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International Migration Outlook
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PART III

International Migrant Remittances and their Role in Development[1]

Introduction

Migrant remittances are a steadily growing external source of capital for developing countries. While foreign direct investments and capital market flows fell sharply in the last years due to the recession in the high income countries, migrant remittances continued to grow, reaching USD 149.4 billion in 2002. The importance of remittances in compensating the human capital loss of developing countries through migration and their potential in boosting economic growth was already recognised in the beginning of the 1980s. A wide range of issues related to remittances became the subject of political debate, as well as of more in-depth research. These topics include the determinants of remittances, the transfer channels used and their economic impact on the remittance receiving countries. Over the past years, partly because of the sharp increase in remittance flows, the research on these issues gained momentum, resulting in a mushrooming of scientific literature.

This introduction presents a critical overview of the state-of-art literature on remittances and is organised as follows: in the following section, the data on migrant remittances, methods of estimating the amounts of remittance flows, global and regional trends in remittance flows, and their importance as a source of capital for developing countries, are discussed. The third section gives an overview of the theoretical and empirical research on the determinants of remittances and the following section outlines the transfer channels, the cost involved with international money transfers and the evolutions of money transfer markets. The last two sections examine the literature on the effects of remittances on inequality, growth and the balance of payments, and present the conclusions.

1. Migrant remittances: data and trends

Data sources and evaluation of remittance flows

According to the International Monetary Fund (IMF) interpretation, remittances are recorded in three different sections of the balance of payments:

- Compensations of employees are the gross earnings of workers residing abroad for less than 12 months, including the value of in-kind benefits (in the current account, subcategory "income", item code 2310).
- Workers' remittances are the value of monetary transfers sent home from workers residing abroad for more than one year (in the current account, subcategory "current transfers", item code 2391).
- Migrants' transfers represent the net wealth of migrants who move from one country of employment to another (in the capital account, subcategory "capital transfers", item code 2431).

While the IMF categories are well defined, there are several problems associated with their implementation worldwide that can affect their comparability. Some central banks (*e.g.* Bangko Sentral ng Pilipinas) book almost all migrants' remittances under "compensation

of employees", even for migrants who are abroad for more than 12 months. Other central banks (*e.g.* the Czech National Bank and the Bulgarian National Bank) do not record workers' remittances separately, but pull them together with other private transfers under "other current transfers other sectors" (item code 2392).[2] However, for the Czech National Bank, under "other current transfers other sectors"mainly household transfers are recorded (Czech National Bank, 2002). In addition, many central banks do not separately record "migrants' transfers" in the capital account.

In order to capture the extent of migrant remittances in a better way than the data reported under the heading of "workers' remittances" alone, scholars use different calculation methods. Some calculate them as the sum of three components: 1) compensation of employees, 2) workers' remittances, and 3) migrants' transfers (Ratha, 2003). Others sum up just compensation of employees and workers' remittances (Taylor, 1999). And finally, Daianu (2001) proposes for the computation of remittance credits the sum of "compensation of employees", "workers' remittances", and "other current transfers of other sectors". Daianu's method of estimating international migrants' remittances flows is considered to be the most appropriate to overcome the discrepancies referred to above. All data presented in this section are calculated using this method. However, the data have serious limitations and the estimates should be interpreted with caution. In some ways, the remittance flows calculated this way overestimate the real flows. First, "compensation of employees" represents gross earnings of migrant workers that are partly spent in the host country and never remitted. Second, "compensation of employees" includes income of non-migrants, *e.g.* local (home country) staff of foreign embassies and consulates, and international organisations, which are treated as extraterritorial entities. Third, "other current transfers of other sectors" include transfers that are difficult to distinguish from workers' remittances, *e.g.* aid, gifts, payments from unfounded pension plans from non-governmental organisations (NGO), and even transfers from illicit activities. On the other hand, the same remittance flows can be seen as underestimated because they do not include transfers through informal channels, such as hand-carries by friends or family members, or in-kind remittances of jewellery, clothes and other consumer goods, or through hawala.[3] These are believed to be significant in many countries, ranging from 10 to 50% of total remittances, but often are not recorded in the official statistics (Puri and Ritzema, 1999; El-Qorchi, Maimbo and Wilson, 2002). If and when they are recorded, it is not clear to what extent they reflect actual transfers rather than imports. For example, in recent years, India has started recording as imports the gold brought by incoming international passengers, although previously this was classified as remittances (Ratha, 2003).

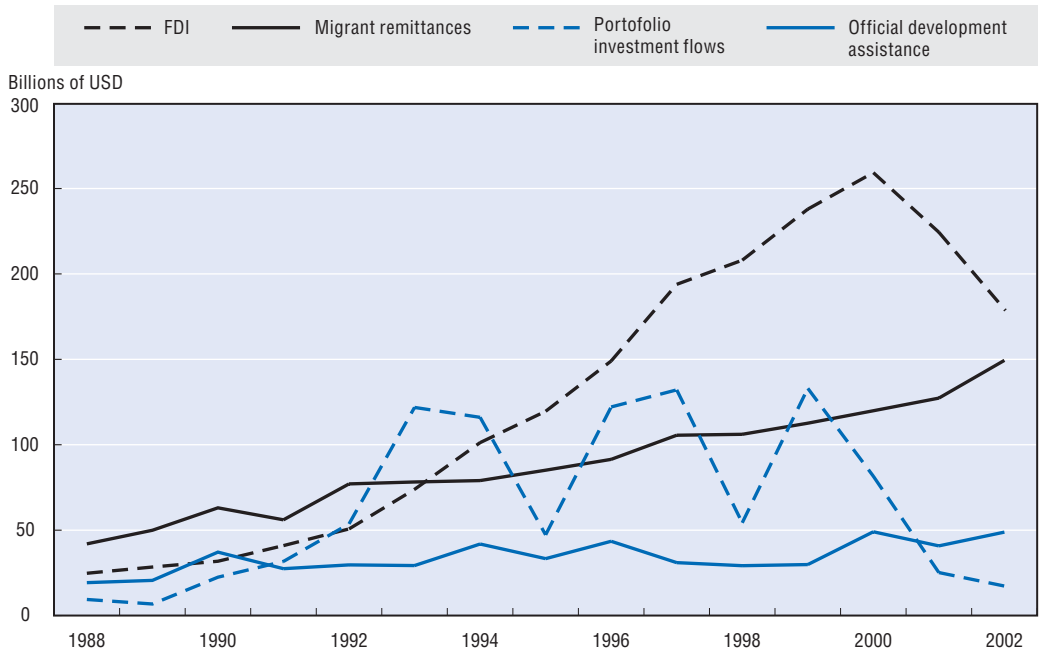
Trends in migrant remittances to developing countries

Remittances to developing countries from international migrants rose in 2002 by 17.3%, reaching USD 149.4 billion. Compared to other capital flows, migrants' remittances were smaller than foreign direct investment (FDI) (83.7%), but significantly larger than portfolio investment flows, by more then eight times, and three times larger than official development assistance (ODA) (Chart III.1).

Remittances are a very important capital source for developing countries. In 2002, they were equivalent to 2.4% of the cumulated GDP of developing countries, 8.2% of the cumulated exports and 10.4% of the cumulated investments. Relative to macroeconomic indicators, remittances are significantly higher in low-income and lower-middle income countries than in the other developing countries. For example, remittances were equivalent

Chart III.1. **Migrants' remittances and other capital flows to developing countries, 1988-2002**

Billions of US dollars



Note: "Remittances" refer to the sum of the "compensation of employees", "worker's remittances" and "other current transfers in other sectors"; "Official flows" include general government transfers both current and capital.

Source: IMF, *Balance of Payments Statistics Yearbook*, various issues.

Statlink: *http://dx.doi.org/10.1786/532553067068*

to 216% of exports from the West Bank and Gaza, 90% of exports from Cap Verde, over 75% of exports from Albania and Uganda, and over 50% of exports from Bosnia and Herzegovina, Sudan and Jordan. Remittances were also equivalent to more then 40% of the GDP in Tonga, more then 35% of the GDP in the West Bank and Gaza, more then 25% of the GDP in Lesotho, and more then 20% of the GDP in Cap Verde, Jordan and Moldova (Table III.1).

