

The Impact of Migration on Children in Developing Countries

Andrea Rossi¹

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¹ Harvard University Kennedy School of Government, Carr Center for Human Rights Policy, 79 JFK Street (box 14) Cambridge MA 02138 USA, email andrea_rossi@ksg.harvard.edu Paper prepared for the Youth Migration Conference April 24-26, 2008 Bellagio, Italy. Catherine Jampel provided excellent research assistance. I am grateful for the support of the Rockefeller Foundation and the Office of Population Research at Princeton University.

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List of abbreviation

CRC	Convention on the Rights of the Child
DHS	Demographic and Health Survey
ENEMDU	Encuesta Nacional de Empleo, Desempleo y Subempleo Urbano
GAO	US Government Accountability Office
IDP	Internally Displaced People
ILO	International Labour Organization
IOM	International Organization for Migration
LFS	Labour Force Surveys
NIDI	Netherlands Interdisciplinary Demographic Institute
OECD	Organization for Economic Cooperation and Development
PISA	Programme for International Student Assessment
PIRLS	Progress in International Reading and Literacy Study
UN	United Nations
UNICEF	United Nations Children's Fund
UNHCR	United Nations High Commissioner for Human Rights

1. Introduction

In the research and reports on international migration, relatively little sustained academic scholarship addresses the impacts and implications of migration for youth and children whose families migrate or who themselves migrate to other developing countries. In the international debate on migration, scant attention has been given to children, and few statistics on migration provide data disaggregated by age. Policy makers and researchers have focused their attention on migration flowing from developing to industrialized countries (also known as South-North migration), giving almost no attention to flows between developing countries, or the so-called South-South migration. Looking at South-South child migration (the migration of children and youth among developing countries) presents two main difficulties: first, we know little about the mobility of children in general, and secondly, we have very little information on South-South migration.

Although substantial research and policy literature exists on migration and economic development on the one hand, and about child and adolescent development on the other, the literatures overlap only in rare and exceptional cases. Therefore, there is a pressing need to assess the extent of academic knowledge on the impact of migration on children and youth in developing countries in order to achieve a basic understanding of the scope and dimensions of the phenomenon, as well as for the formulation of policy recommendations. At theoretical level, analyzing South-South migration allows for better analysis the effects of migration in areas not often studied, as opposed topics like income. Wages differences between sending and destination countries may be smaller between two developing countries than between a developing country and an industrialized one. This may allow for the collection of empirical evidence on aspects affecting migration decision and outcomes that are not necessarily represented monetarily by wages (for migrating children) and remittances (for children left behind).

The aim of this paper is to assess the state of knowledge of existing academic research and empirical evidence on the impact of migration on youth and children in developing

countries. The paper will develop a framework matrix for identifying relevant research topics and also will assess the status of currently available data. It will then identify topics that have been explored more thoroughly and those that have not been addressed; assess if adequate data exists to evaluate the growing and changing role of migrant youth; and identify which researchers are conducting the highest calibre research and analysis about migrant youth, and in which countries.

In addressing the impact of migration on children, this paper also will examine how migration affects the survival, well-being, and development of children left behind, of forced child migrants, and of children migrating with their parents or migrating alone.

1.1 South-South migration

The phenomenon of South-South migration is neither insignificant nor limited to a select few developing countries. In a recent study for the World Bank, Ratha and Shaw (2007) reported that “two of every five migrants on the globe—some 78 million out of 191 million migrants—were residing in a developing country.” More importantly, “nearly half of the migrants from developing countries reside in countries of the South (74 million), [and] almost 80 percent of these migration flows take place between neighbouring countries” (Ratha and Shaw, 2007).

These figures describe only the component of South-South migration that is officially recorded; the true numbers are strongly likely to be much higher. Although the phenomenon of South-South migration is not new, the migration of people within developing countries has been consistently ignored by economists and in academic quantitative research (Hatton and Williamson 2002).

For the purpose of this review, an operational definition of developing countries defined as any country below the 30th position in the Human Development Index has been used.

1.2 Children’s well-being, development, and rights

A comprehensive approach to child well-being will take into account four different non-monetary components, namely: health, education, economic activity (child work), and psycho-social effects. These components reflect the principles defining the obligation that States have towards each and every child within their jurisdiction and without discrimination of any kind (including migrant status), as outlined in the Convention of the Rights of the Child, a nearly universally ratified international convention. These principles include, among others, the right to the highest attainable standards of health and education, and the right to be free from discrimination, exploitation, and abuse.

While these four aspects are certainly germane to assessing child well-being, they also were chosen for reasons of practicality and the availability of data, as research specific to the impact of migration on children in developing countries is almost nonexistent. In addition to census data, which remain the most important source of information, other sources of information include statistics on health from data sets such as the Demographic and Health Surveys (DHS) and on child labour from data sets such as Labour Force Surveys (LFS).

1.3 Definition of children

According to international standards, children are defined as “individuals below the age of 18” (CRC, Article1); this definition will be used throughout the paper. However, it is important to note that only some of the documents included in this literature review provide information disaggregated to specify the 0-18 age group.² In most of the research examined children are defined by the age group 0-15, and youth by the age group 16-24. Practical rather than theoretical reasons guide this decision. First, usually data are disaggregated according to the interest of the researchers, rather than according to international standards or conventions. As already mentioned, statistics on population and children are usually

² The lack of disaggregated data specifying 0-18 as an age group includes international statistics that should follow the definition in the Convention on the Rights of the Child.

collected for health purposes, such as the Demographic and Health Surveys (DHS). In these surveys, data collected to estimate the fertility rate – defined as the total number of live births per 1000 women aged 15 to 44 years – establish a group of females age 0-15, identified on the basis of non-fertility. Similar age disaggregation occurs in statistical studies related to economic activity of people, such as the Labour Force Surveys (LFS), because the legal minimum age for entry into the workforce is often 14 and 15 years. Finally, the identification of a cohort of 15 years can be used to divide all the population into 15 year intervals (15, 30, 45, 60, 75, 90), which is more common than identification of cohorts in multiples of 18. Due to these practical constraints in available data the use of 18 as a consistent and unique age for describing children in this review is limited, but should not be perceived as critique of international standards.

1.4 Definition of migration

The United Nations (1998), in its Recommendations on Statistics of International Migration, revision 1, defines a migrant as “*any person who changes his or her country of usual residence*”.³ Identifying who is a migrant can be difficult due to the the dynamic nature of migration, which in turn implies defining and assessing temporal and spatial criteria.

Migration can be permanent, if a person never return to his or her place of origin, or long term if a person moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residence. A short-term migrant is defined as a person moving to a country other than that of his or her usual residence for a period of at least 3 months but less than a year (12 months), and often is the status of a person who moves from one region to another in accordance the seasons. However, if a person moves to a new country for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment, or religious pilgrimages, he or she is not considered a migrant (UN 1998).

³ In the 1976 recommendation, a migrant was defined as *person who has entered a country with the intention of remaining for more than one year and who either must never have been in that country continuously for more than one year or, having been in the country at least once continuously for more than one year, must have been away continuously for more than one year since the last stay of more than one involved* (United Nations, 1998)

In terms of space patterns, migration can imply the movement from one country to another (international migration), or movement within a country (internal migration, particularly between rural and urban areas), or movement *transnationally* if migrants “forge and sustain multi-stranded relations that link together their societies of origin and settlement” (Schiller and al 1992).

In addressing the impact of migration on children in developing countries, we will take into consideration research addressing all the categories of migration listed in the table below (Table 1).

Table 1 Definition of migration (temporal and spatial criteria)

Time	Space
Permanent	International
Long term	Internal
Short term	Transnational
Seasonal	

For the purpose of this literature review, a very broad definition of migration will be used, primarily for the practical reason that the data on mobility of people in developing countries is so limited. Therefore, a rigid definition of migration may completely undermine the possibility of using and analyzing the scarce empirical evidence. Secondly because we do not know if permanent and long term migration has a bigger impact on children, or that moving internally in a country is less relevant than migrating internationally. For example migrating from rural areas to urban areas may have a bigger impact on children than moving from a city in one country to a city in another.

Two different broad groups of children affected by migration can be identified.⁴ As outlined in the table below (Table 2), the first group includes migrant children that directly experience mobility patterns, together with their parents or alone. This group may include also children born from migrant parents in their destination countries because. Due to their citizenship status, these children may face discrimination and experience similar impacts as

⁴ The phrase “affected children” is used to refer to children and young people under 18 years of age whose survival, well-being or development is in one way or another influenced by migration.

members of the migrant population. This group includes also foster children sent by their parents to live with another family. The second group includes children who do not move but are left behind by one or both parents who have migrated.

