

REMITTANCES IN ARMENIA II: THE IMPACTS OF REMITTANCES ON THE ECONOMY AND MEASURES TO ENHANCE THEIR CONTRIBUTION TO DEVELOPMENT

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Abstract: *This paper develops the economic impact of remittances in Armenia. There is a high propensity to save out of remittances, and thus the impact of remittances on growth is expected to be positive. Using plausible values for some of the parameters under study, we show that the Armenian economy probably grows 1.6% per year in the long run for a permanent 10% increase in the flow of remittances. Evidence also suggests that remittances have a negative impact on labor supply of adults and a positive impact on education. We find that for households receiving remittances, they constitute 80% of household income and help reduce poverty. We then suggest several strategies for increasing the reach of remittances to more remote parts of Armenia. While more research is needed, there is also a need to improve the transmission of remittances and improve linkages with the diasporan community.*

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V. INTRODUCTION

In the previous issue of this journal we defined remittances – the sending of funds by individuals working and living abroad to Armenia – and evaluated alternative estimates of their size.¹ We argued then that the true importance of remittances to the Armenian economy is much higher than the numbers officially reported. We then looked at formal and informal Armenian remittance transfer. We found that access to the formal financial system was adequate for most households.

In this article we evaluate the economic impacts of remittances. We begin with a contemporary assessment of the costs and benefits of remittance transfers on the economy. Older views that remittances were undesirable due to their being spent primarily on consumption and thus acting as a drag on development are no longer tenable. The “new theory of migration” argues that decisions on migration and remittances are made in the context of a household behaving rationally and taking collective decisions in the pursuit of individual interests. One implication of this is that there will be a high propensity to save out of many remittance flows, as they are transitory rather than permanent income, and empirical studies confirm this strongly. Remittances can thus be expected to enhance capital accumulation. Using plausible values for some of the parameters under study, we show that the Armenian economy probably grows 1.6% per year in the long run for a permanent 10% increase in the flow of remittances. Evidence also suggests that remittances have a negative impact on labor supply of adults and a positive impact on education.

Remittances are likely to reduce poverty, and empirical research shows that they do. It is less clear what their impact on inequality is. We use data from the 2002 Armenian household survey to characterize the households that received remittance flows and evaluate their impact on inequality. In Armenia, remittances reduce inequality, because the households that receive them would otherwise be at very low levels of income. According to income data reported to the survey, for households receiving remittances, remittances make up 80% of household income on average. Remittances do appear to be going to some of the most vulnerable households in Armenia.

We conclude with a series of recommendations on initiatives that could be undertaken to enhance the knowledge base on remittances and their economic impacts in Armenia, increase the supply of remittances and their allocation to uses facilitating growth and development, enhance linkages with the diasporan communities more generally, and coordinate donor activities.

VI. THE ECONOMIC IMPACTS OF REMITTANCES

The consensus view on the impact of migration and remittances on the sending countries has moved several times with new research in the area. In the early 1990s, for example, the general pessimistic view was that remittances do not promote growth but “exacerbate the dependency of sending communities by raising material expectations without providing a means of satisfying them, other than more migration. Individual families attain higher

¹ Roberts and Banaian, “Remittances In Armenia I: How Big Are Remittance Flows To Armenia And How Much Does It Cost To Send Them?” *Armenian Journal of Public Policy* 2(1), September 2005, pp. 59-90.

standards of living, but communities achieve little autonomous growth.”² Some analysts went so far as to advise governments and donors to discourage migration and remittances.³ But there has been a sea-change in recent years, and currently there is a great deal of excitement about the potential of remittance inflows to support growth and development. Remittance flows to developing and transition countries have become much larger, and partly the theoretical understanding of remittances has changed. Nevertheless, some of the skepticism in earlier years remains, and there is as yet no decisive answer to whether remittances facilitate or hinder growth and development.

Contemporary views on the economic benefits and costs of remittances to a receiving country can be summarized as in Table 6.1.⁴

Table 6.1 Potential Benefits and Costs of Remittances

Potential Benefits	Potential Costs
Are a stable source of foreign exchange that ease FX constraints and help finance external deficits	Ease pressure on governments to implement reforms and reduce external imbalances (moral hazard); source of Dutch disease
Are potential source of savings and investment for capital formation and development	Reduce savings of recipient families and thus negatively impact growth and development (moral hazard)
Facilitate investment in children’s education and human capital formation	Reduce labor effort of recipient families and thus negatively impact growth and development (moral hazard)
Raise the standard of living of recipients through increasing consumption	Migration leads to “brain drain” and negative impacts on economy that are not fully compensated by remittance transfers
Reduce income inequality and poverty	Increase income inequality

The newer view has been that migration and remittances are outcomes of the decisions of families that are behaving optimally given the opportunities and constraints that they face. Earlier simplistic views that remittances lead to “excessive” consumption, import dependency, or “unproductive” investment in housing and land are no longer tenable. The potential costs of remittances are now viewed as largely deriving from moral hazard problems. Remittances could ease pressure on governments faced with large external deficits to engage in difficult structural reforms. They also could negatively impact labor effort and savings and investment of recipient households, even if the remittance sender wants the family to work hard or save and invest.

² Durand et al (1996), p.249; Adams (1991), p.695.

³ Cuthbertson and Cole (1995) as cited in Brown (1997), p.623.

⁴ Russell (1986) provides a table summarizing earlier views on remittance costs and benefits.

6.1. Armenian Remittance Flows and Household Use

As we discussed in our previous paper, Armenia divides its emigrant population into three categories: seasonal workers who temporarily leave Armenia but return within a year, “new diaspora” and “old diaspora”.⁵ The distinction highlights two important differences for the purpose of economic analysis: First, temporary or seasonal workers maintain a residence in their home country and return to it within a year. Their connection or affinity to the country and to their families is similar to those who move to another part of the home country (say, from the countryside to Yerevan.) Second, “new diaspora” may or may not have a desire to return. For them, saving for self-financing investment in Armenia may be a strong motivating factor. This behavior is much less likely, the longer the time away from the country. “Old diaspora” are unlikely to engage in this behavior. They will simply transfer money to relatives, perhaps as gifts or perhaps as a regular source of income for impoverished relatives.

All of these remittance streams will flow through households in the home country to consumption or investment. They will also cause changes in the behavior of those households. For example, remittances for investment purposes may stimulate economic activity that affect the household’s domestic employment income, the affects of paying higher taxes, etc. Ideally, analysis of migration and remittances would be conducted in the context of the household embedded in a model of the entire economy. In practice, this is very difficult. Few studies have been so ambitious to attempt a “general equilibrium” analysis, and those that have must make some simplifying assumptions so as to maintain mathematical tractability or consistency with available empirical data. Studies on remittances usually restrict their attention to a particular subset of the household choice problem.

6.2. Emigration and Remittances: Competing Models of Behaviour

What are the motivations and constraints faced by those who emigrate and those who stay, and how do these motivations and constraints result in household decisions and economic outcomes? A traditional view is that family members migrate because they have better income opportunities abroad, and once they begin to earn that income, they share it with their family members for altruistic motives. The primary determinant of migration is thus wage differentials, and the primary determinant of remittances is altruism. Recent research (Chami et al (2003)) has emphasized a potential problem that can arise in altruism-based decision-making due to the fact that the emigrant sending remittances cannot know for sure to what extent the recipient is trying to earn labor income or is properly investing remittances as opposed to spending them on consumption. This “moral hazard” problem has the implication that remittances can have a negative impact on longer-run growth.

