Measuring Migration's Development Impacts:

Preliminary evidence from Jamaica

Development on the Move Working Paper 2

by Robert E.B. Lucas and Laura Chappell

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Global Development Network and Institute for Public Policy Research

Contents

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The views expressed in this paper are those of the authors only.

Executive summary

This is the second working paper from GDN and ippr's global research project *Development on the Move: Measuring and Optimising Migration's Economic and Social Impacts*. It is written with two purposes in mind: to present the first set of findings from the project and to illustrate the potential of the *Development on the Move* survey, providing a useful resource for the researchers we are working with in other countries, and to researchers outside this project.

Project findings

Using the data from the pilot household survey conducted in Jamaica, we first set out the prevalence of international migration in Jamaican society, and some of the impacts that migration appears to be having on development in the country. Key findings include:

1. Migration appears to be woven into the pattern of Jamaican living and society. Our survey found that 2 per cent of Jamaican households contain immigrants, 15 per cent have migrants who are currently away and 28 per cent have 'returned migrants' – Jamaicans who are currently living in Jamaica, but have been a migrant at some time in the past.
2. Short-term migration is highly prevalent in Jamaica. More than half of Jamaica's returned migrants were away for less than a year on their last trip, and around 15 per cent of Jamaican households include at least one person who has previously lived abroad for a period of between 3 and 12 months. This shows that the traditional view of migration as a permanent move from one country to another is outdated, and that policymakers and researchers need to pay much greater attention to short-term circular movements.
3. Remittances are received by significant numbers of households, reflecting the high prevalence of migration. However, very strikingly, as well as a high proportion of households receiving remittances from migrants who were members of their household before they left, we also found large numbers of households receiving remittances from people who were not previously members of that household. 28 per cent of Jamaican households receive the latter kind of remittance, and almost half of these remitters were not related to the households they were sending money to, showing the extent to which the effects of migration spread beyond families of migrants.

Second, we found migration to have some significant impacts on certain aspects of development in Jamaica:

4. Living standards (measured by a household's asset ownership) rise more quickly over time when a household contains migrants, holding all other factors steady. This effect is strongest when households contain a returned migrant. This suggests migration has a positive impact on a household's living standards.
5. Migration can affect the educational progress of household members. On the one hand, when a household receives remittances, this money boosts the household budget, allowing it to increase spending on children's education. On the other hand, it appears that when a migrant goes abroad and leaves his or her children behind, there is a significant, negative impact on the children's school attendance. We believe this is the first time that this kind of effect has been shown using quantitative data; however, it should be considered with some caution given the small size of the sample on which it is based.
6. Households that received remittances were able to spend more on healthcare as their household budgets rose. However, having a migrant in the household – whether currently away or returned – was also associated with higher healthcare spending, regarless of whether remittances were being received or not. This may be because of a 'learning effect', whereby people's experiences abroad lead them to value health and healthcare more, and these values are passed on to their families. This might be a concrete example of 'social remittances', whereby ideas and values might be passed between cultures as people move around the world.

7. Finally, migration appears to have a relationship with personal security. Jamaica has serious problems with crime and gangs, and some policymakers have suggested that migration could help improve the situation by moving young, unemployed people, a group who are often involved in crime, out of Jamaica and into employment abroad. However, our data shows that only 1 per cent of the migrants who were away at the time of the survey had previously been young and unemployed at home. In contrast, unemployed young people make up 3 per cent of the non-migrant Jamaican population. Jamaica is holding onto, rather than exporting, its young and unemployed in disproportionate numbers, therefore. While this might not be unexpected, it is still disappointing for those who hoped migration might be part of the solution to Jamaica's crime problems.

Introduction

Development on the Move: Measuring and Optimising Migration's Economic and Social Impacts is a large, innovative, policy-focused research project aiming to examine migration's impacts on development. It is run jointly by the Global Development Network, based in New Delhi, India, and the London-based Institute for Public Policy Research (ippr).

'Migration and development' is an increasingly well researched area. A number of high level and important research projects have been or are being undertaken (for example, World Bank 2005, UNICEF 2008/ongoing), and the issue is rising up policymakers' agendas. The Global Forum on Migration and Development process illustrates its growing significance.

Gaps filled by this project

Development on the Move is tackling four aspects of current research and policymaking that we believe still require attention:

- First, much of the current output is focused on specific issues, such as remittances and diaspora, or involves general overviews of the topic. Very little of it aims for a true synthesis.
- Second, despite considerable potential overlaps, there has been very little exchange between the methodologies used in the studies of economic and social development, and of emigration and immigration.
- Third, there is significant scope for improving data.
- Finally, apart from relatively easy-win recommendations (for example, reducing the transfer costs of remittances) and attractive but unworkable proposals (such as direct compensation for brain drain), there have been few robust policy initiatives put forward.

This project aims to address some of these priorities by:

- Generating new, comparable data through a number of tools, including nationally representative household surveys
- Providing analysis of that data, examining a wide range of migration's economic and social impacts
- Devising, fresh, innovative and workable policy responses.

Box 1 contains more information on the *Development on the Move* methodology.

Box 1: The *Development on the Move* methodology

Development on the Move:

- Examines the impacts of all international migration. This includes both emigration and immigration, between all destinations (not just particular corridors or from global South to North), and resulting from all kinds of motivations.
- Assesses the impact of migration on many aspects of development – see the first working paper in this series (Chappell and Sriskandarajah 2007) for further details on how we conceive of development and the sorts of impacts we are interested in. Broadly, we look at economic, health, educational, gender, 'other social' and governance impacts.
- Uses a range of methodological tools, including examination of existing literature and data and stakeholder interviews, and a large, in-depth household survey.
- Generates comparable information. The bulk of the research is being done at a country level, in each case guided by the same research questions, using the same methodologies (including the same household survey template) and producing a 'country report'. Comparability will allow for cross-country analysis to be performed.

The Jamaica pilot study

Development on the Move researchers are currently gathering and analysing data in six countries – Colombia, Fiji, Georgia, Ghana, Macedonia and Vietnam – with a number of further studies to be launched in the near future. This work was preceded by a pilot study in Jamaica, led by the University of the West Indies. This involved a smaller sample than the six studies currently underway, and a slightly different questionnaire, but otherwise it was very similar.

The country researchers at the University of the West Indies are currently compiling their findings from a range of research methodologies into a 'country report' examining migration's development impacts in Jamaica and some potential policy solutions. This paper differs from the country report in that it has a more specific role, involving analysis of the household survey data alone. It provides some findings from the Jamaican household survey at an earlier stage and perhaps in greater depth than the country report will provide, and it suggests analysis and sparks ideas that could be useful to the *Development on the Move* researchers who are currently gathering their data elsewhere. This paper only starts to uncover the survey's potential.

Topics covered in this paper

The analysis in this paper is organised in broadly the format that the country reports will take. It covers the shape of migration and remittances such as they occur in Jamaica, followed by an analysis of the variety of ways in which migration can have an effect on development – from economic impacts, to health and education, gender and other social impacts, to impacts on governance. Within each section we have attempted to generate results at different levels of sophistication. In some instances the focus is on simple one-way and two-way cross-tabulations. This may prove a useful place to begin in the coming studies, if only to discover the scope of the data. On a number of topics we also include some simple multivariate regressions.

Limitations

It is worth emphasising the limitations of this analysis.

First, the results were delivered over a short time-span in order to provide input in a timely fashion.

Second, as a pilot case, the Jamaican sample size is less than half that planned by most country teams, which clearly limits the scope of analysis possible in the Jamaican context.

Third, some of the other *Development on the Move* country researchers hope to improve their attribution of causality by deploying instrumental variables in their regression analysis: this has not been possible with the Jamaica case, since no instruments are yet available. Nonetheless, even the simple regressions outlined here indicate important correlations in the data, though care needs to be taken in imputing causality.

Fourth, the focus here is only on the household survey data. The discussions could be much enriched by drawing in detail upon the stakeholder interviews, local knowledge of the setting and policy issues, and background statistics. For the Jamaica case study (and the other studies underway) such analysis will be provided in the forthcoming country reports.

The potential of the survey

Besides disseminating these findings, this paper aims to provide a sense of the potential of the *Development on the Move* survey, and to act as a useful resource for the teams of researchers we are working with in Colombia, Fiji, Georgia, Ghana, Macedonia and Vietnam, as well as for researchers on other projects. We intend the paper to give a sense of the scope of the questions that can be tackled, to show ways in which different questions and modules can be combined to examine different issues, and to hint at methodologies that could be used to get the most out of the data. We have only been able to scratch the surface of possibilities, but we have tried to suggest additional variables that could be included in analyses, extensions that could be tried and other methodologies that could be employed.

We hope that the paper encourages other researchers to dig into the data and explore it to the full.

1. Migration to and from Jamaica

How much migration does Jamaica experience?

Our household survey (see Box 2 for further details) found that in Jamaica, 2 per cent of households have immigrants, 15 per cent have migrants who are currently away (whom we term 'absent migrants'[1]) and 28 per cent have 'returned migrants' – Jamaicans who are currently living in Jamaica, but have been a migrant at some time in the past. We believe that these comprehensive, nationally representative estimates are the best that have ever been calculated for Jamaica.

While the focus of *Development on the Move* is on both emigration and immigration (and some of the forthcoming country studies will analyse immigration to as great a degree as emigration), the very limited extent of immigration into Jamaica – in our study we only spoke to three immigrant households in detail[2] – means that this paper focuses on emigration and return from this point forward.

Box 2: The *Development on the Move* survey approach

- The purpose of the household survey is to generate new comparable data on the prevalence and impact of migration on households in developing countries.
- Information on prevalence of migrants is gathered through a nationally representative probabilistic screening survey, which gathers data on how many households in each country contain migrants.
- After the screening data is obtained, a sub-set of screened households are selected for full interview, in order to assess migration's impacts. At this stage, greater probability of selection is given to households with migrants, to ensure the final dataset contains similar numbers of households with migrants (immigrants, those currently away, and those who have returned) and households without.
- In Jamaica 486 households were given the full interview; in the other studies the sample size will be 1200–1800 households per country.
- Given budget constraints, the survey is a one-shot, rather than a panel survey. We do, however, include retrospective questions in the questionnaire.
- The survey takes place only within the countries of study. We do not attempt to trace the migrants in their countries of destination, or conduct corridor analysis.
- This methodology means that we collect information about migrants who are currently away from household members who remain in the country. This has one major drawback: those migrants whose whole household has left are not represented in the survey, as there is no one remaining in the country to tell the interviewers about them. In Jamaica this group was not covered at all, but in the six country studies currently underway we include a question in our screening questionnaire to capture the extent to which whole households depart.
- Data is gathered both about individuals within the household (including demographic and socio-economic information, as well as data on their migration histories) as well as the household as a whole. The household data gathered is also wide-ranging, including data on consumption assets and use of financial services, for example. The survey also collects data on the household's opinions on migration. Altogether, this produces a comprehensive, in-depth questionnaire, approximately 40 pages long.
- The survey includes a variety of tools to capture causal effects, including the use of non-migrant households as a comparator group, the use of backward-looking questions, and the gathering of attitudinal data regarding perceived causes. We believe that this mix of methods, when appropriately combined, should provide the best possible insight into causality.

