

Remittances by recent immigrants

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Remittances—the money immigrants send to family members in their country of origin—have a long tradition. But with today's global networks of financial institutions and telecommunications technologies, the transmission of funds worldwide now takes place at a pace and volume unimaginable earlier.

Considerable work is underway both nationally and internationally to measure remittance flows. The World Bank estimates flows to developing countries at US\$167 billion in 2005 (World Bank 2006). This is likely an underestimate as some remittances through formal channels, such as post offices or exchange bureaus, and remittances below a minimum threshold, are often not recorded in official estimates. Furthermore, remittances through informal channels, like family or friends, generally go unrecorded. Such unrecorded remittances could add 50% or more to the total.

Remittances represent an important revenue source for developing countries. In absolute terms, India (US\$21.7 billion), China (US\$21.4 billion), and Mexico (US\$18.1 billion) top the list (World Bank 2006). In proportional terms, the importance of remittances to many smaller countries is evident. For example, remittances account for about 20% to 30% of GDP in Tonga, Moldova, Lesotho, Haiti, Bosnia and Herzegovina, and Jordan, and for about 10% to 19% in several others, such as Jamaica, El Salvador, the Philippines, the Dominican Republic, Lebanon and Nepal.

The importance of remittances can also be related to national industries. For example, remittances to Mexico "...are more than the country's total tourism

revenues, more than two-thirds of the value of petroleum exports, and about 180% of the country's agricultural exports." (Inter-American Development Bank 2004). More broadly, in 28 countries, remittances are "...larger than the earnings from the most important commodity export." (World Bank 2006) Remittances often also exceed overseas development aid and foreign direct investment.

Recorded estimates of remittance flows to developing countries show a marked increase in recent years, rising by 73% between 2001 and 2005. This trend has been evident across a wide range of nations (World Bank 2006). Many factors are likely at play, including improvements in data collection, a shift from informal to formal networks and developments within the remittance industry (World Bank 2006; Orozco 2006).

While a great deal of Canadian research continues to focus on the labour market and income characteristics of recent immigrants, little attention has been paid to their expenditures, of which remittances are one component.¹ Their preferences or obligations to send money to family members abroad may have implications for other aspects of settlement, such as housing or employment decisions. And while high rates of low income underscore the financial constraints often faced by new Canadians, such figures do not take into account any income used to support family members abroad.

From a macroeconomic perspective, household data on remittances contribute to understanding international financial flows and play a role in the development of concepts and measures for systems of national accounts and balance of payments. Internationally, agencies such as the International Monetary Fund, World Bank, and Inter-American Development Bank (IADB) are interested in the institutional characteristics of bilateral remittance corridors. Indeed, "...efforts are underway to induce users [remittance senders] to shift from informal to formal systems in order to increase the transparency of remittance flows and enhance their contribution to development in the

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Table 1 Remitters and their remittances

	6 to 24 months after arrival		25 to 48 months after arrival	
	Remitters	Average	Remitters	Average
	%	\$	%	\$
Total	23	2,500	29	2,900
Region of birth				
Southeast Asia	52	2,000	56	2,400
Caribbean, Guyana	47	1,400	54	1,600
Sub-Saharan Africa	37	2,400	42	2,500
Eastern Europe	32	1,800	41	2,100
South Asia	23	3,600	28	3,700
Central, South America	23	2,000	25	2,000
East Asia	13	2,900	20	3,900
West Asia, Middle East, North Africa	13	2,000	19	2,500
North America, West Europe, Oceania	11	3,200	11	3,600
GDP/capita, country of birth				
Less than \$2,000	31	1,900	35	2,200
\$2,000 to \$3,999	31	2,700	37	3,000
\$4,000 to \$5,999	20	2,500	25	3,300
\$6,000 to \$7,999	19	1,600	31	2,200
\$8,000 to \$14,999	26	2,400	28	1,900
\$15,000 and over	8	3,100	11	3,900

Note: Averages are for those who remitted and have not been adjusted for inflation.

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

recipient countries.” (Hernández-Coss 2006) The Multilateral Investment Fund of the IADB identifies better documentation of the importance of remittances, reduced transaction costs and improved leveraging of the development impact of remittances as key objectives (Orozco 2002). Information on the entire remittance process, from senders to recipients, is needed to build a complete picture of this complex phenomenon.

Despite the ongoing interest, research on the characteristics of remittance senders in Canada remains quite limited, largely because of the absence of data. More broadly, studies are often focused on immigrants from only one or two source countries. This study uses the Longitudinal Survey

of Immigrants to Canada (LSIC) to document the prevalence of remitting and the amounts remitted by immigrants from a wide range of countries (see *Data source and methodology*). The incidence of remitting by the 2000/2001 landing cohort ranged from less than 10% to about 60%; the average amounts ranged from about \$500 to almost \$3,000 per year. Financial and family characteristics were consistently significant among immigrants from all regions, but other factors, such as sex and education, were significant for only some.

Descriptive results

A significant minority of immigrants from the 2000/2001 landing cohort remitted funds to family or friends abroad during their first

four years in Canada. In the 6 to 24 months after landing, 23% of immigrants remitted and 25 to 48 months after landing 29% did so (Table 1). Among those who remitted, the average amount was \$2,500 in the first reference period and \$2,900 in the second.⁴ Assuming the total to be evenly distributed over the reference period, annual remittances during the third and fourth years in Canada were \$1,450, which is comparable to estimates that Haitian and Jamaican immigrants send approximately \$1,000 to \$1,400 home per year (Simmons et al. 2005).

