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Migrants Remittances, Official Development Aid, and Economic Growth in the Developing Countries[1]

1. The effectiveness of the Official Development Assistance (ODA)

The main objective of this paper is to analyze the stability and significance of the remittances flows and the Official Development Assistance taking into account the current global economic crisis. The prime research question of the paper is to determine which of these financial flows are more significant and stable with respect to flows into developing economies. This paper provides a discussion based on the analysis of both empirical and scientific sources, as well as theoretical approaches to the issue of development interventions and the empirical model based on panel data.

The Official Development Assistance (generally called ‘development aid’) has been one of the fundamental tools for development intervention for last six decades. It is defined as the financial flows to the countries on the DAC list as well as to the multilateral institutions designed to distribute ODA on the two main provisions: 1) provided by official agencies, including state and local governments, or by their executive agencies; and 2) with each administered transaction contributing to the promotion of the economic development and welfare of developing countries as its main objective and being concessional by conveying a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent) (OECD, 2007).

In order to measure and classify ODA and other resource flows originating in Development Assistance Committee (DAC), the member states of the Organisation for Economic Cooperation and Development (OECD) design ‘The DAC list of ODA recipients’ which is usually reviewed every three years. The list is constructed for

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statistical purposes and not as guidance for aid or other preferential treatment. In particular, geographical aid allocations are the matter of national policy decisions and responsibilities (OECD, 2007).

The aid debate has been characterised over the years by many controversies, with aid optimists at one extreme and aid sceptics at the other (see for example Loots 2006; Moyo 2009; or Jones, 2012). Aid pessimists argue in a variety of ways: The first one might be that while aid is supposed to fill the investment-savings gap (and other gaps), the increase in investment should lead to higher and more sustainable growth and a subsequent increase in per capita income. However, existing evidence indicates that it is missing its target. With regard to this, Stojanov and Jamborova (2008) claim that the provision of ODA does not play any significant role in poverty alleviation at the global level. Overall, it seems that ODA is neither a major factor of poverty decline in China, India, Brazil, or in other large rapidly growing developing country.

On other hand, the 'aid optimist' Sachs (2005) emphasises the importance of growing development aid allocated for the developing countries. He is convinced that some regions such as Africa are simply too poor to grow without foreign assistance and that the continent needs a big push in the form of aid flows to end poverty. Moreover, Pronyk et al. (2012) presented the evidence that after three years, the reductions in poverty, food insecurity, stunting, malaria parasitaemia, mortality rates in children younger than 5 years of age had been reported as well as the access to improved water and sanitation had increased across nine Millennium Village sites. Average annual spending per head at the Millenium Villages Project (MVP) 3rd year was about \$116 per head (from average \$27 spending on Millennium Development Goals related activities), of which \$25 was spent on health[2].

The main purpose of the ODA provision is poverty reduction in developing countries. Nevertheless, the effectiveness of ODA for the last five decades, particularly in least developed countries, shows unsatisfactory effects. Discussions about ODA reveal its risks which can hinder development in poor countries. One of the frequently mentioned critical issues is the limited efficiency and certain negative effects of ODA provision (see eg. Bauer and Yamey, 1985; and Jamborová, 2008). Thence, Lancaster (1999) claims that the results of the ODA-financed projects and programmes in Africa for the most part have been among the least effective projects in the world in achieving their goals. She points out that there is some evidence that aid projects in Africa became less effective in the 1980s and the 1990s, even as the amount of aid rose over time. In the context, Lu et al. (2010) alert that foreign development aid for health is a key factor leading to a decline in government spending on health from domestic sources in some countries. However, the ODA can have positive health impacts.

Further, it is often claimed that ODA is used as the tool for increasing the aid dependency of developing countries (Lensink and White, 2001; Lancaster, 1999). Furthermore, there are some negative aspects of ODA provision and in this context Macrae (2001) calls attention to the fact that the ODA still remains an instrument of foreign policy. Similarly, Thérien and Lloyd (2000) argue that for many reasons development assistance remains an instrument of control by the North over the South. According to them the foreign (development) aid with financial transfers more than 2 trillions USD since the late 1940s (cf. World Bank, 1998) is a mainstay of North-South economic relations for a long time.

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[2] However, the findings of the survey were strongly criticized, eg. by Clemens in Gilbert (2012) and by Bump et al. (2012) from methodological point of view and the authors and editors had to publish the erratum (Pronyk 2012).