1. Because the survey only asked about people who went to live abroad in the last 10 years, in order to try to minimise recall errors, those who left the household more than 10 years ago should not be included in this category. This almost certainly means that more Jamaican households have people living abroad than are counted in our survey.
2. Some key overview facts about these three immigrant households include that the immigrants were born in France, Kenya and the USA; and that one household was composed entirely of immigrants while the other two had some immigrant members and some Jamaican-born members.

Definitions used in the survey

- **Migrant** – Someone who has spent three months or more living continuously in a country other than that of their birth. A three month definition of migration allows us to capture short-term and seasonal movement, as well as more permanent emigration.

The survey examines three different kinds of migrants:

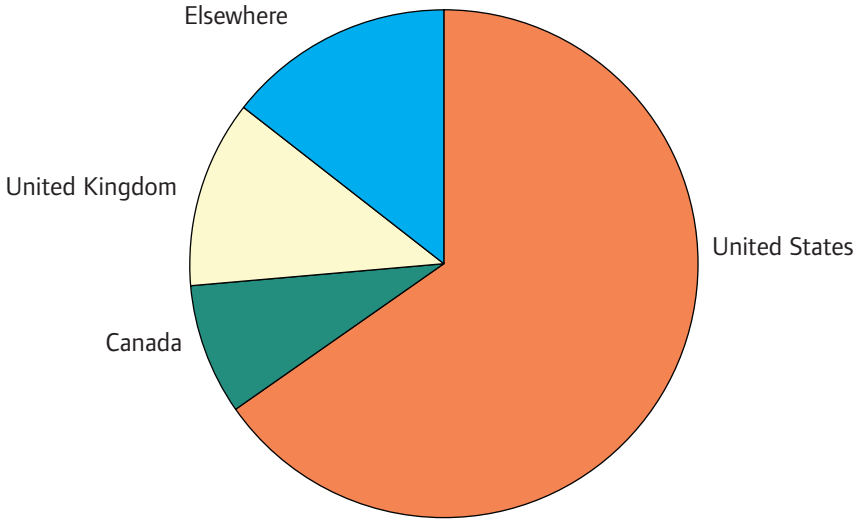
- **Immigrant** – A household member who was born in another country but has come to live in the country of the study.
- **Absent migrant** – A person who was born in the country of the study but who, within the last 10 years, left to go and live in another. Absent migrants are still living abroad. We only examine people who went to live abroad in the last 10 years in order to try to minimise 'recall errors' when respondents are discussing them.
- **Returned migrant** – A household member who was born in the country of the study and who lives there now but who has lived in another country for three months or more.

Note that weights are applied throughout the analysis so that the results are nationally representative.

Where do Jamaican migrants go and how long do they stay away?

Emigration to the United States dominates: this is the destination for more than 60 per cent of Jamaica's absent migrants, as Figure 1 shows.

Figure 1: Destinations of Jamaican absent migrants



On the other hand, as demonstrated by Table 1, less than 50 per cent of returned migrants had been in the US on any of their sojourns abroad. This suggests a tendency for migrants to remain in the US; certainly over 60 per cent of absent migrants in the US had been there for more than five years. On the other hand, more than half of those who had returned from the US had been there for less than 12 months (on their last visit). In other words, the pattern of migration to the US (and the pattern of the majority of migration from Jamaica) is apparently bimodal, with emigrants either tending to pay fairly short visits or to settle for quite long periods or even permanently.

The UK is the second largest destination for Jamaican migrants and again a bimodal pattern is apparent with both short and very extended stays. Of those who had returned to Jamaica from the UK, more than 45 per cent had lived overseas for more than 10 years.

Table 1: Duration of stay and host countries for absent and returned migrants

Duration of stay	Absent migrants (%) in				
	USA	Canada	UK	Elsewhere	All
	62.5	9.3	14.2	14.0	100.0
<6 months	7.3	0.0	5.4	22.5	8.5
<1 year	9.0	0.0	0.0	0.0	5.6
<2 years	7.9	0.0	0.0	0.0	4.9
<5 years	14.5	9.5	27.2	35.1	18.7
<10 years	29.0	53.5	52.7	28.9	34.6
>10 years	32.3	37.0	14.6	13.5	27.6
Total	100.0	100.0	100.0	100.0	100.0
Duration of stay		Migrants (%) returned from			
	USA	Canada	UK	Elsewhere	All
	49.3	10.5	25.4	14.9	100.0
<6 months	24.2	50.0	5.9	30.0	23.1
<1 year	31.9	35.7	11.8	40.0	28.4
<2 years	16.6	0.0	5.8	15.0	11.9
<5 years	7.6	0.0	8.9	15.0	7.5
<10 years	6.1	14.3	20.5	0.0	10.4
>10 years	13.6	0.0	47.1	0.0	18.7
Total	100.0	100.0	100.0	100.0	100.0

Note: This survey was only intended to sample absent migrants who had been away for less than 10 years. However, some migrants who had been away longer were also reported by the households, and so we included them in the analysis. The suggestion previously that this survey likely undercounts migrants by excluding those who had been away longer than 10 years still stands, as does the suggestion above that migration seems to be bimodal. The other six country studies will capture all people who are currently away but will focus their analysis more on recent movers.

Who leaves?

Table 2 sets out the migrants' age profiles. The departure ages of absent migrants and of returned migrants are very similar – most leave as younger working age adults. 33 per cent of returned migrants and 41 per cent of absent migrants left aged between 26 and 40, whereas only 23 per cent of non-migrants fall within this age range (32 per cent of the returned migrants also came home while in this same age range, which is consistent with relatively short stays). On the other hand, 58 per cent of those who had been abroad for more than two years were older than 40 upon returning home; 24 per cent of these longer term migrants were over the age of 60 when they resettled in Jamaica, which indicates a pattern of retiring to Jamaica.

Table 2. Age profiles of non-migrants, returned and absent migrants

Age groups	% of migrants falling within age groups in left column				
	Non-migrants – currently	Returned migrants			Absent migrants at time of departure
		At time of departure	All at time of return	Those absent > 2 years, at time of return	
1-16	31.8	14.3	13.3	13.5	14.8
17-25	15.6	19.2	12.4	2.9	16.7
26-40	23.2	33.4	31.7	25.2	41.5
41-60	18.5	19.2	22.2	29.3	18.2
>60	10.9	13.8	21.4	29.0	8.8
Total	100.0	100.0	100.0	100.0	100.0

This information is weighted, so these ages should be representative of the Jamaican population as a whole

Table 3 shows that nearly half of the absent migrants are females. On the other hand, returned migrants are more likely to be male than female. This could be a result of a number of trends, including men being more likely to return to Jamaica than women or women having left more recently and so not 'completing' their episode of migration with return to Jamaica. One way to see whether such potential dynamic changes are taking place is to look at the cohort of migrants. The Jamaica data indicate that the male-female ratio among returned migrants has changed relatively little over time, suggesting that the return rate of females is indeed lower.

The returned migrants are less likely to live in rural areas than are the non-migrant residents. Earlier emigration may have had a greater urban bias, and there is also the possibility that emigrants who are initially drawn from rural areas tend to settle in urban areas upon return. This could be checked against the information about place of birth. (The Jamaica codes do not allow us to ascertain whether place of birth is urban or rural. Future country studies should permit this analysis.)

Table 3: Profiles of non-migrants, returned migrants and absent migrants

	Household residents		Absent migrants abroad
	Non-migrants	Returned migrants	
Gender and urban/rural profile (%)			
Male	48.0	55.6	51.4
Female	52.0	44.4	48.6
Urban	41.2	55.7	43.2
Rural	58.8	44.3	56.8
Education profile (persons aged 21 through to 60) (%)			
None	55.1	43.6	34.5
Basic	8.2	9.8	2.9
O-level	16.5	16.5	28.0
A-level	2.0	0.0	3.9
Degree	5.5	16.4	11.8
Other/unknown	12.7	13.6	18.8
Total	100.0	100.0	100.0
Living standard*			
Poorest 10% of households	8.8	5.9	10.8
2nd decile	15.6	8.8	12.2
3rd decile	11.3	11.6	15.5
4th decile	13.4	3.4	9.1
5th decile	9.3	12.5	7.0
6th decile	12.1	13.3	6.9
7th decile	8.8	11.6	8.6
8th decile	9.5	5.3	12.1
9th decile	5.2	13.6	7.2
Richest 10% of households	6.1	14.0	10.6
Total	100.0	100.0	100.0

**Living standard is measured by household consumption spending (during the last year) per household member in residence. Note that some of the poorer deciles of households contain more than 10 per cent of the non-migrant population, reflecting larger family sizes among the relatively poor.*

The education profile of emigrants at the point of departure is important in indicating whether a country might be suffering from 'brain drain'. In Jamaica this looks similar to that of the non-migrant population up to A-levels. The only notable exception is that absent migrants are a little more likely to have possessed O-level passes prior to departure and less likely to have never attended school than non- and returned migrants. However, a substantially larger portion of the absent migrants gained university degrees in Jamaica than did the non-migrants. This reconfirms other sources which indicate a high rate of emigration of tertiary educated individuals from Jamaica and the Caribbean Basin more widely. Of those individuals in the sample who possess a university degree, a third are currently or have previously resided abroad. Interestingly, though, it seems Jamaicans with higher levels of education do not necessarily stay abroad: more than 16 per cent of the returned migrants possessed a university degree even before they initially left Jamaica. Such data on the education profiles of returned migrants are quite rare.

In the final panel, Table 3 presents the distributions of the migrants and non-migrants by the current living standard of their households. Whereas 24 per cent of the non-migrants are in the poorest 20 per cent of households, only 15 per cent of returned migrants live in these poorest households. At the opposite end of the spectrum, 11 per cent of non-migrants live in the richest 20 per cent of families, but nearly 18 per cent of absent migrants are from these relatively well-off households and almost a third of returned migrants also live in these households.

This, of course, does not tell us whether households with migrants (whether returned or absent) are richer because of migration, or whether their wealth has allowed them to support a household member to migrate – or indeed, the extent to which both effects apply. This is clearly an important question that each of the *Development on the Move* country studies will do their best to answer.

Further characteristics for investigation

This section has set out just a small number of the characteristics of migrants moving to and from Jamaica. Other interesting descriptive analyses might include topics such as why people moved and whether they moved alone or with others. There is plenty more data available in the questionnaire to draw out such information.