Table III.1. **Top 30 developing countries with the highest remittances received as a percentage of GDP, 2002**

	Remittances as % of GDP		Remittances as % of GDP		Remittances as % of GDP
Tonga	41.9	Albania	15.6	Uganda	9.2
West Bank and Gaza	36.7	FYROM	15.2	Guatemala	8.9
Lesotho	25.8	Nicaragua	14.6	Pakistan	8.9
Jordan	24.0	El Salvador	14.5	Morocco	8.8
Cape Verde	23.3	Republic of Yemen	12.5	Georgia	8.3
Moldova	22.8	Dominican Republic	11.7	Sri Lanka	7.9
Vanuatu	18.4	Ghana	11.3	Latvia	7.5
Bosnia and Herzegovina	18.4	Armenia	11.2	Sudan	7.2
Guyana	18.2	Honduras	11.1	Ethiopia	6.8
Jamaica	16.7	Philippines	9.9	Bangladesh	6.6

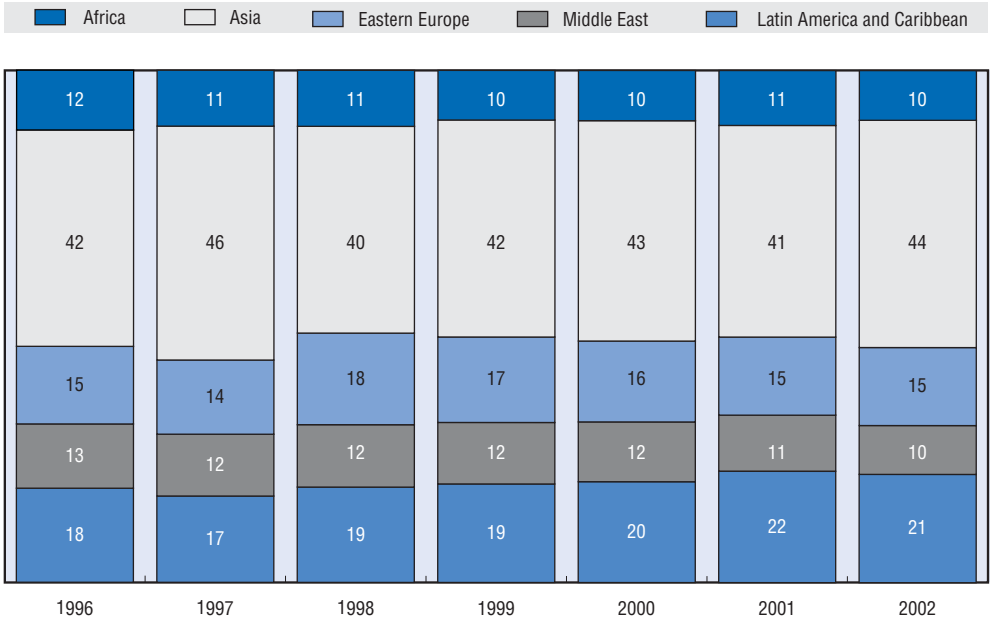
Note: "Remittances" refer to the sum of the "compensation of employees", "worker's remittances", and "other current transfers in other sectors".

Source: IMF, *Balance of Payments Statistics Yearbook*, 2003; World Bank, *World Development Indicators*, 2003.

Statlink: *http://dx.doi.org/10.1786/614135851320*

Chart III.2. **Remittance flows to developing countries by region, 1996-2002**

Percentages



Source: IMF, *Balance of Payments Statistics Yearbook*, 2003. Statlink: *http://dx.doi.org/10.1786/754468305471*

Migrant remittance flows are unequally distributed in the world, with Asia receiving the lion's share. Since 1996, 40 to 46% of the annual remittance flows were received by Asia, followed by Latin America and the Caribbean with 17 to 22%, and Central and Eastern Europe with 15 to 18% (Chart III.2). This is not surprising, since Asia is the most populous region of the world and also has the most numerous diaspora.

It is also not surprising that the top remittance receiving countries are also the most populous, with India and China receiving over USD 14 billion, Mexico over USD 11 billion, the Philippines and Korea over USD 7.5 billion, and Pakistan over USD 5 billion (Table III.2).

Table III.2. **Top 30 developing countries with the highest total remittances received, 2002**

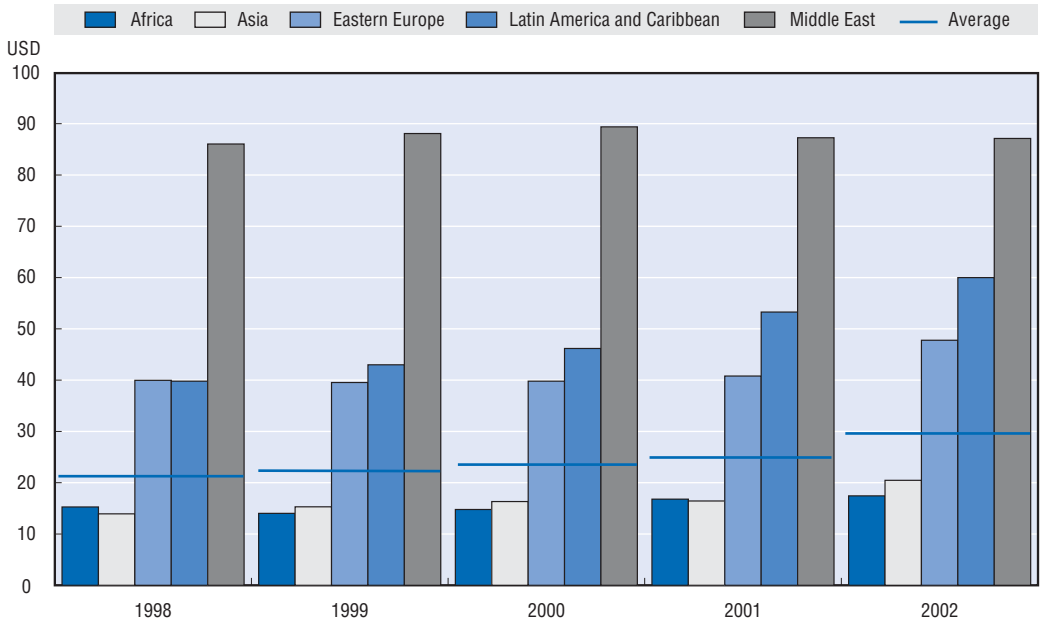
Millions of US dollars

	Total remittances (USD millions)		Total remittances (USD millions)		Total remittances (USD millions)
India	14 842	Turkey	2 990	Indonesia	1 682
China	14 383	Egypt	2 946	Ukraine	1 670
Mexico	11 464	Brazil	2 863	Romania	1 646
Philippines	7 660	Chinese Taipei	2 547	Ecuador	1 470
Korea	7 586	Dominican Republic	2 497	Croatia	1 400
Pakistan	5 413	Colombia	2 403	Thailand	1 380
Poland	3 824	Jordan	2 227	Czech Republic	1 343
Israel	3 783	Guatemala	2 081	Jamaica	1 333
Morocco	3 294	El Salvador	2 071	Rep. of Yemen	1 300
Bangladesh	3 121	Russia	1 817	Sri Lanka	1 296

Note: "Total remittances" refer to the sum of the "compensation of employees", "worker's remittances" and "other current transfers in other sectors".

Source: IMF, *Balance of Payments Statistics Yearbook*, 2003. Statlink: *http://dx.doi.org/10.1786/326418524774*

Chart III.3. **Per capita migrants' remittances by region, 1998-2002, US dollars**



Source: IMF, *Balance of Payments Statistics Yearbook*, 2003. Statlink: *http://dx.doi.org/10.1786/813418634166*

Another way of comparing capital flows internationally is by looking at the amounts received per capita: the regions that received above-average levels of remittances in 2002 were the Middle East with 305%, Latin America and the Caribbean, 210%, and eastern Europe 165%. Asia and Africa received remittances below the 2v002 average of USD 28.53, at proportions of respectively, 72% and 61% (Chart III.3).

Regarding the per capita remittances received by different developing countries, the distribution is even more unequal: Israel, Tonga, Barbados, Jamaica and Jordan received in 2002 the highest amounts of remittances per capita (Table III.3), each exceeding by 1 500% the average per capita remittances received by developing countries.