Table 2 Children affected by migration

Migrant children	Left behind
Migrating with the family	By one parent
Born from migrant parents	By both parents
Migrating alone	
Foster children	

Both foster children and children left behind live in households without one or both their parents. However, whereas foster children have moved away from their original households and thus experience mobility directly, children left behind have not (Pilon 2003).⁵

An additional group includes children living in contexts affected by migration, both in countries of origin or countries of destination. The well-being of children may be affected by the out-migration of large numbers of people of working age from their communities. For example, in countries such as Albania and Moldova, substantial out-migration over the past decade has had a marked impact on the age structure and productive capacity in these countries, exacerbating problems of economic development and poverty reduction (UNICEF 2006). Migration and ‘brain-drain’ can reduce the number of teachers or doctors in the community. Migration can also have a positive impact if outflows reduce labour supply and thus lead to an increase of wages at the household level. At the same time, massive inflows of migrants may seriously affect the local population in terms of access to services, social cohesion and violence. For example, the surge of gangs (or *pandillas*) and youth violence in some receiving countries is often linked with migration patterns and groups. Migration inflow can also negatively affect wages in destination countries (Borjas 2003). However, migration also can have a positive impact if outflows reduce labour supply and thus lead to an increase of wages at the household level.

⁵ Orphans are the third group of children that share the same condition in terms of living without one of both parents. To make clear distinction among these different categories, is important to know if parents of the child are alive and live in the same household.

Finally, migration is also described and classified in terms of voluntary migration or forced migration, or further divided into the categories of documented migrants, undocumented migrants (also referred as illegal migration), or victims of trafficking. These patterns, highly visible in the public and policy domain, are often ineffective for empirical studies and suffer from a lack of sound operational definitions.

1.5 Impact assessment and data sources

Impact questions are usually more challenging to answer than descriptive or normative questions. In order to identify the causal relationship between migration and selected impact outcomes (e.g. education, health etc), researchers need to rule out rival explanations for observed changes in order to assure that “causal relationships” are not purely coincidental (correlated, or due to other factors).

This literature review focuses on empirical evidence related to the impact of migration on children. In these terms, migration is considered as an independent variable that may affect children’s well-being. However, simple comparison of outcome level on migrant and non migrant children will not usually provide the right answer. ⁶ Migrant families are systematically different from non-migrant families, generating sample selection bias issues, thereby hindering sound analysis of the impact of remittances. For example, unobserved characteristics of households, may affect both the educational attainment of children and the migration status of individuals in the household. If only comparatively wealthy families may migrate, there will be an overestimation of the (positive) effects of migration on education. At the end of this paper the so called problem of endogeneity of migration and sample selection bias will be addressed in detail.

For the purposes of this literature review, only peer-reviewed publications, with clear and sound quantitative analysis of cause-and-effect relationships and that address the problem of

⁶To define causality it is necessary to use the notion of potential outcome as the level of outcome each child would attain if exposed to migration or not. Potential outcome refer to possibly counterfactual events. For a systematic discussion on impact assessment and causal inference see: Ashenfelter (1978) and Holland (1986).

endogeneity have been considered⁷. Occasionally, qualitative studies have been considered as powerful sources of information to describe aspects and characteristics of the relation between children and migration, regardless of their limitation in providing unbiased and generalizable information on the impact of migration on children.

⁷ Mainly in English.

2. The effects of migration on children left behind

Migrating parents may decide, whether by choice (voluntary) or due to untenable circumstances (forced), to leave their children in their country of origin, planning either to return to their household of origin (in cases of seasonal migration) or to reunite much later in their destination country (in cases of permanent migration). The decision of one or both parents to migrate and consequently, to leave children behind, may be the result of an individual altruistic decision to send remittances in order to make their family members' lives better, or the result of household utility maximization that may take into consideration also the risks and perils of travel (Funkhouser 1995; Stark 1995; Becker 1974, 1991).⁸

In the last decade, remittances have emerged as the second largest source of funding for developing countries, and their volume continues to grow. According to the World Bank, in 2005, migrants worldwide sent a total of \$232 billion in remittances. Of this, "an estimated \$167 billion was sent to countries in the developing world - more than twice that of official development aid and ten times the net private capital transfers" (World Bank 2006; Kapur and McHale 2003). At the micro-level, remittances may relax the household budget, enabling households in developing countries to increase expenditures on health, to invest in the human capital of children reducing labour participation and to encourage school attendance. At the macro-level, Adams and Page (2003), using data from 71 countries, found a correlation between an increase in migrations and remittances and the decrease of head-count poverty. From their findings, they estimated that "an increase of 10 percent in a country's share of international migrants can lead to a 2 percent decline in one dollar a day poverty.

The possible positive contribution of remittances to combating extreme poverty in recipient households has been at the centre of the recent debate on migration and development, leading to what some authors describe as 'remittances euphoria' (de Haas 2007). For example, during the recent United Nations High Level Dialogue on migration and Development, remittances have been at the centre of most policy debates, publications and recommendations (UN 2006).

⁸ For the altruistic explanation see Lillard and Willis 1997. For an approach based on contractual arrangement see Lucas and Stark (1985); Poirine (1997).

However, the positive correlation between remittances and income may not necessary cause a positive development effect on children left behind (de Haan, 2005). Migration of one or both parents may generate, in the short term, a reduction in household income, that is, reduction linked with migration costs such as travel, resettlement and unearned income, at least until the migrants identify a new and profitable solution in the country of destination. At the macro level studies have identified a negative U shaped relationship between international remittances and income inequality, with inequality increasing initially with the increase of remittances, and then decreasing (Koechlin 2007).

The dearth of general information on children left behind is one of the reasons for the lack of development of appropriate policy responses. There is no global estimate on the number of children who have at least one parent migrating. However, living in a family with at least one parent away for long periods of time is part of normal childhood experience for many children in the developing world. The Whitehead and Hashim (2005) report estimates that the percentage of children living in migrant households is between 18 and 40 percent in rural Bangladesh, 50 to 60 percent in rural Tanzania, and 80 percent in Mali. One study on Bangladesh discovered that an overwhelming 91 percent of the 5,930 children aged between 5 and 14 have one migrant parent (mainly the father) who is away, and another 2 percent of the sample has neither parent living in the household (Kuhn 2006). Patterns can be different from rural to urban areas. For example, in South Africa, the Southern African Migration Project (SAMP 2004, as quoted in Whitehead and Hashim 2005), estimates that the percentage of households with one or two migrant parent(s) goes from 25 percent at rural level to 40 in rural areas. In developing countries rural areas are more affected by migration (internal or international) than cities. In Thailand, Bryant (2005) estimates that about half a million children aged 0 to 14 years are left behind by their international migrant parents – again mostly fathers. Unfortunately, the lack of information on the methodology used in these studies, the possibility of serious sample bias, the prevalence of case studies, and the absence of systematic household surveys, make it difficult, if not impossible, to assess the quality of these estimates.

The impact of migration and remittances upon the children left behind is still notably understudied in the economic literature. Rapoport and Docquier (2006), in their thorough and

far-reaching review of the economics of migrants' remittances, quote only two empirical papers on the impact of remittances upon children in recipient households; the World Bank's (2005) publication dealing with the economic effects of migration and remittances refers only to a handful of papers on this broad topic.

Most of the information available analyse the impact remittances sent from industrialized countries, but little research has been done on the impact of South-South remittances. Additionally, the existing the existing empirical evidence focuses disproportionately on Latin American and South East Asian countries. Little to no evidence currently exists for most geographical areas of the developing world. Mexico is one of the few countries where a rich set of micro-data on migration and remittances is available. What is unique about the Mexico Census of Population and Housing is that it provides data on members of a household who reside abroad. This has probably attracted disproportionate scholarly attention in the wake of soaring interest about the economic impact of migration and remittances.

The lack of questions in national statistics and census that specifically address migration patterns is one of the major constraints to providing solid quantitative estimates. It is difficult to identify households with migrant parents using information collected in standard household surveys with no specific module(s) on migration. Looking at household composition may not provide detailed information. For example, if a child is living in a household without his or her parent, it is not possible to assess whether this situation arose as a result of migrating parents, divorce, or the child's relocation (e.g. an orphan or a child sent to stay temporary or permanently with member of the extended family such as uncles, grandparents, etc.). At the same time, single-headed households can be the effect of divorce or death of the partner, rather than ubiquitously the effect of migration (Whitehead and Hashim 2005).

