

Remittances in the Republic of Moldova: Lost opportunities

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A*bstract:* The article covers the problem of the relationship between remittances and economic growth as well as the use of remittances for productive investment in order to contribute to long-run development. Also, there are given some stylized facts of remittances in the Republic of Moldova and their impact over the national economy. Because of its business and investment climate, of its financial system and macroeconomic policies that were implemented, Moldova has lost almost all opportunities to benefit from remittances.

Keywords: remittances, economic growth, investment, human capital, inflation, consumption, savings

JEL Classification: F43, E15

Among the studies dedicated to the relationship between remittances and economic growth there are no common points of view. The main debates about the impact of remittances on growth refer to *the use of remittances for productive investment that would contribute to long-run development*.

However, the impact of remittances on the economy should be considered not only from the point of view of remittances-investment relationship. As Glytsos¹ pointed out, remittances can affect positively the economy in the following ways:

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¹ Nicholas P. Glytsos, "A Macroeconometric Model of the Effects of Migrant Remittances in Mediterranean Countries," In *Human Capital: Population Economics in the Middle East*, ed. Ismail Abdel-Hamid Siragel din (Cairo: American University in Cairo Press, 2002) cited in Özden and Schiff, "Overview," pp. 7-8.

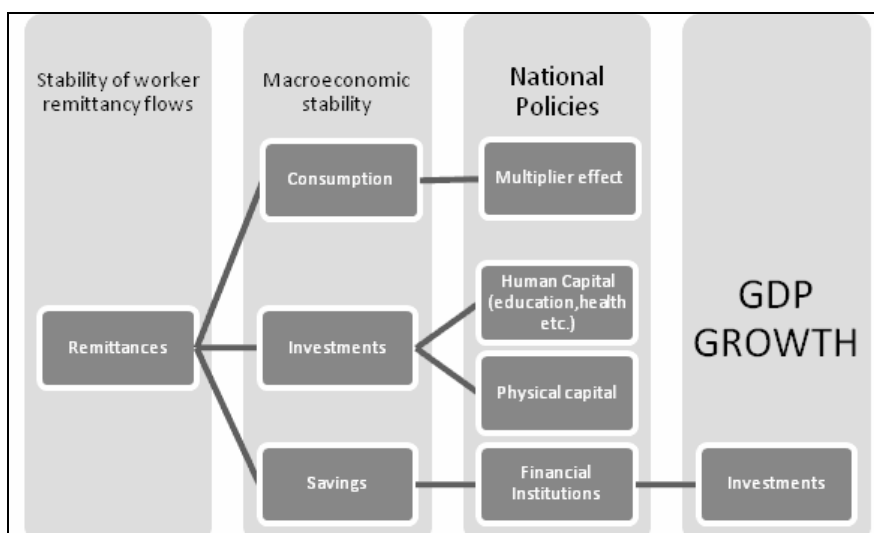
- ✓ improvement of financial intermediation managing remittances (e.g. by banks);
- ✓ extension of investment credit allowed by the increase in the liquidity of banks from remittance deposits;
- ✓ investment in human capital in the form of spending on certain consumption items (e.g. education, health);
- ✓ purchase of more investment goods from abroad, made possible by remittances.

In addition, we can add some more elements:

- ✓ smoothing income inequality on short term;
- ✓ diversification;
- ✓ growth of investment as a result of the multiplier effects of spending on consumption.

Summarizing, we can draw the following chart, including the effects of remittances on the economy:

Figure 1. Influence of the remittances on economic growth



Source: authors contribution.

In order to benefit from remittances and encourage a sustainable GDP growth there are some pillars. *First*, it is important to assure the stability, at least for a medium-term period, of these flows, because of their importance to the disposable income and poverty. *Second*, macroeconomic stability is another goal of the policy makers. *In addition*, sound national policies that encourage the development of quality factors of economic growth (factors that are shifting the potential GDP). A good business environment, investment climate and functional national institutions, including the financial ones, should trigger the growth of potential GDP. Besides, we should add a strong national educational system and some additional policies/national programs that could channel remittances to productive sectors of the economy.