Table III.3. **Top 30 developing countries with the highest remittances per capita received, 2002**

US dollars

	Remittances per capita		Remittances per capita		Remittances per capita
Israel	583	Dominican Republic	289	Korea	159
Tonga	563	Slovenia	288	Belize	154
Barbados	512	Cyprus	280	Mauritius	139
Jamaica	510	FYROM	278	Czech Republic	132
Jordan	431	Latvia	270	Tunisia	114
West Bank and Gaza	344	Bosnia and Herzegovina	234	Mexico	114
Malta	332	Albania	229	Chinese Taipei	113
Cape Verde	321	Vanuatu	209	Ecuador	112
Croatia	320	Guatemala	174	Morocco	111
El Salvador	317	Guyana	167	Honduras	109

Note: "Remittances" refer to the sum of the "compensation of employees", "worker's remittances", and "other current transfers in other sectors".

Source: IMF, *Balance of Payments Statistics Yearbook*, 2003; World Bank, *World Development Indicators*, 2003.
Statlink: *http://dx.doi.org/10.1786/701528020322*

The International Monetary Fund (IMF) does not disaggregate remittance flow data by source countries or by destination countries, so it is not possible to distinguish the exact amounts of remittance outflows from remittance source countries that go to developing countries. Nonetheless, some scholars estimated that in 2001, developing countries received USD 18 billion in remittances from the United States alone. Another important source of remittances for developing countries is Saudi Arabia, which is considered to be the largest source on a per capita basis (Ratha, 2003).

2. Determinants of money remittances

The level of migrants' remittance flows depends on both the migrants' ability, *i.e.* their income and the savings from income, and their motivation to remit savings back to the home country. Of course, the willingness to remit is also determined by the duration of migration (how long do migrants intend to stay abroad, temporarily or permanently?), the family situation of migrants (single, married, with or without children?), and network effects (do migrants move alone, with family members, and do they keep attachments to those left behind?) (for the growing importance of network effects see Munshi, 2003). One way of looking at the determinants of remittance flows is by analysing the motives that migrants have to remit money. The literature distinguishes between pure altruism, pure self-interest, informal agreements with family members left in the home country and portfolio management decisions. As Stark (1991) points out, no general theory of remittances exists. The studies that analyse this phenomenon provide useful descriptive evidence and results from empirical research, but they only explain it partly, and are characterised by certain geographical, socio-cultural and temporal limitations.

Pure altruism

One of the most intuitive motivations for remitting money back home is what has been characterised in the literature as "altruism": the migrants' concern about relatives left in the home country. Under an altruistic model, the migrant derives satisfaction from the welfare of his/her relatives. The altruistic model advances a number of hypotheses. First, the amount of remittances should increase with the migrant's income. Second, the amount of remittances should decrease with the domestic income of the family. And third, remittances should decrease over time as the attachment to the family gradually weakens. The same should happen when the migrant settles permanently in the host country and family members follow. Empirical evidence from Botswana gave support to the first prediction. A 1% increase in the migrant's wage, *ceteris paribus*, induced increases in remittances ranging from 0.25%, at low wage levels, to 0.73%, at high wage levels. However the correlation between remittance levels and home incomes was found to be insignificant. Thus, altruism was found to be insufficient for explaining the motivations to remit, at least for Botswana (Lucas and Stark, 1985). Altruistic motives to remit were found also in recent studies on United States immigrants. Households with children at home are approximately 25% less likely to remit than households without children present. In addition, immigrants with minors left in the country of origin are more than 50% as likely to remit money home (Lowell and de la Garza, 2000).

Pure self-interest

Another motive for remitting money to family members in the home country may be pure self-interest. First, a migrant may remit money to his/her parents driven by the

aspiration to inherit, if it is assumed that bequests are conditioned by behaviour. Second, the ownership of assets in the home area may motivate the migrant to remit money to those left behind, in order to make sure that they are taking care of those assets. Empirical evidence from Kenya and Botswana shows that wealthier parents received a larger share of migrant earnings through remittances (Hoddinott, 1994; Lucas and Stark, 1985). However it cannot be clearly discerned whether the motive was to inherit or to ensure the household took care of the migrant's assets. Survey data on Tongan and Western Samoan migrants in Sydney attest that migrants are motivated to remit for reasons of self-interest, and in particular for asset accumulation and investment in the home areas (Brown, 1997). Third, the intention to return home may also promote remittances for investment in real estate, in financial assets, in public assets to enhance prestige and political influence in the local community, and/or in social capital (*e.g.* relationship with family and friends). Empirical evidence from the Greek migration experience shows that per migrant, remittance flows from Greek migrants in Germany were much higher (experiencing a "return illusion") than from Australia and the United States (experiencing a "permanent settlement syndrome") (Glytsos, 1988 and 1997). United States immigrants exhibit the same remittance behaviour: each 1% increase in the time spent in the United States decreases the likelihood of remitting by 2% and immigrants's political lobbies in the United States are half as likely to remit as the rest (Lowell and de la Garza, 2000). Canada, a country that receives mainly permanent immigrants, registered a similar experience, with immigrant households spending just a modest portion of their budgets on remittances. On average, 2 to 6 % of their total household expenditures were devoted to this category (DeVoretz, 2004).

Implicit family agreement: co-insurance and loan

Household arrangements, particularly within an extended family, may be considered more complex in the real world, and certainly more balanced as under the two extremes: pure altruism and pure self-interest. Thus Lucas and Stark (1985) explained the motivations to remit by a more eclectic model labelled "tempered altruism" and "enlightened self-interest". In this model, remittance determination is placed in a family framework of decision-making, with remittances being endogenous to the migration process. For the household as a whole, there may be a Pareto-superior strategy to allocate certain members as migrants, and remittances should be the mechanism for redistributing the gains. Two major sources for potential gain are taken into account: risk-spreading and investment in the education of young family members. In this context, the intra-family understanding is seen as an "implicit co-insurance agreement", respectively as an "implicit family loan agreement" (see Agarwal and Horowitz, 2002 for an empirical case study). The implicit contract between migrant and family is safeguarded against being breached by the family specific assets, *i.e.* credit and loyalty, but also by self-seeking motives of the migrant, *i.e.* aspiration to inherit, investment in assets in the home area and maintenance by family, and the intention to return home with dignity.

In the implicit co-insurance model, it is assumed that in a first phase, the migrant plays the role of an insuree and the family left at home the role of the insurer. The family finances the initial costs of the migration project, which in most cases are substantial. It is expected that the potential migrant is unable to cover all the expenses alone. The high extent of uncertainty related with the implementation of a migration intention may be minimised by the financial support from home. In turn, the migrant can act also as an insurer for the family members back home in a second phase of the migration process.

This is expected to be possible when the migrant has already a secure employment, high enough earnings and has positive expectations about further income. By receiving remittances, the family will then have the opportunity to improve its consumption, to undertake investment projects including much more risk and thus reach a higher level of utility. Evidence from Botswana shows that families with more cattle receive significantly more remittances in periods of drought (Lucas and Stark, 1985).

The loan agreement model was theorised as displaying a "three waves" shape. In a first stage, remittances are assumed to be the repayment of an informal and implicit loan contracted by the migrant for investment in education and migration costs. In a second stage, they are loans made by migrants to young relatives to finance their education, until they are themselves ready to migrate. In this phase, the amounts remitted are expected to diminish in aggregated numbers because not all migrants are expected to give a loan to family members. Then, in the third stage, before returning to their original country, migrants invest accumulated capital at home, therefore the amount of remittances increases. Later, the next generation of emigrants repay the loan to the former emigrant-lenders, who may have retired in the home country. Given the nature of the loan, remittances cannot consequently be reduced over time – as the co-insurance or altruistic theory predicts – and are mainly used for consumption purposes. Empirical estimations for Botswana's rural to urban migration showed that migrants' years of schooling, and the years of schooling of their own children, are positively and significantly correlated to remittances, giving support to the loan agreement hypothesis. Empirical support was found as well from Tonga and Western Samoa, due to the regularity of remittance flows (Poirine, 1997). However, survey data on migrants from the these countries in Sydney provide no evidence that in situations where parents have invested more in a migrant's education, they will remit more than otherwise (Brown, 1997). Recent empirical studies also reject the loan agreement hypothesis. A 1998 marketing study of Latino households in the United States showed that migrants' education has a strong impact on remittances, with each additional year of education reducing the likelihood of remitting by 7% (Lowell and de la Garza, 2000). The results of another study with macroeconomic data from over 30 developing countries are suggesting the same behaviour of migrant workers. These results are striking, suggesting that brain drain flows are not compensated by remittances (Faini, 2002).