Following the child-rights based approach described in the introduction, empirical papers on the impact of migration on children left behind can be organized along four issues. The first group of papers analyzes the impact of migration on various measures of child health. The second group analyzes the impact of migration and remittances upon human capital formation, that is, educational attainment. A third group looks at the impact of remittances on child economic activities and possible risks of child labour. The final group looks at the

effect on children of lack of parental care. Most of the research identified addresses the impact of either migration or remittances upon school attendance and child work, while a few studies analyze how the migration of an adult household member and the ensuing transfer of resources affect children's health outcomes. Very few/almost none investigate the psychological effects of lack of parental care using solid quantitative methodology.

The four issues are, of course interconnected: a reduction in school attendance may lead to an increase in economic activity, and *vice versa*; bad health can affect school performance; and lack of parental control can increase the need for additional schooling, but not necessarily lead to an increase in performance. Unfortunately, there are no comprehensive and holistic studies looking at all the aspects and their relationships and possible correlations. Remittances do not merely cause an increase in the income of recipient households, but also can give rise to significant indirect or non-economic effects. Such effects are likely to be closely intertwined with the migration of an adult member, and understanding these effects requires adopting a broader and more complex analytical perspective.

2.1 The impact on health of children left behind

The first handful of papers analyze the impact of migration on infant survival (Kanaiaupuni and Donato 1999) and on the incidence of low birth weight (Frank and Hummer 2002).⁹ The Mexican Migration Project, Kanaiaupuni and Donato (1999) analyze the impact of migration and remittances on infant mortality in 5 states of Mexico. A positive contribution of migration to infant mortality reduction linked with income effect determined by the transfer of remittances is identified. In another instance, Frank and Hummer (2002) rely on micro-data from the 1997 Encuesta Nacional de Dinámica Demográfica in order to analyze the impact of migration and remittances on birth weight. Their paper supports the hypothesis that migration beneficially impacts child health outcomes, and demonstrates that children in households with migrant members are less likely to be underweight. López-Córdova (2006) analyzes the relationship between migration and child health in

⁹ Although Borckerhoff (1990) and Ssengonzi *et al.* (2002) are quoted in papers that study the effect of migration on the health of children left behind (e.g. World Bank 2006), it must be stressed that they analyze the chances of survival of children born from migrant mothers.

Mexico, using data at the municipal level. He provides evidence consistent with Hildebrandt and McKenzie's (2005) household-level estimates. López-Córdova (2006) estimates that a 1 percent increase in the share of recipient households reduces the infant mortality rate by 1.2 per thousand. Although the author himself admits that the size of the effect may appear excessive, given the low and declining incidence of infant mortality in Mexico, López-Córdova (2006) nevertheless argues that the direction and significance of the effect are notably robust across alternative specifications.

Other studies have analyzed the impact of remittances on children's health using multiple indicators, and not just infant mortality. World Bank (2006) and Acosta et al. (2007), in their broader analysis of the development contribution of remittances to Latin America, include anthropometric measures, specifically weight-for-age and height-for-age z-scores, for children aged 1 to 5, the probability that the delivery of the children born in the 12 months prior to the survey had been assisted by a doctor, and the probability that children aged 2 to 5 had completed a set of vaccinations. Controlling for household characteristics and for an estimate of pre-migration income, their multivariate analysis suggests that children in recipient households fare better than children in non-recipient households with respect to all four health indicators.

The interaction of recipient status with the estimated pre-migration household income suggests that the positive effects of remittances are confined to the households in the poorest quintile of the income distribution.¹⁰ As Frank and Hummer explain, "These distributions suggest an interesting 'mini-epidemiological paradox' within Mexico. That is, although women in migrant households are characterized by a riskier socio-demographic profile, their infants have favourable birth outcomes as compared to infants born into nonmigrant household" (Frank and Hummer 2002: 755). To understand this apparent paradox, it is important to note that the positive effect of migration is largely provided through remittances, but not as a simple income effect. In Frank and Hummer (2002), household income does not present a significant effect on low birth weight, whereas receiving remittances always has a significant effect, reducing low birth weight. Hildebrandt and McKenzie (2005) find that despite migration's reduction of infant mortality and the risk of low birth weight, lower

¹⁰ However, the limited dimension of the samples for the two countries analyzed (Guatemala and Nicaragua) may cast doubt on the soundness of these latter estimates.

access to preventive healthcare services offsets these beneficial effects. The authors argue that remittances fail to account fully for the positive contribution of migration to children's health because migrant family members increase mothers' health knowledge.

This explanation is linked to what Levitt (1998) calls *social remittances*, that is, the ideas, behaviours, identities, and social capital that flow from country of destination to country of origin. Migrant members of the household bring back not only financial remittances but also new information, and values that may have a positive effect on children. This positive effect depends, however, on the possibility of existing means of contact between migrants and the household. Whether parental migration is permanent or seasonal also determines the different impacts on children left behind.¹¹ For example, Macours and Vakis (2007) find a positive impact of seasonal maternal migration in Nicaragua on the early cognitive development of those children. The accumulation or adoption of the benefits of social remittances also requires sufficient time for transfer.

2.2 Migration, remittances and educational attainment

In looking at the impact of migration and remittances on educational attainment, the underlying hypothesis is that remittances increase educational opportunities. The logic is that the remittances relax the household's budget constraint, which previously limited educational investment, thereby enabling households in developing countries to invest in the human capital of children. Such an outcome is key in terms of country growth and development (Acosta 2006).

The available literature on this topic is quite recent. For years, the sole academically published attempt to quantify the impact of remittances upon school attendance was a study done by Cox-Edwards and Ureta (2003) on the risk of school dropout. The authors estimate how remittances influence Salvadorian households' educational choices via an income effect, finding that because remittances relieve some of the pressure on household budgets, families

¹¹ Much of this South-South migration is seasonal, as economies are more agricultural based, and borders might be more porous (Ratha and Shaw 2006)

can afford – and often choose for reasons of optimization – to have their children spend more time in school. The authors estimate a duration model using cross-sectional data drawn from Encuesta de Hogares de Propósitos Múltiples 1997. They find that remittances significantly reduce the drop-out rate of individuals aged 6 to 24. Cox-Edwards and Ureta’s findings appear to be coherent with the expectation that remittances contribute positively to school attendance. Looking at the same hypothesis, Hanson and Woodruff (2003) explicitly recognize the complex interaction between migration and remittances and find that in the case of Mexico, children in migrant households complete significantly more grades of school at a given age than do other children.

School enrolment or dropout may be limited proxies in measuring the impact of migration and remittances on the education of children left behind. The impact could simply be the result of a higher demand for institutionalized child care in families where one of the parents is migrating.¹² In order to have a more accurate analysis of the development effects, researchers should also evaluate each child’s academic performance: are children of migrants just spending more time in school, or are they actually benefiting from that time in school and making educational gains they would not otherwise be making?

One example of a study that seeks to understand this question is a 2003 research project in which the Episcopal Commission on the Pastoral Care of Migrants and Itinerant People /Apostleship of the Sea-Manila, the Scalabrini Migration Center, and the Overseas Workers Welfare Administration cooperated on a nationwide study that explored the impact of migration on the left-behind children and families. The 2003 study found that children of migrants fared better than the children of non-migrants, not only in terms of school attendance, but also in terms of result and achievement. The findings suggest that the economic benefits of migration somehow translate into better outcomes for the children of migrants.

The positive effect on children’s academic performance may reflect specific patterns of investments migrant parents channel into children’s education. Bryant (2005) argues that in the Philippines remittances were used to send children to private schools, which were

¹² Specific research in boarding schools, looking at migration patterns of parents, can raise interesting questions and results.

considered better than public schools. He suggests that children in left behind households have a higher probability of attending private schools, and that on average they got better grades than non-migrant children. Finally the extra income a household gains from remittances may allow children to delay entering the workforce in order to further their studies, increasing the final level of education (Hanson and Woodruff 2003).