The ODA will always be connected with threats related to bureaucratic misuse and corruption due to the strong position of the public sector. Lancaster (1999), based on her personal experience in Africa, directly addresses this: "The accountability of the government to its people was gradually being replaced by accountability to its major aid donors". She points out an example of African politics (e.g. cabinet ministries) which did not come up with any broad development strategies at meetings with donors but only put in further and further requests for funding particular projects (meaning for projects of their friends or relatives).

The effectiveness of the development aid remains controversial and Ovaska (2003) is even more critical in the study in which he examined the effect of development aid on economic growth for 1975–1998 on the basis of a sample of 86 LDCs. He used two alternative data sets for aid, compared them with previous studies of aid effectiveness and used a more advanced measure of the quality of governance. The results indicate a negative relationship between development aid and economic growth. He found that a 1.0 per cent increase in aid as a percentage share of the GDP decreased the annual real GDP per capita growth by 3.65 per cent.

Jones (2012) claims that current ODA is an 'old' or 'orthodox' aid model which is characterized as bilateral and multilateral flows between public sectors in developing and advanced countries according to traditional modalities—i.e. project loans and grants. However, it is important to recognise that ODA is not static and recent reforms have encouraged alignment with country-led poverty reduction plans and wider use of programme aid modalities (Jones 2012). He supports the shift towards harder commitment devices and a results-based focus. Specialized partnership funds were effective in mobilizing and disbursing large volumes of funds, especially where the technology of intervention is known. Market-based approaches created innovative ways to connect individual donors and recipients, both widening and decentralizing the reach of aid, increasing the potential scale of external funding for social ventures in low-income countries. According to Jones (2012), these innovative models can reduce political interference, enhance transparency, promote specialization and allow greater competition among implementing actors, thereby improving performance.

At this account, Sachs (2012) focuses on more realistic financing of the 'Sustainable Development Goals' than constituted the Millennium Development Goals (finishing in 2015). According to him, rather than relying on so-called 'aid voluntarism', in which countries announce their individual aid promises (and then fail to honor them in the majority of cases), countries should agree to transparent and specific standards of financing, such as quotas and assessments. International Monetary Fund (IMF) quotas and United Nations' (UN) dues related to national incomes, and levies on national greenhouse gas emissions (e.g. a few dollars per ton of carbon dioxide emitted per year) represent small sums, however they can be effectively managed and become essential for success (Sachs, 2012).

2. Remittance flows

With respect to the problems described above, it is therefore not surprising that some authors' opinions of "Plan B" (see eg. Pritchett, 2003) by the most developed countries start to occur, focusing on other financial sources, such as migrants' remittances as a natural financial resource transfer from the developed to the developing world.

Remittances flows (also frequently called 'workers' remittances') are defined for purpose of the paper as current transfers by migrants who are employed or intend to remain employed for more than a year in another economy in which they are considered

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residents (World Bank, 2012). In the list of standard components for the balance of payments accounts, ‘workers’ remittances’ have been recently replaced by ‘personal transfers’ (see Figure 1). However, the latter term is defined more broadly (for more details see IMF 2009).

Figure 1

Total remittances

<table>
<tr><td rowspan="5">Total remittances</td><td rowspan="4">Personal remittances</td><td rowspan="2">Personal transfers</td><td>remittances in cash</td></tr>
<tr><td>remittances in kind</td></tr>
<tr><td colspan="2">Compensation of employees less taxes</td></tr>
<tr><td colspan="2">Capital transfers between households</td></tr>
<tr><td colspan="3">Social benefits</td></tr>
</table>

Source: Author’s own elaboration based on information from IMF (2009).

The links between migration and development are examined with a varying intensity from the second half of the 1990s. Stojanov, Strielkowski and Drbohlav (2011) present some reasons for increasing interest about migration and development linkages during the last two decades. According to them, it is caused by the rise in the absolute number of immigrants and the ageing population in developed countries. Another important reason is disillusion about traditional development interventions, such as official development assistance (ODA) and the consequent search for alternative options, among which remittances receive considerable attention and importance. Another reason may be the increasing amount of remittances, and a relative stability of this form of support compared to other external flows such as ODA or foreign direct investment (FDI).

The officially recorded remittances flows to developing countries, which include bank transfers, MTOs transfers, and wire transfers are expected to reach \$406 billion in 2012, up by 6.5% from \$381 billion in 2011. Worldwide estimated remittance flows, including those to high-income countries, reached \$513 billion in 2011. These flows are expected to rise by 8% in 2013 and 10% in 2014 to reach \$534 billion in 2015 (see Table 1), according to Ratha et al. (2012).