The migrant's saving target

Another way to model remittance determination is to assume that the migrants' goal is to return home with a certain amount of savings – the saving target.[4] Thus, remittance flows during the migrants' stay abroad result from a bargaining process between the migrant and his/her family. The claim of the family left at home on the migrant's income is considered as the demand side and the ability of the migrant to remit, *i.e.* income and the savings from income, as the supply side for remittances. The migrant has an interest in reaching the saving target and to minimise the drains from the income (*i.e.* consumption expenses in the host country and the money remitted to the family). Therefore the expectations of future income are continuously being revised and a nexus of inter-related factors are adjusted, including the length of stay, the intensity of work, and the flow of remittances for the family's consumption. On the other hand, the family is regarded as having as its goal an income (including remittances) larger then that of the neighbours, in order to justify the decision to send some family members abroad. Thus, the amount of

remittances depends on the migrant's income, the per capita income in the home country and the bargaining power of the two parties. Empirical evidence for the support of the saving target hypothesis was found for Greek-German migration in the period 1960-1982, and for migration from seven Mediterranean countries (Algeria, Egypt, Jordan, Morocco, Syria, Tunisia and Turkey), the remittances being positively correlated to the per capita income in the host as well as in the home country (Glytsos, 1988, 2002).

In a recent paper, Lucas (2004) summarises the answers to the question whether migration for permanent settlement results in lower remittances than temporary migration. Temporary migrants might have higher incentives to remit to those left behind than permanent migrants (Galor and Stark, 1990). Moreover, the longer migrants stay abroad, the lessser are the bonds to the sending economy and the lower are the remittances (Merkle and Zimmermann, 1992). On the other hand, migrants are better paid the longer they live in the destination country. Thus they could (if they wish) remit more. Lucas (2004, p. 13) concludes that remittances may initially rise, then decline with duration of stay, which "would suggest an optimal length of stay to maximise remittance flows, balancing greater earning power against diminishing attachment".

Portfolio management decisions

Most of the current literature on the determinants of remittances is concentrated on the individual motives to remit, rather than on macroeconomic variables. To be sure, aggregate remittance flows will reflect the underlying microeconomic considerations described above, which determine individual decisions about remittances. Nevertheless, it is reasonable to expect that there are some macroeconomic factors, both in the host and home country, which may significantly affect the flow of remittances. Migrants' savings that are not needed for personal or family consumption may be remitted for reasons of relative profitability of savings in the home and host country, and can be explained in the framework of a portfolio management choice. In contrast to remittances for consumption proposes, the remittance of these kinds of savings have an exogenous character related to the system of migration, and are expected to depend on relative macroeconomic factors in the host and home country, *i.e.* interest rates, exchange rates, inflation, and relative rates of return on different financial and real assets.

Relying on such assumptions, governments of migrant sending countries used to implement incentives schemes, *i.e.* premium exchange rates, foreign exchange deposits with higher returns, etc. in order to attract remittances from their diasporas. However, contrary to the conventional belief, empirical analysis reveals that the incentives to attract remittances have been not very successful. Empirical results for Turkey of the period 1963-1982 illustrate that neither variations in exchange rates (reflecting the governmental intention to attract remittances by premium exchange rates), nor changes in the real interest rates (reflecting the governmental intention to attract remittances by foreign exchange deposits with higher interest rates) turned out to affect the amounts of remittance flows. The flows of remittances towards Turkey depended more on political stability rather than economic returns. An environment of confidence in the safety and liquidity of savings was much more important than options of possible higher returns (Straubhaar, 1986).

According to some scholars, microeconomic factors are more significant in determining remittance flows in the long run, while portfolio considerations are presumed to have only a short-term effect, essentially by shifting remittances around the long-term trend. In addition, the macroeconomic environment – especially in the home country –

may substantially influence the choice of the channel for transferring the money. Therefore, this issue can become crucial for the amount of officially recorded transfers. Inflation in the home country was found to have a negative impact on remittances, perhaps reflecting uncertainties from the perspective of the remitters (Glytsos, 2001). Similarly, remittances became volatile in the Philippines following the financial crisis at the end of the 1990s, and suffered a decline as the economy slipped into crisis in 1999 and 2000 (Ratha, 2003).

It should be pointed out that these numerous hypotheses trying to explain migration decision and remittances are not mutually exclusive. In fact, it may be the case that remittances are driven by all of these motives at the same time, each one explaining a part of the remittance amount or period of remitting practice. One of the elements can predominate over the others for a period or for a sample of migrant workers, and their roles can be later interchanged. This implies the complexity of the remittance phenomenon and its determinants, and explains the challenges of developing a universal theory (El-Sakka and McNabb, 1999).

3. The transfer channels

Since systematic research on the determinants of workers' remittances was undertaken in the 1980s, there was been a recognition that an important part of the money remitted back home by migrant workers flows through informal channels. An unstable macroeconomic environment in the home country was assumed to be a significant reason for choosing informal remittance mechanisms by the migrants. However, systematic research on transfer mechanisms has been carried out only in the last few years. Here the focus has been on: *i)* the typology of the transfer mechanisms, *ii)* the comparative cost of transfers through different mechanisms, and *iii)* the choice of the transfer means and money transfer market evolutions.

The typology of transfer mechanisms

Migrants use a wide array of informal and formal mechanisms to remit money, ranging from hand deliveries by the migrants themselves or by a third party, and less regulated mechanism such as "hawala", or "hundi", to electronic transfers through postal services, banks, credit unions, and money transfer companies.

Hand-carries by the migrants themselves or by a courier represent a transfer mechanism supposed to persist only among the poorest in the developing world, such as in Africa (Orozco, 2002). But this is not the case. Recent data for Latin America show that almost 10% of all remittances to those countries are hand-carried (Suro *et al.*, 2002). For the Romanian diaspora, the International Organization for Migration (IOM) estimates that these informal mechanisms could account even for 50% of the remittance transfers (IOM, 2004).[5]

Another informal mechanism reported by Suro (2003) is sending money by ordinary mail. Even if this is a quite risky mechanism, it accounts for 7% of the remittances send by Latino migrants in the United States.

Asian migrants use an additional informal transfer mechanism by which money is not physically or electronically transferred. This system is known as "hawala" (meaning transfer) in Pakistan and Bangladesh, "hundi" (meaning collect) in India, "fei ch'ien"(meaning flying money) or "chits/chops" (meaning notes/seals) in China. As described by El-Qorchi (2002), transfers from country A to country B through this mechanism involve two intermediaries,

called hawaladars. The hawaladar in country A receives funds in one currency from a person from country A to be transferred to another person in country B. The person in country A receives a code for authentication proposes. The hawaladar then instructs his/her correspondent in country B to pay an equivalent amount in local currency to the designated beneficiary, who needs to disclose the code to receive the funds. Although the remittance is immediately transferred, the liability the hawaladar in country A has to his counterpart in county B is set through various mechanisms of compensation occurs at different moments and often does not involve direct payment between the two hawaladars.

There are also formal immigrant-businesses involved in international money transfers. In the United States, these are known as "ethnic stores", and most of them operate transfers to Bangladesh, India, Pakistan and the Philippines. As Orozco (2002) reports, these enterprises need to contend with competition from the hawala system (which operates outside the US regulation system). They also face tough competition from wire transfer services, such as Western Union, which have more market power. According to recent estimates, this type of business is gradually losing global market share, from 50% in 1996 to 45% in 2001 (Orozco, 2002).

Postal offices also entered the international remittance market in the 1990s, by offering the possibility of transfers through international money orders. EuroGiro, a European company established in 1993, operates in direct co-operation with the Universal Postal Union (UPU) to promote new solutions for postal financial organisations worldwide. Currently, it operates international money transfers in more than 30 countries including the European Union (EU), Canada, United States, most Central and Eastern European countries, Brazil, China and Israel. The US Post Office has its own transfer system that allows transfers to most Latin American countries. Additionally, they introduced in 1998 Dinero Seguro@, a system that offers the possibility of transferring smaller amounts of money (up to USD 2 000) from postal offices in the United States to any of the 2 300 Bancomer branches in Mexico.

The most popular businesses for international money transfers are the money transfer companies, like Western Union and Money Gram. Money transfer companies are non-bank financial institutions which are authorised to engage in banking activities not involving the receipt of money on any current account subject to withdrawals by check (Lowell and de la Garza, 2000). The company with the largest global presence is Western Union. It has more than 170 000 agent locations worldwide and a global market share of about 26% (Orozco, 2002).