⁵ The Armenian National Statistical Service (NSS) uses a 12-24 month period of emigration to classify “new diaspora” and calls anyone gone more than 24 months “old diaspora”. In the ensuing discussion that distinction is blurred; economically, what we would use to distinguish these groups are those with close family connections to Armenia and those who do not have close relatives in the country. Given that the economic concept is not measurable, we suffice with the data we have.

Another approach that has been called the “new theory of migration” assumes that families make migration decisions similar to the way that investors develop a portfolio of assets.⁶ Remittances are viewed as a part of a family’s “self-enforcing, cooperative, contractual arrangement.”⁷ Family members are sent abroad to work in order to maximize household earnings and reduce its risk of fluctuations. Households thus pool individual member incomes and take decisions as a collective unit. By pooling incomes, they can smooth individual members’ consumption over good and bad times. Families often have good methods of enforcing implicit contracts through altruism, inheritance decisions, and maintenance of investments of the emigrant in the home country.

Empirical research has been carried out over the past 30 years on both the decision of a migrant worker to remit or not remit, and the size of a remittance if the worker does remit. Banerjee (1984) finds that factors that determine the decision to remit differ from those determining the size of a remittance, education and income are not important in the decision to remit but positively affect the size of a remittance, the presence of a wife in the family to which remittances are sent increases the likelihood of remittance, and the likelihood of remittances is greater the higher the dependency burden in the rural household. Knowles and Anker (1981) find that the decision of emigrant to remit depends directly on the likelihood that they will have to return at some point to their home, whereas the amount remitted depends on income. Hoddinott (1994) treats the decision to emigrate and remit as outcomes resulting from a bargaining agreement between the migrant and family (altruism is ruled out) and finds empirical results that generally favor the non-altruistic approach. Education and income of migrant are positively associated with remittance size. Ilahi and Jafarey (1999) use data for roughly 1000 Pakistani migrants to show that remittances made by migrants rose in proportion to the loan obligation that they had incurred with their family to finance their emigration. This is additional evidence in favor of the “new theory of migration.” Brown (1997) uses data on Pacific island households to show that migrants make remittances for reasons of self-interest, in particular asset accumulation and investment back home, and that remittances do not “decay” with the length of time that an emigrant has been abroad. This is direct support for the “new theory of migration.”

The empirical evidence generally supports the “new theory of migration.” This is encouraging to those who believe that remittances can play an important role in growth and development, because it implies that migrants are motivated to make remittances out of self-interest and in particular to save and accumulate assets in their home country.

6.3. Short-Run Macroeconomic Impacts

There are no less than four effects of remittances on the short-run growth of the economy:

1. A direct effect from additional income to households (*income effect*), which may have Keynesian multiplier effects through consumption and investment;

⁶ See Lucas and Stark (1985) and Stark and Lucas (1988) for rich descriptions of this theory using Botswana as an example, and Stark (1991) for a more concise description.

⁷ Stark and Lucas (1988), p.465.

2. An indirect effect from increasing imports of goods as a result of their status as luxury goods (*import substitution effect*);
3. An indirect effect that increases imports due to an appreciation of the exchange rate as remittances are converted to drams (*exchange rate effect*); and
4. An indirect effect in the long run from a decrease in the effective labor supply lowers output through “brain drain” (*labor supply effect*).

Only the first effect is positive for GDP growth, but in the short run it may dominate the other three effects. The question is empirical.

Income effect

Traditionally, analysis of the short-run macroeconomic impacts of remittances focused on their Keynesian multiplier impacts. A range of estimates were developed for different countries. Glytsos (1993), for example, estimates a multiplier of 1.7 for Greece. The impact of remittances on external balance and exchange rates also received attention. Remittances will undoubtedly improve the current account of a country, providing it with a source of foreign exchange. This will be less true in a dollarized economy, but otherwise household purchases of remittance recipients are most likely to occur in the local currency. This effect, which we label the *income effect*, requires us to determine the marginal propensity to consume out of remittance income.

Several studies have empirically assessed the degree to which remittances are spent on consumption or investment, and suggest that the propensity to save out of remittance income is high (almost 40%) and remarkably consistent across studies, and that investment is primarily in housing and land, and secondarily in business activity (machinery and shops.)⁸ There is considerable evidence that migrants often save out of their overseas earning for the purpose of coming back into their home country with a nest egg for investment either in a business or for a home. Taylor (1992) finds in a sample of rural Mexican families that remittances are associated with an increase in livestock investment. Sofranko and Idris (1999) find in a sample of 170 small-town Pakistani families that 32% used remittance income to finance business investments (start-up or expansion of shop or other small business), and 13% of total remittance income was spent on this purpose. Korovilas (1999) argues that many Albanian small businesses were formed after their owners had worked for some time in northern Greece. Woodruff and Zenteno (2001) find that 20% of investment in microenterprises, or \$1.85 billion, had been paid for by workers' remittances in forty-four urban areas in Mexico, confirming previous research by Massey and Parrado (1998.) We found in our informal survey of diasporan Armenians that 12 of the 53 Armenians surveyed working in the Moscow area reported that they either have already or intend to invest in Armenia.

It seems natural to assume that an increase in remittances would increase consumption, but the question is by how much. According to the permanent income hypothesis, an increase

⁸ See Gilani, et al. (1991), Adams (1991), Glytsos (1993), IOM (2003) and The IOM study suggests that Guatemalan households save a high proportion of remittances into financial assets. There may be differences across these studies in definition and coverage of categories. Swamy (1985) summarizes evidence from other studies showing even higher marginal propensities to save (pp. 36-7.)

in income will increase consumption more, the more reliable or less volatile is the source of that income. Households will save more when income is more volatile. Adams (1991) finds in a sample of Egyptian households that migrants saved most income earned abroad, regarding it as temporary as opposed to permanent income; 54% of remittance earnings were spent on housing construction and repair; and almost all other investment was purchase of agricultural or building land. Adams (1998) finds in a panel dataset of rural Pakistani families that there is a higher marginal propensity to invest out of remittance income than other income, again indicating that remittances are viewed as temporary income. He also finds that the Pakistani families were significantly more likely to invest out of external remittance income than internal remittance income. Adams (2002) studied the precautionary saving behavior of Pakistani households in response to income from seven different sources. His results indicate that remittances are seven times more likely to be saved than income from renting land. Puri and Ritzema (1999) review the evidence for a variety of Asian economies and conclude that marginal propensities to consume from remittances are small: “It is quite possible that migrant families consider remittances only as a transitory income and tend to save as much as possible.”

The empirical evidence suggests that remittances are often perceived as transitory income, and the marginal propensity to save from remittances is very high. We can conclude that remittances do promote investment. However, investment is usually made into real assets such as housing, land, and shops rather than formal-sector financial instruments. This may reflect poor development of financial markets and institutions and/or lack of access of many remittance-receiving families to the financial sector.⁹

A model of the macroeconomy built by BearingPoint LLC for the Armenian Ministry of Finance calculates the short-run marginal propensity to consume out of income from any source at 0.35 and the long-run MPC as 0.72 (or multipliers of 1.2 and 2.7). In our estimates to follow, we will use both 0.6 and 0.7 as estimates of the long-run MPC out of remittance income. To the extent that “old diaspora” flows are substantial and viewed as transitory income, even the lower estimate may be too high.