The extent to which remittance behaviour varies by region of birth is evident. Over half of immigrants from Southeast Asia and the Caribbean and Guyana sent remittances home 25 to 48 months after landing, compared with about 40% of those from sub-Saharan Africa and Eastern Europe. About one-quarter of the respondents from South Asia and Central and South America sent remittances during this period, while about one-fifth of those from East Asia or West Asia, the Middle East and North Africa did so. The average amounts sent also differed. Immigrants from East Asia sent \$3,900, while immigrants from the Caribbean and Guyana sent \$1,600.

The incidence of remitting was highest among those from countries with lower GDP per capita. Over the 25 to 48 months after landing, around 36% of immigrants from countries with GDP per capita under \$4,000 remitted, compared with only 11% from countries with GDP per capita of \$15,000 or more. One interpretation is that because their families are in greater need of financial support, immigrants from poorer countries are more likely to remit.

That being said, the relationship between GDP per capita and the incidence of remitting is fairly flat between these extremes, ranging from about 25% to 30%. Conditional on remitting, a consistent relationship between GDP per capita and average amounts was not evident.

By country of birth, variability is particularly striking (Chart A). Some 60% of immigrants from the Philippines and Haiti remitted two to four years after landing, while about 40% to 50% of immigrants from Jamaica, Nigeria, Romania, Guyana and Ukraine did so.⁵ Quite clearly, remittances are sent by many new immigrants from a diverse set of world regions. France, the United Kingdom and South Korea—all industrialized—are at the bottom of the distribution.

As for the average amounts sent, remitters from 11 of 24 countries sent between \$1,700 and \$2,200, and remitters from another 7 countries sent between \$2,700 and \$3,700 (Chart B). While less than 20% of immigrants from the United States sent money home, the average amount was quite high—just under \$6,000. (However, the confidence intervals around many of the estimates are quite large.)

In terms of admission categories, about 30% of immigrants in all three categories remitted 25 to 48 months after landing (Table 2). Among those who did remit, economic immigrants sent somewhat larger amounts than refugees (\$3,000 versus \$1,900). How-

ever, measures of central tendencies, like averages, demonstrate little about the range of values. Just over one-quarter of immigrants who remitted 25 to 48 months after landing sent less than \$500. This was the case for 21% of economic immigrants compared with 45% of refugees. About one-half of immigrants in all categories sent between \$500 and \$2,500. And at the high end of the distribution, 12% of the economic immigrants who remitted sent \$5,000 or more compared with 5% of refugees.

An important issue is the extent to which remittances impose financial hardships on newly arrived immigrants. Several studies have documented the relatively high and rising rates of low income among recent immigrants (Heisz and McLeod 2004; Picot et al. 2007). While measures of low income take the number of family members residing together into account, they do not take the sharing of income with members residing elsewhere into account. This applies to all families regardless of immigration status. However, given the relatively high rates of low income among recent immigrants and with almost one-third of them

Table 2 Remittances 25 to 48 months after landing

	Immigrant category			
	Total	Eco- nomic	Family- class	Refugee
Remitters (%)	29	29	29	31
Average amount (\$)	2,900	3,000	2,700	1,900
Remitters sending	100	100	100	100
Less than \$500	26	21	33	45
\$500 to \$999	21	22	19	17
\$1,000 to \$2,499	24	26	22	19
\$2,500 to \$4,999	18	19	16	14
\$5,000 or more	11	12	10	5