Moldova's "benefits" from remittances, stylized facts

Worker's remittance began to grow at fast rates after the regional crisis in 1998. Since then, despite a recovery of national economy, the flow of emigration has intensified, thus, the estimated number of the migrant contingent is nearly 590,000 persons¹. This number constitutes more than 30% of the economic active population. According to the National Bank of Moldova (NBM), remittances to GDP ratio are estimated at more than 30% in the last 3 years.

Workers' remittances have become the single most important net source of foreign exchange currency in Moldova. Obviously, such high levels of workers' remittances have huge macroeconomic consequences. Workers' remittances have played a significant role in boosting growth in recent years, through their effect on consumption. Indeed, GDP growth is driven mainly by growth of consumption and this is not a sustainable growth.

Worker's remittances have increased households disposable income which in turn has sustained high consumption growth rates. According to the CBS-AXA survey, on average, remittances constitute at least 65% of the income of the recipient family in 41% of families with a migrant and between 35-65% for other 25%. The largest part of remittances is used to meet basic current consumption needs and the remainder to buy houses and land.

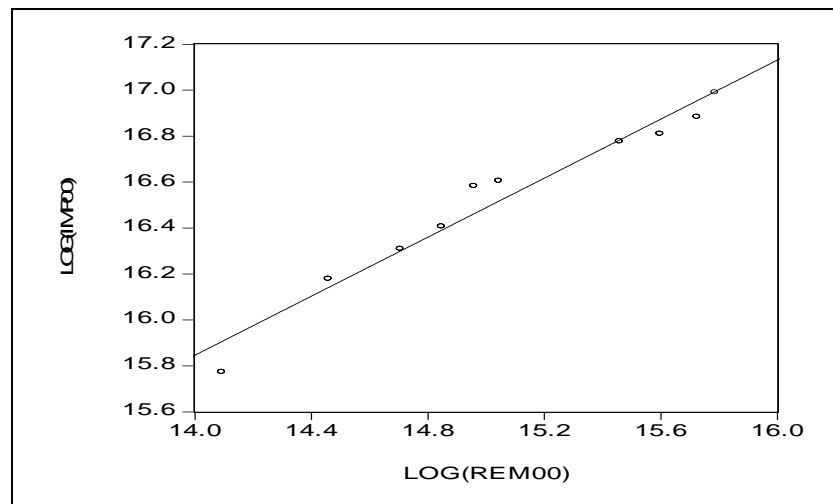
Emigration has had a significant influence on the labor market by reducing both unemployment and labor supply. This may explain why wages have pushed up.

¹ National Bureau of Statistics, www.statistica.md.

However, the increase in wages was not accompanied by an improvement of labor productivity, thus causing inflation pressures in the economy.

As far as the BoP is concerned, remittances have had a major impact on the current account balance and mainly on the import side. Moldova does not have the productive capacity to meet the increasing aggregate demand. The huge increase in imports is driven mainly by the boom of the aggregate consumption. An analysis of the situation reveals that workers' remittances are financing a large part of the trade deficit.

Figure 2. Correlation between imports and remittances in the Republic of Moldova



Source: Author's calculations according to National Bureau of Statistics.

The large inflows of workers' remittances may explain the international reserves accumulation that has put the Moldovan Leu under appreciation, which might have weakened the domestic economic competitiveness level and constraining national exporters.

At the same time, remittances have positively affected the government fiscal revenue in the short run, but they might imply negative effects in the long run. The increasing inflow of remittance has alleviated the fiscal burden of the government and has helped to finance social spending. Nevertheless, in the long run, fiscal balance might be negatively affected by the financing of the pensions.

Indeed, emigration changes the demographic dependency ratio by decreasing the number of contributors to the pension system.

Another problem is external shocks, like financial crisis that down-turned remittances, triggering a fall in consumption, imports and government revenues from import taxes (one of the main sources of revenues for the public budget).

Conclusions: Until now, Moldova has not been able to direct these foreign inflows of currency to productive sectors of the economy, thus, increasing the potential GDP in the long run. Let us look at the lost opportunities. What could happen if Moldova attracted more remittances to investment?

Why remittances have not boosted investments

Remittances can be transformed into investment in 2 ways:

1. directly by investments in entrepreneurial activities;
2. indirectly through savings and/or financial system (financial intermediation).

One of the main conditions for transformation of remittances into investment is a favorable economic climate. According to Ratha (2003) the relaxation of foreign exchange controls as well as general improvements in policies may have facilitated the use of remittances for investment¹. In addition, Ruiz-Arranz (2006) noted that investment opportunities in the home country influence the volume of remittance flows. They increased when economic conditions at remittance receiving countries improved.