The transfer mechanisms developed by banks and credit unions have the particularity that at least the remittance sender must open a current account with a bank in the host country. Having a current account with a bank allows the remittance sender to electronically send money to a bank account of the receiver in the home country. Moreover modern banking technology permits payments in stores or cash withdrawals at Automated Teller Machines (ATMs) with a debit or credit card at the receiving end. The amounts paid/withdrawn this way are then credited on the account of the remittance sender. According to the Pew Hispanic Center/Kaiser Family Foundation National Survey of Latinos, major barriers for Latino migrants in the United States wanting to use this mechanism are legal status (which impedes illegal migrants from opening current accounts), lack of information that such methods can be used to remit money internationally and poor banking

infrastructure in the migrants' home countries (Suro *et al.*, 2003). A further barrier to these transfer mechanisms in the United States is that current account holders have to choose between the size of the minimum balance they maintain in the account and the fees they pay for running the current account (*i.e.* fees decrease as the minimum balance decreases). Maintaining a minimum balance of at least USD 1 000, that eliminates fees, is beyond the abilities of many Latino migrants "who earn low wages, live payday to payday, and dispatch most of their disposable income in remittances" (Suro *et al.*, 2003). For remittance transfers to Latin America, banks and credit unions have a market share of 13% (Suro, 2003).

The comparative cost of transfers through different mechanisms

The cost of transferring money varies greatly from country to country, and according to the method of transfer. But migrants are not interested only in transfer costs. They are also interested in the risk they carry. The cheapest transfer methods are self hand-carries and ordinary post, but they involve also the highest risk of being stolen.

The hawala system is *par excellence* a system of trust. It is very popular because it is relatively inexpensive (1.25 to 2% of the transferred value), senders do not have to provide identification, and it is well organised in the migrants' home countries.

More formal transfer mechanisms reduce significantly the transfer risks, but are also much more costly compared to informal ones. For example, the Inter American Development Bank estimated that the total cost of sending remittances to Latin America and the Caribbean reached USD 4 billion in 2002. That is about 12.5% of the total remittances. Because of the small amounts per transaction (about USD 200), the fees are very high. Orozco (2003) provided a good comparison of the cost involved in formal international money transfers for the sending of small amounts of money (USD 200). He compared the cost of remittance transfers from six sending countries (France, Germany, Saudi Arabia, South Africa, United Kingdom and United States) to 14 receiving countries in southern Europe, South Asia, Africa and Latin America. The study includes banks, national money transfer companies ("ethnic stores"), and international money transfer companies.

The mean value to send USD 200 was 6% through "ethnic stores", 7% through banks and 12% through money transfer companies like Thomas Cook or Western Union. Competition is very important for reducing remittance costs. But in many cases, it is inhibited because of the lack of banking services in the rural populations of sending countries, a lack of confidence in formal channels, impediments to banking because of legal status (*i.e.* illegal residence) and lack of information about modern banking methods for money remittances.

The choice of the transfer means and money transfer market evolution

In order to better understand how remitters choose the means to send money home, the Pew Hispanic Center and the Multilateral Investment Fund of the Inter-American Development Bank commissioned Bendixen and Associates, a public opinion research company based in Miami that specialises in polling Latinos in the United States, to conduct an intensive study. Extensive interviews with 302 remittance senders were conducted, focused on their understanding of the costs involved and their willingness to use new methods, such as the electronic transfer products that US banks are now putting on the market. The results are presented in the report "Billions in Motion: Latino Immigrants, Remittances and Banking" of 22 November 2002.

Table III.4. **Cost of remittance sending**

Percentage

From the six sending countries to:	Bank	Ethnic store/exchange house	International money transfer company
Egypt			13.8
Philippines	8.0	10.1	10.3
India	6.0	2.5	13.8
Greece	6.8		9.5
Pakistan	0.4	3.0	13.0
Portugal	3.4		12.3
Turkey	3.1		9.5
Mozambique	1.0		
Mean	7.0	6.0	12.0

Source: Orozco (2003). Statlink: *http://dx.doi.org/10.1786/816701010268*

The report shows that most remittance senders – according to Suro (2003), 70% of all remitters from the United States to Latin America – use international money transfer companies such as Western Union and MoneyGram, which are expensive relative to banks and credit unions.

The results of the study indicate that a large segment of the remitting population is willing, even eager, to explore new methods of sending money home. But a variety of legal and institutional factors impede their ability to do so. Many lack proper identity documents and fear that the failure to produce valid papers at a bank will jeopardise their possibility to stay in the country. They are receptive to innovations that help overcome legal impediments to banking, such as the identity cards issued by Mexican consulates in the United States known as the "matricula". Yet, despite all the recent developments that have helped formalise and ease remittance flows, for many Latinos it remains an expensive and confusing process, primarily because of minimum balance requirements and the fees charged. These factors all mean that remitters keep going back to the old methods, mainly international money transfer companies, even though they are concerned that they are paying excessive transaction fees and foreign exchange costs.

These findings suggest that a wholesale move by remitters to banking channels will only take place if banks can offer similar services to those provided by international money transfer companies, at significantly reduced costs. This will involve more than simply putting an effective product on the market and letting it go head-to-head with existing products. Banks will need to guarantee competitive pricing and quality of service at both ends of the remittance transaction. Given the intimate family connections between remittance senders and receivers, the convenience, reliability and safety of the services provided in Latin America will have to meet or exceed those currently available there.

If immigrants who regularly dispatch most of their disposable income in remittances could acquire the habit of accumulating money in a bank account, they would attain benefits that go beyond economising on the costs of remittance. The potential benefits include reduced banking costs, interest-paying savings accounts, the responsible use of credit, and ultimately financial practices that are rewarded by the tax system, such as home ownership and retirement savings accounts. In order to attract new customers, some US banks already offer financial literacy training and help Mexican immigrants to obtain "matriculas".

Moreover, as other authors argue, ensuring transparency in pricing and greater consumer awareness about the available options are also important for a fair competition

and efficient market for remittance transfers. This is one of the reasons for the introduction by the United States of the Wire Transfer Fairness and Disclosure Act. According to this act, fees and exchange rates have to be posted in the offices of money transfer agencies and in their advertising, and remitters are to be provided with a receipt stating the exact amount of foreign currency to be received in the foreign country (Suro *et al.*, 2002).

4. The economic effects of money remittances

There is a bulk of economic literature on the impact of money remittances on the remittance receiving countries (a very recent study is Terry *et al.*, 2004). Most of the analysis has tended to focus on three main issues. The first part of the literature discusses the direct impact of remittances on income distribution, poverty alleviation and individual welfare. The second part concentrates on the subsequent effects of remittances on the economy as a whole, discussing the impact on employment, productivity and growth. And finally, the third part deals with the contribution of remittances to cover deficits in the trade balance and in the current account.

Remittances and income distribution

The research on the income distribution effects of remittances focuses on social justice and equality, and does not deal with implications for the home economy. In empirical evaluations, most of the studies on income distribution effects of remittances use the Gini index. The empirical evidence is mixed. Some scholars such as Ahlburg (1996), Taylor and Wyatt (1996) and Taylor (1999) found confirmation for the hypothesis that remittances had an equalising effect on income distribution in Tonga and Mexico. For Tongan households, for example, the Gini coefficient for total income declined from 0.37 to 0.34 with the receipt of remittances. By contrast, other studies show that remittances increase inequality as measured by the Gini coefficient. One of the main reasons for this is that richer families are more able to pay for the costs associated with international migration. Thus, evidence from Egypt shows that despite the poverty reduction (because a significant number of poor households do receive remittances), remittances induced income inequality to rise (Adams, 1991). In the Philippines, remittances contributed in the 1980s to a 7.5% rise in rural income inequality, in spite of a low share of remittances in the households' income (Rodriguez, 1998). Household survey data from Pakistan reveal that the wealthier income groups were those which benefited the most from migrants' remittances (Adams, 1998).

Stark, Taylor and Yitzhaki (1986, 1988) used a dynamic model to offer a broader view on the income distribution effect of remittances. Focusing on rural income distribution in two Mexican villages, they found that the income distribution effect of remittances depends decisively on the migration history, and on the degree to which migration opportunities are diffused across households. They suggested that the dynamics of migration and income distribution might be represented by an inverse U-shape relationship. At the early stages of migration history information about target destinations and employment possibilities in destination countries is still limited. At this stage, it is mainly wealthier households that send migrants abroad. Consequently, the wealthier families benefit first from migrant remittances, causing income inequality to rise. At later phases of migration history, as migration is widely spread over a greater range of income

classes, poorer households benefit from migrant remittances as well and remittances have an equalising effect on income distribution.