The BearingPoint model is also built on the assumption of a marginal propensity to invest of 0.35. We will assume this effect as well applies to remittances; the evidence from other country studies suggest a number between 0.35 and 0.4.

Import substitution

We found in the BearingPoint model that the marginal propensity to import is about 0.7. While this estimate may appear large at first, Glytsos (2001) shows marginal propensities to import for countries with large remittance volumes (Egypt, Greece, Jordan, Morocco and Portugal) in the long run between 0.4 and 1.5. Thus the number we use appears plausible.

Since remittances come in foreign currency, we think it is likely that households will demand more imported goods when they receive remittances than when they do not. This

⁹ An interesting, and exceptional, situation is that of Albania in the mid-1990s. Korovilas (1999) argues that remittances were the main source of the high growth experienced in Albania prior to 1998, and that remittances fueled the pyramid schemes whose collapse brought an end to that growth.

strikes one as a little high but intuitively it is sensible. An increase in demand in the short-run probably does not induce a sharp response from domestic production since the economy is still in restructuring. Most of the response is instead coming from imports, with domestic producers responding with a lag.

If home families use remittances to substitute imported goods for domestic, this may create a larger negative effect on domestic production than the positive effect on consumption generally.

Dutch disease from remittances

Considerable attention is now given to the impact of remittance flows on short-run macroeconomic stability. A remittance inflow will typically lead to an appreciation of the local currency. In this sense remittances are analogous to increases in private or public foreign capital flows. However, some of the inflow of remittances will flow back out through imports, particularly if domestic production is unable to expand sufficiently (with goods people want to buy.) Just as exporting natural resources can induce “Dutch disease” by making the country’s manufactured goods less competitive and inducing a persistent trade deficit, so too can exporting labor lead to a trade deficit. This is particularly true when remittances lead to higher inflation because they are used to purchase non-tradable goods. Dutch disease is particularly harmful for families that do not receive remittances. Remittances also relieve pressure on central banks to defend currencies from speculative attack, allowing interest rates to be lower and capital formation higher. Neyapti has shown that the flow of remittances into developed countries is more stable than foreign direct investment, but the same cannot be said for less developed countries.¹⁰ This is likely due to frequent shifts in economic conditions in the recipient country. This calls into question one of the benefits of remittances – that they are more certain as a source of foreign exchange.

The BearingPoint model estimates that a 1% change in the real effective exchange rate changes imports by 3.9%. Likewise, a one percent improvement in the current account balance improves the real effective exchange rate by about 0.08%. The effects of movements of the real exchange rate on imports are quite pronounced in Armenia, but the real exchange rate does not appear to be highly sensitive to movements in the current account balance. The exchange rate effect of remittances is obtained by evaluating the coefficients at their mean levels, which for Armenia gives us an effect of approximately 0.2.

Aggregate demand

To get the total effect of remittances on aggregate demand then requires the summation of these three effects. In the short run, the impact of the change in exchange rates and the desire to purchase imports as substitutes for domestic products will lower real GDP using our plausible values for the parameters of the model.¹¹

¹⁰ Bilin Neyapti, “Trends in Workers Remittances.” *Emerging Markets Finance and Trade*. 40(2), March-April 2004, pp. 83-90.

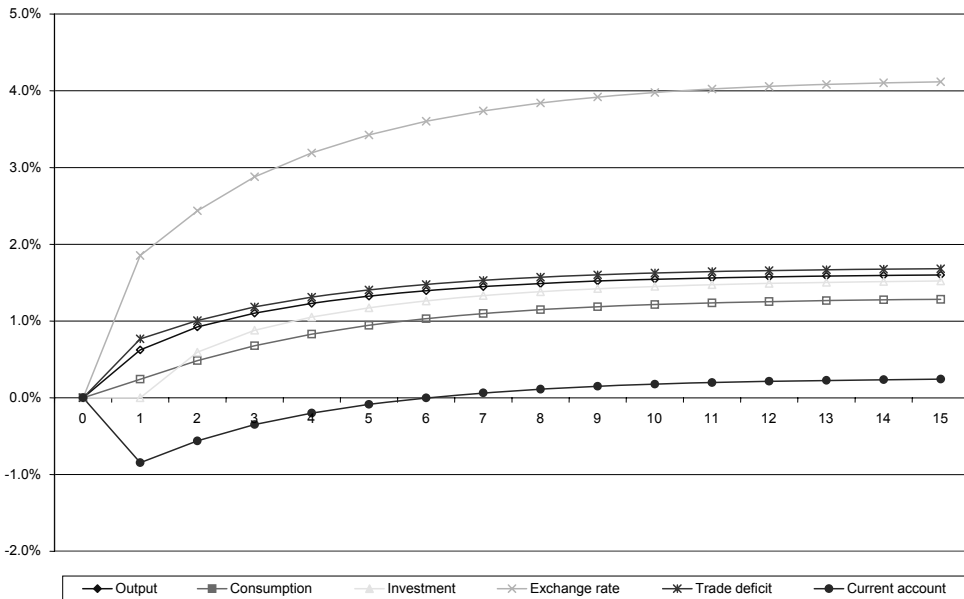
¹¹ Algebraically the question is to decide the direction of inequality in this expression

$$\beta(1 + \theta(X + R)) - \phi(1 + \theta(X + R)) - \theta\omega$$

Because the size of the exchange rate effect is relatively small for Armenia, the income effect overwhelms the other two effects even in the short run. The effect is enhanced by the assumption that investment improves with increase in remittances. For illustration purposes we ran a simulation of a 10% increase in remittances for a model economy based on the parameters presented above. The results appear in Figure 6.1. In the long run, a 10% increase in remittances to Armenia raises GDP by 1.6%. Consumption and investment rise by similar amounts. Imports rise by 1.2%, worsening the trade deficit. The current account at first improves with the higher inflow of remittances, but worsens over time as imports rise. The Dutch disease effect is shown by the top line for the exchange rate, which rises more than 4% in response to this change in the flow of remittances.

These effects strike us as reasonable. Glytsos (2001) estimates output effects of remittances for five countries – Egypt, Greece, Jordan, Morocco and Portugal – over the period 1971-1997 using a structural model. His long-term elasticities are 0.33 for Jordan, 0.19 for Portugal and about 0.1 for the other three. Our simulation shows a long-run elasticity of 0.17 and an impact elasticity of 0.07. Our model includes the exchange rate (Dutch disease) effect, unlike his, which dampens our estimate slightly (in the simulation, setting the effect of the current account balance on the exchange rate to zero lifts the long-run elasticity only to 0.19).

Figure 6.1. Simulated effects of 10% increase in remittances



where β is the marginal propensity to consume or invest, θ the reaction of the real exchange rate to changes in the current account balance, R is remittances, ϕ is the marginal propensity to import, ω is the reaction of imports to changes in the real exchange rate, and X is a placeholder for a collection of other terms determined to be greater than zero, as are all other terms. The three terms of the expression are the income, import substitution and exchange rate effects. Figure 6.1. is drawn assuming a short-run value for β of 0.7, ϕ of 0.7, $\theta = 0.11$, and $\omega = 1.57$, and the long-run solution is based on an assumption that consumption adjusts to shocks with a speed of adjustment of 0.5 per quarter.