Table 1

The remittance flows to developing countries in 2011–2015 (US \$ billions)

Region	2011	2012^{e}	2013^{f}	2014^{f}	2015^{f}
Developing countries	381	406	438	482	534
Low income economies	28	32	36	41	47
Middle income economies	353	374	402	441	487
World	513	534	570	623	685

Note: ^{e} estimate; ^{f} forecast.

Source: Authors’ own calculations based on Ratha et al. (2012).

According to Ratha et al. (2012), the true size of remittance flows, including unrecorded flows through formal and informal channels, is significantly larger. Compared to private capital flows, remittance flows have shown remarkable resilience since the global financial crisis, registering only a modest fall in 2009 which was followed by a rapid recovery. The size of remittance flows to developing countries is now more than three times higher than the official development assistance flows (see Table 4).

Remittances indisputably represent an important channel of levelling unemployment and increasing welfare. Djajic (1986) shows that those who stay in the source country may also benefit from migration if migrants send a sufficiently large amount of remittances back home. In general, remittances can have two opposing effects on the labour market of the source country. First, remittances might actually increase the income of unemployed individuals in the source country. Second, remittances might be invested, eg. by firms in developing countries that are financially constrained and lack capital.

Generally, remittances can be either spent on consumption or re-invested. With regard to this, remittances may increase dependency and have a negative impact on income inequality in the home country. In addition, if most of the remittances are spent on goods and services this could cause inflation which leads to excessive wage claims. On the other hand, remittances can be equality enhancing and have a positive impact on the development of poor areas, especially if they are invested in productive activities (Drinkwater et al., 2003).

Katseli et al. (2006) point out that the impact of remittances on development is limited by behavioural and policy responses that in turn depend on specific structural characteristics. These structural characteristics include labour and credit market conditions as well as migrants' characteristics (gender, age, skill, region of origin). Therefore, credit market conditions determine not only the cost of money transfers and thus the channels chosen by migrants for sending remittances back home, but also the way remittances are invested. The development potential of remittances also depends on their continuous flow and may be limited by local market imperfections, such as underdeveloped or absent rural credit markets. In this case, recipients would be constrained to borrow against remittances or use them as collateral. Inefficient rural credit markets would also hamper the channelling of savings from households with remittances to those desiring to invest them in productive activities (Katseli et al., 2006).

The results of the analytical studies by Adams and Page (2005), which are based on macro-data comparison, show that international migration and remittances significantly reduce the level, depth, and severity of poverty in low-income and middle-income developing countries. A similar increase in per capita official international remittances will lead, on average, to a 3.5 per cent decline in the share of people living in poverty. But the study also points out the possibility that poor people, especially poor people from countries located near major labour-receiving regions, are more likely to remit through informal channels (Adams and Page 2005).

From the argument above, it is clear that remittances are capable of fostering development. But what are the relations between remittances and poverty? According to Skeldon (2002), this issue is not as straightforward as one would suppose. The problem is that it is not always clear who are the people sending remittances back home. There is a conventional idea that extremely poor people generally do not migrate (except in the cases of displacement or involuntary migration) because migration always involves some transportation costs and the abandonment of many of the few possessions the poor might have. Skeldon (2002) pays attention to the fact that the poorest of the poor cannot afford either risk or movement and most of them move locally and for short periods of time. It has been emphasised that migrants tend to be among the more innovative and better-educated members of any population (Skeldon 2002).

The impact of remittances varies according to both the overall level of development and the nature of local migration dynamics. If there are mechanisms that exclude the poorest strata of the population from taking part in migration, remittances are likely to exacerbate existing inequalities. However, if we tend to assume that migrants are wealthier on average, remittances are more likely to be used for productive investments rather than household consumption and this could have positive community-wide effects (Carling, 2005).

One of the most commonly used criticisms about remittances is that they are primarily used for consumption purposes instead of investment. According to Adams (1998), even though a small proportion of remittances may be invested directly by migrants or their families, remittances can be channelled into productive use by the banking system. For instance, Kule et al. (2000) found that most entrepreneurial projects started by return migrants were financed by their own savings. The case of remittances and return migration is also explored by the McCormick and Wahba (2001) study of remittances in Egypt. They come to the conclusion that return migrants invest in projects and enterprises in their own country and that the duration of their stay overseas increases the probability of opening an enterprise.