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

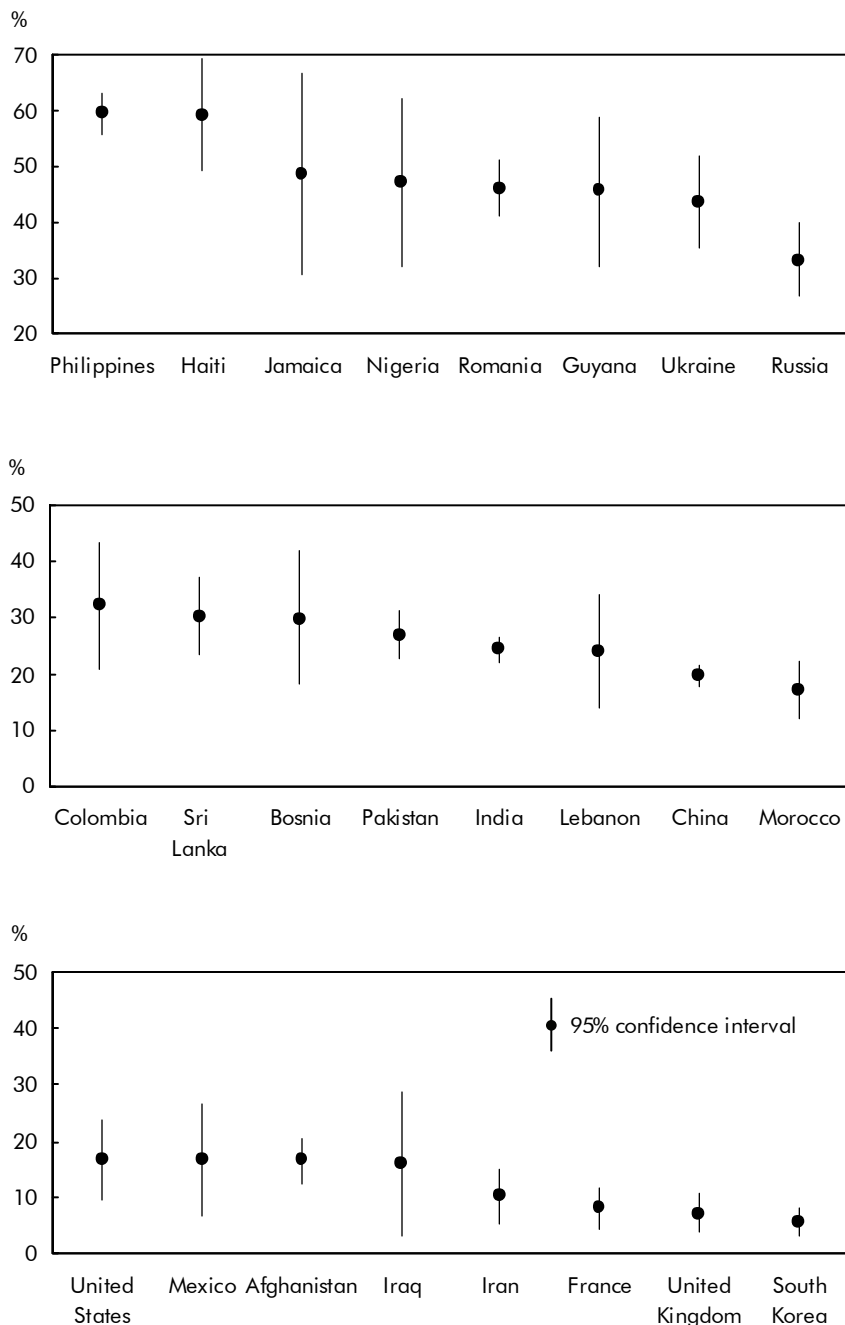
Data source and methodology

The **Longitudinal Survey of Immigrants to Canada (LSIC)**, conducted jointly by Statistics Canada and Citizenship and Immigration Canada (CIC), included all immigrants who arrived between October 1, 2000 and September 30, 2001; were age 15 or older on landing; and had applied through the Canadian Mission abroad. The sampling frame was an administrative database maintained by the CIC. The LSIC used two-stage stratified sampling. The first stage selected **immigrating units (IUs)** using probability proportional to size and the second randomly selected one member within each IU. Only the selected member was followed throughout the survey.

Respondents were first interviewed about six months after arrival and then again after two and four years. During the first interview they were asked if, since arriving, they had sent money outside Canada to relatives or friends—they were not asked the amount. During the second and third interviews, respondents were also asked the amounts.

The multivariate analysis includes a logistic regression on the likelihood of remitting and an ordinary least squares regression on the natural logarithm of the amount remitted. Coefficients from the logistic regressions have been converted into predicted probabilities for ease of interpretation.² Coefficients from the natural logarithm of the amount remitted approximate percentage differences and are discussed in these terms for ease of presentation. All models are calculated using bootstrap weights to correct variance estimates for survey design (a technique called design-based variance estimation).³

Chart A The proportion of immigrants making remittances varied considerably by country of origin



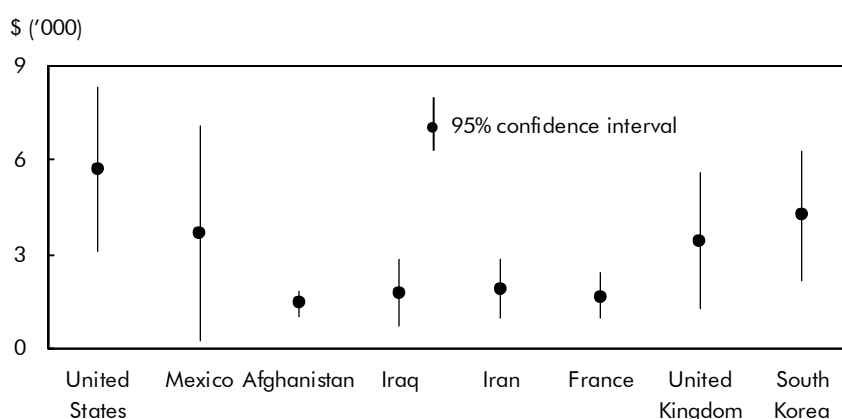
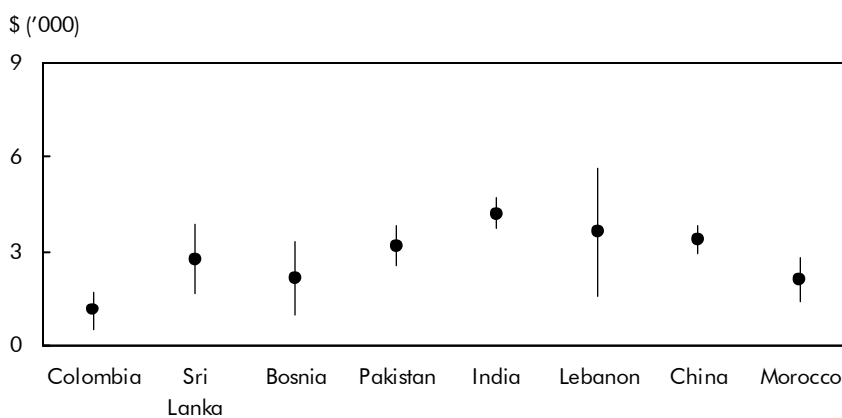
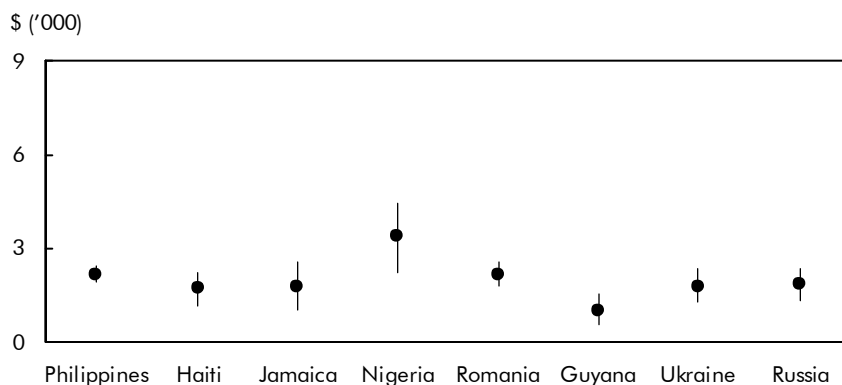
Note: Average of the average amounts remitted (conditional on remitting) at two years and four years after landing.
 Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