In the last year, the Moldovian Government struggled to do reforms. In some areas, we were successful. Moreover, in this context, previous reforms can be mentioned: regulatory reform, imposing zero reinvested profit tax, fiscal and capital amnesty².

Despite economic reforms, Moldova remains the poorest country in Europe, our country has modest economic performance, and the speed of economic reforms is very slow. According to the World Bank reports **Doing Business**, in the last 3 years Moldova is continuously decreasing in ranking - 92nd out of 178 states in

¹ Dovelyn Rannveig Agunias, "Remittances and development", Migration Policy Institute, 2006.

² Marta Ruiz-Arranz, "Boosting Economic Growth", ID 21 Insights 60 (January 2006), p. 4, <http://www.id21.org/insights/insights60/art03.html>, accessed August 1, 2006.

2008, 103rd out of 181 states in 2009, 87th out of 187 in 2010 and 90th out of 187 in 2011¹.

The indirect method of transforming remittances into investment relies on a developed financial system that will attract savings and invest them were K/L ratio is low. In this case, financial intermediation and financial products are essential.

Although a small part of remittances is saved they contribute to the increase in banking deposits. The main problem consists in directing savings to real economy through banking loans. There are two aspects, which make difficult for firms to put in good use bank credits:

- ✓ high level of interest rate of banking credits;
- ✓ important parts of banking credits are short-term loans.

One cause of high level of interest is the uncertainty of the economy. Under-development of the Moldovian economy and lack of reforms generate a high instability, and in such conditions banks put high premium risk in interest rates.

The structure of credits is dominated by short-term credits, and monetary authorities don't stimulate receiving of long-term savings (usually from long-term savings is financed capital investment and long-term projects). The structure of deposits is dominated by short-term deposits (with maturity until one year). This also is a cause that induce high level of interest rates, because financing of long-term credits from short-term deposits is very risky.

Table 1. Structure of deposits according to their maturity (%)

	2007	2008
Banking deposits in foreign currency with maturity shorter than 1 year	96.5	92.2
Banking deposits in foreign currency with maturity higher than 1 year	3.5	7.8
Banking deposits in MDL with maturity shorter than 1 year	89.4	95
Banking deposits in MDL currency with maturity higher than 1 year	10.6	5

Source: Annual report of the National Bank of Moldova 2008.

¹ www.doingbusiness.org/reports/doing-business

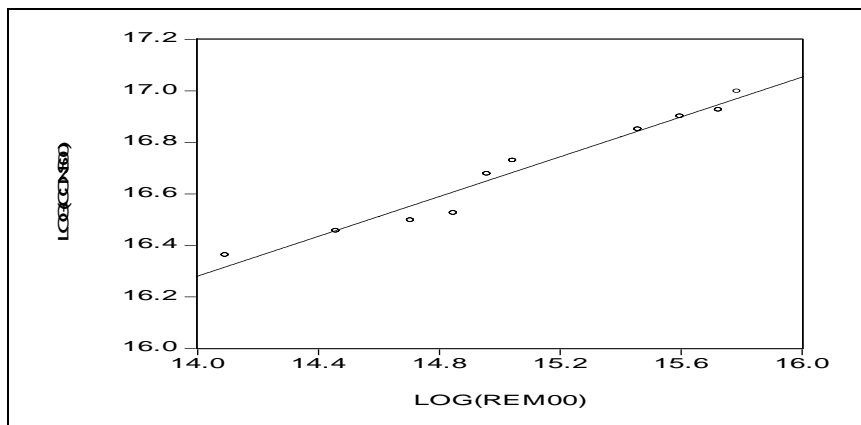
Table 2. Structure of credit according to their maturity (%)

	2007	2008
Banking credits in foreign currency with maturity shorter than 1 year	26.7	31.1
Banking credits in foreign currency with maturity higher than 1 year	73.3	68.9
Banking credits in MDL with maturity shorter than 1 year	41.5	39.2
Banking credits in MDL currency with maturity higher than 1 year	59.4	60.8

Source: Annual report of the National Bank of Moldova 2008.