So-called 'economic productive investment' is much less frequently mentioned as the objective of remittances. Even if this is true, for many families remittances are an important source of revenue. This extra income allows them to meet their basic needs or to overcome periods of economic crisis. It can also open up opportunities to invest in the family's well-being, education of children, improvement of the family's health status, and so on (De Bruyn, Wets, 2006). More recently, Carling (2005) claimed that it would be interesting to reconside the distinction between consumption and investment which has been criticised by researchers: expenditures on 'consumption' items such as health and education should be seen as investment in human capital. With regard to this, Skeldon (2002) argues – using the example of the expenditure on house construction – that this can stimulate local building enterprises, helping generate employment and trade in materials. The key point is that so-called consumption expenditure has investment externalities and a clear and hard distinction between the two categories is deceptive (Skeldon, 2002).

Furthermore, increased consumption by poor families is often equivalent to poverty alleviation, which is a goal in its own right. Silencing of criticism for "squandering" remittances is also based on the recognition that remittances are hard-earned money that migrants and their families should be entitled to spend in any way they wish (Carling, 2005). However, contemporary research on the impact of remittances indicates that the second- and third-round impacts of consumption expenditure are important in local job creation (see Skeldon, Hugo, 1999).

Skeldon (2005) points out that remittances alone cannot be seen as a general panacea to poverty alleviation because relatively few people from any population migrate across international boundaries. The majority of those who move do so internally and the emphasis on the linkages between migration and poverty must be upon internal population movements. Remittances from internal migrants going back to the villages may be a significant factor in poverty alleviation.

According to Julca (2012), remittance flows have become a finance source of last resort in low-income countries, and a significant part of a diversified portfolio in middle-income countries. For both sets of countries, remittance policies should be embedded within broader fiscal, financial and institutional policies of national development strategies.

The use of remittances is hard to describe unequivocally. As already mentioned, many migrants use their remittances to support the basic economic needs of their families. When these needs are filled, money can be used for more productive purposes. In other words, when these necessities are met, there is room for community projects (De Bruyn and

Wets, 2006). However, the use of money within the framework of Official Development Assistance is not in the hands of poor people.

3. Determinants of the ODA and remittance flows

The determinants and impacts of international migrant remittances on the areas from which migration originates are complex (Taylor, 1999). The literature identifies both negative and positive attributes of migration. With all this in mind, Ellis (2003) points out that it is helpful to distinguish the adverse experiences of migrants (weak social status, harassment, violence, debt bondage, lack of redress against mistreatment by employers and public officials) from the role that migration can play in reducing the vulnerability and poverty of the resident group.

There are many causes why experts are now interested in remittances as a basic traditional development tool. In this way, Stojanov and Strielkowski (2013) identified the six most relevant reasons:

1. Decrease in the amount of ODA as a share of gross national income (GNI) (see Table 2);
2. Stagnation or decrease of ODA in absolute terms (Table 2);
3. Dubious efficiency of ODA provision;
4. Increase in the amount of remittances transmitted to recipient countries in contrast with ODA (see Table 3), with the presumption of more effective uses;
5. In contrast to remittances, not all financial sources within the ODA framework are intended for development purposes, because the ODA funds include debts relief, refugee and asylum seekers assistance, administrative costs, etc. (according to Stojanov and Jamborova (2008), the cost of such items can reach about 50% of bilateral development aid budget);
6. Greater stability of remittances, as compared with other foreign financial flows, such as foreign direct investment (FDI) or ODA.

Table 2

Net Official Development Assistance, 2005–2011

Indicator	2005	2006	2007	2008	2009	2010
Net ODA received (% of GNI)	0.237	0.215	0.193	0.208	0.219	0.207
Net ODA received (constant 2010 billion US $)	123.9	119.2	111.7	124.8	127.4	130.5
Net ODA received (current billion US $)	108.4	107.0	108.1	127.4	126.4	130.5

Source: World Bank (2012).

The United Nations recommended target is 0.7 per cent of rich-countries' gross national income (GNI) to Official Development Assistance (ODA). The value of the indicator up to 2010 never reached the level from 2005 on the global level (see Table 2). Only a modest increase of the absolute amount of ODA in constant 2010 prices was recorded within the period. Generally, it means that consistently growing high income economies are less willing to provide development aid.