2. Patterns of remittances

Remittances have attracted increasing attention over the past few years as they have become one of the largest sources of financing for developing countries. Indeed, they are perhaps the most prominent channel through which migration is thought to affect development[4]. However, only a limited amount is known about who remits and to whom – vital questions policymakers need to answer if they are to ensure that remittances contribute as effectively as possible to development. The *Development on the Move* data have significant potential to fill some of the gaps in this area.

Who receives remittances in Jamaica, and how much do they receive?

The Jamaica survey collected information about three sources of current remittance inflows: from the household's 'absent migrants', from other remitters overseas (people who were not members of that household before departing), and from persons located in Jamaica (internal remittances). Table 4 (next page) begins by looking at each of these three sources, initially focusing on the household level.

Some 7 per cent of households report receiving remittances from absent household members overseas, among which the average amount received is over 50,000 Jamaican dollars per year, in cash and in kind together (approximately US$570)[5].

A striking feature of the Jamaica survey is the frequency of remittance receipts from people abroad who were not members of the household before departing. 28 per cent of all families in the survey reported transfers from such individuals. This amounts to a significant additional source of remittances for households in Jamaica. Given the very high frequency of transfers from non-member remitters, this is the dominant source for the average household in Jamaica. The average Jamaican household receives more than four times as much from non-member remitters as from absent members.

In addition, 18 per cent of families reported transfers from domestic sources. The amounts sent by persons located in Jamaica tend to be smaller than those from overseas migrants, however. Internal transfers are less than half the total of amounts sent from both overseas sources. Further details on remittance receipts are given in Table 4.

To see whether remittances reach poor families, or are concentrated among the relatively wealthy, Table 4 also looks at these same measures by consumption level per resident in each family. The chances that a household receives remittances from an absent member are highest in the 30 per cent of families with lowest consumption levels. A similar, though less strong, pattern is seen among internal remittances, though the likelihood of remittances being sent by 'non-members' is more evenly dispersed across the different standards of living.

Among families receiving remittances, the poorest 10 per cent receive particularly small amounts, both from international and domestic sources, while amounts sent to families in the top half of the income distribution are comparatively large. The combined effect is that international remittances are generally larger to families in the top half of the income distribution.

This should not be read, however, as 'migration increasing inequality'. Firstly, it is not clear from this analysis what the dynamic impacts of these remittances are. It could be that wealthier households spend remittances on goods and services offered by poorer ones, meaning that, over time, their remittances benefit poorer households. Secondly, inequality cannot simply be measured using an income measure. Inequality in other areas, such as educational opportunity, also matters.

4. A framework for thinking through the other 'channels' via which migration can affect development is set out in Hudson *et al* forthcoming and Lucas 2005.
5. PPP adjusted gross national income per capita in Jamaica is US$6,210 (World Bank 2007).

Table 4. Household remittance receipts: percentages of households receiving and mean amounts received (Jamaican dollars/year), by decile of household consumption per capita

	% of households receiving remittances from		
	Absent migrants	Non-household members	Internal transfers
All households	6.6	28.3	17.5
Poorest 10% of households	10.7	26.5	23.3
2nd decile	8.1	22.2	20.1
3rd decile	16.9	35.0	27.2
4th decile	6.2	27.8	20.8
5th decile	4.8	16.7	9.9
6th decile	5.1	39.6	11.5
7th decile	4.3	26.3	22.8
8th decile	2.2	38.7	09.9
9th decile	4.9	34.2	26.0
Richest 10% of households	4.6	20.0	19.2
	Of those receiving remittances: mean receipts from		
	Absent migrants	Non-household members	Internal transfers
All households	51,155	52,920	23,299
Poorest 10% of households	12,738	35,478	6,221
2nd decile	38,959	25,623	17,891
3rd decile	54,319	62,575	12,685
4th decile	40,748	22,331	19,667
5th decile	67,820	76,021	11,723
6th decile	40,952	123,920	14,062
7th decile	39,578	25,915	31,847
8th decile	186,000	30,979	6,396
9th decile	65,938	41,697	41,681
Richest 10% of households	58,660	70,389	47,810
	All households in Jamaica: mean receipts from		
	Absent migrants	Non-household members	Internal transfers
All households	3,378	15,280	4,406
Poorest 10% of households	1,366	9,386	1,447
2nd decile	3,156	5,677	3,599
3rd decile	9,153	21,875	3,448
4th decile	2,527	6,211	4,091
5th decile	3,283	12,662	1,163
6th decile	2,072	49,011	1,623
7th decile	1,717	6,817	7,250
8th decile	4,082	11,975	636
9th decile	3,200	14,279	10,848
Richest 10% of households	2,704	14,098	9,186

Which migrants send remittances, and how much do they send?

Table 5 looks at some features of remittances sent by individual absent migrants. Male migrants are slightly more likely to remit than are females, but those females who do remit transfer larger amounts, with a net effect that female absent migrants remit only slightly less than males do.

Looking across the education profile of remitting migrants shows that the average amount remitted is highest among those who had some O-level passes before emigrating. The average amount remitted by those with a university degree is by far the lowest: they are both relatively unlikely to remit, and if they do remit, send the lowest amounts of any education level. Statistical confidence in this finding is not high since sample sizes are small, but such results would suggest that remittances from university graduates may do little to compensate for any losses imposed by the absence of their skills at home.

Table 5. Remittances from absent household members: percentages remitting and mean amounts sent (Jamaican dollars/year)

	% remitting	Mean amount if remit	Mean amount per migrant
Gender			
Male	54.6	46,286	25,260
Female	41.3	55,948	23,100
Education prior to departure			
None	43.3	74,982	32,445
Basic	100.0	24,588	24,588
O-level	47.1	72,482	34,129
A-level	100.0	20,851	20,851
University	38.2	17,519	6,685
Other	45.9	23,486	10,787
Duration of absence			
<6 months	10.0	10,000	999
<1 year	27.2	44,000	11,973
<2 years	62.8	76,292	47,934
<5 years	59.7	46,364	27,672
<10 years	49.5	34,202	16,943
>10 years	52.0	69,564	36,208
Host country			
USA	43.2	64,662	27,917
Canada	63.1	11,909	7,510
UK	56.8	36,843	20,931
Elsewhere	54.6	36,461	19,903

Migrants who have only been away for a short period (less than a year) remit relatively little (although they may bring savings back with them; the extent of this could be tested using *Development on the Move* data, but this is not done here). The average amount sent back is greatest among those who have been away one to two years, but there is no systematic pattern of decline thereafter. In fact those who have been absent more than 10 years have a high propensity to remit and send substantial amounts.

Table 5 shows that migrants in the US and the UK send the largest amounts on average, despite there being significant short-term migration to both. Remittances from Canada appear to be particularly small.

We now turn to remitters sending money to households to which they do not belong themselves (who we term 'non-member remitters'); Table 6 sets out their characteristics. About half of Jamaica's non-member remitters are female, and both genders send similar amounts of money. About half send money to rural households, while nearly 55 per cent of the sample households are in rural areas; this suggests that urban areas are slightly more likely to receive these remittances. Moreover, the average amount sent to rural families is substantially smaller than to urban families. The average amounts sent are greatest to households in the middle of the distribution of living standards, but the amounts sent to the richest 20 per cent of households are a little greater than amounts sent to the poorest 20 per cent.

Table 6. Profile of non-member remitters abroad and mean amounts they send

	Percentage of senders	Average amount remitted per sender (Jamaican dollars)
Male	48.9	45,588
Female	51.1	45,361
Urban	47.9	54,880
Rural	52.1	36,214
Poorest 10% of households	8.7	37,880
2nd decile	8.8	24,982
3rd decile	11.0	48,756
4th decile	11.3	25,663
5th decile	5.0	61,193
6th decile	15.0	99,519
7th decile	8.2	25,176
8th decile	12.7	27,559
9th decile	10.4	34,970
Richest 10% of households	8.7	47,447
Destination country		
USA	56.8	48,995
Canada	9.6	23,083
UK	23.5	52,585
Elsewhere	10.1	31,029
Relationship of remitter to recipient		
Close relative*	37.3	48,817
Other relative	15.6	39,923
Not a known relative**	47.2	43,982

**spouse, child, parent or sibling of the recipient*
***The survey data give us no further information about who these remitters are. The country report should be able to provide more insight.*

The dispersal of the non-member remitters across host countries is roughly in line with the patterns of migration shown in Table 1, although non-member remitters in places other than the US, Canada and the UK ('elsewhere') are slightly under-represented relative to the migration profile, while those in the UK are over-represented.

The households were asked how they are related to non-member remitters who send them money. Table 6 shows quite strikingly that almost half of the non-member remitters are reported as not being related to the recipient. Less surprisingly, the amounts remitted from close relatives are the greatest.

Why do migrants send remittances?

Table 7 (next page) looks in greater detail at the remittances (in cash and in kind) reported as received from household members absent abroad and from non-household member remitters abroad.[6]

Other things being equal, any gender gap in the amounts remitted is insignificant (as is the difference between remittances to rural and urban locations, which is not shown). There may be potential to simulate migrants' earnings from destination country data, but we have not explored this here.

The greater the total household consumption spending per household member, the larger remittances are, though the rate of increase diminishes at higher standards of living[7]. However, it is not clear whether migrants send more money to wealthier households or households are wealthier because they receive more remittances. Therefore, as well as examining the relationship between remittances and total household consumption (in the first column of Table 7), we also calculate 'non-remittance consumption' – the amount of consumption the household would have been able to afford without remittances (in the second column of Table 7)[8]. This shows that remittances are sent fairly evenly to households across the income spectrum. Note that the amounts remitted from migrants in Canada are less than from other host destinations, though statistical confidence in the Canadian difference is not strong, given the fairly small sample of migrants there.

The Jamaican data records various forms of 'shock' to households: death of a household member, serious illness, job loss, a natural disaster, or something else. The most common form of shock reported was being affected by a natural disaster; we take this to likely reflect the hit by Hurricane Dean in August 2007. The proportion of absent migrants remitting to families that had been impacted by the hurricane was somewhat greater than those remitting to other families (51 per cent compared with 47 per cent). However, as Table 7 shows, the amount remitted is no greater to families that suffered from the hurricane. The amount remitted to families in which a household member had lost their job is seen to be significantly and substantially greater. (But severance from a job could potentially be induced by the availability of remittance support, so the direction of causality is not entirely clear here.)

6. Ideally multivariate analysis of this kind would be conducted on the absent migrant remitters and non-member remitters separately, but the small sample size for Jamaica does not permit this. However, the number of observations in the other country studies will expand analytical possibilities.
7. The implied turning point of the quadratic form is beyond the maximum level.
8. Of course, if the household were not receiving remittances, its members might look to make money in other ways, such as via earnings (see Section 3 below for more on this). However, for the purposes of this section, this possibility is not problematic, as we are interested in the actual non-remittance consumption budget of the household, not what the consumption budget could be if remittances were not being provided.