Yet by contrast, migration of parents can also detrimentally affect school attendance. For example, McKenzie and Rapoport (2006) detect a significant negative effect of migration on school attendance and educational attainment of 12 to 18 year old boys and of 16 to 18 year old girls. The authors argue that migration influences educational decisions via three main channels: the income effect brought about by remittances; the direct effect of adult migration on the demand for child work; and the impact of the prospect to migrate upon the incentives to invest in education. The authors argue that the latter channel most likely drives the estimated negative contribution of migration to educational attainment. They explain that, in rural Mexico, children of migrants are more likely to migrate themselves (illegally) to the United States, where the return to human capital for an illegal alien is very low. In this case and children in migrant households are no more likely than children in non-migrant households to be economically active, so that the second channel (impact of migration on children's productivity) plays little to no role. This negative effect is amplified once remittances become essential for the economic survival of a large part of the population of a country, generating a predisposition for migration on a larger scale and generating household dependency to remittances for household members left behind.¹³ Remittances may lead to changes on consumption patterns, reduce labour supply, and increase need for additional remittances in the future (Coronel & Unterreiner, 2005). In Pakistan, for example, consumption patterns of families with members working abroad can have "demonstration effects" inducing increased spending, as a consequence (Addleton 1984). Bagasao (2004) interprets that in the Philippines, remittances induce a culture of dependency that suppresses individual initiative. Analyses of other countries maintain that remittances modify culture, consumer habits, and work ethics (De la Garza 2002).

¹³ On dependency, see: Kritz et al. 1981.

Another negative aspect with regard to school attendance may be linked with the risk that the departure of wage earners from a household disrupt family life. The reduction in the number of adult role models in the home, may increase the child-rearing responsibilities of resident household members, placing greater demands on older children to assist in running and supporting the household (Hanson and Woodruff 2003; Acosta 2006), and making it more difficult for children to remain in school.

Some studies have identified specific gender patterns, with different result for boys from girls. Hanson and Woodruff (2003) analyze a sub-sample drawn from the 2000 Mexican population census to assess the impact of migration upon the educational attainment – defined as the number of accumulated years of schooling – of children aged 10 to 15 residing in rural areas.¹⁴ Whereas migration does not appear to influence the educational attainment of boys significantly, it does influence girls in migrant households, who appear to complete a significantly larger number of years of school. In the case of Pakistan, Mansuri (2006) provides an insightful disaggregated analysis of the impact of migration with respect to the gender of the de facto household head, finding no evidence that a female de facto household gives a higher priority to educational expenditure. He also reaches the conclusion that there is no protective effect of migration-induced female headship on schooling outcomes for girls, and rather that women appear to be protecting male siblings.

Emigration may then increase or decrease household investments in schooling, depending on whether the income effects from remittances offset the effects of household disruptions. The effect of migration on school grades completed will be equal to the sum of the impact of external migration on a child's educational attainment through its impact on family income (expected to be positive) and the impact of external migration on a child's education attainment through its impact on family structure (expected to be negative). The sign of the total effect cannot be defined theoretically and may change according to multiple variables such as gender, time or level of education of parents, or if the household is in rural or urban areas (Borraz 2005).¹⁵ For example, parental migration can have negative impact on

¹⁴ Their use of historic migration rates, dating back to the 1920s, follows the practice of many other authors such as Woodruff and Zenteno (2001), McKenzie and Rapoport (2006), and López-Córdova (2006).

¹⁵ In a study on Mexico Borraz (2005) calculate that remittances have a small impact on education but only on children living in urban areas with less than 2.500 inhabitants and whose mothers have low level of education

education if it increases the migration decision of young males or increases the need for young females to engage in housework (McKenzie and Rapoport, 2006).

The final result may also be affected by the time-sensitive character of educational decisions in the household. If parents have already made a decision about their children's schooling at the time of migration, these children are unlikely to receive any beneficial impact from a later transfer of funds. The recent availability of richer data has allowed some authors to refine the evidence about the relationship between migration and educational attainment. Mansuri (2006) relies on a survey from the rural areas of Pakistan that provides information on the year in which migrants left their households, and he is able to focus solely on migrant households to test whether remittances produce differentiated impacts on siblings of different ages. Mansuri (2006) estimates that the age of the child before migration significantly influences the impact of migration upon school attendance, drop-out hazard, and accumulated years of schooling.

Similar to the paradox observed in analyzing impact on health, the effect of remittances on schooling may vary with the educational level of migrating parents. Results from Latin America shows that migration's positive effect on school attendance is usually limited to children with parents with a low level of education (Acosta 2007; Hanson and Woodruff 2003; McKenzie and Rapoport 2006).

2.3 Economic activity of children left behind

Remittances may have a direct impact on decisions concerning economic activity of children left behind, and not due to changes in education and school attendance. Remittances may replace the income obtained from child work, thereby reducing the need for economic activity of children regardless of the effect on return of education (Acosta 2006).

Migration and remittances may have a different impact if the child undertakes her or his activities outside or inside of the household. When a child is employed within the household, the migration of an adult member may produce two distinct direct effects on the household

demand for child work: first, it increases the marginal productivity of the child, who is required to substitute for the foregone adult labour; and secondly, remittances – besides determining a beneficial income effect – can influence the productivity of child work if the remittances are used to finance productive investments, such as the purchase of land or of productive equipment.¹⁶ Conversely, when children are employed outside the household, migration of an adult member and the transfer of remittances do not directly influence their productivity. Therefore, expected and predominant income effects of remittances can potentially contribute to reducing the incidence of child work.

Migration of parents and remittances can also affect the distribution of time between family and non-family activities. Yang (2004) explores the impact of the variation in the amount of remittances Filipino migrants sent home after the East Asian crisis of 1997 on the time children in recipient households devoted to work, distinguishing between different types of employment of children.¹⁷ He finds that an increase in remittances receipt has two effects: on the one hand, it lowers the amount of time children devote to wage employment outside the household, and on the other, it increases the time children work and receive a wage within family-run economic activities. On balance, the effects of remittances are positive, as this latter increase (of time spent within family-run economic activities) is smaller than the reduction in the time worked outside the household. This disaggregated analysis warrants merit for highlighting that the effects of remittances on child work are often closely intertwined with the type of economic activities adult household members perform.

The effects of remittances on child work can be sharply different between urban and rural households. In rural areas, where there is a much higher prevalence of employment within family-run activities than in urban areas, the effect of remittances on economic activity is not significant, whereas in urban areas, remittances are estimated to reduce significantly the incidence of child work. In a study on Ecuador, for example, nearly 90 percent of the working children in rural areas are employed for household farming, while in urban areas the

¹⁶ Adams (1998) finds that remittances to rural Pakistan increase the purchase of both rain-fed and irrigated land, and Bhalotra and Heady (2003) and Cockburn (2001) suggest that the relationship between the household economic condition and the incidence of child work is not linear, as the household demand for the latter is positively influenced by its endowment of some productive assets.

¹⁷ Yang (2004) analyzes the impact of a variation in remittances transfers, expressed in local currency, due to the different extent of devaluation of the Philippine peso against the currencies where the Filipino migrants resided. He looks only at recipient households, thus getting rid of the issue of their non random selection.

percentage of working children employed in family-run businesses is 50% (Bertoli 2007).¹⁸ This is linked with the results in studies looking at the impact on educational attainment. Cox-Edwards and Ureta (2003), as another example, estimated that the positive effect of remittances on reducing school drop-out is four times larger among urban rather than rural households.

2.4 Social costs and benefits of migration on children left behind

The social cost of migration can be very high, particularly due to the lack of parental care.¹⁹ Children left behind inevitably grow up in single-headed families (if only one parent is migrating), or with grandparents and other relatives (if both of the parents are migrating), filling the vacuum left by migrant parents.

Negative effects can be exacerbated if long term migration of one of the parents may lead to permanent disruption of family unity (Coronel and Unterreiner 2005). Absence of men can create material and psychological insecurity, leading mothers (or children when both the parents are migrating) to pressures and negotiations with wider family members. Migrants may start having “dual families” relationships: one in the country of origin and one in the country of destination; this phenomenon may actually reduce the amount of remittances sent home (Nyiri and Saveliev 2002). However it is important to stress the fact that children left behind are not orphans and most of them do keep some sort of contact with their migrant parents.