The World Bank’s statistics show that a greater amount of formal remittances is transferred to developing regions than the amount provided by the ODA. In 2008, all developing countries received about US $ 325 billion in the form of registered remittances. This comes in contrast with about US $ 127 billion received in the form of ODA from OECD countries (World Bank, 2012). And the trend is continuing. Whereas the net ODA flows stay on similar level comparing to 2008 (US $ 4 billion growth), recorded remittances flows increased to US $ 341 billion. The bigger significance of remittances for economies of developing countries is reflected by more than two times higher share of remittances in GDP (1.6) as compared with the ODA percentage of GNI (0.7) (see Table 3).

Table 3

Distribution of formal remittances flows and net ODA by geographical regions, 2008–2010 (current US $ billions)

Region	2008		2009		2010		ODA (% of GNI) (2010)	Remittances (% of GDP) (2010)
	ODA	Remit.	ODA	Remit.	ODA	Remit.		
Developing countries	127	325	126	316	131	341	0.7	1.6
East Asia & Pacific	9.1	85	10.2	85	9.9	95	0.1	0.6
Europe & Central Asia	7.4	45	8.3	37	7.5	37	0.0	0.6
Latin America & Caribbean	9.3	64	9.1	57	10.8	58	0.2	1.1
Middle-East & North Africa	24.3	36	13.5	34	12.2	41	0.5	2.4.
South Asia	12.3	72	14.6	75	15.4	82	0.8	4.0
Sub-Saharan Africa	40.3	22	44.1	28	44.6	29	4.1	2.7
World	127.4	456	126.4	435	130.5	462	0.2	0.7

Source: Data from World Bank (2012), Ratha et al. (2012), Mohapatra, Ratha and Silwal (2011).

Furthermore, one has to take into account that there are substantial administrative and other expenses included within the framework of ODA which have development impact. Some estimations show that this might constitute about 50 per cent at the lowest (see Stojanov, Novosák, 2008). The most significant expenses are debt forgiveness and loans. However, we can also notice other amounts calculated into ODA having low direct (often neither indirect) effect on the recipient’s development. A significant item in the budget of every development agency are the costs of its own existence and administrative, travel and other costs. We can briefly review such items (see Stojanov, Jamborová, 2008):

1. Operation costs of national/regional development agencies/ministries and other bodies;
2. Operation costs of international development organizations and agencies providing projects within the frame of the ODA;
3. Administrative and other costs of bilateral and multilateral development organizations;
4. Debt forgiveness especially in the case of the debtor’s default;

5. Refugees and asylum seekers assistance;
6. Development education, research, analyses and other 'domestic' projects (the payments stay 'at home' – in the developed countries);
7. Loans (especially in the case when provided to back up previous unpaid loans) that are calculated as the ODA in the whole nominal amount even if they have to be returned up to 75%;
8. Scholarships (considering that many graduates do not return to their home country on the completion of their term).

This is in contrast to remittances flows, where the majority of funds is directly transmitted to people in economically poor regions, and the transaction costs (involving both explicit fees and exchange rate spreads) are estimated within the range of 7–15% of the sum remitted. Transaction costs have declined significantly over the last decades, probably reflecting the greater intensity of competition among remittance-service providers or the ability of such providers to spread fixed infrastructure costs over a larger volume of customers (IMF, 2005).

Moreover, Wucker (2004) points out that remittances serve to reduce the negative impacts of economic crises. Even in times of political and economic crisis migrants tend to send remittances to support their families. Thus, remittance influx has bigger development impacts in times of crisis because other development tools cannot respond as quickly, steadily and directly for the benefit of the locals.

This phenomenon is more likely to be observed in the case of regional economic crises. Stojanov and Strielkowski (2013) demonstrate the progress of remittances and development aid that are being sent to Southeast Asian countries, which were among the most affected states during the regional economic crisis in the late 1990s. The statistics indicate a slight short-term regress of remittances in 1997–1998 (the years of the crisis outbreak) and their increase during following years. Thailand experienced the remittance peak in 1996, which was repeatedly acquired as late as 2008. However, this situation did not refer to the financial crisis. It was rather meant to show that overall remittances assisted to overcome the worst short-term economic troubles in Malaysia, Indonesia and the Philippines. In the context of continually decreasing development aid (as in the case of Malaysia), the aid was eventually seesawing (as in the case of the Philippines, Indonesia and Thailand).

This assistance variability did not meet the prime purpose of the development aid in times of crisis, which mostly affected the poorest strata in society. However, during the global crisis, remittances flows again became a more stable and significant source of income for developing countries as compared with the ODA. Only the least developed countries (low income economies) 'statistically' receive higher amounts of ODA as compared with the official remittances flows (see Table 4). But not the effects of remittances on their economies is bigger, according to our arguments.