But evidence derived from dynamic models is also divergent. Using a similar approach to that of Strak, Taylor and Yitzhaki, and inter-temporal data from the 1973, 1978 and 1983 Yugoslavian household surveys, Milanovic (1987) found no support for the U-shape relationship hypothesis. In contrast, his results showed that remittances lead to income divergence. Furthermore, the effects differ according to the periods and social categories considered.

There is no decisive conclusion as to whether migrant remittances induce income convergence or divergence at origin, for two main reasons. First, there is diversity in the environments studied in terms of initial inequality. And second, disparities in results may be caused by differences in the empirical methods applied: static *versus* dynamic, with or without endogenous migration costs, and with or without factoring in the effects of migration on domestic income sources (Docquier and Rapoport, 2003). This theoretical study suggests that the conflicting results of the empirical literature may be reconciled if local wage changes at origin are taken into account. They show that the inequality impact of remittances and local wage adjustment tend to reinforce one another in the case of high initial inequality, but may compensate one another in the low initial inequality case. This has important implications for empirical studies. For example, in the Mexican case, where inequality is high, the omission of wage adjustments may lead to an underestimation of the equalising effect of remittances. On the contrary, in the Yugoslavian case, where inequality is lower, taking this labour market effect into account could possibly reverse an inequality enhancing effect. However, this theoretical finding has to be considered with care, until confirmed by empirical work (Adams and Page, 2003).

Remittances and growth

There are some indisputable welfare effects of migrant remittances. First, remittances are an important source of income for many low and middle-income households in developing countries. Second, remittances provide the hard currency needed for importing scarce inputs that are not available domestically and also additional savings for economic development (Ratha, 2003; Taylor, 1999; Quibria, 1997). But the magnitude of the development impact of remittances on the receiving countries was assumed by many scholars to depend on how this money was spent. Thus, a significant proportion of the literature studies the use of remittances for consumption, housing, purchasing of land, financial saving and productive investment. There is no doubt that spending on entrepreneurial investment has a positive direct effect on employment and growth.[6] However, other scholars documented that even the disposition of remittances on consumption and real estate may produce various indirect growth effects on the economy. These include the release of other resources to investment and the generation of multiplier effects. Regarding the use of migrant remittances, a longstanding literature has suggested that remittances are more often spent on basic consumption needs, health care and real estate. But, whether from remittances or other sources, income is spent in a way which responds to the hierarchy of needs. Therefore it is reasonable to suppose that until the developing countries reach a certain level of welfare, households will continue to exhibit the same spending pattern (Lowell and de la Garza, 2000).

A more significant aspect concerning the use of remittances questions whether they are spent in a different way than other sources of income. There is empirical evidence that

households with remittances have similar consumption patterns to households not receiving remittances. Yet other scholars suggest that remittances are treated differently than other sources of income and are more often saved. Household surveys in Pakistan show that a larger part of international remittances are saved (71%) compared to domestic urban-rural remittances (49%) and rental income (8.5%) (Adams, 1998). In other countries, for example Mali, remittances are used to build schools and clinics (Martin and Weil, 2002). But the decisions of remittance senders (or receivers) to invest more or less is a rational choice about the use of their income, according to the general economic situation in their countries. Household productive investments do not depend on income, but rather on interest rates, stock prices, sound macroeconomic policies and stable economic growth (Puri and Ritzema, 1999).

Recent economic research shows that remittances, even when not invested, can have an important multiplier effect. One remittance dollar spent on basic needs will stimulate retail sales, which stimulates further demand for goods and services, which then stimulates output and employment (Lowell and de la Garza, 2000).

Most of the theoretical researches considering the multiplier effects of remittances use models that capture both migration and remittances effects on welfare. They consider remittances as a possible offset to the decline in output suffered by developing countries, caused by the loss of trade opportunities as a result of emigration. The results show that if low-skilled migrants emigrate, the welfare of the source country rises in the case that remittances are in excess of the domestic income loss. If highly-skilled persons emigrate and/or if emigration is accompanied by capital, remittances have a welfare increasing effect for the non-migrants only when the capital/labour ratio of the source economy remains unchanged or rises. If the capital/labour ratio falls, the welfare effect is indeterminate or even negative (Quibria, 1997). For example, for the Central and Eastern European countries, Straubhaar and Wolburg (1999) found that remittances do not compensate the welfare loss due to the emigration of the high skilled to Germany. However, when foreign capital is present in an economy, remittance financed capital accumulation improves the welfare of the economy. If remittances are spent for consumption, the welfare impact of remittances depends on the relative factor intensities of traded and non-traded goods (Djajic, 1998).

The empirical evidence indicates that multiplier effects can substantially increase gross national product. Thus for example every "migradollar" spend in Mexico induced a GNP increase of USD 2.69 for the remittances received by urban households and USD 3.17 for the remittances received by rural households (Ratha, 2003). In Greece, remittances generated at the beginning of the 1970s a multiplier of 1.7[7] in gross output, accounting for more than half of the GDP growth rate. Furthermore, high proportions of employment were supported by remittances: 10.3% in mining, 5.2% in manufacturing and 4.7% in construction. And the capital generated by remittances amounts to 8% of the installed capacity in manufacturing. Of particular interest is the finding that spending on consumption and investment produced similar multipliers of respectively 1.8 and 1.9. And contrary to common opinion, expenditure on housing was found to be very productive, with a multiplier of 2 (Glytsos, 1993). By carrying out an econometric test on data from 11 Central and Eastern European countries, Léon-Ledesma and Piracha (2001) found that remittances significantly contribute to the increase of the investment level of the source economies. Drinkwater *et al.* (2003) attained similar results through a study of

20 developing countries. Moreover, their results showed that remittances also diminished unemployment, but insignificantly.

Remittances do not only have positive effects on the source economy. If remittances generate demand greater than the economy's capacity to meet this demand, and this demand falls on non-tradable goods, remittances can have an inflationary effect. In Egypt, for example, the price for agricultural land rose between 1980 and 1986 by 600% due to remittances (Adams, 1991). Along with the positive effects remittances had on Jordan's economy, in the years 1985, 1989 and 1990, they seem to have intensified recession very strongly and generated negative growth rates of over 10%. Other potential negative welfare implications of remittances are the encouragement of continued migration of the working-age population and the dependence among recipients accustomed to the availability of these funds. All these could perpetuate an economic dependency that undermines the prospects for development (Buch *et al.*, 2002).

Finally, because remittances take place under asymmetric information and economic uncertainty, it could be that there exists a significant moral hazard problem leading to a negative effect of remittances on economic growth. Given the income effect of remittances, people could afford to work less and to diminish labour supply. Using panel methods on a large sample of countries Chami *et al.* (2003) found that remittances have a negative effect on economic growth (which according to the authors indicates that the moral hazard problem in remittances is severe).

Balance of payments effects of remittances

The impact of remittances on private consumption, saving and investments is only part of the story about the contribution of remittances to the growth and development of source countries. Remittances are an addition not only to the domestic household income but also to the receipt side of the balance of payments.

Remittances offset chronic balance of payments deficits, by reducing the shortage of foreign exchange. These transfers can help to ease the often crucial restraint imposed on the economic development of the migrants' home countries by balance of payments deficits. They have a more positive impact on the balance of payments than other monetary inflows (such as financial aid, direct investment or loans), because their use is not tied to particular investment projects with high import content, bear no interest and do not have to be repaid. In addition, remittances are a much more stable source of foreign exchange than other private capital flows and for certain countries they exhibit an anti-cyclical character (Buch *et al.*, 2002; Buch and Kuckulenz, 2004; Nayyar, 1994; Straubhaar, 1988).

Developing countries quickly recognised this obvious and clearly estimable positive balance of payments effect of remittances, and measures were taken to increase such inflows of foreign exchange. But such measures must be implemented with care, because apart from the positive balance of payments effects, remittances have an impact on the economic activity in the home country. Depending on how they are spent or invested, their effects on production, inflation and imports will be different.