Remittances and consumption. Analyzing national surveys figures, one important remark is that almost 81% of all remittances are directed to daily expense¹. These findings explain the high level of correlation between the growth rates of total workers' remittances and the aggregate consumption estimated at 0.98². Graphical representation can be done using simple scatter plot of these two variables (Figure 3).

Figure 3. Correlation between consumption and remittances in the Republic of Moldova



Source: Author's calculations.

¹ Moldovan National Public Opinion Survey on Remittances, 2007.

² Author's calculations, using simple matrix correlogram.

This is why we think that the biggest problem of benefiting from remittances was because Moldova's production possibility is too small in order to meet the demand. The influence over demand is reflected through increasing of households' consumption, which roughly can be divided into 2 components: consumption of domestic products and consumption of imported goods. According to the Moldovan National Bureau of Statistics between 1998-2009 the average real growth rate of imports (nearly 9%) exceeded the average real growth rate of households' consumption (nearly 7.4%). In conclusion, the increase in consumption is mainly oriented to imports. This has happened in condition when household consumption represents the main part of the Moldovan GDP (in the last 4 years the weight of household consumption in GDP exceeded 90%). A rough estimation is telling us that since 1998 nearly 6 billion USD were spent on consumption from remittances. The multiplier effect should have boosted investments and growth. However, this was not the case of Moldova. Reasons for this can also be found in the business and investment climate, plus weak structural reforms.

Remittances and human capital investment

Cardona and Medina (2006) find that households receiving remittances induce increases in education expenditures¹. Since the increased investments in education and health contribute to human capital formation, it is likely that remittances may benefit developing countries for long-term growth prospects².

For Moldova one would expect remittances to have significant positive effects on the educational attainment of members from households with migrant members. Expenditures on education account for 5% of all remittances³. In terms of the year 2008 it is almost 83 millions USD. This figure can be easily compared with the national budget expenditures on education.

Remittances contribute to increase in general level of education of the society. However, our government acts in order to decrease the number of students. In 2006, the Government of the Republic of Moldova issued the Resolution No.

¹ Lina Cardona Sosa, Carlos Medina, "Migration as a Safety Net and Effects of Remittances on Household Consumption: The Case of Colombia", Banco de la Republica, Columbia, p. 38, available at <http://www.banrep.gov.co/docum/ftp/borra414.pdf>.

² Özden and Schiff, "Overview," p. 8.

³ Moldova National Public Opinion Survey on Remittances 2007.

434, which stipulates the reduction in number of citizens with university degree. As a result, the number of persons with university degree is declining since then (Table 3).

Table 3. Students matriculated to Moldavian Universities

Number of students enrolled in Moldavian universities		
2008 year	2009 year	2010 year
122 939	109 623	98 919

Source: National Bureau of Statistics.

Again, some potential benefits are not explored. Lack of education reforms and weird education regulations will not make possible for an increase in human capital. Most important is the reduction of brain gain process. Government directly strikes in process of human capital formation, thus reducing the long-term effects on growth.

Another problem is the reduction of financing higher educational institutions. The number of students learning in the base of contracts (paying for university studies) is increasing. The decrease in financing is the worsening quality of educational services (low financing lead to lower wages for professors, and some of them leave universities in searching jobs with higher salaries and corruption), which decreases the educational level of society.

International experience

Because of its business and investment climate, because of its financial system and macroeconomic policies, Moldova has lost almost all opportunities to benefit from remittances. Even the increase in the national budget due to high imports, was not used to promote sustainable growth. What happened in other countries? It is an interesting question concerning countries that have high remittances inflows are transition countries with many structural problems.

Matching funds. One of the most interesting programs is “3 to 1” that was implemented for the first time in Mexico. 1 dollar that came from remittances was supplemented by 3 dollars from the budget and aimed to finance different infrastructure and social projects. Another program in Mexico was called Mi Comunidad, which supported the creation of joint enterprises with the state. Another option is the creation of Hometown Associations.

Increase investment incentives. Countries like Pakistan have tried to attract investments of the migrants to the export processing industries. Government offers a non-repatriable scheme and advisory for business start-up¹.

Micro-finance institutions. Because of low financial intermediation, micro-finance can be a good start for attracting remittances to the investment flow. A study of a Mexican micro-financial institution showed that remittances were responsible for 27 percent of the capital invested in micro enterprises and 40 percent of the capital in the major remittance receiving areas of the country².