sending money abroad, their financial resources may be stretched further than income figures alone would suggest.

Caution is warranted when addressing this issue. Because remittance behaviour is measured using individuals rather than families or households, estimates of amounts sent abroad are likely conservative. Furthermore, remittances as a share of income can be computed using total personal income or total economic family income as the denominator. Personal income yields a higher percentage, but does not take any sharing of financial resources into account. Family income yields a lower percentage, but mixes units of analysis (personal remittances and family income). Results from both approaches represent conservative estimates of the lower and upper bounds of remittances as a share of income (Table 3). Remittances accounted for 7.5% of the personal income of remitters and 3.4% of family income, on an average annualized basis, during remitters' second year in Canada. Two years later, remittances accounted for 5.9% and 2.9%.⁶

When all immigrants are considered, regardless of whether they remitted, remittances accounted for 3.7% and 3.4% of aggregate personal income, and 1.6% and 1.3% of aggregate family income, two and four years after arrival. From this perspective, remittances account for a fairly small share of the income of newly arrived immigrants. Nonetheless, remittances may still represent a considerable expenditure for some families—take refugees for example. The average family income of refugees who remitted during their fourth year in Canada was \$36,100. By comparison, the 2004 before-tax

Chart B Average remittances were less than \$4,000 for three-quarters of 24 countries of origin



Note: Average of the average amounts remitted (conditional on remitting) at two years and four years after landing.
 Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

low-income cut-off (LICO) was just over \$31,000 for a three-person family and just under \$38,000 for a four-person family residing in a large urban centre. (The LICO is an income threshold below which a family will likely devote a larger share of its income than the average family on the basic necessities of food, shelter and clothing.) For refugees who remitted, the average of almost \$1,000 came from a fairly modest family income.

Multivariate results, pooled model

Descriptive statistics demonstrate the magnitude of differences in remittance behaviour, which partly reflect the characteristics and experiences of individuals from different countries. The significance of the various factors was examined via logistic regression and based on ordinary least squares regression.

Demographic characteristics

A modest correlation could be seen between sex and remittance behaviour, with predicted probabilities of remitting (after taking other characteristics into account) of 26% for men and 23% for women (Table 4). Among those remitting, women sent approximately 12% less than men. Age is also important—the predicted probability was highest among immigrants aged 25 to 44 (about 30%) and lower among those in younger and older age groups (less than 20%). Individuals 25 to 34 who remitted sent larger amounts than those under 25 or 55 and older.

Financial capacity

Consistent with the literature, strong correlations were found between remittance behaviour and financial capacity. For example, the

Table 3 Annual incomes of remitters

	Total	Immigrant category		
		Eco- nomic	Famil- y- class	Refugee
2nd year after arrival				
Personal income (\$)	22,200	27,200	14,100	12,500
Remittance as share of income (%)	7.5	6.7	10.4	8.1
Family income (\$)	48,700	51,000	47,400	28,300
Remittance as share of income (%)	3.4	3.5	3.1	3.6
4th year after arrival				
Personal income (\$)	28,200	33,600	17,500	16,400
Remittance as share of income (%)	5.9	5.4	8.4	6.1
Family income (\$)	57,200	61,100	52,600	36,100
Remittance as share of income (%)	2.9	3.0	2.8	2.8

Note: Based on those making remittances.

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

predicted probability of remitting rose monotonically with family income, from 10% among immigrants with family incomes under \$10,000 to 36% among those with incomes of \$70,000 or more. The amounts sent also increased monotonically. The amount sent by remitters in families with incomes of \$70,000 or more was approximately 45% higher than the amount for those with incomes of \$25,000 to \$44,999.

Considering savings abroad, immigrants who had \$5,000 or more were significantly less likely to remit (about 20%) than those with no savings abroad (26%). One interpretation is that immigrants with savings abroad come from more affluent families, and hence were less likely to remit. Among remitters, the amounts were not correlated with savings.

Consistent with other studies, immigrants employed full time were significantly more likely to remit than those employed part time or not employed (predicted probabilities of 29%, 25% and 21% respectively). However, employment status was not correlated with the amount sent.

The probability of remitting was not significantly associated with immigrants' level of education upon arrival. However, the amounts sent by those with no

postsecondary education were 20% to 25% less than the amounts sent by those with a university degree.

Finally, place of residence was positively correlated with both incidence of remitting and amounts. The predicted probability of remitting ranged from 21% among immigrants in Montréal to 34% in Calgary and Edmonton. Through the 2000s, the labour markets in Calgary and Edmonton have been especially robust, fuelled by oil and gas and high world commodity prices. In 2004, for example, the unemployment rates in Edmonton and Calgary for men aged 25 to 44 (3.7% and 4.4% respectively) were about half the rate in Montréal (8.7%). The greater incidence of remitting among immigrants in these cities likely reflects favourable labour market circumstances and perhaps positive expectations about future earnings. Among immigrants who remitted, those in Calgary, Edmonton and Vancouver sent about 16% more than those in Toronto.