This does not, of course, account for the labor supply effect, which may be substantial nor does it necessarily capture all of the movements within these three effects. We did not, for instance, allow remittances to have any different effect on investment in Armenia than, say, an increase in government spending (meaning the multipliers are the same).

6.4. Labor Supply, Education, and the Brain Drain

A key question concerning remittances is whether they impact the labor supply of household members who do not emigrate. Remittances could lower labor supply by enabling family members to enjoy leisure. They could also lower labor supply by permitting family members to be educated. These two impacts have very different implications for growth and development. The empirical evidence that is available suggests that remittances have both effects. Itzigsohn (1995) finds that for households in four Caribbean Basin countries (Haiti, Jamaica, Guatemala, and Dominican Republic), receipt of remittances lowers the probability that the head of the household will participate in the labor market, possibly indicating an increase in leisure. Ahlburg (1991) finds that labor force participation of American Samoans receiving remittances is lower than that of those not receiving remittances. The limited evidence available suggests that remittance receipt lowers labor effort of household adults.

On the other hand, Edwards and Ureta (2003) find that remittances play an important role in keeping children in school and thus financing human capital accumulation. Using data on a sample of 8387 families in El Salvador, they find that in rural and (especially) urban areas, receipt of remittances substantially reduces the hazard rate of a family's child leaving school, and the impact of remittances is much greater than that of other types of income.¹² Hanson and Woodruff (2003) find that Mexican children in households with an emigrant working abroad complete significantly more years of schooling. Yang (2004) shows that remittances reduce child labor supply. Swamy (1985) summarizes evidence from the Philippines that households sharply increased spending on education after starting to receive remittance income (pp.40-1.)

These findings suggest that remittances might have a negative impact on labor supply of older family members beyond schooling age, but that they have a positive impact on keeping children in school. For a country like Armenia, where child labor is not apparently an important issue, remittances are more likely to improve the quality of a child's education rather than the quantity.

A major issue for developing countries that has received much attention over many decades is the "brain drain," or the emigration of better-educated, higher-skilled workers to richer countries and its impacts. Assessing the impacts of brain drain in detail is outside the scope of this study. A recent overview paper argues that "[a]ccording to most existing studies, it is unlikely that remittances, return migration or other ways through which highly-skilled emigrants continue to impact on their home country's economy are significant enough to compensate sending countries for the losses induced by the brain drain."¹³ Although

¹² They show, for example, that a child in 7th grade in a family receiving a remittance of \$100 per month is 25% less likely to drop out of school.

¹³ Docquier and Rapoport (2004).

emigration is not always permanent, and some emigrants return and invest in the economy, bring back skills learned abroad, and possibly create trade networks between host and home countries, the evidence appears to be that emigration losses to the labor supply are not compensated by an increase in remittances or these other possible positive externalities.

There is little doubt that in the case of Armenia, the labor removed from the country is highly educated. More than half of its emigrants have more than 12 years of education, approximately on a par with the share of college-educated emigrants from China or Turkey and more than from other labor-exporting transition economies like Albania (38%) or Croatia (41%):

Table 6.2 Emigrants From Armenia in 2000

Educational level attained	<i>Number of emigrants</i>
0-8 years	3,815 (8.6%)
9-12 years	17,975 (40.5%)
Greater than 12 years	22,590 (50.9%)
Total	44,380 (100.0%)

Source: Adams (2003.)

6.5. Longer-Run Impact on Growth and Development

Research on the impact of remittances on longer-run growth and development is scarce. On the one hand, remittances do increase investment in physical and human capital. On the other hand, remittances are unrequited transfers and introduce moral hazard problems that can negatively impact labor supply, investment, and government policymaking. An important recent study by Chami et al (2003) develops a theoretical model of remittances and labor supply in which moral hazard is present and show that remittances should be countercyclical and can have a negative impact on economic growth. They then analyze a panel dataset spanning 113 countries during the period 1970-1998 and show that empirically, remittances are countercyclical and are negatively correlated with growth. This is an important finding. More research is needed, however. The remittance data that Chami et al use apparently includes only the BOP category labeled “workers’ remittances.”¹⁴ As we showed in our previous paper, this is in fact only one component of what should be considered as remittances from the viewpoint of growth and development. Leaving out non-emigrant (temporary worker) remittances is of particular concern, as most countries with significant “workers’ remittances” will have significant non-emigrant remittances. It will also be useful to carry out direct examinations of whether remittances reduce labor effort. The very limited evidence available suggests that they do but more needs to be done on this.

¹⁴ For example, their dataset has official remittances in Armenia averaging 0.5% of GDP during 1995-98. This clearly can only be “workers’ remittances,” which equaled \$10m in 1998, or 0.5% of GDP. Including temporary worker remittances and/or diasporan transfers, both of which are much larger than “workers’ remittances,” would have remittances be a much higher percentage of GDP.

VII. IMPACTS ON POVERTY AND INEQUALITY: OVERVIEW

The impact of remittances on poverty and inequality has been empirically researched for a long time. Under plausible assumptions, remittances will theoretically reduce poverty. In a recent study using panel data on 74 developing/transition countries, Adams and Page (2003) find that remittances have a strong, statistically significant impact on reducing poverty. This impact comes from both increasing the average level of income and making income distribution more equal.¹⁵

Theory does not give firm predictions on whether remittances can be expected to increase or decrease inequality. Some studies evaluate tables showing distribution of total income and remittance income across decile or quintile household groups (see Adams (1998) for example.) However, this simple approach can be very misleading; in fact, we will show below using Armenia as a case study that it is more likely to be misleading than not. A more sophisticated way to approach this question is to calculate inequality measures for household incomes excluding remittance income and including remittance income: if the inequality measure falls when remittance income is included, then they reduce inequality. Several studies have applied this methodology to household income data obtained from surveys.

The most sophisticated way to assess remittance impact on inequality is to develop a counterfactual baseline scenario that describes what emigrants would have done in their home country if they had not emigrated. Adams (1989) compares Gini coefficients on actual household income and a no-migration counterfactual alternative and finds that external remittances increased income inequality for a sample of 1000 Egyptian households because the richest families benefit disproportionately from remittance income. Barham and Boucher (1998) develop an even more sophisticated no-migration counterfactual scenario using data from a survey of households in Nicaragua. They find that if one simply excludes remittances from income and does not develop a no-migration scenario, the Gini coefficient rises, so that remittances reduce inequality; but if their no-migration scenario is incorporated, the Gini falls, so that remittances increase inequality. This shows how important including a no-migration scenario can be.