The impact of the absence of one of the parents on children can be mediated by an extended family safety net, which is an effective response to economic and social crises, particularly in sub-Saharan Africa (Foster 2004). In many developing countries, assistance

¹⁸ Bertoli (2007) draws his data from the 2001 *Encuesta de Empleo, Desempleo y Subempleo en el Area Urbana y Rural* conducted within the IPEC programme of the ILO. Unfortunately the survey does not provide data on migrants. This severely limits the opportunity to cope with the possible selection bias

¹⁹ In the available policy literature on development, the term “children left behind” is sometime also used to refer to children orphans due to HIV/AIDS. The effect of a lack of parental care on children has been addressed in detail in a series of recent studies looking at the conditions of the large number of children orphans due to HIV/AIDS, and some of the policy concerns and interventions are similar to the ones developed for of abandoned children or orphans

among members of extended families is done not only through inter-household income transfers between rural and urban areas, but also through sending children to live with relatives as reciprocal arrangement that contributes to mutually recognized benefits for both families (Pharoah 2004). For this reason, children in left-behind households do not appear to suffer greater social or economic problems than their peers in non-remittance-receiving households, with the exception of younger children (Bryant 2005). However, care by the extended family, or community or institutional care, often does not provide as much protection from abuse and exploitation as parental care. When very young infants are left behind, recommended periods for exclusive breastfeeding may be compromised and malnutrition exacerbated. Parental absence, however temporary, can still have a significant impact on children left behind; among the consequences are a decrease in cognitive development and a compromising of long-term human capital accumulation and income-generating potential in the long run.²⁰

Furthermore, the effects of parental absence vary not only with time but also with the type of migration (seasonal versus permanent).²¹ For example, in the case of Nicaragua, it is found that seasonal maternal migration positively impacts the early cognitive development of the affected children (Macours and Vakis 2007). According to their study, seasonal migrants not only have more direct contact with their children, but are more likely to maintain control of the migration income. For example, in case of female migration, migrating mothers may dictate that remittances are spent directly for children, a far different result than when remittances from permanent migration are sent to family members rather than applied to the children immediately.

When examining empirical evidence on the impact of lack of parental care on children left behind, it is crucial to remember that the final effect (positive or negative) is the result of two different components: though the lack of parental care produces a potentially adverse

²⁰ Cognitive development can be measured using test scores such as the Peabody Picture Vocabulary Test. Children are shown a series of slides/plates with four pictures. For each plate, they are told a corresponding stimulus word that describes one of the four pictures and are asked to point to the relevant picture. The items become gradually more difficult and the test score reflects how many items the child can identify before making an excessive number of errors. PPVT has been used by Macours and Vakis (2007) in Nicaragua. Comment: this footnote seems rather specific compared to the others? Should we bring the others up to this level, or delete this so it doesn't seem out of place? Or did you just think it was very interesting.

²¹ According to Ratha and Shaw (2006), the majority of South to South migration is seasonal due to the prevalence of agriculturally-based economies and comparatively porous borders."

effect, remittances can compensate for maternal absenteeism due their positive contribution to the household income and to the household's potential to access and provide better health, education, and work opportunities. Although family disruption may have an evident negative effect on children's general health, particularly during the first period of their parent's migration, the positive impact of remittances can compensate for this negative effect because the increase in the household income may elevate the food available for children and consequently raise child weight (Kanaiaupuni and Donato 1999). Hanson and Woodruff (2003), exploring the effects of migration and remittances upon the education attainment of children left behind in Mexico, also observed competing effects: on the one hand, remittances from international migrants raise household income and allow children to complete more schooling, but conversely, parental absence also may impact on family life affecting educational attainment of children. This argument is in line with Battistella and Conaco's (1996) observation that the children left behind in Luzon, Philippines, performed worse in school and tended to have social problems, especially in the case of maternal migration.²²

Unfortunately, the evidence of family disruption's negative impacts upon children's access to the realization of their rights is often anecdotal and there is a need for sustained further research on the social costs of migration and remittances. If there are few studies on the socio-economic impacts of migration on the population left behind, the number of studies on the psychological impacts of migration on the population left behind is almost non-existent.

2.5 Gender and preferences in the use of remittances

Family decisions concerning the use of remittances often depends on which family members have migrated and which family members are left in charge of resource allocation. The gender of the de facto head of household (the parent left behind with children) can affect the impact of remittances on children because remittances allocation decisions often differ between mothers and fathers. Even if both of the parents genuinely seek to maximize their

²² It is worth noting that later research by the same authors, Battistella and Conaco (1998), as quoted in Bryant (2005), finds scant evidence that children in migrant households have greater psychological problems.

children's future well-being, fathers seem prefer to invest in physical assets and the expansion of family farming and business activities, while mothers prefer to invest in human capital. Malone (2007) tests the relevance of differences in the preference for educational investments between male and female parents, drawing her data from the Mexican Migration Project, and finds that remittances improve children's educational attainment via their positive income effect primarily when fathers send remittances. With fathers absent, mothers assume more "allocative power," thereby allowing them to allocate the remittances toward education. Various studies have confirmed this asymmetrical preferences hypothesis, that mothers spend a greater portion of household remittances on children and investment in human capital than fathers do, for mothers especially seek to improve their children's educational attainment. For example, Duflo (2003) finds evidence that the impact on child nutrition varied according to the gender of the head of the household in a study on the expansion of social pension program in South Africa.²³

Recipient households also have a higher proportion of female heads (not married or with husbands not currently present at home) when compared with non-recipient households. However, it is important to note that when data refer to resident members alone and do not include migrants, household headship is endogenous to migration. In many developing countries, the decision about whether the mother or father will migrate has been regulated and/or influenced by colonial laws, which often impose limitation on family reunification (Whitehead and Hashim 2006). Through a probit model, Acosta (2006) estimates that large effect of female headship upon the likelihood of receiving remittances is mainly due to the fact that in most of the cases, the husband migrates.

The increasing global feminization of labour migration may have a negative effect on the education of children left behind if asymmetric preferences between males and females persist. Even if women may send a substantial percentage of their income home (Chant & Radcliffe 1992; Curran and Saguy 2001), husbands left at home may prefer to direct only a small part of that income towards the education of children. Therefore, migrant women have to find a way to maintain their roles in deciding how to allocate inter-household income. Parreñas (2005), for example, finds that migrant Filipino mothers tend to remit to the eldest

²³ As quoted in Malone 2007.

child instead of the father, and remain involved in expenditure decision by co-managing a bank account not with their husbands, but often with their eldest daughters. Some studies describing the remittance behaviours of male and female migrants find that women remit more (both overall and as a percentage of their income) than men do (Richter and Havanon 1995; Phongpaichit 1993).²⁴ In another case, Vanwey (2005) tested whether such a difference in remittances behaviour was caused by the different characteristics of male and female migrants using a data set that included the characteristics both of the migrants and their recipient households. Female migrants seem to behave more altruistically than male migrants, and they also react more strongly to the effect of remittances on their dependents in the recipient household.

Migration may impact on household decision on the allocation of time among household members, and this effect may be different according to gender patterns. Funkhouser (1992) finds that, in Nicaragua, remittances increase self-employment in men, but reduce labour supply in women. Acosta (2006) finds similar results, while also correcting the analysis for potential endogeneity of remittances and for sample selection bias. Remittances still have a negative and significant impact by reducing female labour supply due to the disincentive remittances provide in terms of work, in which increasing the household income can increase the decision to consume more leisure time (Acosta 2006). Unfortunately, data limitation does not allow for any disaggregated analysis on the use of time by women who leave the labour market between parental and home production activities, making impossible to test the hypothesis that a reduction in female employment increases parental care provided to children.

²⁴ Using the National Migration Survey of Thailand, Osaki (1999, 2002) found that women are more likely than men to remit. She attributed this gender difference to Buddhist traditions in Thailand that assign religious merit to women who financially or materially support their families (Osaki 1999)

3. Forced migration and trafficking: a protection paradox

According to the standard definition of migration, forced child migrants and child victims of trafficking should be still considered migrants.²⁵ However, they represent two different and very special subgroups of the total population of migrant children. The paradox is that there is more literature and information on these two special groups of children than on all “normal” migrant children, as a result of the special level of protection the international community grants to these two groups.

3.1 Forced migration and refugee children

According to the definition outlined in the 1951 United Nations Convention Relating to the Status of Refugees, a refugee is *a person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, is outside the country of their nationality, and is unable to or, owing to such fear, is unwilling to avail him/herself of the protection of that country.*

Children represent an important component of the refugee population. Of the estimated 14.2 million refugees worldwide, 41 per cent are believed to be children under the age of 18.²⁶ On the same basis, there are 24.5 million people who are internally displaced because of conflict, of whom 36 per cent are children (UNICEF 2007).²⁷ According to the UNHCR, which groups all of its varied refugee populations (including asylum seekers and Internally Displaced People for example) into the larger category of “population of concern,” children and adolescents represent the majority of persons of concern in Africa, whereas the lowest proportion is found in the Americas region (26%).²⁸ According to the UNHCR, more child

²⁵ “From a purely accounting perspective, asylum-seekers who stay in the country for over a year should be counted as part of the group of all international migrants” (UN 1998).