Obligations to family

Although LSIC information on family abroad is limited, the available evidence is consistent with the view that remittance behaviour is shaped by family characteristics. The likelihood of remitting and the amounts were negatively correlated with the number of minor children in the household. The predicted probability of remitting was 18% for households with three or more children, compared with 27% for those with no children. Furthermore, amounts sent by remitters with one or two children were 17% to 19% less, and with three or more children 36% less, than by those with no children.

The importance of family characteristics was also evident in intentions to sponsor family members to come to Canada. Immigrants already sponsoring or intending to sponsor a spouse or child were more likely to remit than those with no sponsorship activities or intentions (predicted probabilities of 36% and 23% respectively). Those sponsoring a child or parent sent approximately 23% more than those with no sponsorships. The same patterns were evident among immigrants sponsoring a parent or grandparent. Their predicted probability of remitting was 30% and they sent approximately 12% more. These findings are consistent with other studies reporting that immigrants remitting to support children and spouses tend to send more than those helping other family members (Stanwix and Connell 1995).

Table 4 Regression results on pooled sample

	Logistic regression coefficients on probability of remitting	Predicted probability of remitting ¹	Ordinary least squares coefficients on natural log of remittance
		%	
Sex			
Men (ref*)	...	26	...
Women	-0.170*	23	-0.117*
Age			
15 to 24	-0.718*	17	-0.200*
25 to 34 (ref*)	...	30	...
35 to 44	-0.093	28	-0.073
45 to 54	-0.607*	19	-0.017
55 or older	-0.879*	15	-0.277*
Family income			
Less than \$10,000	-1.110*	10	-0.453*
\$10,000 to \$24,999	-0.605*	16	-0.316*
\$25,000 to \$44,999 (ref*)	...	26	...
\$45,000 to \$69,999	0.235*	31	0.220*
\$70,000 or more	0.471*	36	0.445*
Savings abroad			
No saving abroad (ref*)	...	26	...
Less than \$5,000	-0.109	24	0.014
\$5,000 to \$24,999	-0.477*	18	0.135
\$25,000 or more	-0.318	20	0.111
Missing	-0.237	21	-0.030
Person most knowledgeable on income			
Respondent (ref*)	...	26	...
Other	-0.280*	21	-0.073
Employment status			
Employed full time (ref*)	...	29	...
Employed part time	-0.239*	25	-0.099
Not employed	-0.465*	21	-0.065
Education at landing			
Less than high school	0.131	27	-0.255*
High school	0.035	25	-0.201*
Completed postsecondary	-0.065	23	-0.078
University degree (ref*)	...	24	...
Place of residence			
Toronto (ref*)	...	23	...
Montreal	-0.143	21	0.099
Vancouver	0.167*	26	0.159*
Calgary, Edmonton	0.553*	34	0.158*
Other	0.204*	27	0.036
Children in household			
No children (ref*)	...	27	...
One	-0.153*	24	-0.169*
Two	-0.404*	20	-0.187*
Three or more	-0.512*	18	-0.361*
Sponsorship			
None (ref*)	...	23	...
Spouse or child	0.598*	36	0.231*
Parent or grandparent	0.322*	30	0.117*

Immigrant class

Although descriptive statistics indicated little difference in the incidence of remitting by immigration category, the picture changed somewhat with other characteristics taken into account. More specifically, the predicted probability of remitting was somewhat higher among family class immigrants (27%) than among economic immigrants (23%). Similarly, the predicted probability of remitting was 28% among refugees (although this estimate was just over the 0.1 level of confidence). The immigration category was not correlated with amounts sent.

Organizational involvement

Of the two organizational participation/involvement variables in the model, one was significant. Specifically, those belonging to a religious organization were more likely to remit than other immigrants (predicted probabilities of 28% and 24% respectively). Organizational involvement was not correlated with amounts remitted.

Region of birth

Dummy variables identifying immigrants from nine regions captured interregional differences in remittance behaviours net of other characteristics. Again, the differences were large. The predicted probability of remitting was highest among immigrants from Southeast Asia and the Caribbean and Guyana (52%), followed by Eastern Europe and sub-Saharan Africa (35% and 32%). The likelihood of remitting was lowest for those from West Asia, the Middle East and North Africa (16%), North America, Western Europe and Oceania (17%) and East Asia (18%). Among remitters, those from East Asia sent the largest amounts.

Table 4 Regression results on pooled sample (concluded)

	Logistic regression coefficients on probability of remitting	Predicted probability of remitting ¹	Ordinary least squares coefficients on natural log of remittance
		%	
Immigrant category			
Family class	0.174*	27	-0.033
Economic (ref*)	...	23	...
Refugee	0.249	28	-0.135
Member of religious organization			
No (ref*)	...	24	...
Yes	0.230	28	-0.046
Member of ethnic/immigrant organization			
No (ref*)	...	25	...
Yes	0.145	27	-0.002
Region of birth			
North America, Western Europe, Oceania	-0.067	17	-0.554*
Eastern Europe	0.860*	35	-0.629*
Caribbean, Guyana	1.586*	52	-0.789*
Central, South America	0.362*	24	-0.693*
Sub-Saharan Africa	0.760*	32	-0.487*
West Asia, Middle East, North Africa	-0.148	16	-0.461*
East Asia (ref*)	...	18	...
Southeast Asia	1.581*	52	-0.770*
South Asia	0.283	23	-0.139
GDP/capita, country of birth			
Less than \$2,000	0.566*	38	-0.169
\$2,000 to \$3,999 (ref*)	...	26	...
\$4,000 to \$5,999	0.127	28	-0.215*
\$6,000 to \$7,999	0.143	29	-0.216*
\$8,000 to \$14,999	-0.466*	18	-0.283*
\$15,000 or more	-0.957*	12	-0.133
Constant	-0.782*	...	8.089*

* statistically significant or significantly different from a reference group (ref) at 0.05 or better
1. Predicted probability of remitting with other co-variables set to their mean values.