Increase of financial products. Designing financial products for migrants will attract a bigger part of remittances to the financial system. For example, in the Philippines, Honda offers special leasing conditions to migrants that want to buy a car. Some countries like, Bangladesh, India and Tunisia offers special deposit accounts.

What should we do? Policy recommendations in conclusion

A reduction in remittances, on short and medium term will influence dramatically the Moldovian economy. The exogenous shock provoked by world financial crisis, that decreased remittances, led to a negative impact on Moldova's overall economic performance. We will deal with two aspects, first is remittances' modeling and the second one concerns the macroeconomic effects of remittances.

In order to forecast workers' remittances, a simple econometric model has been applied. Its specification is taken from Erik Lueth & Marta Ruiz-Arranz (2007) and may be described as follows:

$$\text{Total inflow of Remittances} = f(\text{Domestic GDP}, \text{Foreign GDP}, \text{Domestic Prices}) + u_t$$

We will follow the same idea and methodology. Domestic GDP is measured by the real GDP figure at cost factor and domestic prices by the Consumer Price Index. We choose to apply as foreign GDP the world GDP variable constructed in order to model trade equations. The World GDP variable is a weighted average of the following countries' GDP: Belarus, Russia, Ukraine, Romania, Eurozone and the United States. This group of countries is the essential

¹ Lucas, Robert, "International Migration Regimes and Economic Development" (Typescript, 2003). Chapter 5, p. 43.

² Orozco, Manuel, *Remittances to Latin America and the Caribbean: Issues and Perspectives on Development*, report Commissioned by the Organization of American States (Washington, DC: Organization of American States, September 2004), p. 26.

destination of the majority of Moldovian migrants in the world. The foreign GDP may be a good proxy for the economic activity in migrants' host countries.

Results are reported in the table below. The adjusted R² is high and the fit of the equation is very good. All the variables are significant and they have the expected signs.

Dependent Variable: LOG(TOTAL_REMIT)				
Method: Least Squares				
Sample: 1998 2009				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-28.00433	6.193372	-4.521660	0.0106
LOG(GDP)	2.702182	0.717353	3.766879	0.0197
LOG(WGDP*X\$A)	0.431184	0.199696	2.159195	0.0970
LOG(CPI)	1.241530	0.519751	2.388702	0.0753
R-squared	0.996259	Mean dependent var		8.140985
Adjusted R-squared	0.993453	S.D. dependent var		0.995419
S.E. of regression	0.080544	Akaike info criterion		-1.893171
Sum squared resid	0.025949	Schwarz criterion		-1.853450
Log likelihood	11.57268	F-statistic		355.0534
Durbin-Watson stat	3.196127	Prob(F-statistic)		0.000026

Remittances increase when economic activity in the home country accelerates and they decrease when economic conditions deteriorate, an indication that investment considerations are at play. In particular, an increase in real GDP by 1% will increase remittances by 2.7%. This suggests that remittances respond to investment opportunities and the business and political climate in the home country as much as to altruistic and insurance considerations.

Remittances increase when the inflation rises: an increase of 1% in consumer price will increase remittances by 1.24%. This implies that migrants have altruistic motivation when they remit. When consumer price increases, the real disposable income of domestic households decreases, and so migrants increase their remittances to the home country in order to sustain their family condition of living.

Remittances increase with foreign GDP: a change in foreign GDP of 1% increases remittances by 0.4. This result suggests that greater economic activity in the host country increases the chances of employment and wages, allowing migrants to send more remittances.

Returning to the second aspect we estimated consumption that includes the new disposable income. We will estimate a simple model that aggregates household disposable income in order to take into account workers' remittances. Aggregate consumption relies then on this new income.

$$C_t = a + cY_t^d + u_t$$

$$Y_t^d \equiv DI_t + WR_t$$

where: C_t is the real aggregate consumption at time t , Y_t^d is the new real disposable income of the households calculated as the sum of the disposable income evaluated by the national accounts (DI_t) and the inflow of workers' remittances (WR_t).

The macroeconomic linkage incorporated in the macroeconomic model will then transmit a shock in the workers' remittances to all others macroeconomic variables because of their linkage with household's consumption.