²⁶ In 2006 information on the age breakdown itself was available for only about one quarter (24% or 7.8 million persons) of persons of concern. On average, some 45 per cent of these 7.8 million persons of concern for which age data is available are children under the age of 18, with 11 per cent being under the age of 5 and 19 per cent between 5 and 11 years.

²⁷ Progress for Children: A World Fit for Children Statistical Review (No. 6), 48.

²⁸ UNHCR Statistics Yearbook 2006, p. 10

refugees come from African nations and often travel to other nations within Africa or within their own national borders. On that continent, 56 per cent of all refugees are children under the age of 18, with little variance among the main geographical regions. The proportion of refugee children is especially high in Angola (69%), Togo (64%), Guinea (63%), Burundi (62%), Rwanda (61%), the Democratic Republic of the Congo (61%) and Sudan (60%).²⁹

The percentage of children among refugees is higher in camps than in rural or urban settings. “Children below the age of 5 represent on average 18 per cent of UNHCR’s population of concern in camps in Africa for which data on age and sex are available, followed by the Asia and Pacific (12%) and the North Africa and Middle East (10%) regions. Available data also suggest that children below the age of 18 represent more than half (55%) of the camp populations in Africa and 49 per cent in Oceania while they represent only 2 per cent in Latin America and the Caribbean” (UNHCR 2006).

Impact on child refugees’ well-being

The particular phenomenon of *forced* child migration raises many issues related to migration’s impact on children’s well-being. Among these are issues related to health, education, labour and mental health (psycho-social effects). The UNHCR’s five “Priorities for Girls and Boys of Concern” outline the key issues for all refugee or otherwise forcibly migrant children: (1) separation of children from families and caregivers, (2) sexual exploitation, abuse, and violence, (3) military recruitment, (4) education, and (5) adolescent concerns (transition to adulthood through education, skills-training, income generation, life-skills, decision-making skills).³⁰

In addition to issues that all forced child migrants face, certain groups of forced child migrants are especially vulnerable: unaccompanied children, girls, and children with disabilities. Unaccompanied children may lack proper documentation and may be unable to access resources to which they might otherwise be entitled. Displaced young women may face particular issues at each step of the way: in urban areas, they risk sexual exploitation and are often put under house arrest by their husbands, fathers, or male siblings, or are in

²⁹ <http://www.unhcr.org/statistics/STATISTICS/3b9378e42d.pdf>, p. 1-2

³⁰ <http://www.unhcr.org/protect/PROTECTION/4398146f2.pdf>

particularly vulnerable positions as domestic workers. Alternatively, in camps, they also experience marginalization in terms of decision-making processes and in a closed environment are even more likely to be victims of sexual and gender-based violence. Adolescent girls (as children under 18) are also likely to be “married off at increasingly younger ages.” Females often have a harder time finding jobs that do not involve prostitution and risk exploitation by military or other government personnel (usually male) who are part of the migration process.³¹ Children with disabilities are also very vulnerable, and “compared with their peers, these children are at a greater risk of violence, abuse, exploitation, and neglect,” due to misperceptions or specific physical, sensory, or intellectual differences. When reporting abuse, these children may be discredited or not taken seriously. In addition to separated children, girls, and disabled children, children from ethnic minorities and those in conflict with the law may face additional problems.³²

Though substantial qualitative and policy literature on the impact of forced migration on children in fields such as sociology or medical anthropology address a variety of issues, there is a dearth of quantitative literature on the subject.

3.2 Child victims of trafficking

Trafficking in children is probably one of most visible and discussed topics related to the movement of children among developing countries. However, not only is there a lack of solid academic research on the impact of trafficking on children, but also there is a lack of availability of even simple descriptive statistics, such as estimate at global and national levels. The lack of quantitative and qualitative data on trafficking presents a serious constraint in the development of effective policies and interventions to prevent and combat the phenomenon.

The increased demand for quantitative estimates on trafficking in human beings has, in some cases, pushed stakeholders to present as quantitative findings what are, in reality,

³¹ UNHCR Handbook for the Protection of Women and Girls, p. 9-11
<http://www.unhcr.org/protect/PROTECTION/47cfa9fe2.pdf>

³² UNICEF's Children and the Millennium Development Goals: Progress towards A World Fit for Children, p. 59

subjective perceptions. This tendency to quote unsourced data has occurred in reports on trafficking at the global and at the regional levels. Moreover, different reports tend to cite the same unconfirmed estimate, often with little or no reference to the source. This repetition across sources constantly reinforces “ballpark figures,” which then adopt a life of their own and begin to take on a kind of authority. Once an estimate is circulated and appears in multiple publications and in media reports, it is difficult to alter or adjust the figure. It is not at all unusual to find false or artificial estimates in use, even in the most up-to-date official documents.

For example, the most quoted estimate of trafficking people is a worldwide estimation of some “700,000 women and children trafficked in the world” even if in most of the cases such a number is quoted without providing any reference to the source. This estimate came from a document produced in 1997 by the Bureau of Intelligence and Research, United States Department of State, with the intention to provide an idea of the scale for internal purposes; this document did not include any information on the sources and the methodology used. Based on this flawed estimate and its ensuing document, the US State Department has produced the oft-quoted estimates of the size of the trafficked population worldwide: 800,000-900,000 annually. These figures are then used by a number of international organisations, including the UN and IOM, as authoritative, even though there has been no release of information with respect to the methodology used to obtain these figures, which also have been seriously disputed by some of assessed countries themselves or by international organizations who conducted their own country evaluations (HRW 2003).

Kelly (2002), in her review of research on trafficking in women and children in Europe, reaches the conclusion that “it is possible and necessary for researchers and organizations involved in counter-trafficking work to generate more reliable data and to conduct better research.” Six years later, reliable data and strong impact research are still not available, a shortcoming in the field and a sharp contrast to the continuously increasing number of policy interventions and public interest on trafficking. In a recent evaluation of international program on trafficking, the US Government Accountability Office (GAO 2007) concluded “little is known about the impact of antitrafficking interventions” (GAO 2007: 3).

4. Migrant children in developing countries

No accurate or even ballpark global estimate of the number of migrant children exists. Moreover, no specific descriptive statistics on the number of children migrating within developing countries has been published.³³ Consequently, it is not possible to provide any data disaggregated by the different groups of interests, namely children migrating with their family, children migrating alone, and foster children.

However, regardless of some methodological and practical challenges, information on the number of migrants, disaggregated by age, is available in most census data, which can be a useful source for calculating the stock of migrants in a specific country.

The United Nations Statistical Division has addressed some of the limits and challenges linked with the use of census data and national reporting on migration data (UN 2004).³⁴ The major challenge is that some countries identify migrants based on place of birth (foreign born) and others identify them based on their citizenship³⁵ (UN 2004). Differences in data collection capacity and coverage error can limit the use of census data for examining international migration (Whitehead and Hashim 2005). One of the limits of census data is that although they can be used to calculate the stock or number of migrants in a country, they cannot be useful for enumerating the number of people emigrating. The major limit in using this information is the absence of a number value for the foreign-born people present in the country illegally.

In order to provide preliminary explorative insight about the relevance of migration of children among developing countries, the age structure of the migrant population was computed for 40 countries, on the basis of census data available in the United Nations *Demographic Yearbook*, on “Native and foreign-born population by age, sex and urban/rural

³³ Some information are available in McKenzie (2007)

³⁴ United Nations Demographic Yearbook review National reporting of international migration data Implications for international recommendations 2004. <http://unstats.un.org/unsd/demographic/products/dyb/techreport/migration.pdf>

³⁵ the Place of birth does not change like citizenship but at the same time it might not adequately describe the foreign population as the child of a foreign-born might still be considered, depending on the country's legislation, foreigner even if born in the country

residence, 1985 – 2004.” Native population is defined as persons born within the country or area; foreign-born population is defined as persons born outside the country or area.³⁶

Given the limits in the number of countries for which data are available and differences in definition and year of data collection, the purpose of this table and indicators produced in this chapter is explorative only and is presented with the sole intention of facilitating the discussion on the impact of migration in developing countries and potentially identifying areas and topics for further research.³⁷

4.1 Immigration indicators

For each country, several immigration percentages have been calculated:

- **In-migration proportion:** foreign-born population as percentage of the total population.
- **Child in-migration proportion:** foreign-born population in the age group 0-14 as percentage of the total population in the same age group.
- **Youth in-migration proportion:** foreign-born population in the age group 15-24 as percentage of the total population in the same age group.
- **Migrant child proportion:** foreign-born population in the age group 0-14 as percentage of total foreign-born population.
- **Migrant youth proportion:** foreign-born population in the age group 15-24 as percentage of total foreign-born population.