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

Finally, remittance behaviour was significantly associated with GDP per capita in the country of birth. The predicted probability of remitting was highest for immigrants from countries with GDP per capita below \$2,000 (38%) and lowest for countries with GDP per capita of \$8,000 to \$14,999 (18%) or \$15,000 or more (12%).

Multivariate results, regional comparisons

Given the considerable variation in the remittance behaviour of immigrants from different regions, one question that arises is whether the factors associated with remitting are universal or regional. To address this, separate regression

models were estimated for immigrants from nine regions. Because three of these models were based on samples of less than 800, the likelihood of regression coefficients being statistically significant was reduced. Hence, these models used a simplified specification—some co-variables were excluded because they were correlated with region (e.g. immigrant category), while others, like number of children, were re-grouped into fewer categories.

Several characteristics were consistently correlated with remittance behaviour (Tables 5 and 6). This was most evident for financial capacity. The likelihood of remitting and the amount were both positively and significantly correlated with family income for seven of the nine regions.⁷ Employment status was correlated with the likelihood of remitting for six regions, but the amount for only two. Finally, savings abroad were negatively correlated with the likelihood of remitting for five regions, but not correlated with the amount sent for any.

The correlations between presence of children and the likelihood of remitting and the amount were significant for four regions, and approached significance for another. The positive correlation between sponsorship of a family member and the likelihood of remitting was significant for five regions, but significant for the amount in only two cases.

The negative correlation between older ages and the likelihood of remitting was significant for six of the nine regions, but the correlation with the amount sent was significant in only one case.

Table 5 Logistic regression on the probability of remitting by region of birth

Region	A	B	C	D	E	F	G	H	I	
Sex					β coefficient					
Men (ref*)	...	...	...	...	...	...	...	...	...
Women	-0.302	-0.127	0.015	-0.030	-0.058	-0.545*	0.101	-0.023	-0.445*	
Age group										
15 to 24	-0.271	-0.200	-0.238	-0.293	-0.826*	-0.604*	-0.809*	-1.110*	-1.017*	
25 to 34 (ref*)	...	...	...	...	...	...	...	...	...
35 to 44	0.399	-0.070	0.457	-0.303	-0.084	-0.195	-0.114	-0.146	-0.035	
45 to 54	0.483	-0.405	0.273	-1.124	-1.140*	-0.721*	-0.766*	-0.525*	-0.958*	
55 or older	0.441	-0.784*	-1.026	-0.666	-0.536	-2.454*	-0.591	-0.789*	-1.090*	
Family income										
Less than \$10,000	..	-0.557	-0.666	-0.568	-1.180*	-0.913*	-1.483*	-1.452*	-1.428*	
\$10,000 to \$24,999	-0.530	-0.836*	-0.095	-0.775*	-0.447	-0.532*	-0.790*	-0.441*	-0.432*	
\$25,000 to \$44,999 (ref*)	...	...	...	...	...	...	...	...	...
\$45,000 to \$69,999	-0.151	0.458*	-0.117	-0.067	-0.188	0.438*	0.454*	0.206	0.104	
\$70,000 or more	0.228	0.811*	0.348	0.284	-0.092	0.860*	0.823*	0.405*	0.352*	
Savings abroad										
No saving abroad (ref*)	...	...	...	...	...	...	...	...	...
Less than \$5,000	-0.109	-0.950	-0.338	-0.296	-0.311	0.319	-0.470	0.528*	-0.139	
\$5,000 to \$24,999	-0.914*	-0.748	-0.544	-1.425	-1.383*	-1.319*	-0.252	-0.246	-0.192	
\$25,000 or more	0.193	0.605	-2.493*	-1.926*	-0.724	-0.490	-0.809	-0.599	0.103	
Missing	0.354	-0.654	-0.528	-0.666	-1.104	-0.825	-0.525*	-0.429	0.086	
Person most knowledgeable on income										
Respondent (ref*)	...	...	...	...	...	...	...	...	...
Other	-0.106	-0.197	-0.053	-0.576	-0.045	-0.051	-0.551*	-0.158	-0.302*	
Employment status										
Employed full time (ref*)	...	...	...	...	...	...	...	...	...
Employed part time	-0.129	-0.055	-0.311	0.429	-0.113	-0.273	-0.451*	-0.199	-0.405*	
Not employed	-0.356	-0.335*	-0.745*	0.197	-0.712*	-0.358	-0.683*	-0.584*	-0.214*	
Education at landing										
Less than high school	-0.480	-0.527*	-0.031	0.552	-0.155	0.071	0.861*	0.345	0.189	
High school	-0.405	-0.269	0.045	1.325*	-0.003	-0.219	0.986*	0.118	0.024	
Completed postsecondary	-0.397	-0.174	-0.870*	0.677	-0.201	-0.191	0.217	0.082	-0.163	
University degree (ref*)	...	...	...	...	...	...	...	...	...
Place of residence										
Toronto (ref*)	...	...	...	...	...	...	...	...	...
Montreal	-0.384	-0.026	0.339	-0.347	-0.066	-0.016	-0.465*	-0.176	-0.507	
Vancouver	-0.274	0.250	-1.199	-0.125	0.861	0.285	0.006	0.354*	0.311*	
Calgary, Edmonton	0.583	0.588*	0.046	-0.120	0.979*	1.419*	0.422*	0.490*	0.254	
Other	-0.163	-0.016	0.816*	-0.427	0.822*	0.494	-0.029	0.921*	0.167	
Children in household										
No children (ref*)	...	...	...	...	...	...	...	...	...
One	0.033	-0.154	-0.546	0.175	0.937*	-0.262	-0.166	-0.131	-0.301*	
Two or more	-0.776*	-0.308	-0.641	0.060	-0.536	-0.650*	-0.319	-0.395*	-0.490*	
Sponsorship										
None (ref*)	...	...	...	...	...	...	...	...	...
Spouse or child	1.646*	0.888*	1.001*	0.805	0.596	0.437	0.209	0.646*	0.390*	
Parent or grandparent	0.507	0.315*	0.526	0.314	0.060	0.209	0.264	0.282	0.310*	
Member of organization										
No (ref*)	...	...	...	...	...	...	...	...	...
Yes	0.061	0.239	0.247	0.259	0.511*	0.551*	-0.316*	-0.199	0.218	
GDP/capita	-0.044*	-0.058*	-0.048	-0.083	-0.129*	-0.079*	-0.057*	-0.139*	0.198*	
Constant	-0.172	0.279	0.641	-0.365	0.343	0.050	-0.674*	1.097*	-0.462	