A crucial factor in this respect is the extent to which the additional demand induced by remittances can be met by expanding domestic output. The flexibility with which domestic supply reacts to extra demand will determine whether remittances will have positive employment effects or adverse inflation effects, and whether additional imports will be necessary.

One of the negative effects of remittances on the current account is the "boomerang effect". This occurs when remittances induce an increase of imports and trade balance deficits in the remittance-receiving country. However, most scholars disagree that it is the remittance-induced imports that cause these trade balance problems. The propensity to import can also increase as a consequence of the general development of the economy, of a structural change in the production of consumer or investment goods, or of the international division of labour. Neither is the "boomerang effect" supported by empirical research. Evidence shows that in south European countries, remittance-induced imports between 1960 and 1981 accounted for minimums of 1% in Spain and Italy, to maximums of 4.9% in Greece and 6.2% in Portugal (Glytsos, 1993; Straubhaar, 1988).

Another negative effect can be produced where remittances generate demand greater than the economy's capacity to produce. When this demand falls on tradable goods, remittances can induce an appreciation of the real exchange rate. The overvalued exchange rate reduces the competitiveness of the domestic industries in the foreign markets (by expensive exports), in the home markets (by cheap imports), and shifts resources from the tradable sector into the non-tradable sector, so-called Dutch Disease effect. This may further lead to balance of payments pressure, a slower growth of employment opportunities, and consequently to a further increase in the incentive to emigrate. Empirical evidence from Egypt, Portugal and Turkey supports such fears, but the effect remained marginal in most of the observed cases and periods (McCormick and Wahba, 2004; Straubhaar, 1988). A possible reason for an insignificant Dutch disease effect of remittances is that the additional import of cheap capital goods may increase productivity and therefore improve the competitiveness of domestic products. Moreover, the imported capital goods may be used to substitute other imports and/or to produce exportable goods.

Further, in a system based on non-convertible domestic currency, the privilege of holding foreign currency in corroboration with inflationary tensions may have adverse consequences in monetary terms. For example, in the countries of the Maghreb, the development of a black market for foreign exchange, the increased use of swap transactions in the foreign and domestic trade, and the very high prices for foreign goods lead in the 1980s and beginning of the 1990s to a situation in which foreign exchange was used for the domestic exchange for luxuries, or to buy services in order to obtain them more rapidly. Under such circumstances of currency substitution (known in the literature as "dollarisation" or "euroisation"), the authorities of countries with a non-convertible domestic currency used to devaluate the national currency periodically in order to attract remittances from emigrants. For example, Algeria started to devaluate the dinar after 1985 and consequently its value dropped from 5 dinars a dollar in 1985 to 9 dinars a dollar in 1990, and 20 dinars a dollar in 1992 (Garson, 1994).

Conclusion

On the basis of this survey on the complex phenomenon of international migrant remittances, the following conclusions can be drawn.

International migrant remittances are a very important source of capital for developing countries. They are less important than FDI, but surpass by far official development assistance and capital market flows. Moreover, remittances are a very stable source of capital. In contrast to FDI and portfolio investment that fell sharply in the last

years due to the worldwide recession, international migrant remittances grew further, evidence of an anti-cyclical character.

Many central banks face difficulties in implementing the distinctive booking of international migrant remittances as income (compensation of employees), current transfers (workers' remittances) and capital transfers (migrants' transfers), according to IMF definitions. The main problem that occurs is that many central banks in developing countries have difficulties in distinguishing "workers' remittances" from the other private transfers. Therefore they book entire or important parts of workers remittance flows under "other current transfers of other sectors". This often means that the level of official remittance flows to developing countries is undervalued, and creates difficulties for any international comparison of remittance data. The best way to overcome this data problem is by evaluating formal remittance flows as the sum of the following three balance of payments components: compensation of employees, workers' remittances, and other transfers of other sectors.

The different hypotheses attempting to explain remittance motivations – pure altruism, pure self-interest, implicit family agreements, the migrant's saving target and portfolio management decisions – complement each other. Some or all of these motives together may simultaneously drive remittances, each one explaining a part of the amount remitted or a period of remitting practice. One motive can predominate over the other for a period or for a sample of migrants with the same characteristics, and their roles can be interchanged. This illustrates that the remittance phenomenon is a very complex one, and explains the difficulty in developing a universal theory of remittance determination. A very important recent assumption regarding the contribution of remittances in compensating the human capital loss of migrant sending countries is that migrants' propensity to remit diminishes with education. There is little empirical work regarding this issue (an exception is Faini, 2002), but if confirmed by future research, the results would be outstanding. It would imply that high skilled workers do not compensate (or compensate less) for the loss they induce to the economy they are leaving.

A significant part of the money remitted by international migrants goes to the transfer companies as profits rather than to the migrants' families in developing countries. Empirical studies show that a reduction of the costs of remitting money to the level charged by the financial institutions with the cheapest transfer services, *i.e.* commercial banks, would free up several billions each year for poor households in Africa, Asia, Latin America and eastern Europe. This can be achieved by two sets of policies in industrial, remittance-sending countries. First, policies that target fair competition and efficient markets for remittance transfers, *e.g.* ensuring transparency in pricing and greater consumer awareness about the available options. Second, innovations that allow illegal migrants to open bank accounts (such as the "matriculas" in the United States) and thus give access to cheaper transfer services. By assuring lower cost for remittance sending, larger remittance flows could be channelled through the formal financial system too.

In addition to direct impacts of remittances on migrant sending economies, *i.e.* poverty reduction, offset of balance of payments deficits, reducing of foreign exchange shortages, productive investments, etc., remittances also have positive indirect effects. These are the easing of capital and risk constraints, the release of other resources for investment and the generation of multiplier effects of consumption spending. Despite this, remittances are not a panacea and cannot substitute sound economic policies in

developing countries. An economic environment that encourages emigration also limits the developmental impact of remittances in migrant sending areas. Productive investment does not depend on income, but rather on market infrastructure, interest rates, stock prices, macroeconomic policies and stable economic growth. Following models of sound macroeconomic management and development strategies involving the whole economy will be the best means to maximise the positive growth effects of remittances in developing countries.

Notes

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2. "Other current transfers of other sectors" (item code 2392) together with "workers' remittances" (item code 2391) are the two subcomponents of "current transfers, other sectors" (item code 2390). "Other sectors" refer to other non-government sectors.
3. For more about *hawala* (meaning transfer), see below under "The transfer channels".
4. In the model, the savings target is excluded from the remittance flows.
5. As far as is known, almost all East European bus transport companies that link the East European countries to the EU also offer courier services. Because of the low cost, mainly poor and unskilled workers use them both for travelling and sending remittances.
6. Remarkably, spending on education is generally categorised in the literature as consumption, in spite of the fact that scholars regard education as one of the main determinants of economic growth.
7. One extra drachma of remittances generated 1.7 drachma of gross output.

Bibliography

ADAMS, R.H., Jr. (1991), *The Effects of International Remittances on Poverty, Inequality and Development in Rural Egypt*, Research Report No. 96, International Food Policy Research Institute.

ADAMS, R.H., Jr. (1998), *Remittances, Investment, and Rural Asset Accumulation in Pakistan*, Economic Development and Cultural Change No. 47, October, pp. 155-173.

ADAMS, R.H., Jr. (2003), *International Migration, Remittances and the Brain Drain: A Study of 24 Labor-Exporting Countries*, Policy Research Working Paper No. 3069, World Bank (Poverty Reduction Group), Washington, DC.

ADAMS, R.H., Jr. and J. PAGE (2003), *International Migration, Remittances and Poverty in Developing Countries,* Policy Research Working Paper No. 3179, World Bank (Poverty Reduction Group), Washington, DC.

AGARWAL, R. and A. HOROWITZ (2002), "Are International Remittances Altruism or Insurance? Evidence from Guyana Using Multiple-Migrant Households", *World Development*, Vol. 30(11), pp. 2033-2044.

AHLBURG, D.A. (1996), "Remittances and the Income Distribution in Tonga", *Population Research and Policy Review,* Vol. 15(4), pp. 391-400.

BROWN, R. (1997), "Estimating Remittance Functions for Pacific Island Migrants", *World Development*, Vol. 25(4), pp. 613-626.

BUCH, C. and A. KUCKULENZ (2004), *Worker Remittances and Capital Flows to Developing Countries*, Centre for European Economic Research (ZEW) Discussion Paper No. 04 31, ZEW, Mannheim.