³⁶ Given the limit in the data available, differences in definition, and year of data collection, the purpose of the table and indicators produced in this chapter is explorative only and is presented with the sole intention of facilitating the discussion on the impact of migration in developing countries.

³⁷ For a profile of young migrants (12-24 years old) see McKenzie (2007)

Table 3 Foreign born population as percentage of national population - by age.

Country	migration	child migration	youth migration	census year
Argentina	4.21%	0.74%	2.14%	2001
Armenia	8.89%	2.22%	4.67%	2001
Bahrain	36.36%	17.88%	24.79%	1991
Belarus	0.82%	0.80%	1.02%	1999
Belize	13.84%	7.33%	15.29%	1991
Benin	2.09%	1.37%	2.69%	2002
Bolivia	1.04%	0.67%	1.14%	1992
Botswana	2.23%	1.34%	1.41%	1991
Bulgaria	0.55%	0.31%	0.67%	2001
Chile	1.22%	0.87%	1.67%	2002
Croatia	13.52%	5.45%	9.46%	2001
El_Salvador	0.51%	0.55%	0.31%	1992
Fiji	1.80%	0.89%	1.34%	1986
Gambia	13.68%	7.94%	15.53%	1993
Jamaica	0.90%	0.62%	0.63%	1991
Kyrgyzstan	8.24%	2.02%	4.38%	1999
Latvia	18.28%	1.92%	5.44%	2000
Lithuania	5.86%	0.77%	2.18%	2001
Malaysia	5.65%	1.61%	6.41%	1991
Mexico	0.51%	0.77%	0.33%	2000
Morocco	0.39%	0.24%	0.30%	1994
Namibia	8.46%	4.28%	8.08%	1991
Nepal	2.67%	0.72%	2.83%	2001
Oman	23.89%	8.67%	9.64%	2003
Occupied Palestinian Territory	9.60%	6.59%	10.00%	1997
Paraguay	3.35%	1.46%	2.62%	2002
Philippines	5.13%	5.05%	5.06%	2000
Poland	2.03%	0.54%	0.19%	2002
Romania	0.62%	0.21%	0.45%	2002
Senegal	2.95%	1.21%	3.38%	1988
Seychelles	5.35%	2.60%	2.98%	1994
Slovakia	2.21%	0.52%	0.91%	2001
South Africa	2.09%	0.45%	1.56%	1996
Sudan	1.85%	1.16%	1.88%	1993
Swaziland	4.66%	2.10%	5.15%	1986
Turkey	1.86%	0.64%	1.56%	2000
Uganda	2.43%	1.18%	1.09%	1991
Uruguay	2.93%	1.70%	2.12%	1996
Venezuela	4.40%	0.51%	1.67%	2001

Notes: computed using data from United Nations *Demographic Yearbook*, on "Native and foreign-born population by age, sex and urban/rural residence, 1985 – 2004"

Table 4 Foreign born population by age group (percentages)

Country	migrant child	migrant youth	census year
Argentina	4.94%	8.95%	2001
Armenia	6.06%	9.51%	2001
Bahrain	15.57%	11.05%	1991
Belarus	19.10%	27.15%	1999
Belize	23.25%	22.15%	1991
Benin	30.62%	23.12%	2002
Bolivia	26.37%	20.74%	1992
Botswana	25.96%	12.82%	1991
Bulgaria	8.49%	16.95%	2001
Chile	18.44%	33.29%	2002
Croatia	6.86%	9.52%	2001
El Salvador	41.55%	12.82%	1992
Fiji	18.77%	15.27%	1986
Gambia	25.42%	21.86%	1993
Jamaica	24.50%	14.24%	1991
Kyrgyzstan	8.81%	10.18%	1999
Latvia	1.90%	4.24%	2000
Lithuania	2.57%	5.35%	2001
Malaysia	10.47%	21.42%	1991
Mexico	50.72%	12.96%	2000
Morocco	22.60%	15.94%	1994
Namibia	21.10%	20.07%	1991
Nepal	10.63%	20.50%	2001
Oman	12.28%	8.96%	2003
Occupied Palestinian Territory.	32.29%	20.40%	1997
Paraguay	16.13%	15.89%	2002
Philippines	36.51%	19.44%	2000
Poland	4.84%	1.56%	2002
Romania	6.00%	11.41%	2002
Senegal	19.41%	21.07%	1988
Seychelles	14.82%	10.47%	1994
Slovakia	4.42%	6.92%	2001
South Africa	7.35%	15.06%	1996
Sudan	28.07%	19.51%	1993
Swaziland	21.37%	21.76%	1986
Turkey	10.31%	17.25%	2000
Uganda	22.99%	8.96%	1991
Uruguay	14.60%	11.57%	1996
Venezuela	3.81%	7.35%	2001

Notes: computed using data from United Nations *Demographic Yearbook*, on "Native and foreign-born population by age, sex and urban/rural residence, 1985 – 2004

In-migration proportion:

This indicator looks at the stock of foreign-born population as percentage of the total population in countries in developing countries. This indicator is normally used to describe the relevance of the stock of migrant in a given country. In the group of countries under consideration, it ranges from a maximum of 36% (Bahrain) to less than 1% (Morocco, Mexico, El Salvador, Bulgaria, Romania and Belarus), with an average of 5.5% (2.8% on the total population of listed countries).

Migration in developing countries can be the result of an increased demand of foreign workers, driven by technological and economic development, such as in Bahrain, or the result of the demand for an unskilled labour force in oil-rich economies such as Oman and Namibia. In Gambia, people migrating from Senegal, Mali and Guinea are mainly employed in agriculture, with inflow facilitated by the relative political stability and low levels of urbanization (Zachariah 1980). Migration may also be part of regional patterns of mobility, such as in the case of Central America, West Africa and the Mekong region. For example, since the 1980s, migration in Central America increased as a result of increasing flows from Latin America to the United States (Castillo 1996). During the 1970s, migration from central American nations was directed half within the region toward other Central American regions, and half outside the region (Maguid 1999). In the 1990s, more than 90 percent was directed to countries outside the region (Mahler 2006). In Belize, immigration has been promoted as a way to populate inhabited areas since the colonial time (Dobson 1973) and has in particular involved Guatemalans and Salvadorans (Everitt 1984). Another relevant regional pattern of international migration is the one from Nicaragua to Costa Rica, mainly driven by emergencies such as earthquake (1972), the civil war against Somoza (1970) and the war between the Contras and the Sandinista Government (Mahler 2006).

Child in-migration proportion

This indicator looks at the stock of foreign-born population in the age group 0-14 as percentage of the total population in the same age group. Such an indicator may provide information on how migration impact on the composition of local child population. In the set

of countries under consideration, it ranges from 18% (Bahrain) to less than 0.5% (Morocco, Romania, South Africa, Bulgaria, Mauritius) and an average of 2.3% (1.5% on the total population of listed countries), with substantial differences in the magnitude from the preceding indicator, but following similar patterns in terms of ranking identified in the migration percentage for the entire population.³⁸

Youth in-migration proportion

This indicator describes foreign-born population in the age group 15-24 as percentage of the total population in the same age group. It measures the impact of migration on the composition of youth population in developing countries. In the set of countries under consideration it ranges from 24% (Bahrain) to almost 0% (Poland, Morocco), with an average of 4% (2.5% on the total population of listed countries).

A comparison between the two indicators shows that, for some countries such as Uganda, El Salvador, Poland, and Mexico, the impact on child population is bigger than the impact on youth population. Such a difference highlights significant presence of child migration in these countries and can be the result of differences in the age composition between the population in the destination country and the one migrating, a possible high presence of children migrating alone. It may also be the result of differences in reporting legal or illegal migrants at the moment of the census, and at the same time “youth are more likely to migrate illegally than older migrants” (McKenzie 2007: 8).

Migrant child proportion:

This indicator describes the age composition of the migrant population and describes foreign-born population in the age group 0-14 as percentage of total foreign-born population. In the set of countries available it ranges from 50% (Mexico), 42% (El Salvador), and 36% (Philippines), to less than 5% (Argentina, Poland, Slovakia, Venezuela, Lithuania, Latvia), with an average of 17% (18% on the total population of listed countries). High percentages of children among migrants can be the result of high levels of family migration and age

³⁸ This is due to the fact that foreign-born population 0-15 is part of total foreign-born population stock used to calculate the in-migration percentage.

composition may reflect the one of countries of origin. Flows of migrant children may follow same patterns and routes of adults moving across developing countries. They may move together with their parents as part of family migration, or cross the border to unite with their parents or relatives who have already migrated, or move autonomously while following already existing migration networks.