* statistically significant or significantly different from a reference group (ref) at 0.1 or better

A = North America, Western Europe, Oceania

B = Eastern Europe

C = Caribbean, Guyana

D = Central, South America

E = Sub-Saharan Africa

F = West Asia, Middle East, North Africa

G = Eastern Asia

H = Southeast Asia

I = South Asia

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

Table 6 Ordinary least squares regression on the amount remitted by region of birth

Region	A	B	C	D	E	F	G	H	I
Sex	β coefficient								
Men (ref*)	...	...	...	...	...	...	...	...	...
Women	-0.536	-0.086	-0.083	-0.445	-0.229	-0.268	0.056	0.048	-0.173
Age group									
15 to 24	-0.747	-0.074	-0.155	-0.408	-0.179	-0.438*	0.046	-0.136	-0.147
25 to 34 (ref*)	...	...	...	...	...	...	...	...	...
35 to 44	0.157	-0.154	-0.030	-0.077	0.137	-0.292*	-0.143	0.041	-0.077
45 to 54	-0.147	-0.036	-0.418	0.852	0.509	-0.031	-0.019	-0.014	-0.003
55 or older	-0.317	-0.206	-0.416	-1.125	-1.073	0.217	-0.390	-0.095	-0.144
Family income									
Less than \$10,000	..	-0.414	-0.163	0.786	-0.165	-0.823*	-0.298	-0.916*	-0.549
\$10,000 to \$24,999	0.354	-0.476*	-0.256	-0.441	-0.435*	-0.524*	-0.047	0.109	-0.472*
\$25,000 to \$44,999 (ref*)	...	...	...	...	...	...	...	...	...
\$45,000 to \$69,999	0.271	0.161	-0.093	0.009	0.157	0.422*	0.095	0.418*	0.232*
\$70,000 or more	1.233*	0.331*	0.024	0.901*	0.823*	0.549*	0.361*	0.486*	0.363*
Savings abroad									
No saving abroad (ref*)	...	...	...	...	...	...	...	...	...
Less than \$5,000	0.101	-0.133	0.109	0.330	0.479	0.048	0.633*	-0.100	-0.069
\$5,000 to \$24,999	0.791	0.263	-0.274	-0.732	0.551	0.613	-0.037	0.140	0.175
\$25,000 or more	0.443	0.803*	2.865	-1.025	-0.831*	0.571	-0.021	0.201	-0.225
Missing	0.054	-0.648*	0.419	-0.921	-0.817	-0.374	0.209	0.506*	-0.263
Person most knowledgeable on income									
Respondent (ref*)	...	...	...	...	...	...	...	...	...
Other	0.539	0.029	-0.015	-0.047	-0.168	-0.037	-0.219	-0.161	0.104
Employment status									
Employed full time (ref*)	...	...	...	...	...	...	...	...	...
Employed part time	-0.387	-0.151	0.072	-0.534	0.157	0.061	-0.072	-0.220	-0.204
Not employed	0.230	-0.001	-0.049	-0.567*	0.044	-0.110	0.017	-0.164	-0.210*
Education at landing									
Less than high school	0.881	-0.621	-0.466*	-0.801	-0.499	0.022	-0.296	-0.396*	-0.066
High school	0.382	-0.048	-0.636*	-0.646	-0.540*	0.044	-0.261	-0.263	-0.149
Completed postsecondary	0.768*	-0.183	-0.566*	-0.540	-0.244	0.204	-0.172	-0.086	-0.031
University degree (ref*)	...	...	...	...	...	...	...	...	...
Place of residence									
Toronto (ref*)	...	...	...	...	...	...	...	...	...
Montreal	0.188	0.030	0.208	0.290	-0.676*	0.101	0.094	0.214	0.296
Vancouver	0.773	-0.029	0.987	0.538	-0.242	0.011	-0.065	0.072	0.423*
Calgary, Edmonton	1.079*	0.187	-0.714	0.037	-0.223	0.215	0.234	0.061	0.064
Other	0.870*	-0.015	-0.092	0.404	-0.427	-0.019	-0.074	0.001	0.211
Children in household									
No children (ref*)	...	...	...	...	...	...	...	...	...
One	-0.645	-0.016	-0.062	0.361	-0.109	-0.618*	-0.025	-0.210	-0.121
Two or more	-0.520	0.109	-0.317	-0.149	-0.428*	-0.381*	0.069	-0.273*	-0.352*
Sponsorship									
None (ref*)	...	...	...	...	...	...	...	...	...
Spouse or child	0.711	0.830*	0.381	-0.488	0.623*	0.225	-0.011	0.047	-0.070
Parent or grandparent	0.732	0.063	0.242	-0.339	0.114	0.261	0.210	0.073	0.060
Member of organization									
No (ref*)	...	...	...	...	...	...	...	...	...
Yes	0.493	-0.072	-0.065	-0.083	0.044	0.051	0.052	0.067	-0.188*
GDP/capita	0.033	-0.020	0.022	-0.251*	-0.013	0.043*	-0.007	-0.005	-0.123
Constant	5.343*	7.306*	7.322*	9.694*	7.892*	7.450*	7.645*	7.038*	8.384*