The impact on inequality changes over time. Jones (1998) argues that migration's impact on inequality will change over time, because migration goes through distinct stages: innovator stage (only most ambitious and adventuresome people positively selected from families already well-off), early adopter phase (migration diffuses down the income distribution and reaches a large group of families), late adopter phase (community stratifies into a better-off migrant class and non-migrant class.) Stark et al (1988) carry out Gini coefficient analysis that supports Jones' contention. They apply a decomposition of the Gini coefficient to data on 61 households in two Mexican villages and conclude that "the impact of migrant remittances on (recipient village) income distribution depends critically on the degree to which migration opportunities of different types become diffused through a village population, as well as on the returns to human capital embedded in migrants'

¹⁵ As in the case of the Chami et al (2003) study, the remittance data used in this study apparently include only "workers' remittances" and not non-emigrant remittances or remittances included in "other private transfers."

remittances and on the distribution of potentially remittance-enhancing skills and education across village households” (p.319).

7.1. Access to and Quality of International Labor Markets

Those favoring the “new theory of migration” point out many pieces of evidence that show increasing remittances to the family of emigrants with the educational level of the emigrant.¹⁶ Some have chosen to call this evidence of a repayment of principal and interest for the education the emigrant receives; others believe that families are using emigration and remittances as a form of insurance against crop failures or unemployment in the home country; others still argue that they alleviate the liquidity constraint that many families face in countries with highly imperfect financial markets. This last point, however, creates a real issue for countries like Armenia. If credit markets are imperfect and the costs of emigration are high, it is unlikely that poorer families are able to take advantage of opportunities to emigrate. For this reason, many studies conclude that emigration may increase income inequality. Access to international labor markets is an important issue, and poor households will take measures to reduce costs or employ creative ways to get around financing constraints.¹⁷ One approach is for a group of poor households to pool their funds to enable one person to emigrate. We will evaluate below whether poor households in Armenia appear to be shut out of international labor markets.

Another important question concerns the quality of international labor markets. Emigrant labor has long been known to suffer some degree of exploitation. There are reports in Armenia of labor slavery, of women (often for sexual exploitation) but also of men.

7.2. A Snapshot of Microeconomic Remittance Impacts in Armenia

Data on remittance transfers and recipient households is readily available for Armenia. A survey of households (HLS) has been carried out in 1996, 1999, and annually since 2001 by the NSS with support from the World Bank. Several thousand households have been surveyed each year in several rural and urban districts in Armenia.¹⁸ The survey provides detailed information on household geographic, demographic, and economic characteristics, including a range of data on agricultural activities and assets, residential assets, education, health, savings and debts, social assistance, intra- and inter-household monetary and commodity transfers, and migration and remittance transfers. Detailed information is also collected for each household’s incomes and expenditures through a one-month diary that intends to record all incomes and expenditures by type and amount. 20 different types of incomes are distinguished in the diary, including remittance transfers.

There are two sources of information in the survey on remittance transfer receipts. The household is asked in section F of the survey about receipt of money or goods from absent

¹⁶ See for example Lucas and Stark (1985.)

¹⁷ The cost of a typical Armenian emigrant going to Russia is \$500 for airfare and initial settling costs. Rural emigrants now often take the bus to cut travel costs.

¹⁸ Details on characteristics of the survey, including sampling methodology, geographical locations of sampled households, and other pertinent details can be found in Brown (2003) (especially pp.38-39 and 55-56).

members over the past 12 months, including where the absent member lives (Russia, a non-Russia CIS country, another European country, USA or Canada, and other) and the total value of money or goods received. The second source is the income and expenditure diary, in which cash received from relatives living out of Armenia during the month that incomes are monitored is recorded (this income data is in section Y of the survey.)¹⁹ As noted in section II, The NSS uses these data to construct balance-of-payments estimates of remittance transfers. During interviews with Armenian and international economists familiar with the survey, the view was often expressed that reported incomes are less than actual incomes, particularly in the case of remittance transfers, due to concerns about taxation and visibility in the local community and potential jealousy and pressure to share such income. These experts generally stressed that the expenditure data were more reliable than income data, as is classically the case with household budget surveys around the world. It is, however, inevitable that analysts will focus considerable attention on the income data.²⁰ Efforts to improve accuracy of collected income data will have a high research payoff.²¹

The distribution of transfers received over 12 months according to country of origin is described in Table 7.1 below. The large majority of transfers to Armenian households came from Russia, which accounted for 68% of the value of all transfers, and 14% of surveyed households receiving transfers from there. The next most important region was USA/Canada, with 17% of total transfer value and 2% of surveyed households receiving transfers from there. As one would expect, the average value of transfers was higher in the case of USA/Canada and European countries than for Russia and CIS countries: the average for USA/Canada was 50% higher than for Russia.²²

There is an interesting segmentation between households receiving transfers from USA/Canada and Russia/CIS. Only 14 households received transfers from both regions.

Interestingly, the same percentage of households in Yerevan, non-Yerevan urban regions and rural regions received transfer income. However, rural regions benefited relatively more from Russia transfers and Yerevan from western transfers, with non-Yerevan urban households in-between.

¹⁹ Sections F and Y also contain information on internal remittances (transfers received from relatives living in Armenia).

²⁰ In the Armenian case, there are already three studies that make heavy use of the HLS income data: Murrugarra's (2002) study of public transfers, remittances, and health care demand, Brown's (2003) study of tax policy and poverty, and this study.

²¹ Another data issue is the fact that because the survey only collects one month of income and expenditure observations for each household, the permanent versus temporary income issue can become acute in some cases. For example, one household in the 2002 HLS reported as its only income cash received from the sale of valuables. Although the amount was quite high and put the household in an upper income decile group, it is likely that this household's permanent income is much lower. NSS calculates total household income by simply summing up all recorded monthly incomes. However, given that the survey asks the household if a received income is periodic or not, it should be possible to make an estimate of permanent income.

²² However, a 50% differential seems rather low given the income differential between North American and Russia.

Table 7.1. Remittance Transfers Received Over Past 12 Months

Country where transfer originated	Number of surveyed households receiving transfer	(as % of households surveyed) ^A	Total value of transfers			Average value of transfers per household	
			1000 dram	USD	Share of total, %	Dram	USD
Any region	852	18%	167,923	\$293,059	100%	193,459	\$338
Russia	629	14%	114,498	\$199,823	68%	182,032	\$318
Other CIS country	42	1%	7,220	\$12,600	4%	171,904	\$300
Other European country	73	2%	15,434	\$26,936	9%	211,427	\$369
USA or Canada	105	2%	28,885	\$50,411	17%	275,098	\$480
Other ^B	19	0%	1,885	\$3,290	1%	99,205	\$173

(cont'd)

Household located in:	Total number of households surveyed	Number of households receiving:				Value of average remittance in dram (USD)			
		Remittance from foreign country		Of which originating in:		Remittance from foreign country		Of which originating in:	
		Russia/CIS	Europe/North America	Russia/CIS	Europe/North America	Russia/CIS	Europe/North America	Russia/CIS	Europe/North America
Yerevan	1404	253 (18%)	170 (12%)	92 (7%)	247,109 (\$431)	205,340 (\$358)	300,117 (\$524)		
Non-Yerevan urban	1413	246 (17%)	199 (14%)	49 (3%)	196,886 (\$344)	201,510 (\$352)	170,073 (\$297)		
Rural	1817	334 (18%)	302 (17%)	35 (2%)	164,926 (\$288)	154,669 (\$270)	239,289 (\$418)		

Source: Calculated from raw data of section F of 2002 HLS (section F asks households about amount of transfers received over previous 12 months.)