Table 7. Remittance patterns

Dependent variable: Log of amount remitted *Estimation method: Ordinary least squares* *Sample: Absent migrant and non-member remitters*		
Intercept	9.453 (25.90)	9.844 (25.36)
If female	0.049 (0.24)	0.086 (0.42)
Household consumption spending per member	0.029 (1.96)	
Household consumption spending per member squared	-0.00027 (1.73)	
Household consumption spending, minus remittance receipts, per member		-0.010 (0.69)
Household consumption spending, minus remittance receipts, per member squared		-0.00006 (0.38)
Migrant in US	0.188 (0.58)	0.287 (0.89)
Migrant in Canada	-0.708 (1.67)	-0.630 (1.47)
Migrant in UK	0.251 (0.70)	0.242 (0.67)
If household affected by natural disaster/ hurricane	0.142 (0.66)	0.160 (0.74)
Someone in household lost job	1.575 (2.75)	1.427 (2.48)
Close relative	1.119 (3.94)	1.036 (3.61)
Other relative	-1.175 (3.66)	-1.038 (3.21)
Migrant has nuclear family with them abroad	-0.482 (1.21)	-0.395 (0.98)
If member of household	0.512 (1.56)	0.337 (1.02)
Number of observations	232	232
F-statistic	2.61	2.32

T-statistics for a zero null hypothesis in parentheses.
In the regressions reported in this paper, standard errors of estimated coefficients are obtained from the conventional ordinary least squares formulas and do not adjust for sample stratification, though this may be desirable in further work.

The remaining measures in Table 7 all look at various relationships with the family. Close relatives are estimated to remit the most, other things being equal. However, other relatives remit substantially less than persons who send money but have no known blood relationship with the family. Other things being equal, absent members send more than the non-member remitters do. However, where a spouse or the migrant's children are with the absent member abroad, the migrant tends to remit less. Such a finding would raise critical though complex questions about the desirable patterns of migration, and of family reunification in particular, from the perspective of citizens left at home.

Statistical confidence in these patterns of remittances from individuals abroad is not very high, in large part because of the comparatively small Jamaican sample. For the other country studies the sample should prove larger, permitting more detailed analysis. In addition to the type of analysis considered here, which looks at the amounts remitted, it would be of clear interest to extend the study of who remits and who does not, from Table 5, to a multivariate form. In addition, it should be possible to examine net remittances and not their gross inflows, since the surveys contain information about remittances sent to migrants abroad, as well as examining the mode of remittance transfer selected[9]. Additional explanatory terms to be explored might well include some of the measures from Table 5, such as age, education and duration abroad of the migrant (these are not reported for non-member remitters in Jamaica and are therefore excluded from Table 7).

9. Though it should be noted that in the Jamaica case, our data indicates that 'reverse remittances' were very infrequent, thus the results presented here would be little changed if calculations were done on a net, rather than gross, basis.

3. Economic impacts

Having looked at the shape of migration and remittances we now turn to the impacts of migration, beginning with the economic impacts. We examine impacts at a range of levels – on the migrant themselves, on their household, on their local community and on the society they enter or leave.

In this section and those that follow we aim to give a sense of the scope of the *Development on the Move* data and some of the questions it can be used to examine. We also highlight findings that are of potential use to Jamaican policymakers and that also contribute to the global literature in this area. In some cases we are able to address questions that have previously gone unexamined because of a lack of data. Once again, some questions are examined though fairly simple cross-tabulations, and others using multivariate analysis.

Labour market impacts

Relatively little systematic evidence exists with respect to the impacts of migration on the labour market. We therefore intend to contribute to greater understanding of this previously under-explored area.

The regression results in Table 8 illustrate some of the analysis that can be undertaken. The dependent variable is a simple dichotomy, indicating whether each adult (ages 18 to 60) worked or did not work in the week prior to the survey. Here, working includes both self-employment and working for others for pay, though there is clear potential to distinguish between these forms in a multinomial framework.

On average, women are significantly less likely to be working than are men.[10] Moreover, the likelihood of being employed at first rises with age then declines, peaking around the age of 40. Of greater interest here, though, are some of the migration measures in these results.

What role do returned migrants play in the labour market?

A common concern is that returned migrants are unable or unwilling to integrate into the home labour market, taking early retirement or remaining unemployed (for example as was shown for Pakistan in Arif 1998). This could be problematic both because early retirement or unemployment could deprive Jamaica of returnees', (particularly skilled returnees') valuable talents, as well as putting pressure on systems of retirement and unemployment support. In Table 8 this is examined in three steps. Emigrants who had returned to Jamaica within the last three months are indeed substantially (and fairly significantly) likely to be out of work compared with other residents of similar age and gender. On the other hand, those who have been home from 3-12 months are far less likely to be out of work than are those very recently returned and any difference from measurably similar non-migrants is statistically insignificant. A year or more after return there is no difference at all between migrants and non-migrants.

This leaves two possibilities: either it takes a few months for returned migrants to settle into local employment or those who remain out of work again leave the country.[11] Either way, they do not constitute a burden to the Jamaican government or other household members through remaining in Jamaica but being out of work.

10. In further work it may be important to estimate responses for the two genders separately. Given the sample size we have not done so here, though the broad patterns mentioned here apparently tend to be similar for both genders.
11. It is possible to pursue this distinction further with the *Development on the Move* data, but we have not attempted to do so here.

Table 8. Employment of resident adults

Dependent variable: Employed or not employed in week preceding being surveyed
Estimation method: Binomial logit
Sample: Household residents aged 18 to 60

Intercept	-3.854 (4.92)
Female	-0.890 (5.60)
Age	0.305 (6.90)
Age squared	-0.0037 (6.46)
If emigrant who returned within last 3 months	-0.626 (1.95)
If emigrant who returned within last 3-12 months	-0.118 (0.39)
If emigrant who returned more than 12 months ago	0.056 (0.28)
Log of total remittance receipts per household member	-0.028 (1.82)
Log number absent migrants per household member	0.418 (2.88)
Number of observations	841
Fraction correct predict	0.68

T-statistics for a zero null hypothesis shown in parentheses
Alternative iterations of this model might include educational qualifications achieved as an additional control variable

How does migration affect labour market participation?

Adults in families receiving more in remittances, either from abroad or from domestic sources, are less likely to be employed than those receiving less in remittances. However, the effect is neither large nor very significant statistically. The estimates in Table 8 suggest that a 1 per cent rise in remittances per household member is associated with a 3 per cent drop in the odds of being employed. On the other hand, adults in families where there has been substantial departure of emigrants relative to the household size are substantially more likely to be working, taking into account their age and gender.

Therefore, these results suggest a mixed effect of migration on the employment of those left behind: having a household member leave is associated with greater employment but if the migrants remit, this tends to diminish employment among those remaining at home. This may amount to the first evidence pointing at such a distinction in the effects of the migration-remittance nexus.

Entrepreneurialism

Studies conducted in a number of countries have pointed to the tendency of returned migrants to start a business. In a number of countries there are even policy initiatives to support return migrants' entrepreneurialism, probably based on the assumption that returned migrants are not only more likely than other residents to start businesses, but that these businesses will survive and succeed, generating opportunities for others. However, almost nothing is known about the chances of such enterprises surviving and very little is known about the benefits – such as employment – that they generate. The *Development on the Move* data offer rich potential to look at these questions, as illustrated in Table 9, next page.

Table 9. Family businesses

	Has household resident ever lived abroad?	
	No	Yes
Percentage of households		
Has ever had a business	20.7	18.1
Still has business	18.3	13.5
Had business but closed	3.1	5.8
If still in business, percentage with		
Family employees only	31.2	27.9
Some waged employees	26.5	40.0
Employees unknown	42.2	32.1
Total	100.0	100.0
Still in business		
Mean no. employees	1.6	2.4
% employees paid wages	60.7	25.4
If closed		
Mean no. years in business	2.8	11.4

About a fifth of households report ever having had a business, no matter whether or not there is someone in the family who has ever lived abroad. On the other hand, the fraction of families that still operate a business is lower among returned migrant households, which have almost twice as high a chance of having started a business that is now closed than households with no returnees. Of the businesses that have closed down, the average number of years from starting up to closing is much longer among families with returned migrants (11 years). Overall this might suggest that returned migrants do indeed have a higher chance of starting businesses that endure for a long time, even if they ultimately fail. More work remains to be done on this topic, for example, on how closures relate to reaching retirement age.

Family businesses in Jamaica tend to be very small. Of those still in operation, the average number of workers (including unpaid family workers and waged workers) is 1.7, though businesses operated by families with returned migrants are slightly larger with 2.4 employees. Although family businesses with at least one waged worker are more common where there is a returned migrant present, family employees dominate in these enterprises.

With a fifth of households having had a family business, even if the average enterprise employs fewer than two people the aggregate employment remains highly significant. However, return migration may have little direct impact on this rate of micro-enterprise creation in Jamaica since the incidence of business start-ups is no greater among families with returned migrants and, if anything, the rate of closure is greater where returned migrants are present. If replicated in the other *Development on the Move* studies, this finding poses important questions for policymakers about the role of returned migrants as entrepreneurs.

Living standards

In connection with Table 3 above, it has already been noted that both absent and returned migrants tend to be concentrated in families toward the richer end of the income distribution. The difficulty of attributing causality was emphasised, however – whether families become richer because of migration or whether migrants tend to be drawn from richer families is difficult to disentangle. However, it is possible to take a slightly different look at the connection between living standards and migration.

In designing the household survey, it was realised that people's ability to recall their consumption spending several years ago would be very unreliable. On the other hand, recall of major assets owned tends to be more reliable. Questions about ownership of a number of physical assets, of a home, land and of a business, were asked both with respect to today and five years ago. An index of living standard was created by looking at the correlation between ownership of these assets today and

current consumption spending, per household member present. These associations were then used to 'predict' living standard five years ago, based on the assets then owned. In doing so, emphasis was placed both on those assets that bore a particularly strong correlation with current consumption and on those assets for which ownership levels changed most over the previous five years. In the regressions reported in Table 10, the dependent variable is then an index of current living standard, predicted on today's asset ownership. A comparable index for living standard five years ago appears as an explanatory term.

Table 10. Change in living standards

Dependent variable: Log index of current living standards *Estimation method: Ordinary least squares* *Sample: All households in survey*	
Intercept	3.162 (7.51)
If head of household over age 50	-0.050 (2.46)
If rural household	-0.026 (1.32)
If household experienced shock (e.g. natural disaster)	-0.055 (2.70)
If household contains returned migrant	0.059 (2.77)
If household has absent members	0.034 (1.45)
Log index of household living standard five years ago	0.740 (20.81)
Number of observations	468
F statistic	99.59

T-statistics for a zero null hypothesis shown in parentheses

Alternative iterations of this model might include the remittance receipt as an additional control variable

Households in which the household reference person is aged over 50 at the time of the survey are estimated to have a 5 per cent lower consumption index than are households with younger 'heads', given predicted consumption levels five years ago. This indicates that households accumulate fewer additional assets in older age. On average, rural households experienced around a 3 per cent smaller improvement in their living standards over the five years than did urban households, though this difference is not very statistically significant. It is also interesting to see that households that report having experienced a major shock, such as from the impact of a hurricane or someone in the family losing a job, had nearly a 6 per cent smaller improvement in living standards than did households that did not suffer a shock.