* statistically significant or significantly different from a reference group (ref) at 0.1 or better

A = North America, Western Europe, Oceania

B = Eastern Europe

C = Caribbean, Guyana

D = Central, South America

E = Sub-Saharan Africa

F = West Asia, Middle East, North Africa

G = Eastern Asia

H = Southeast Asia

I = South Asia

Source: Statistics Canada and Citizenship and Immigration Canada, Longitudinal Survey of Immigrants to Canada, 2000/2001 cohort.

Overall, the significance of financial and family characteristics was far more evident in terms of the decision to remit than for the amount sent. Furthermore, the results suggest a considerable interregional consistency in some of the factors correlated with remittance behaviour, most notably financial and familial characteristics.

In other instances the correlates of remittance behaviour appear to be more evident for specific regions. For example, women from South Asia and West Asia, the Middle East and North Africa had a negative correlation with the likelihood of remitting. Such correlations were not evident for other regions.

In the literature, evidence on the significance and direction of the correlation between education and remitting is mixed. This was also the case here. Among immigrants from Eastern Europe, those with less than high school education were less likely to remit than those with a university degree. Among immigrants from the Caribbean and Guyana, those with a postsecondary certificate or diploma were less likely to remit than those with a degree. The correlation runs in the opposite direction among immigrants from Central and South America and from Eastern Asia, as immigrants with lower levels of educational attainment were more likely to remit. However, remitters with lower levels of educational attainment sent less money than those with university training for three of the nine regions.

Finally, a strong, positive correlation was seen between membership in an organization and remitting for immigrants from sub-Saharan Africa and West Asia, the Middle East and North Africa.

Summary

During their initial years in Canada, a significant minority of new immigrants send money to family or friends abroad. On an annual basis, the average amount was approximately \$1,450, accounting for about 6% of personal and 3% of family income before taxes.

Remittance behaviour varied greatly. Within a single landing cohort, the incidence of remitting among immigrants from different countries ranged from less than 10% to around 60%, while the annual amounts ranged from about \$500 to almost \$3,000. Financial and family characteristics were consistently significant among immigrants from all regions. In contrast, other

factors, such as sex and education, were significant for some regions but not others. Furthermore, large intercountry and interregional differences remained after socioeconomic characteristics and group composition were taken into account.

Perspectives

■ Notes

1. Considerable emphasis has been placed on earnings trajectories after arrival, economic returns to foreign credentials and experience, ability to find employment in an area of specialization, and incidence of low income. For a review see Picot 2004.
2. Predicted probabilities for each independent variable were estimated by setting the other independent variables to their mean values.
3. Some researchers have used the Heckman selection model (1976) to take into account the possibility that the sample of immigrants who remit may be a selective sample of those who could have remitted (Funkhouser 1995; Brown and Piorine 2005). Several Heckman models were run using different specifications to address this issue but evidence of selectivity was not found. Our results are consistent with several studies that also report that selection effects are modest or not statistically significant (Menjivar et al. 1998; Funkhouser 1995).
4. All dollar figures have been rounded to the nearest \$100. Remittance amounts reported 2 years and 4 years after arrival have not been adjusted for inflation. Questions about remitting and remittance amounts were included in the income section of the LSIC questionnaire. This section includes numerous questions about the income of the respondent and respondent's family—all of which refer to the 12-month period preceding the interview. At the end of the section, respondents were asked if they had remitted since their last interview, and if so, how much they had remitted. Here, the reference period shifts from the 12 months preceding the survey to the 18- or 24-month period preceding the survey (the duration varies between Waves 2 and 3). Given the sudden shift in the reference periods, it is not clear if respondents who reported remittance amounts had a 12-month or 18/24-month reference period in mind.
5. The estimates in Chart A are computed by taking the average of the incidences of remitting at LSIC Wave 2 (i.e. 24 months after landing) and at LSIC Wave 3 (i.e. 48 months after landing). This approach reduces standard errors around the estimates (which are still large in many cases) and simplifies the presentation of the data. The same approach is used for Chart B.

6. For immigrants who remitted, average family income after expenditures on housing (rent or mortgage, taxes and utilities) was also computed and used to estimate remittances as a share of family income after housing expenditures. For immigrants in all three admission categories, remittances accounted for about 4.0% to 4.9% of family income after housing expenditures
7. In this section, within-region correlations with P-values of 0.1 or better are flagged as statistically significant. The usual threshold of 0.05 was relaxed because of the small number of cases in several of the models.

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