A: Total number of households surveyed in 2002 HLS was 4,634. Regional percentages do not add up to total because some households received transfers from more than one region.

B: Country outside of Armenia not in CIS, Europe, or North America.

7.3. Impact of External Transfers on Inequality

One way to evaluate the impact of external transfers on inequality is to compare inequality measures for income including and excluding external transfers.¹ Table 7.2. shows that the Gini coefficient rises when external transfers are excluded, and external transfers thus reduce inequality:

Table 7.2. Gini Coefficients with and without remittances

Gini Coefficients for Monthly Household Income	
Including external transfer income	0.489
Excluding external transfer income	0.495
Average monthly income for:	
Households not receiving external transfer	37,323
Households receiving external transfer : with transfer	85,932
Households receiving external transfer : without transfer	20,604
Average monthly transfer size	65,328
-as % of total monthly income	76%

The reason why this is happening is straightforward. For households reporting external transfer income in the survey, external transfers comprise 76% of their monthly income. The table above shows that external transfers move these households' average income level from a very low level to a very high level. Many of the households receiving external transfers are in the highest income deciles of the sample – and if they did not receive external transfers, they would be in the lowest deciles. Table 7.3. shows the distribution of households receiving external transfers according to the share of external transfers in total income. Remarkably, 23% of these households reported no other income source except external transfers.

This evidence does suggest that external transfers reduce inequality in Armenia, and they tend to confirm the widespread popular impression that many families receiving transfers consist of pensioners or mothers and children only. However, the evidence is not conclusive, because it does not accurately describe what would happen in the absence of external transfers. For families receiving external transfers from a family member working abroad, if that member could not work abroad, he/she would presumably try to find employment in Armenia. To really show what would happen in the absence of migration and external transfers, we have to describe a no-migration counterfactual outcome. As discussed previously, studies have shown that taking into account a no-migration counterfactual can produce a different picture. This must be left as a topic for future research.²

¹ This approach was taken by Ahlburg (1996) and Taylor (1992) using survey data on Tongan families and rural Mexican families respectively. Both found that remittance transfers lowered income inequality as measured by Gini coefficients, similar to our finding using Armenian data. Taylor also evaluated the indirect impact of remittances through the financing of household investment in livestock and increased income over time; this effect was found to reduce inequality.

² The HLS evidently contains the data necessary to implement the techniques used in Adams (1989) and Barham and Boucher (1998). The Armenian case is somewhat complicated by the fact that some external transfers captured in the HLS are coming from “old” diaspora relatives.

Table 7.3. Distribution of remittances as share of household income

Share of external transfer income in total income	Number of households	(as %)
1%-9%	1	0.3%
10%-19%	6	1.5%
20%-29%	6	1.5%
30%-39%	16	4.0%
40%-49%	26	6.5%
50%-59%	32	8.0%
60%-69%	51	12.8%
70%-79%	55	13.8%
80%-89%	74	18.5%
90%-99%	40	10.0%
100%	93	23.3%
1%-100%	400	100%

VIII. INITIATIVES REGARDING REMITTANCES AND DIASPORA LINKAGES

In this section, we evaluate a range of initiatives that could be undertaken to increase the volume of remittances and enhance their impact on economic growth and development. We also review initiatives that can strengthen linkages between Armenia and its diaspora communities and intensify diasporan economic involvement. Diasporas contribute to their home country not only through monetary remittances, but also through direct investment and non-monetary contributions such as human capital transfers, technology transfer, trade opportunities, and market opening. We distinguish between “new” and “old” diaspora communities, with “new” diaspora representing those families who left during and after the Gorbachev era. The old diaspora is highly organized and has long-established institutions representing it politically, socially, and economically. Its capacities to take collective action on behalf of Armenia are high. The new diaspora is much less well organized. Nonetheless, civic institutions have formed in the new diasporas in recent times. Our informal survey interviewed 8 such diasporan organizations in Moscow and 7 in Rostov; some details on these organizations are given in the appendix.

8.1. Data and Research Issues

Reports on remittances have emphasized the importance of improving the knowledge base on remittances and their economic impacts, and the situation is the same in the Armenian case. Although this report has made some contributions to knowledge on Armenian remittance flows, much needs to be done.

- ***Data quality, availability, and accessibility should be improved.*** This can be accomplished through the following actions:

a) The IMF and World Bank need to work with the Armenian Government to review and improve the quality of data and methodologies used to estimate remittances. As we discussed in our previous paper, although the NSS is doing a very good job with the resources available to it, some improvements could be made at low or no cost. The NSS is also using data sources that are not available on a regular basis (special surveys), and it

would be worthwhile to assist the NSS to update that information, particularly as the information sheds light on how remittances are used by Armenian households.

b) The problem of underreporting of remittance transfers in the HLS needs to be addressed. Every effort should be made, and creative approaches taken, to encourage households to accurately report their incomes to the survey.

c) The NSS should provide easier access to HLS data. The HLS data must be requested from the NSS. The World Bank web site page that provides information on HLSs that it supports around the world notes that for Armenia and some other countries, “a substantial proportion of data requests have been denied, left unanswered, or answered affirmatively only after substantial delays.”³ HLS data should be made widely available to researchers and the public by posting it on the World Bank web site.

d) An Armenian migration survey should be carried out by an organization experienced in this activity. Little systematic data is available on this topic that is so important to Armenia. The IOM offers a good template for a migration survey. This template should be augmented with questions aimed at illuminating remittances and their impacts.

e) Microfinance institutions are in a good position to gather information at low cost on remittance flows and access to the formal financial system. They typically interact with a large number of clients at lower levels of income dispersed over a wide geographic area..

• ***More research should be carried out on the characteristics, uses, and impacts of remittances, and this research should inform public policies and donor activities.***

a) A very valuable database, the household survey, is already available to carry out such research, and previous research that provides a guide to doing such research has been identified in this paper. HLS data should be used to carefully analyze:

- The inequality impacts of remittances. A study could be done developing a non-migration counterfactual scenario. It might also be possible to do a study using the approach of Stark et al (1988) to assess where Armenian communities are in the emigration lifecycle;
- The characteristics of households receiving remittances, and the impact of remittances on labor supply;
- The impact of remittances on savings and/or physical capital accumulation;
- The impact of remittances on education.

b) In order to inform public policies, it is not enough simply to carry out research and produce papers. The research must reach a domestic Armenian audience, including government policymakers. Armenia needs a think-tank that is staffed by qualified economists capable of understanding and producing quality research (particularly quantitative research.) Such a think-tank should be supported by a group of highly-qualified western economists who will work collaboratively with the Armenian researchers and provide peer review. It is essential that the think-tank have effective channels of

³ See <http://www.worldbank.org/lsm/>.

communication with government officials and the media. It is also essential that the think-tank become institutionalized, sustainable, and viewed as an asset to the Armenian government and public. Resources are in place that can support achieving this goal, for example the American University of Armenia (existing think-tanks should also be carefully evaluated.) Models for effective think-tanks already exist in several transition countries.⁴

8.2. Initiatives Specific to Monetary Remittances

Generally speaking, initiatives affecting remittances can affect three things: the volume of remittances, the use (allocation) of remittances, and the distribution of and access to remittances. It is quite conceivable that a particular initiative could affect more than one of these. One key point that must be respected about remittances is that they are small-scale private transfers that are completely under the control of households, and efforts to increase their volume and/or alter their allocation must rely on changing incentives in an effort to correct a market failure or promote competition.