For this study, the most interesting findings relate to the two migration measures included in Table 10. In general, migrant families have had a greater improvement in their living standards over the five years preceding the survey than have non-migrant families. Those households with members currently absent have had about a 3 per cent larger rise in standards than non-migrant families, though there is not a lot of statistical confidence in this difference. There is much more confidence in the finding that families to which emigrants have returned have enjoyed an almost 6 per cent greater improvement in their living standard than have the non-migrant families (although it is not clear whether emigrants have been attracted to return to families where the living standard is rising more rapidly or whether remittances and the return of the migrant have led to this increase).

4. Educational impacts

Migration can impact on education in a variety of ways: by affecting the individual migrant's access to educational opportunities, by changing the ability and incentives of households to invest in education, and by affecting the national educational infrastructure, whether through brain drain (which might harm a country's education system), or through brain gain (as more people have an incentive to train as teachers, as they see it as a route to migrate). Immigration may also play a role in boosting a country's supply of education professionals.

Impacts on the education of household members

The *Development on the Move* survey provides at least two measures of educational outcomes – (a) current school attendance, and (b) the highest level of education achieved[12]. Here the focus is on the former.[13] Table 11 presents the school attendance rate of children and young people in two age groups, 5-16 and 17-21. These age ranges were chosen for the Jamaican context because many children discontinue their education after age 16.

Table 11. School attendance rates for children and young people

	Aged 5-16		Aged 17-21	
	Attendance rate (%)	Proportion of age group (%)	Attendance rate (%)	Proportion of age group (%)
No household remittance	83.3	55.0	26.2	55.2
Remittance received	86.9	45.0	36.4	44.8
Overseas remittance received	86.0	37.3	34.4	37.8
Parent absent	74.8	3.1	19.2	1.7
Parent present	85.2	96.9	31.0	98.3

Of the younger age group, 55 per cent are in households where no remittance inflows are reported from any source, leaving 45 per cent in households with some form of remittance receipts (and 37 per cent with remittance receipts from overseas, either from absent migrants or non-member remitters). The 5 to 16 age group has slightly higher school attendance rates in families in which remittances are noted, compared with those that do not receive remittances, which is also true among the older age group. However, none of these differences proves statistically significant.

Having a parent reported absent abroad is quite rare, amounting to only 3.1 and 1.7 per cent in the two age groups above respectively. Within both age groups the school attendance rate is lower where a parent is absent.

The relationship between school attendance and these measures of migration is explored in more detail in Table 12. The first set of regressions look at all children and young people present at home, aged 5 to 21. The remaining regressions distinguish between those under and over age 16. Overall, girls are more likely than boys to attend school. While this gender difference is weak among the younger children the gap is quite large among those over 16. On the other hand, no significant difference is found in the attendance levels of young people in rural compared with urban areas, other things being equal.

12. In Jamaica, it seems that repeating years of schooling is uncommon, so attendance at a given age is highly correlated with the highest level of education achieved.
13. Specifically, responses to the household roster question about the level of classes each person is currently attending is used to define a measure of whether each household member, aged 5 to 21, is currently attending school. The response to the question about economic activity status during the last seven days could have been used, but children who have been absent the preceding week could still be attending school.

Having an absent migrant parent has a large and statistically significant effect in reducing school attendance among younger children, bearing in mind these controls, but has no discernible effect on whether older children continue their education. This appears to be the first statistical evidence available confirming this effect. The results suggest that it is indeed the absence of parents that has this effect of diminished attendance among the younger children, and not out-migration by other family members, since no correlation is observed with the number of absent migrants from the family. Interesting extensions to this analysis might include looking at whether it is the mother or father who is absent, and the duration and timing of their absence in relation to the child's age.

Table 12. School attendance of children

Dependent variable: Currently attending school or not
Estimation method: Binomial logit
Sample: Children aged 5 to 21

Variable	Ages 5-21		Ages 5-16		Ages 17-21	
Intercept	-1.374 (4.49)	-5.136 (2.73)	1.301 (4.56)	0.635 (0.27)	-1.543 (3.38)	-10.898 (3.11)
If child age 16 or less	2.659 (10.62)	2.717 (10.66)				
Female	0.583 (2.42)	0.575 (2.39)	0.384 (1.29)	0.395 (1.32)	0.946 (2.32)	0.948 (2.22)
If rural area	0.073 (0.31)	0.158 (0.65)	0.128 (0.43)	0.104 (0.35)	0.060 (0.15)	0.478 (1.05)
Number absent migrants	-0.038 (0.15)	0.026 (0.10)	0.092 (0.23)	0.135 (0.33)	-0.115 (0.32)	0.080 (0.22)
If either of child's parents absent	-1.122 (1.85)	-1.073 (1.76)	-1.462 (2.14)	-1.722 (2.32)	-0.021 (0.02)	0.366 (0.29)
Log of total remittance receipts per household member	0.048 (2.03)		0.057 (1.84)		0.037 (0.94)	
Log household consumption spending per member		0.325 (2.10)		0.061 (0.31)		0.786 (2.75)
Total remittance receipts/ household consumption spending		1.146 (1.26)		3.434 (1.62)		0.010 (0.01)
Number of observations	493	493	358	358	135	135
Fraction correct predict	0.80	0.81	0.84	0.84	0.71	0.73

T-statistics for a zero null hypothesis shown in parentheses
Note: Given the binomial dependent variable, a logit regression is adopted. Other possibilities clearly include a probit (though perhaps slightly more difficult to interpret) or even a linear probability model with ordinary least squares (though less ideal statistically)

The association of school attendance with remittance inflows to the family is represented by the total number of remittance receipts, from absent migrants, from non-household members abroad, and from domestic remittances, per person present in the household. Overall there is a positive association with the magnitude of these inflows and school attendance. This positive association is slightly greater and statistically a little stronger among the younger age group. The second regressions within each age grouping suggest that this positive association with remittances reflects the fact that they make higher living standards attainable to families.

Overall, the measure of household consumption per household member at home is positively associated with attendance. However, this effect is confined to the probability of continuing with education after age 16. The estimates suggest that the doubling of living standards raises the likelihood of continuing education after age 16 by nearly 80 per cent. But raising living standards does not mean that younger children from families are any more likely to be in school.

It should be recognised that remittances enter the family differently from other income sources and may be controlled by different family members.

This framework could be extended in a variety of interesting ways, to investigate, for example, whether remittances have impacts among poorer families that differ from impacts on relatively affluent households; and whether the influence of remittances differs according to the characteristics of the sender.

5. Health impacts

The effects that migration can have on health outcomes are complex. The experience of emigration from certain countries may improve migrants' knowledge about personal healthcare and treatment or potentially expose emigrants to new health risks abroad. And if migration – perhaps through remittances – results in households having higher incomes, this may enable people to spend more on healthcare and to take time off when sick.

From the perspective of the state, emigration of health professionals, as with education professionals, may cause brain drain, harming the national health infrastructure; alternatively it could lead to brain gain, as more people have an incentive to train as health professionals[14]. Furthermore, immigration may play a role in bolstering the health infrastructure of a country if health professionals from overseas settle there.

Impacts on the health of household members

The Jamaica data offer two major, objective measures of health for household members: whether each child under 5 has been immunized; and the number of days lost from usual activity during the last month due to illness. The data suggest that virtually all of the children in the survey had been immunized. The focus, here, therefore falls upon the latter measure: days lost to ill health.

We have included some key control measures, such as age and gender of the person in question. The results in Table 13 consequently present regressions in which the dependent variable is days lost because of ill health, with these and other controls as explanatory terms. The results in this table are confined to persons age 18 and older, though some comments on comparable analysis for children follow.

Not surprisingly, the incidence of days lost to ill health rises with age.[15] Among men and women of the same age, women report significantly more days lost than do men, and people in rural areas also report significantly more days lost than those in urban areas.

Table 13. Days lost due to ill health

Dependent variable: Log of days lost to ill health or injury in last 30 days
Estimation method: Ordinary least squares
Sample: All household members age 18 and older

Intercept	0.004 (0.06)	-0.647 (1.73)	-0.669 (1.78)
Age of person (years)	0.0039 (3.49)	0.0038 (3.30)	0.0038 (3.32)
If female	0.102 (2.23)	0.089 (1.91)	0.089 (1.90)
If rural area	0.107 (2.33)	0.112 (2.32)	0.110 (2.28)
Log of total remittance receipts per household member	0.012 (2.62)		
Log household consumption spending per member		0.060 (1.93)	0.062 (1.99)
Total remittance receipts/household consumption spending		0.010 (0.07)	0.010 (0.07)
If person living abroad five years ago			-0.166 (0.96)
No. of migrants returned to household			-0.005 (0.18)
No. of observations	1105	1071	1071
F-statistic	7.77	4.75	3.54

T-statistics for a zero null hypothesis shown in parentheses

14. This greater incentive arises because if children and their parents see that health professionals have a good chance of migrating then they may decide to pursue healthcare as a career path. As not everyone who trains as a doctor or nurse then migrates, it may mean that the country ends up with more doctors and nurses than it would have done had there not been the opportunity to leave.
15. In the Jamaica context, a term in age-squared proved insignificant and is not reported here. Other country studies may wish to explore such extensions, however.

Given these background characteristics, there is a positive correlation between days lost through ill health and remittances received per household member. As the second regression shows, the positive association actually gets larger (though statistically slightly weaker) with household consumption spending per household member. Indeed, the coefficient estimated on remittances received relative to consumer spending indicates that remittances act no differently from higher living standards more generally. In other words, among better off families it seems people are better positioned to take more sick days (though, we do not know how seriously ill they are) and there is no indication that remittances give any different effect from other sources of improvement to standard of living in this regard.

Similarly, as the final regressions in Table 13 show, any hint that returned migrants are less (or more) likely than other household members to lose days through ill health is very weak statistically. Moreover, any learning effect whereby returned migrants improve the health of others in their household appears to be very weak too.

Comparable regressions for children in the household are not shown, but again the number of days lost (largely from school) are greater for girls than boys and greater among better-off households than their worse-off counterparts. In this case, there is no sign that children of absent migrant parents are more likely to miss days from school than children who have their parents at home.

Table 14 examines household spending on healthcare items, controlling for the incidence of days lost through illness in the family. In this table, each observation is one household.