It seems that remittance transfers are also a more stable money influx than ODA because, contrary to development aid, remittances flows are not forced by current political representatives and their short-term concerns. Another factor playing a significant role within a development impacts' comparison of resources dedicated to ODA provision and remittances – the efficiency of using resources. The comparison in the case of remittances is simpler because the remittance recipients can count on roughly 90 per cent of the transferred amount (see above) for their development, whereas in the case of ODA the figures are not so clear

In spite of the ongoing debate, we deem that there are reasons to believe in a counter-cyclical effect of remittance flows. While it is common for international donors not to honour their previous promises even in prosperous times, aid budgets also tend to become

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victims of belt-tightening measures in times of economic crisis. On the other hand, the motives behind the transfer of remittances are strong enough not to be dependent on the current economic situation.

Table 4

Distribution of formal remittances flows and net ODA by major groups of countries, 2005–2011 (current US $ billions)

	2005		2006		2007		2008		2009		2010	
	ODA	Remit.	ODA	Remit.	ODA	Remit.	ODA	Remit.	ODA	Remit.	ODA	Remit.
Developing countries	108	187	106	221	108	278	127	325	126	316	130	341
Low income economies	22	10	25	13	30	16	35	22	37	21	41	23
Middle income economies	66	177	59	209	50	261	56	303	54	294	51	318

Note: Some differences between the total sums in the particular developing regions and the net ODA figures for the whole developing world are caused by selected administrative costs for ODA provision and the contributions to some multilateral funds.

Source: Data from the World Bank (2012), Ratha et al. (2012).

Another advantage of migrants' remittances is the fact that the majority of the flows can be directly used for the benefit of households, communities and on regional development without the inclusion of secondary costs. Remittances are also more effective because they can be used by poor recipients for the best purposes of their choice (consumption, investments, education, health care, houses building/reconstruction, etc).

In this context, ODA could be a useful tool as a supporting mechanism of efforts at the regional level or, for example, as the 'distributor' of the most modern/effective/environmental friendly technologies and practices which are generally very expensive. Of course, they might be used on a much wider level than today. There also exists some space for development aid in the context of poverty alleviation in the most marginalised communities or regions, which have a very bad foundational position in the society.

Furthermore, ODA can be a successful instrument for enhancing the support of remittances in the form of simplified and improved access to related services and particularly costs reduction in recipient countries. This simplification might lead to the situation in which the amount of remittances sent through informal channels could be reduced. Recipient countries will surely appreciate the outputs of the service due to security reasons because they will have these financial flows under official control.

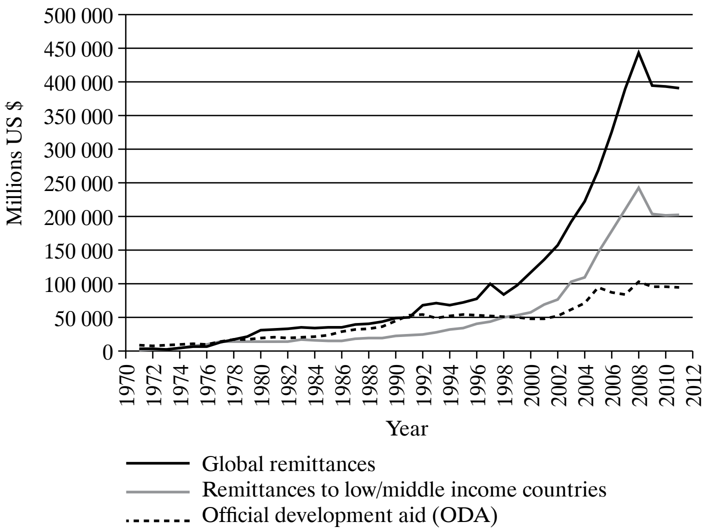
4. The impact of remittances and ODA on economic growth: an analytical approach

According to de Haas (2011), remittances have overtaken the amount of ODA provided to low and middle-income countries. Figure 2 shows the evolution of global remittances, remittances to low and middle-income countries and official ODA aid over the period of 1970–2011. From 55 billion US $ in 1990, the ODA decreased to 50 billion US $ in 2000 and reached 100 billion US $ in 2008, while at the same time remittances to low and middle-income countries constituted a mere half of ODA in 1990 (23 billion US $), reached 60 billion US $ in 2000, and 243 billion US $ in 2008.