Areas where initiatives could be undertaken are:

- ***Lowering transactions costs.*** Given the emergence of the Anelik and UniBank operations, formal-sector transactions costs are not an important issue with respect to remittances from CIS diaspora communities. However, fees are rather high on remittances from western countries. The remittance transfer market is apparently segmented, and if Anelik and UniBank could compete in the western-country market, transfer costs would fall. Our overall impression is that market-driven processes are working rather well in Armenia and that trust and confidence in the banking system is much more important than transfer costs.
- ***Extending the availability of financial services to poor people and rural areas.*** The extent to which various population groups lack access to the formal financial sector is not yet clear. Armenia is a small country with a reasonably well-developed transport network. Data needs to be collected through the household survey, microfinance institutions, and other channels in order to assess whether access is an important issue or not. One measure that should be undertaken in any event that would enhance such availability to poor people and rural areas, enhancing microfinance institutions, is discussed below.
- ***Bringing remittances into the formal financial sector.*** It is often argued that this should be an important goal of programs to enhance remittances and their impacts on growth development. However, empirical evidence on remittance use suggests that a large proportion of remittances are in fact already saved into housing, land, education, and small businesses. There are two arguments that can justify seeking to bring more remittances into the formal financial sector. First, financial institutions should have a much wider knowledge of productive investments than an individual family and should be able to identify investment projects providing higher returns. Second, these higher returns should attract an even higher level of investment than currently prevails. For these arguments to work, it must be the case that the financial sector is functioning well. Transition financial sectors are plagued with well-known problems that hurt efficiency,

⁴ See Struyk (2002) on the development and management of public-policy think tanks in transition countries.

erode public trust, and lead to low levels of financial intermediation. The level of intermediation in Armenia is low even in comparison with other transition economies (see Grigorian 2003.)

a) USAID and other donors have already funded several projects that are designed to directly strengthen the financial sector, including (for example) banking supervision projects, microfinance and small and medium enterprise (SME) lending projects, and capital market projects. Projects assisting the government to develop economic analytical capacities indirectly support this effort by aiding the maintenance of macroeconomic stability and resistance to introducing distortionary policies that could lead to financial repression. Grigorian (2003) outlines a series of measures that he believes are now necessary to further strengthen the Armenian banking sector, and the programmatic implications of these measures should be evaluated. Unfortunately, there are no magic bullets that can rapidly speed up strengthening of the banking sector. The collapse of confidence in formal financial institutions during early transition is taking a long time to rebuild in all transition countries. There are signs that the Armenian banking sector and the products that it offers are developing along lines seen earlier in more advanced transition economies.⁵ The most important action that donors can take is arguably to continue to adhere to the set course and be patient.

b) Enabling microfinance institutions (MFIs) to expand their range of services. MFIs offer a promising opportunity to bring remittances into financial institutions. Some (many?) clients of MFI lending programs receive remittances, and they are reluctant to save into banks due to trust issues. They also believe that the amounts that they can deposit are too small to interest commercial banks. However, they know their MFI lender well and trust it, and many are interested in saving funds in it. In Armenia, MFIs cannot take deposits. MFIs are reluctant to become commercial banks, because they do not want to implement collateral requirements, they are often offspring of international NGOs that operate with some noncommercial objectives, and the regulatory burden required by Central Bank regulations will be far too high. MFIs offer an important opportunity to both bring more remittances into formal savings institutions and increase services to poor and rural households, but until current problems are resolved, they are prevented from realizing that opportunity. USAID has already established a project to address these problems, the MEDI project.

- ***Encouraging the formation of Hometown Associations.*** Hometown Associations (HTAs) are voluntary civic associations of emigrants who come from the same town or region of their home country.⁶ They grew rapidly in the 1990s and have become prominent among Mexican and other Latin American emigrant groups working in the United States. HTAs typically pool contributions from emigrants to fund projects in health, education, public infrastructure (roads, utilities, churches, cemeteries,) and recreation. They play an active role in identifying, planning, and implementing these projects. HTAs have not so far been much involved in funding “productive” (business)

⁵ For example, some banks have recently introduced mortgage and consumer appliance loans, and are working intensively with large corporate borrowers to develop new loan activity with them.

⁶ References on Hometown Associations include Orozco (2003), Orozco (2004), and chapter 2 of Johnson and Sedaca (2004).

projects that directly generate income and employment. HTAs typically have limited fundraising abilities but often work in very small communities in which their contributions are very large compared to municipal public works budgets. An important merit of HTA projects is that they are fully “owned” by the funders and communities receiving them. In recent years, the Mexican and El Salvadorean governments have begun formal programs to match HTA donations with public funds. Sustainability of HTA-funded projects is an emerging critical issue.

The possibility of Armenian HTAs emerging is intriguing. HTAs are relevant mainly to the “new” diaspora, located mainly in Russia, rather than the “old” diaspora. Most old diasporans with ties to Armenians have ties to individuals or families, not communities, whereas cities in Russia with concentrations of new diasporans may have clusters of people from the same community living in close proximity. We did not find any evidence that HTA-type organizations have yet formed in Moscow or Rostov. However, Armenians do have a clear sense of identification with their hometown, and HTA emergence is possible.

Donor and government engagement with HTAs has been to work with existing HTAs to develop their project identification and implementation skills, fundraising abilities, and governance.⁷ Engagement has not sought to encourage the formation of HTAs. At this point, engagement in the Armenian case would have to be of that nature, given that Armenian HTAs do not yet exist. The new (Russian) diaspora does have civic organizations and actors with whom it would be worthwhile to initiate a dialogue on prospects for forming HTAs. Some of these organizations which might be incipient HTAs are listed in the appendix. A risk of donor involvement in encouraging formation of HTAs is that they would be formed for rent-seeking purposes.

One possibility for engaging the old diaspora in HTA-like efforts is the formation of groups of old diasporans who “adopt” a specific town or community in Armenia. The chances of this approach working well are less than in the case of real HTAs, given that old diasporans and the Armenian community will not have the same sense of identification and ownership and will lack informal monitoring and enforcement mechanisms deriving from membership in a common community.

- ***Establish a much more ambitious “National Community Funds Program.”*** Such a program is described in detail in Mussig (2002.) This program seeks to enhance the volume of remittances by eliminating fees charged on transfer, and affect use of remittances by channeling them into a community funds program that would invest in productive business projects, productive infrastructure, social investments, and personal loans. Many communities would channel remittances into this scheme. A community funds program is like a supercharged HTA that pools together many communities’ resources and invests in a broad portfolio of projects. The scheme does raise important governance issues. Given that individual HTAs have not yet formed, it is too premature to consider it for Armenia.

⁷ A comprehensive review of donor and government engagement is given in Johnson and Sedaca (2004), pp.24-29.

- ***Taking measures to facilitate, monitor and regulate temporary and long-term migration, and increase access of population groups to international labor markets.*** Migration and remittances are obviously linked, and measures that impact migration will also impact remittances. Review of such measures and recommendations on them are beyond the scope of this paper. Many international organizations, including the International Organization for Migration in particular, have an extensive literature on these issues.