Table 14. Household spending on medicine and health services

Dependent variables: Log of household spending in last month
Estimation method: Ordinary least squares
Sample: All households

	Total spending			Spending on modern medicine	Spending on traditional medicines
Intercept	2.694 (9.32)	-5.634 (2.13)	-5.811 (2.22)	-6.121 (2.34)	-1.800 (1.39)
Days ill: adult males	0.141 (3.06)	0.131 (2.89)	0.115 (2.52)	0.117 (2.58)	0.008 (0.34)
Days ill: adult females	0.158 (4.09)	0.194 (4.80)	0.200 (5.00)	0.207 (5.20)	0.007 (0.37)
Days ill: boys	0.287 (1.62)	0.286 (1.63)	0.306 (1.76)	0.195 (1.13)	0.256 (2.99)
Days ill: girls	0.202 (2.18)	0.197 (2.15)	0.211 (2.32)	0.222 (2.45)	0.147 (3.28)
If rural area	0.479 (1.37)	0.773 (2.17)	0.840 (2.37)	0.908 (2.57)	0.373 (2.14)
Log of total remittance receipts/household member	0.032 (0.91)				
Log household consumption spending/member		0.698 (3.20)	0.677 (3.13)	0.675 (3.13)	0.166 (1.55)
Total remittance receipts/ household consumption spending		0.575 (0.61)	0.439 (0.46)	0.305 (0.32)	0.609 (1.30)
No. of migrants absent from household			0.655 (2.24)	0.651 (2.23)	0.422 (2.92)
No. of migrants returned to household			0.519 (2.18)	0.630 (2.66)	-0.014 (0.12)
No. of observations F-statistic	481 6.58	469 7.73	469 7.25	469 7.73	469 3.75

T-statistics for a zero null hypothesis shown in parentheses

The table shows that, unsurprisingly, families with higher living standards (as measured by household consumer spending per capita) spend significantly more on healthcare than do poorer families, other things being equal. However, there is no sign that remittance receipts play any special role in permitting more healthcare spending.

Households with more absent migrants and those with more returned migrants spend significantly and substantially more on healthcare than those that do not have these migrants, taking into account their living standards and other factors held comparable. Precisely what this reflects is uncertain, though one possibility is a learning effect about the importance of healthcare from the migration process.

Indeed, this possibility may be fortified by the last two regressions in Table 14, which differentiate between spending on traditional versus modern forms of healthcare. This may be indicative of a learning effect as households affected by migration may be more familiar with healthcare methods used in the countries of destination – the USA, Canada and the UK. These are likely to more closely resemble modern healthcare methods in Jamaica, rather than traditional ones. First, note that when adults experience sick days, spending on modern medicine is greater but spending on traditional medicines is not. This is not true, however, for children. Perhaps surprisingly, the greater spending by rural families compared with urban households is on modern medicines rather than traditional forms. However, better-off families increase their spending on modern medicines far more than on traditional forms compared with poorer families. In relation to migration, the data shows that families with larger numbers of migrants increase their spending on modern forms of medicine much more than they do on traditional forms. Indeed, the presence of returned migrants in the family has no association with spending on traditional medicine, though spending on modern medicines is much higher where there are more returned migrants. This appears to support the presence of a learning effect, though we cannot be certain.

6. Gender impacts

One of the least studied relationships within the migration and development 'nexus' is that between migration and gender roles. In theory, migration could have significant impacts in this area at a number of levels. It could influence a migrant's own attitudes and/or opportunities by exposing him or her to expectations that differ from the gender role that is traditional for them; and migrants may influence attitudes of their own household members and wider society through their actions, either as diaspora or as returning migrants. The *Development on the Move* survey includes a number of variables that allow us to examine how migration affects perceptions of gender and gender roles.

Jamaica is not noted for having major gender disparities or gender discrimination. However, limiting gender roles and gender discrimination do exist to an extent in Jamaica; the form these take and their influence are discussed in greater detail in the forthcoming Jamaica report. Gender plays a part in forming people's expectations and roles in every country, and so gender analysis should be relevant in each of the case studies, albeit to differing degrees.

Impacts on women's economic opportunities

The survey asks how the migrant felt about their standard of living while they were abroad compared with their standard of living before they left Jamaica[16]. These data can be disaggregated by gender to see whether migration has different impacts on men and women – specifically, do women disproportionately feel that migration has improved women's standard of living, in comparison with men's? It has been suggested that migration may benefit women economically more than it may benefit men by easing certain gender-based constraints, including discrimination, on women's economic success (UNFPA 2006).

Figure 2: Migrants' perceptions of their standard of living abroad, compared with their standard of living in Jamaica before they left

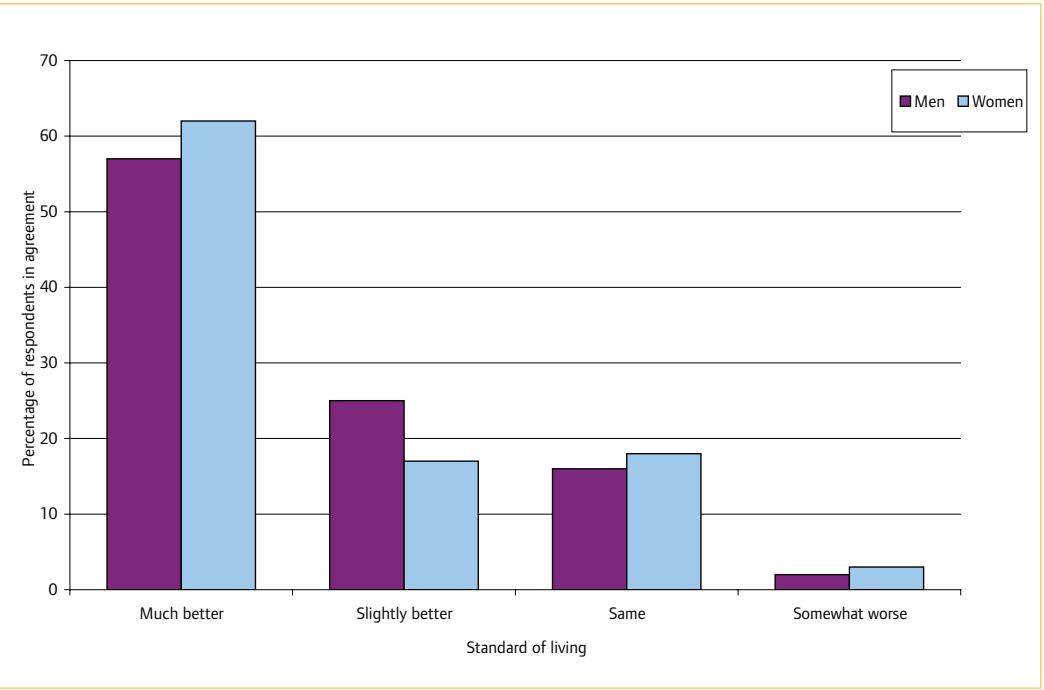


Figure 2 combines reported outcomes for absent migrants, and returned migrants' evaluations of their time abroad. The responses for both groups of migrants were similar.

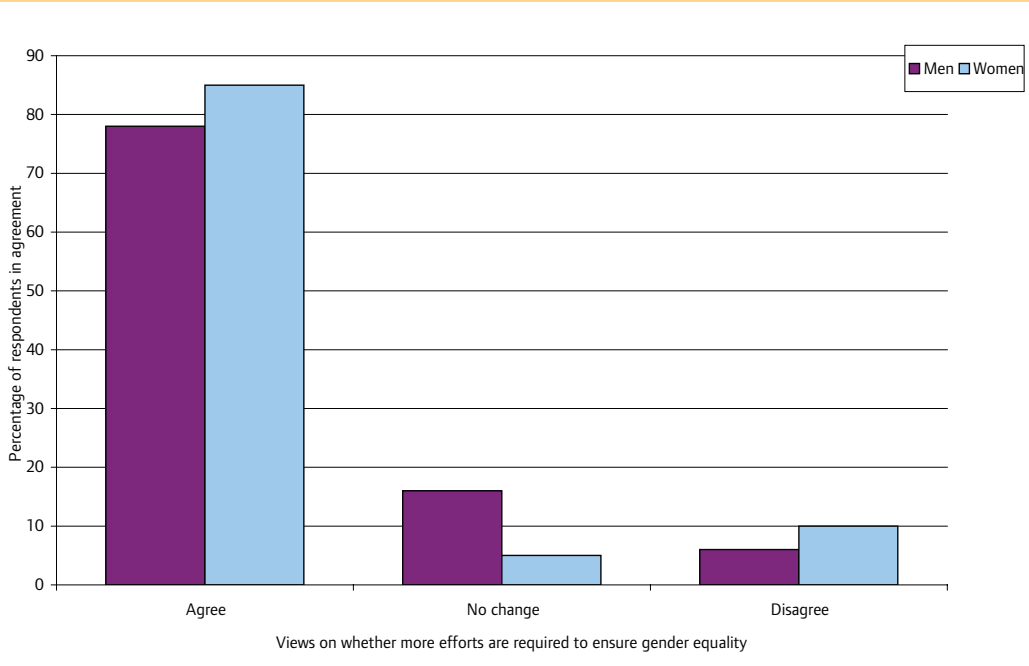
16. This analysis is based on migrants' perceptions of their standard of living. Objective analysis could also be undertaken by comparing the income of Jamaicans abroad using datasets from major countries of destination with the incomes of Jamaicans with similar characteristics remaining in Jamaica.

The data suggests no substantial difference between the genders in terms of how migrants evaluate their standard of living during migration. The vast majority of both men and women saw significant improvements in their standard of living as a result of migration. If any trend can be discerned, it is that female migrants are slightly over-represented at both ends of the spectrum. A greater percentage of women than men said that migration made their standard of living 'much better,' and slightly more said that their life as a migrant was the same or somewhat worse than their situation before departure[17]. However, this is not a marked trend. On the whole, the results are fairly similar for both genders. Future analyses could also look into whether results differ by age group, migrants' length of stay abroad and their principal country of destination.

Views on gender equality

The survey also enables us to see whether returned migrants felt their views about gender equality were changed by their experiences of migration. We found that to a large degree, returned migrants did report that their experiences affected their views in this respect. More than 80 per cent of returned migrants reported that their experiences of living in another country had made them think increased efforts to obtain gender equality were required in Jamaica. Figure 3 illustrates this, also showing how views were disaggregated between the genders. There appears to be a slight difference between men and women, with a marginally greater proportion of women suggesting that they had increased commitment to gender equality having lived abroad. Greater numbers of men reported that their views were not changed by the experience. However, it does not appear that this difference between the sexes is statistically significant.

Figure 3: Returned migrants' views on whether they are now more supportive of efforts to improve gender equality, given their experience of living abroad



The increased commitment to gender equality across both sexes is a very interesting finding, not least because one might expect that it might translate into altered behaviour by returned migrants. Next we examine data that might indicate whether or not this is indeed the case.