BUCH, C., A. KUCKULENZ and M. LE MANCHEC (2002), *Worker Remittances and Capital Flows,* Kiel Working Paper No. 1130, Kiel Institute for World Economics, Kiel.

CHAMI, R., C. FULLENKAMP and S. JASHJAH (2003), *Are Immigrant Remittance Flows a Source of Capital for Development?,* Working Paper No. 03/189, International Monetary Fund (IMF), Washington, DC.

CZECH NATIONAL BANK (2002), *Balance of Payments Report 2001*, Prague.

DAIANU, D. (2001), *Balance of Payments Financing in Romania – The Role of Remittances*, Romanian Center for Economic Policies, Bucharest.

DeVORETZ, D. J. (2004), *Canadian Immigrant Monetized Transfers: Evidence from Micro Data*, Proceedings of Migration and Development: Working with the Diaspora, International Labour Organization (ILO), Geneva.

DJAJIC, S. (1998), "Emigration and Welfare in an Economy with Foreign Capital", *Journal of Development Economics*, No. 56, pp. 433-445.

DOCQUIER, F. and H. RAPOPORT (2003), *Remittances and Inequality: A Dynamic Migration Model*, IZA Discussion Paper No. 808, Institute for the Study of Labor, Bonn.

DRINKWATER, S., P. LEVINE and E. LOTTI (2003), *The Labour Market Effects of Remittances*, FLOWENLA Discussion Paper No. 6, Hamburg Institute of International Economics, Hamburg.

EL-QORCHI, M. (2002), "Hawala", *Finance and Development*, Vol. 39(4).

EL-QORCHI, M., S.M. MAIMBO and J.F. WILSON (2002), *The Hawala Informal Funds Transfer System: An Economic and Regulatory Analysis*.

EL-SAKKA, M. and R. MCNABB (1999), "The Macroeconomic Determinants of Emigrant Remittances", *World Development*, Vol. 27(8), pp. 1493-1502.

FAINI, R. (2002), *Development, Trade, and Migration*, ABCDE Europe, World Bank.

GARSON, J.P. (1994), "The Implications for the Maghreb Countries of Financial Transfers from Emigrants", *Migration and Development: New Partnerships for Co-operation*, OECD, Paris.

GLYTSOS, N.P. (1988), "Remittances in Temporary Migration: A Theoretical Model and Its Testing with the Greek-German Experience", *Weltwirtschaftliches Anrhiv*, Vol. 124(3), pp. 524-549.

GLYTSOS, N.P. (1993), "Measuring the Income Effects of Migrant Remittances: A Methodological Approach Applied to Greece", *Economic Development and Cultural Change*, Vol. 42(1), pp. 131-168.

GLYTSOS, N.P. (1997), "Remitting Behaviour of Temporary and Permanent Migrants: The Case of Greeks in Germany and Australia", *Labour*, Vol. 11(3), pp. 409-435.

GLYTSOS, N.P. (2001), "Determinants and Effects of Migrant Remittances. A Survey", in S. Djajic (ed.), *International Migration: Trends, Policies and Economic Impact*, Routledge, London and New York.

GLYTSOS, N.P. (2002), *A Model of Remittance Determination Applied to the Middle East and North Africa Countries*, Working Paper No. 73, Centre of Planning and Economic Research, Athens.

HODDINOTT, J. (1994), *A Model of Migration and Remittances Applied to Western Kenya*, Oxford Economic Papers, No. 46, pp. 459-476, Oxford.

INTERNATIONAL MONETARY FUND, *Balance of Payments Statistics Yearbook,* Washington, DC, various issues.

LEÓN-LEDESMA M. and M. PIRACHA (2001), "International Migration and the Role of Remittances in Eastern Europe", *Studies in Economics*, No. 0113, Department of Economics, University of Kent.

LOWELL, B.L. and R.O. DE LA GARZA (2000), *The Developmental Role of Remittances in US Latino Communities and in Latin American Countries,* A Final Project Report, Inter-American Dialogue.

LUCAS, R.E.B. (2004), *International Migration to the High Income Countries: Some Consequences for Economic Development in the Sending Countries,* Boston University (mimeo).

LUCAS, R.E.B. and O. STARK (1985), "Motivations to Remit: Evidence from Botswana", *Journal of Political Economy*, Vol. 93(5), pp. 901-918.

MARTIN, P., S. MARTIN and P. WEIL (2002), "Best Practice Options: Mali", *International Migration*, Vol. 40(3), pp. 87-99.

McCORMICK, B. and J. WAHBA (2004), *Return International Migration and Geographical Inequality. The Case of Egypt*, Research Paper No. 2004/7, World Institute for Development Economics Research (WIDER), United Nations University.

MERKLE, L. and K.F. ZIMMERMANN (1992), "Savings, Remittances and Return Migration", *Economic Letters*, No. 38, pp. 77-81.

MILANOVIC, B. (1987), "Remittances and Income Distribution", *Journal of Economic Studies*, Vol. 14(5), pp. 24-37.

MUNSHI, K. (2003), "Networks in the Modern Economy: Mexican Migrants in the US Labor Market", *Quarterly Journal of Economics*, No. 118, pp. 549-599.

NAYYAR, D. (1994), *Migration, Remittances and Capital Flows: The Indian Experience,* Oxford University Press, Delhi.

OROZCO, M. (2002), *Worker Remittances: The Human Face of Globalization*, Inter-American Development Bank.

OROZCO, M. (2003), *Worker Remittances: An International Comparison*, Inter-American Development Bank.

PURI, S. and T. RITZEMA (1999), *Migrant Worker Remittances, Micro-Finance and the Informal Economy: Prospects and Issues*, Working Paper No. 21, Social Finance Unit, International Labour Organization, Geneva.

POIRINE, B. (1997), "A Theory of Remittances as an Implicit Family Loan Arrangement", *World Development*, Vol. 25(4), pp. 589-611.

QUIBRIA, M.G. (1997), "International Migration, Remittances and Income Distribution in Source Country: A Synthesis", *Bulletin of Economic Research*, Vol. 49(1), pp. 29-46.

RATHA, D. (2003), "Worker's Remittances: An Important and Stable Source of External Development Finance", *Global Developing Finance 2003*, World Bank, pp. 157-175.

RODRIGUEZ, E. (1998), "International Migration and Income Distribution in the Philippines", *Economic Development and Cultural Change*, Vol. 46(2), pp. 329-350.

STARK, O. (1991), *The Migration of Labor*, Blackwell, Oxford and Cambridge, Mass.

STARK, O., J.E. Taylor and S. Yitzhaki (1986), "Remittances and Inequality", *The Economic Journal*, No. 96, pp. 722-740.

STARK, O., J.E. Taylor and S. Yitzhaki (1988), "Migration Remittances and Inequality: A Sensitivity Analysis using the Extended Gini Index", *Journal of Development Economics*, No. 28, pp. 309-322.

STRAUBHAAR, T. (1986), "The Determinants of Worker's Remittances : the Case of Turkey", *Weltwirtschaftliches Archiv*, Vol. 122(4), pp. 728-740.

STRAUBHAAR, T. (1988), *On the Economics of International Labor Migration*, Haupt, Bern-Stuttgart.

STRAUBHAAR, T. and M. WOLBURG (1999), "Brain Drain and Brain Gain in Europe: An Evaluation of the East-European Migration to Germany", *Jahrbücher für Nationalökonomie und Statistik*, Vol. 218 (5-6), pp. 574-604.

SURO, R. (2003), *Remittance Senders and Receivers: Tracking the Transnational Channels*, Pew Hispanic Center, Washington, DC.

SURO, R., S. BENDIXEN, L. LOWELL and D.C. BENAVIDES (2002), *Billions in Motion: Latino Immigrants, Remittances and Banking*, Pew Hispanic Center and Multilateral Investment Fund Report.

TAYLOR, J.E. (1999), "The New Economics of Labor Migration and the Role of Remittances", *International Migration*, Vol. 37(1), pp. 63-86.

TAYLOR, J.E. and T.J. WYATT (1996), "The Shadow Value of Migrant Remittances, Income and Inequality in a Household-farm Economy", *Journal of Development Studies*, Vol. 32(6), pp. 899-912.

TERRY, D.F., F. JIMINEZ-ONTIVEROS and S.R. WILSON (eds.) (2004), *Beyond Small change: Migrants, Remittances and Economic Development. Inter-American Development Bank and Baltimore*, Johns Hopkins University Press.