Dependent Variable: LOG(CONS)				
Method: Least Squares				
Sample: 1994 2009				
Included observations: 14				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.073736	1.045341	1.983789	0.0754
LOG(RDI_RET)	0.786725	0.110212	7.138283	0.0000
R-squared	0.835945	Mean dependent var		9.531749
Adjusted R-squared	0.819539	S.D. dependent var		0.276582
S.E. of regression	0.117494	Akaike info criterion		-1.293849
Sum squared resid	0.138048	Schwarz criterion		-1.213032
Log likelihood	9.763096	F-statistic		50.95509
Durbin-Watson stat	0.520847	Prob(F-statistic)		0.000031

As it can be seen from the estimation results, the new measure of the real disposable income is highly significant. An increase in the real disposable income with remittances of 1% will increase the aggregate consumption of 0.8%.

Recommendations

Main constraints in using remittances in a more productive way are associated with little transfer sums, limited access to the financial market, market failures, too little knowledge about migrant's needs and investment climate.

For Moldova we recommend: stimulating collective investment programs; launching Hometown Associations; fortifying the influence of Moldovian Diaspora; the implementation of specialized international financial products; diversification of financial products offered to migrants and their families; launching programs that stimulate SME's development.

Stability of the remittances is very important on short and medium term in order to maintain living standards. At the same time, sound macroeconomic policies and structural reforms are needed. It is necessary to promote an official way to transfer the remittances and long-term economic policies must not exclusively rely on remittances.

Management of economic migration and remittances is also needed in order to assure the stability of the flows. Thus, we recommend migration management, and external labor occupation policies. It includes external labor agreements, information offices, temporary labor contracts, reduction in costs to migration, utilization of migration as know-how experience.

Also, the following measures could be specified:

- Reduction of the negative effects of remittances;
- Fighting the effects of Dutch disease, fighting poverty and inequality;
- Encouraging positive effects. Increasing the volume of remittances that can be invested;
- Creation of special funds, encouraging financial diversification and assuring non-banking financial institutions to act properly;
- Increasing the volume of deposits due to remittances and decreasing the interest rate for long-term credits – it will provide sources for long-term investment projects;
- Investments in human capital;

- Promotion of national policies that will encourage the process of brain gain and will stimulate education and health of the population.

The only way to channel remittances to investments is to assure a daily expense for those receiving remittances. This means higher incomes. This is why none of the above instruments will work *without a sustainable growth national program*. That should enhance the investment business climate, fight corruption and promote competition and finally, restructure the Moldova's economy.

References

1. Cardona Sosa, L., Medina, C., "Migration as a Safety Net and Effects of Remittances on Household Consumption: The Case of Colombia", Banco de la Republica, Columbia, p 38, available at <http://www.banrep.gov.co/docum/ftp/borra414.pdf>
2. Development Report Commissioned by the Organization of American States (Washington, DC: Organization of American States, September 2004), p. 26.
3. Dovelyn, R. A. (2006), "Remittances and development, Migration Policy Institute", 2006.
4. Glytsos, N.P. (2002), "A Macroeconometric Model of the Effects of Migrant Remittances in Mediterranean Countries", In *Human Capital: Population Economics in the Middle East*, ed. Ismail Abdel-Hamid Sirageldin (Cairo: American University in Cairo Press) cited in Özden and Schiff, "Overview," p. 7
5. Lucas, R. (2003), "International Migration Regimes and Economic Development", Chapter 5, p. 43.
6. Lueth, E., Ruiz-Arranz, M. (2007), "Are workers' remittances a hedge against macroeconomic shocks? The case of Sri-Lanka", *IMF working Paper* No. 07/22, Washington: International Monetary Fund.
7. Moldovan National Public Opinion Survey on Remittances, 2007
8. National Bank of Moldova, www.bnm.md
9. National Bureau of Statistics, www.statistica.md
10. Orozco, M. (2004), "Remittances to Latin America and the Caribbean: Issues and Perspectives on Remittances to Latin America and the Caribbean: Issues and Perspectives on Development", report Commissioned by the Organization of American States (Washington, DC: Organization of American States), p. 26.
11. Özden and Schiff, "Overview," p. 8.
12. Ruiz-Arranz, M. (2006), "Boosting Economic Growth," ID 21 Insights 60 (January 2006), p. 4, <http://www.id21.org/insights/insights60/art03.html>.
13. www.doingbusiness.org/reports/doing-business