It is believed that remittances have been boosted thanks to both the structural increase of South-North and East-West migration over the past twenty years or so, as well as due to the rapid decrease in the price of financial products (opening and maintaining a bank account, using traveller's cheques, using cheap money transfer agencies to send money abroad) and technological progress allowing the use of safer channels for transferring money (Internet and telephone banking).

Figure 2

Global remittances and official ODA (1970–2011)



Source: World Bank (2012).

It becomes quite clear that remittances might represent a more important driver of economic growth and development than ODA. In order to test this assumption, the empirical approach will be applied. The empirical approach envisaged to unveil the relationship between remittances and economic growth that is presented below employs the model presented in (1). The model is a modification of the models used in Jha, Sugiyarto and Vargas-Silva (2009) and Vargas-Silva (2011), and can be written as follows:

$$g_{it} = f\,(R_{it}, A_{it}, Y_{it}, S_{it}, O_{it}, \pi_{it}), \tag{1}$$

where g_{it} is the economic growth rate (the logarithm of the growth rate of GDP per capita) R_{it} is the natural logarithm of remittances as a percentage to GDP; A_{it} is the natural logarithm of the net ODA received (in current US $), Y_{it} is the natural logarithm of GDP per capita (in current USD), S_{it} is savings rate, O_{it} is the natural logarithm of exports plus imports as a percentage of GDP and represents the openness of the economy, π_{it} is the annual percentage change in the GDP deflator (inflation rate). Due to the presence of heteroscedasticity, the estimations were done using the OLS model with robust standard errors. The model was estimated using annual data of the period of 1979–2011.

The results of the estimations employing the model presented in (1) are listed in Table 5. We run regression models using different measures of ODA aid: first we run our model with the total ODA and then we re-run the model using the annual values of the ODA provided by various United Nations (UN) agencies, namely UNHCR, UNICEF, UNRWA, UNTA, and WFP.

The results of our estimations show that in all 6 cases remittances proved to be more important (both positive and statistically significant) for the world's economic growth measured by the annual growth of the world's GDP. Quite on the contrary, ODA proved to be significant and positive only in the case of the development aid provided by UNTA (in the case of estimations with ODA data from UNHCR and UNICEF, the values were significantly negative and negative, respectively).

Table 5

Results of the model estimations: annual GDP per capita growth, the world (1970–2011)

Variables	Total ODA	UNHCR	UNICEF	UNRWA	UNTA	WFP
	(1)	(2)	(3)	(4)	(5)	(6)
Remittances	4.383*	2.946	3.907*	4.872*	6.120**	4.412*
ODA	0.074	–0.678*	–0.771	1.227	1.197*	0.059
Per capita GDP	1.021	2.311*	2.644	0.357	0.437	0.982
Savings	8.738*	4.281	7.886*	10.492**	10.424**	8.881*
Openness	–2.414	0.748	–0.916	–2.037	–3.965**	–2.661
Inflation	–0.228***	–0.180**	–0.205**	–0.255***	–0.117*	–0.229**
Constant	–14.681	47.839	16.089*	–19.894	–41.634*	–18.881
R-squared	0.36	0.45	0.38	0.40	0.51	0.38
Obs.	33					

Note: * Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

Source: Authors' own calculations.

Figure 3 depicts the plot of workers' remittances and compensations as per cent of the GDP in 1982–2011. There is a clear pattern obvious from looking at Figure 3: while most of the global remittances go to middle-income countries, the low-income and lower middle-income countries seem to have the highest dependence on remittances. Looking at Figure 3, it can be observed that their remittance dependency increased from 2 per cent of the total GDP in the mid-1990s to 6.5 per cent in 2008. Although the latter increase may partly reflect better remittance accounting in poor countries (da Haas, 2011), Figure 3 suggests that remittance dependence might be higher in poorer countries in comparison to wealthier countries. The data suggest that a high dependence on remittances might be a feature of structurally weak, less-developed and developing economies.