17. It should be noted that no migrants said that their standard of living abroad was 'much worse' than before they left Jamaica.

Gender roles in the household

The *Development on the Move* survey includes a question asking which 'household tasks' each household member spends most of their time doing (note that the concept of 'household task' is interpreted widely, to include leisure activities as well as tasks). The question is asked both for the present and for the past. This enables us to isolate the tasks that are most gender-specific, and then see whether, over time, households that produce migrants see a lessened degree of gender assignment of tasks than households without. This might indicate that returned migrants' increased commitment to gender equality is affecting how roles are shaped and tasks distributed within the household.

In Jamaica, the greatest gender disparity between tasks is found in cooking, cleaning and attending social events. In 2007 women were more than twice as likely as men to report cooking and cleaning as household activities that take up much of their time and men were more than twice as likely as women to mention socialising.

Figures 4 and 5 show the percentage of women within households that do and do not contain migrants reporting cooking, cleaning and socialising as a major use of their time, in both 2002 and 2007. As the figures show, our survey data does not provide any evidence that migration is changing gender roles within households. The proportions of women citing the traditional female tasks of cooking and cleaning as being important varies little over time and between the two groups. Likewise, the proportions of women who say they spend large proportions of time socialising holds steady at around 5 per cent across the groups and years. It seems clear, therefore, that in our data at least, while return migration may alter views about gender roles, it does not necessarily alter behaviour within the household.

Figure 4: Proportion of women in households without migrants citing gender-specific household tasks as absorbing significant amounts of their time

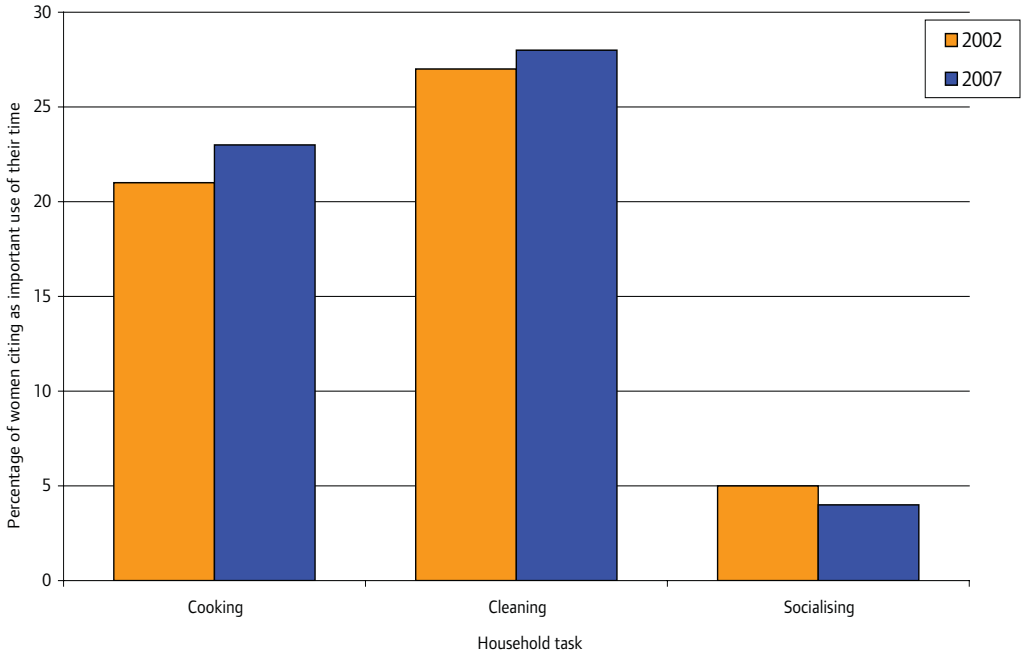
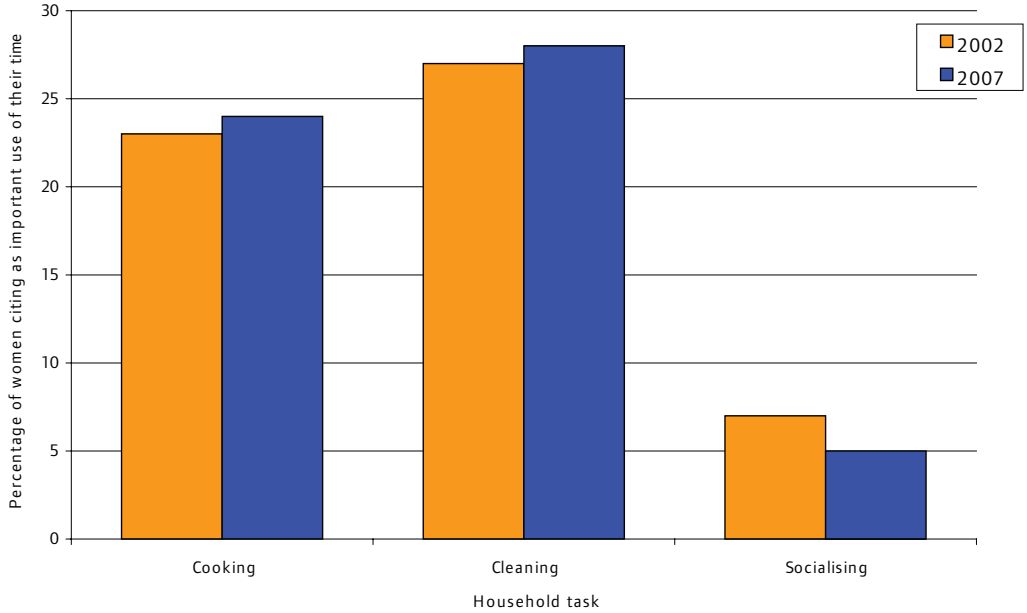


Figure 5: Proportion of women in households with returned migrants citing gender-specific household tasks as absorbing significant amounts of their time



This is not to say, however, that returned migrants do not change their behaviour, and that of others, in other ways. It may be simply that the division of household tasks does not alter. Also, this result may be influenced by the fact that the question is retrospective – it may be that recall for this type of question is particularly poor. A follow-up survey in Jamaica could start to generate a panel dataset that should not suffer from recall problems.

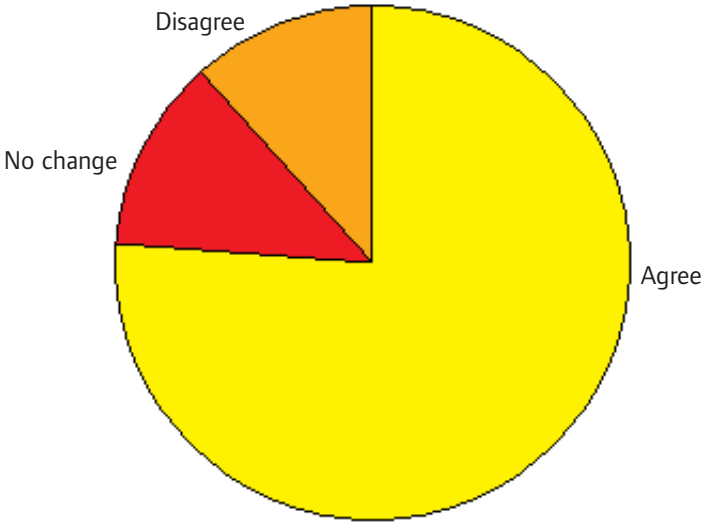
7. Other social impacts

The *Development on the Move* project is interested in a range of other social impacts, beyond education, health and gender (see Chappell and Sriskandarajah 2007 for details). In this section we focus on the effect of migration on 'traditional' culture and norms[18].

It has been suggested that migration can have powerful effects on people's views about the ways in which they want to live. For example, if a migrant moved from a society where village or tribal structures are strong to one where they are weaker, they may enjoy the freedom they have as a result, making them less supportive of traditional ways of living; or they might miss the support offered by those structures, raising their estimations of that way of living. For example, Sofer (1992) sets out how migration (both internal and international) supports the 'traditional' village structures in Fiji, both economically and in terms of values.

Our data includes a variable that asks returned migrants whether or not living abroad altered their views on traditional ways of living (specifically, it asked whether or not, having lived abroad, they now felt more strongly that Jamaica should preserve its traditional ways of life). Figure 6 shows the responses. More than 75 per cent of returned migrants said that living abroad had made them more supportive of preserving traditional ways of life in Jamaica.

Figure 6: The effect of migration on views about traditional ways of living



Given the extent of return migration in Jamaica, migration could be having a significant influence on the values and ways of life that people in Jamaica hold dear. However, given the lack of evidence (as set out in the section on gender above) as to whether and how changes in values manifest themselves in people's behaviour, it is difficult to know to what extent this impact on beliefs is important for development outcomes in Jamaica.

18. Interpreting what 'traditional culture and norms' means is country and culture specific. As such, making the greatest use of this survey data will again mean drawing on the other research tools (such as stakeholder interviews) as well as our research teams' existing country-specific knowledge. Our analysis here is therefore necessarily limited.

8. Governance impacts

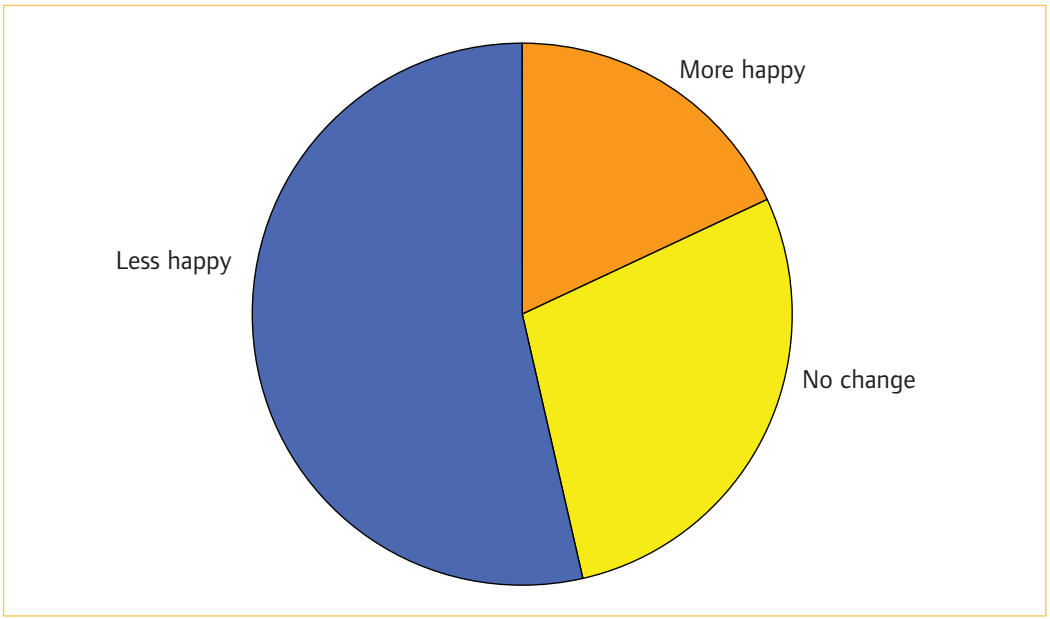
Another area of interest for *Development on the Move* is the relationship between migration and governance (see Chappell and Sriskandarajah 2007 for information on our definition of governance). We explore two areas in particular in this Jamaica analysis: the link between migration and quality of governance and the link between migration and personal security.