8.3. Initiatives to Enhance Linkages With the Diasporan Community

In addition to initiatives specifically targeted at remittances, there is the question of what can be done to take fuller advantage of the potentialities of the diasporan communities with respect to things like human capital transfer, technology transfer, financial investment, trade opportunities and market openings. A recent study of the role of diasporas in facilitating poverty reduction in their home countries has identified six distinct models in which the diaspora focuses on maximizing remittance streams (Phillipines), facilitating HTAs (Mexico), channeling remittances into government channels (Eritrea), providing human capital (Taiwan), providing direct investment and trade opportunities (China), and providing direct and portfolio investment, technology transfer, market opening and outsourcing opportunities (India.)⁸ Over the past decade, Armenia's diaspora has made very significant contributions in some of these areas. It has also made contributions that are perhaps uniquely its own. The US diaspora, for example, founded, financed and managed the American University of Armenia.

- ***Business Mentoring Program and SME Development***

In the 1990s, a great deal of business training was carried out in Armenia by a variety of international organizations, but results are felt to have fallen short with respect to actual establishment of new SMEs and associated employment and income creation. One natural initiative to pursue is enlisting experienced diasporan businesspeople to provide mentoring services to potential Armenian entrepreneurs. Potential entrepreneurs could be selected on the basis of proposed project quality and willingness to invest personal funds. The MBA program of the American University of Armenia could provide training to the potential entrepreneurs (AUA could in fact be the institution hosting the project.) Businesspeople willing to volunteer their time to work with the potential entrepreneurs could be recruited in the US by a diasporan organization. Matching financing could be provided to the entrepreneurs if their project looked promising and they are willing to invest their own funds. This initiative could straightforwardly be organized as a public-private partnership. The overriding goal would be to get new SMEs off the ground.

Challenges involved in attracting adequate diasporan involvement in such an endeavor should not be underestimated, as illustrated by the experience of the Armenian SME Investment Fund. In response to a study done in 2000 showing that inadequate investment financing was available for SMEs, in 2002 the IFC sponsored the creation of an investment fund for SMEs and played a key role as a leading investor by contributing up to \$5m to the fund. The Armenian diaspora and other interested investors were supposed to raise \$15m more. The fund was intended to establish joint ventures with good multinational partners,

⁸ See Newland (2004).

and make investments in good existing SMEs that need capital to expand. A US-based private investment firm run by a member of the US diaspora was enlisted to manage the fund. In August 2004, the IFC withdrew its stake, and the fund became defunct. This was evidently due to an inability to reach the diaspora financing target of \$15m, due to concerns that diasporans had over the Armenian government's commitment to the initiative. However, in the business-mentoring initiative proposed above, the diaspora would be responsible primarily for providing human capital, not financing.

- ***Pan-Armenian Development Bank***

The Pan-Armenian Development Bank concept is described in detail in Gevorkyan and Grigorian (2003) and Johnson and Sedaca (2004.) The goal would be to establish an investment fund involving mid- to large-scale diaspora investors that would be managed by experienced diapsoran professionals and would take equity investments in new or existing private companies. There are important challenges to implementing such a development bank, including diasporan investors' requirement of a sound investment climate, and potential resistance to such a bank from Armenian domestic actors. The recent experience of the Armenian SME Investment Fund suggests that the present moment is not propitious for attempting to establish such a bank. If and when that time comes, a good opportunity for a public-private partnership will have opened up.

IX. CONCLUSIONS

We have shown in this paper that remittances have helped the Armenian economy, and that the negative effects that are discussed for other countries do not appear to apply to this country at this time. The macroeconomic effect of remittances is roughly in line of those estimated for other countries. The effect of remittances on the exchange rate through "Dutch disease" does not appear to have been large, though changes in monetary policy towards inflation targeting and away from de facto exchange rate pegging may change this.

Using data from the household survey of the National Statistical Service, we find that the flow of remittances has been relatively even between urban and rural families, though those outside Yerevan are more dependent on remittances from Russia and CIS countries than those inside the capital. The flow of remittances therefore will be dependent on Russian economic developments. For families that receive remittances, external transfers comprise 76% of their monthly income. While we do not know who those families would choose to work and save without remittance income, we have some reason to believe that remittances lead to greater income equality.

Over our entire study we have highlighted data difficulties. Some of these can be readily addressed with technical assistance to the NSS, while others would require creation of new surveys. While more research is always desired, we also argue that we know enough now to approach two key issues for improving remittances to Armenia. Remittance flows come often in suitcases and never reach the formal sector. Savings and investment would be improved by the development of new institutions such as hometown associations, development banks and debt instruments into which remittance income could be invested. Such measures can make a substantial difference in the Armenian economy.

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Appendix. Armenian Civic Organizations

Armenian Civic Organizations in Moscow

Name of organization	Type of organization	Does organization finance projects in Armenia?	To whom is money directed?	Are business projects funded?	Does organization fund social projects?
SAR - The Union of Armenians in Russia (UAR)	Charity	Yes	Directly to beneficiaries	No, only technical assistance	Funds a number of cultural, educational, scientific, publishing projects. Also supports orphans, elderly, refugees and IDPs in Armenia (donated 2 hostels)
ARADES - Russian-Armenian business cooperation association	Business/political/charity	Yes	Directly to beneficiaries	Facilitates business development	Organisation is newly established and intends to have a big impact on economic development.
Russian Armenian Friendship	Charity	Yes	Directly to beneficiaries	No	Funds some charitable projects to support the disadvantaged
Ararat Cultural Centre	Charity	Yes	Directly to beneficiaries	No	Funds some charitable projects to support the disadvantaged
Armenian Community of Moscow	Charity	Yes	Directly to beneficiaries	No	Funds some charitable projects to support the disadvantaged
Lazarian Institute of Oriental Languages	Educational	Yes	Ministry of Education	No	
The Nakhichevan and Russian Dioceses	Religious			Facilitates a few business ventures	Donation to Edjmiatsin, sponsors Rus/Arm children trips to Armenia and cultural events
Yerevan's Municipality in Moscow	State/charity	Yes	Directly to beneficiaries	Yes.	Sponsors training of 50 Architects in Moscow, 100 people of other professions, 25 Armenian children to take holidays in Russian, participants of the international Student festival FESTAS, distance learning programmes

Armenian Civic Organizations in Rostov

Name of organization	Type of organization	Does organization finance projects in Armenia?	To whom is money directed?	Are business projects funded?	Does organization fund social projects?
Surb Khatch Benevolent Fund	Religious/charity	Yes	Directly to beneficiaries	No	No
Armenian Youth Organisation	Charity	Yes		Organizes youth trips to Armenia	
Armenian Theatre	Theatre	No (invites Armenians to Russia to perform)		Yes (theatre related)	Yes (arts related)
Nakhichevan Dioces	Religious	No	Directly to beneficiaries	No	Charity
Armenian Community of Rostov	NGO, charity, business forum	Yes	Directly and through government	Yes	Charity, renovation of cultural monuments, aid to 2 schools and occasional transfers to orphanage, computers to regional schools
Domestic Communities based in Rostov region but out of Rostov City	NGO, charity, business forum	Yes	Directly and through government	Yes	Charity work
Samourgashev Brothers	Sports club / charity	Yes	Directly to partners	No	Supports wrestling school