Furthermore, we extend the model defined in (1) in order to check for the importance of remittances and their significance in comparison with the ODA for the annual GDP growth. This time we use the variables specified above that were reported for the low-income, lower middle-income, upper middle-income and high-income countries. As in the previous case, we use the available data from the World Bank (World Bank, 2010) covering the period of 1970–2011. The estimations were done using the standard OLS (the Breusch-Pagan test did not detect heteroscedasticity). The results of all four estimations

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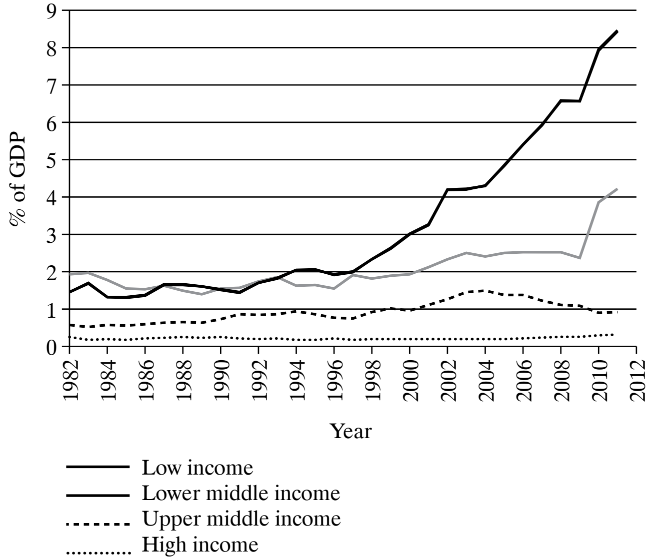
are presented in Table 6. The differences in the number of observations in each model are attributed to the fact that for some independent variables, e.g. savings or imports or exports (used in construction of the variable 'openness') the data for some years is omitted.

Figure 3

Workers' remittances and compensation of employees received (% of GDP) (1982–2011)



Source: World Bank (2012).

Table 6

Results of the model estimations: annual GDP per capita growth, low-income, middle-income and high-income countries (1970–2011)

Variables	Low-income	Lower middle-income	Upper middle-income	High-income
	(1)	(2)	(3)	(4)
Remittances	–0.639	0.596*	–0.742	–5.046**
ODA	–0.758	–0.369	–4.143**	–0.111
GDP per capita	1.231	–0.817	1.985	5.132**
Savings	4.831	1.585	0.419	3.278*
Openness	0.053	–0.550	–9.038	–3.281*
Inflation	–0.028	0.024	0.081*	–0.244***
Constant	11.820	–14.510	–86.845*	4.123
Adj. R-squared	0.39	0.43	0.34	0.39
Obs.	33	30	23	33

Note: * Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

Source: Authors' own calculations.

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The results show that remittances have a significantly positive effect on economic growth (in our case the logarithm of the growth rate of GDP per capita) in the case of lower-middle income countries; the coefficient for low-income countries is negative but insignificant, perhaps indicating that the inflow of remittances is not enough. As for the ODA, the coefficients' values are negative for all four groups of countries, being significant only in the case of upper middle-income countries (see Table 6). The negative and significant coefficient of remittances in the case of high-income countries might be explained by the diminishing effect of remittances on wealthier economies (Figure 3).

The results of our estimations might suggest that remittances are at least no less significant (and perhaps even more significant) than ODA in influencing economic growth in the case of lower-income countries. For instance, in the case of lower-middle income countries, the coefficient suggests that a 10 per cent increase in remittances as a share of GDP per capita in a given year leads to about an 6 per cent increase in annual GDP growth[3].

Conclusions

Based on the comparative analysis of empirical data, theoretical conceptualisation and empirical modelling conducted in this paper, the authors concluded that generally remittances might have a higher development potential for LDCs than ODA. This is not only based on the quantitative side (remittances being higher than ODA funds) but foremost on the question of effectiveness. As administrative and other costs eat up a significant portion of aid budgets (about 50 per cent at the lowest), remittances are absorbed by 80–90 per cent. Remittances might also be a more stable source of income than ODA, which tends to be highly volatile.

The results from our empirical models support the evidence widely described in migration literature: there is no strong evidence for preferring ODA as the best and most effective remedy for least developed and developing economies. Our estimations show that remittances have a larger net effect on economic growth expressed as the annual growth of GDP per capita in LDCs.

We do not want to underestimate the importance of the ODA for developing countries. However, we attempt to show that there are other possibilities that might be more effective. Along these lines, an example of such a coherent development and migration policy carried out by developed countries could serve as some kind of solution for managing temporary and return migration between countries of origin in developing regions and developed states. The policy could use the combination of following tools: support of secure and cheap transactions for remittances flows to countries of origin; new models of the development aid based on transparent and specific standards of financing and a results-based focus; and positive impacts of return migration such as 'brain gain' effect.

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[3] There are several concerns about this estimation: the most important one is the possibility of non-linearity. Although our analysis suggests a positive impact of remittances on economic growth, the relationship between these variables might be non-linear. Therefore, all interpretations of our statistical analysis should be taken with caution.

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