Quality of governance

It has been theorised that migration can affect a country's quality of governance, as diasporas and returned migrants who are exposed to different political systems change their views about the kind of governance they want in their countries of origin. Indeed, there are many historical examples of both diaspora and returned migrants playing important roles in changing the governance of their countries of origin. Diaspora have played an important part in changing the governance of Iraq, to name a recent, indeed ongoing, example; and returned migrants are frequently found in key civil service and ministerial positions in developing countries, as shown by a number of studies. However, the extent to which migration *per se* has played a part in this phenomenon (or whether the people concerned might have had important impacts on the political systems of their countries without migrating) is not clear.

In an attempt to assess whether migration has played a role in shaping the views and political engagement of returned migrants our survey asked whether those people are happier after living abroad with the way Jamaica is being run. As Figure 7 shows, the majority of returned migrants said that they were less happy with Jamaica's political governance having lived abroad.

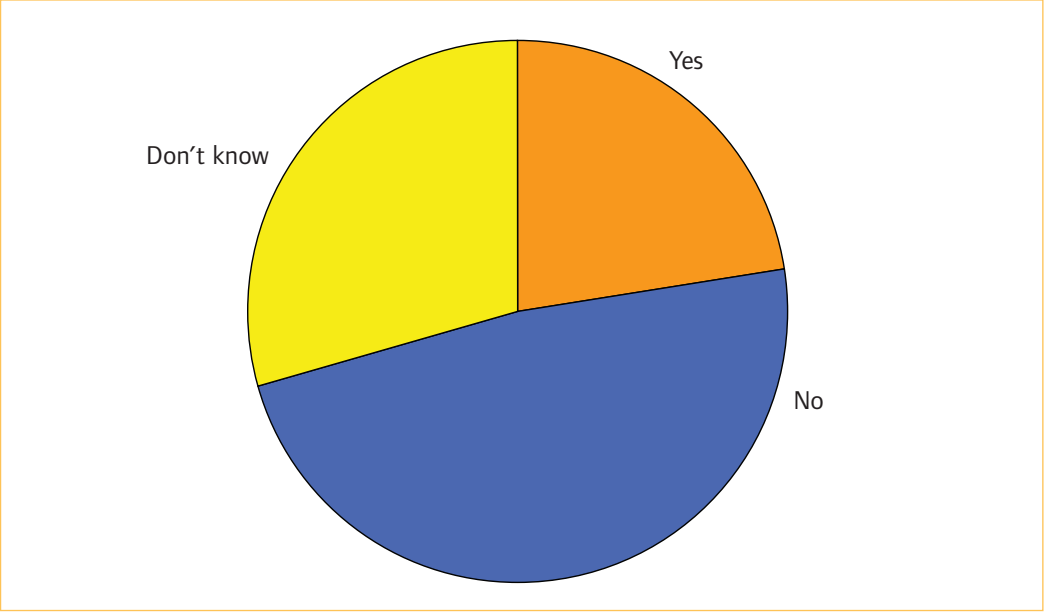
Figure 7: Returned migrants' level of approval of the way the country is run



Once again, it is worth emphasising that, given the extent of returned migration in Jamaica (28 per cent of households contain a returned migrant) this may have a significant impact on attitudes across the country. Jamaican citizens may be demanding improved standards of governance as a result of migrants' experiences overseas.

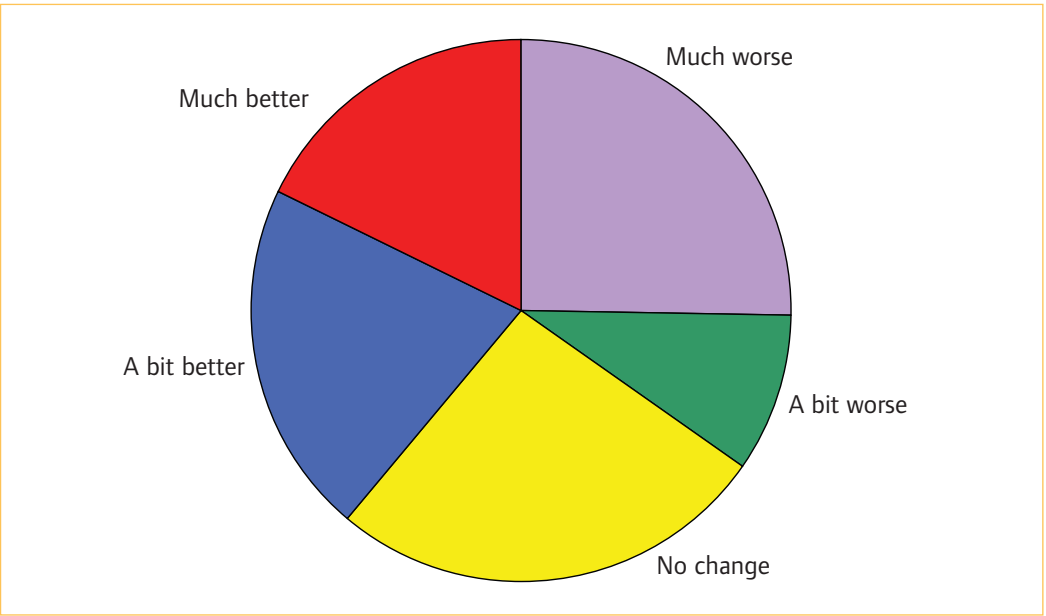
However, once again, it is important to be careful in interpreting what this change in views means for people's actions, and for outcomes in Jamaica. To try to unravel this we can look at other data in the questionnaire. The survey includes questions about returned migrants' involvement in political and social issues, and the impact of this on governance in Jamaica. Figure 8 illustrates respondents' views on whether returned migrants do get more involved in political and social issues on return. Just under half felt that they did not – the most popular response – but almost 25 per cent thought that they did, suggesting that in some cases returned migrants' experiences abroad, and their changed views, may be translating into action.

Figure 8: Views on whether migrants become more involved in political and social issues on their return to Jamaica



Greater involvement, however, does not necessarily lead to improved outcomes. Therefore, we also asked those people who felt that returned migrants had increased their participation in social and political issues what they thought the effect of this was on life in Jamaica – was it improving life or making things worse? The results are set out in Figure 9 below.

Figure 9: Views on how returned migrants' political and social activities are affecting life in Jamaica



As the graph shows, views on the effect of returned migrant involvement are highly divided. The most frequent response was that, despite this increased involvement, the returned migrants were not changing outcomes in Jamaica to any great degree. The next most common response was that they were making life much worse – but not too much should be read into this as when positive and negative responses are taken together, marginally more people felt that returned migrants were having a positive, rather than a negative impact. All in all, it appears there is some relationship between return migration and governance, but whether it is positive or negative is hard to tell. This is an area in which stakeholder interviews and the study of existing qualitative evidence could probably tell us much more.

Personal security

Migration's relationship with security is a very important topic for Jamaica, as a country that is concerned about its level of violence, particularly in the capital Kingston. One key question articulated by policymakers is whether migration provides a 'safety valve', offering a route for unemployed young people to find work and to stay out of gangs and gang-related violence. The survey allows us to examine the extent to which migration is undertaken by unemployed young people, as it includes measures allowing us to calculate migrants' age at departure, as well as their 'economic status' – whether they were in work, education, unemployed and so on, just prior to departure.

Figure 10: The main activity of currently absent migrants aged 17–25 before their departure from Jamaica

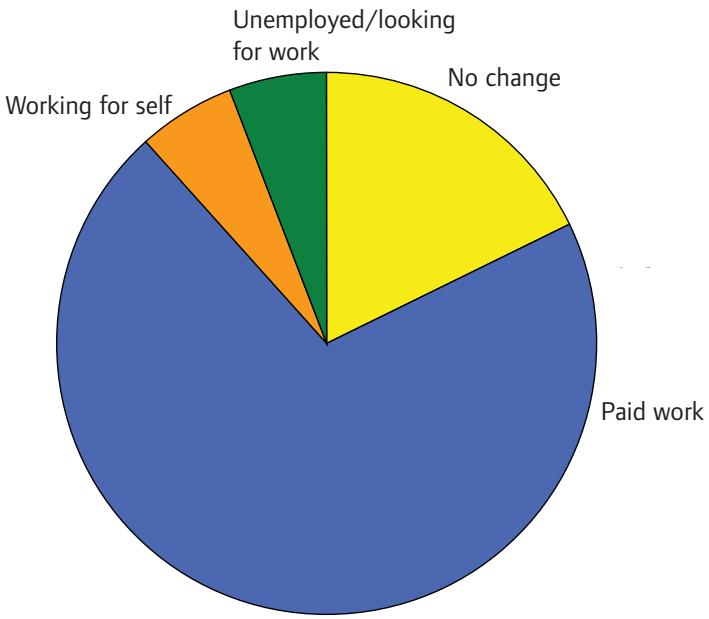


Figure 10 shows that just 6 per cent of the absent migrant 'youth' were unemployed before departure, with the vast majority in work. By contrast, 21 per cent of the non-migrant youth in our survey were unemployed. Looking at it another way, only 1 per cent of the absent migrants in the survey were unemployed youth. By contrast, 3 per cent of the non-migrant population were unemployed youth. By either measure, migration is biased against – rather than towards – the young unemployed. This should probably be expected, as managed migration systems tend to discourage migration by the young unemployed. Nonetheless, this information is disappointing for Jamaican policymakers.

9. Conclusions

This paper represents a cursory first attempt at analysing the *Development on the Move* data. It does not represent the full scope of what can be brought out of the survey – either in terms of topics covered or the rigour of the methodologies used. However, we hope it has given a sense of the kind of debates to which *Development on the Move* can contribute, and sparked some ideas about the methodologies that might be useful to explore the data, as well as providing some evidence regarding the kind of impacts migration appears to be having on development in Jamaica.

One of the unique contributions of *Development on the Move* is that it enables such a broad sweep of analysis to be performed – covering economic, social and political impacts of migration. This first paper gives a strong sense of the complex and multifaceted nature of the relationship between migration and development. It makes clear both how challenging a project like *Development on the Move* is, but also the importance of tackling these issues in a broad and ambitious way.

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