remittances

\*\*1 for 1998, 2007-2009 and 0 for other years as for Moldova, 1 for 1997 and 0 for other years as for Albania.

\*\*\*F(5,8) for Moldova, F(6,10) for Albania

Summarizing, Moldovians have better exploited the development potential of remittances in favor of their economy and have applied a better policy towards the

direction of their use. That could be the encouragement to invest or the promotion of the local market instead of the imported goods and services for the consumption needs, or even the motivations for donations in favor of common development. Albanians have not been able to enhance the productive investment of remittances flows as much as Moldovians, or even their exact recording and the use of bank accounts so as to give motives for capital formation through bank intermediation.

## **Conclusions**

Both Albania and Moldova should focus on finding the utilization patterns of remittances that can bring the best results in terms of productive investments and long-term growth. Morton *et al.* (2010: 9) revealed that Moldova faces a lower corruption perception index than other countries surveyed, a higher literacy rate, a dropping population growth and a growing capital formation, all of which can improve business development. The econometric investigation presented above also supports that remittances are already contributing to gross fixed capital formation in these countries and they could have a greater contribution with more targeted policies. The results indicate an unambiguous role of remittances in the two major macroeconomic injections of these countries namely consumption and investment.

There is a variety of suggested policies and actions governments could follow to this end. First of all, the monitoring and analysis of the exact size of transfers, of the way and time they are sent, as well as of their use, are necessary steps to be made. Reducing the transfer fees of remittances can also affect their recipients. Both Moldova and Albania need a boost of their domestic growth and at least according to the results above, remittances seem to be able to offer it. The positive effects of remittances could be reinforced while negative ones should be mitigated. This means that the countries could promote the rerouting of remittances towards productive investments by eliminating governmental distortions and market failures and on the other hand, they could sterilize the inflow of foreign currency to prevent Dutch Disease problems and at the same time, implement an industrial policy and stabilization funds (Culiuc, 2006:17-21). Furthermore, economic modernization of the emigration countries needs to go beyond the national borders. They should cooperate with the neighboring countries, where most of the migrants are, in order to develop a common strategy towards the protection of migrants and the appropriate management of remittances (Maroukis, 2005:233).

The conclusion that most authors seem to agree with, is that such inflows of money can help developing countries overcome a lot of problems they face and for this reason they are a development asset they cannot afford to waste. The massive emigration outflows the two countries experienced, influenced them deeply in

social and economic terms. The task for the governments continues to be to capitalize on the benefits and minimize the costs emigration implies. Moldova and Albania, being small transition economies which lack the development tools and the experience needed for policy implementation. The Moldovians and the Albanians should try to follow the examples of countries, which have taken advantage of remittances inflows in order to improve their socio-economic conditions, through spillover and imitation.

An assessment of the policies followed until now indicates some progress, although many things remain to be done in order to channel the money received, in favor of the country's development. People are still reluctant and skeptical regarding the policy measures of their governments. However the findings of the econometric investigation indicate a significant presence of remittances in spending patterns and also a potential for them to promote growth. They have financed consumption expenditures to a great extent, but they have also financed a large share of the country's imports. However, they have already also contributed to the investment choices of households, by financing their cost. In this respect, the findings defy the pessimistic view that the lack of effective mechanisms for the management of the remittance flows and their channeling to priority uses and sectors has caused a complete loss of their developmental momentum.

The main conclusion from our findings supports the mainstream view that there was and certainly still is room for a targeted policy for the best use and exploitation of remittances by the receiving countries. The fact that different countries display different levels of efficiency in the channeling and use of remittances reveals the differences in the existing structures and institutions as well as the policies pursued. Even when an institutional and policy handicap exists, however, there is still room for intervention in order to serve the interest of the emigrants and the society.

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