Migrant youth proportion:

This indicator describes foreign-born population in the age group 15-24 as percentage of total foreign-born population. In the set of countries available it ranges from 33% (Chile), and 27% (Belarus), and only in two cases is less than 5% (Latvia and Poland) with an average of 17% (14% on the total population of listed countries).

In developing countries, migrant children may be a small group compared with national children, but still represent an important component of migrant groups. According to McKenzie (2007: 3) “youth migrating to other developing countries are less likely to be accompanying a parent migrating. About 80 percent of 12 to 14 year olds accompany a parent, compared to 50 percent of 15 to 17 year olds and less than 20 percent of 18 to 24 year olds”.

4.2 Migrant children: impact on health

The effects of migration on child health are contested and complex. Whereas on the one hand, migration itself poses significant hazards to children and their health, movement to a destination country also can increase access to health care.

Moving to countries or regions with better health services will have a positive impact on children. Migrant children moving from a rural area to the urban area are more likely to survive due to a greater number of hospitals and doctors, improved infrastructure including potable water, flush toilets, and refrigeration, and better health information (prompting cleaner food preparation and storage and improved hygiene practices). Migrant families may

adopt newer and lower fertility norms, “which in turn may enhance child survival.” (Findley 1982; Hobcraft, McDonald, & Rutstein 1985, as in Brockerhoff 1990)

Overall he finds that migrant groups experience a statistically significant survival advantage relative to rural natives (Brockerhoff 1990). Even more interestingly, urban natives often do not capitalize on urban health care opportunities as much as rural migrants to the urban area. Brockerhoff’s (1990) case study of rural-to-urban migration within Senegal finds that “child mortality patterns in Senegal reflect not only large urban-rural disparities but also significant migrant-native differentials” (Brockerhoff 1990: 614). Investigating this latter phenomenon requires a simultaneously quantitative and qualitative research project: researchers must examine the actual practices of natives and migrants as well as the social norms and previous socioeconomic status of each group.

In a study on Uganda, Ssengonzi et al. (2002) explore whether different types of migrants experience different health effects. The researchers note that migrants tend to have characteristics (ie. younger, better educated, and wealthier mothers) that may explain the favourable infant and child survival. Controlling for the effect of alternative proximate determinants and socioeconomic explanations for child survival, they found that “the process of migration had a significant effect on the survival chances of children only for the urban-urban migrants” (Ssengonzi et al. 2002). Like Brockerhoff, these researchers expressed surprise at the lower survival chances for the urban non-migrant children, and also posited that though they ostensibly had access to better health care, their place in the slums (rather than as entrepreneurial rural-to-urban migrants with capital to travel) effectively prevented them from obtaining adequate access to health care. Rural-rural migrant children also had better survival chances once selection and adaptation/disruption variables were controlled for, demonstrating the importance of sound data analysis. Ssengonzi et al. ultimately point to the increased health benefits of migration, in this particular case of Uganda, though overall, they acknowledge migration generally only plays a small role in child survival

Whitehead and Hashim (2005) take the complexity argument a step further, arguing strongly that the effects of migration are *context-specific*. Although they do not discuss health specifically, this paper suggests some hypotheses about the relationship between migration and child health as well as opportunities for further research. Children who migrate may be

prompted to do so for pre-existing health reasons or health risks. In some cases, merely leaving a hazardous situation may improve their potential for survival, such as escaping family neglect or abuse (Beauchemin 1998 and Iversen 2002, as cited in Whitehead and Hashim 2005).

Health benefits of migration, due to access to better health services and information, are sharply contrasted with the inherent health risks to moving in the first place. According to Whitehead and Hashim (2005), child health is often directly associated with the type of work child migrants find, whether it be abusive work, sex work, hazardous work in the informal economy, or physically beyond the child's capacities. The working conditions, if illegal (ie. prostitution) may also prevent child access to health care if there is a fear of raid, discovery, or deportation

Finally migrant may face serious difficulties in accessing health services if based on a registered residence system. In China, for example, migrants may face a lack of adequate health care for a variety of reasons: caretaker lack of knowledge, both in terms of prevention and access to care; passive attention to disease; poor economic situations. These factors lead to higher child mortality rates among migrants (Beijing Health Bureau's 2007).

4.3 Impact on education and economic activity of migrant children

Quantitative research assessing the impact of migration on education attainment of children in developing countries is almost nonexistent. Most of education statistics do not provide information on nationality of children or of their parents, nor on the place of birth to assist in the analysis of internal migration.

According to qualitative available research, migration may lead to a positive impact on the the education attainment of children. In many developing countries children move from rural to urban areas with the specific objective to attend better or more advanced schools. In most rural areas in developing countries education is available only at primary level, and at a quality often lower than that in urban areas (Punch 2007). Migration for educational

purposes, or “school migration” may also generate international migration (Pilon 2003). In order to reduce costs linked with such a decision, parents may decide to send their children to live with relatives or friends, or to obtain free accommodation by helping the foster family with a number of household tasks. As a result foster children may receive less resources compared with children of the head of the household (De Vreyer 1994), even if there may be of a higher availability than resources available in the household of origin. Finally fostering may negatively impact on the educational attainment of migrant children if the tasks performed by the host household detract attention or even worse, prevent children from attending school. (Pilon 2003).

In terms of educational achievement, evidence from industrialized countries show that students born abroad or with both parents born abroad had the lowest average achievement (PIRLS 2006). Unfortunately information on educational outcome measured by standardized indicators is not available for developing countries. Only in 2009 will the Programme for International Students Assessment PISA also include also the following non OECD countries. Albania, Brazil, Chile, Indonesia, Kazakhstan, Peru, Thailand, Argentina, Azerbaijan, Colombia, Dominican Republic, Kyrgyz Republic, Panama, and Uruguay

Migration may also have a negative impact on education attainment of children. Children of migrant workers, and children migrating alone face serious exclusion to education due to social and cultural isolation, strenuous and hazardous work, extreme poverty, poor health conditions and language barriers. Children may leave the household of origin with the objective of performing economic activities that may keep them out of school.

The analysis of future available data research may face important methodological challenges in terms of identification of the appropriate control group and sample selection bias. Comparing education achievement between migrants and non migrant children in a given country may be misleading in assessing the impact of migration on migrant children. In order to measure how and whether the decision to migrate has increased school attainment, it will be necessary to compare levels with children of the same age group in the country of origin, and not the population of children in the country of destination. This may lead to the problem of sample selection bias if migrant families are systematically different from non-

migrant families, particularly in terms of income (only wealthy families may migrate) and education (only the more educated families migrate).

Children who migrate may end up in being involved in economic activities as a specific decision (work migration) or as a result of the conditions, need and opportunities in destination countries. Regardless of the extensive literature on child work, disproportionately focused on children who work in the worst form of child labour (ie. trafficked jobs, prostitution), there is a lack of quantitative research looking specifically at economic activity patterns of migrant children.

Child migrant workers have a variety of experiences due to a complex set of factors, and often one child will have a mixture of positive and negative experiences. Negative effects may include exploitation, poor working conditions, physical, verbal, or sexual abuse from employers and foregone access to school. De Lange (2007) specifically examines cases of child migrant laborers in Benin and Burkina Faso in West Africa and finds that negative impacts on children include permanent removal from their homes (inability to return), exploitation (unfair pay), and work exceeding abilities (occupational hazards).

However, sometimes work can increase a child's access to food or other necessities and children migrating for work are often empowered due to their newfound income (Whitehead 2005; Punch 2007). Iverson (2002) specifically examines autonomous children migrating for the purposes of work. He finds that there can be significant child agency in child labor supply decisions, that is, that children often choose to migrate and to supply the labor force with their capability for work. Many of the children choose to do so to escape negative circumstances at home (ie. domestic abuse) and so for them, migration for work has positive effects. Bastia (2005), specifically examining the cases of Bolivia (and more generally, Latin America), found through "life stories" or case studies that "victims of child trafficking" often eventually developed into "normal" adult labor migrants. In these cases, trafficked child migrants changed status into child labor migrants. She posits that entirely banning those who are seeking work or who are

trafficked might actually place them into a worse situation “by decreasing their already limited opportunities to sustain themselves and their families or by forcing them to undertake the journeys abroad outside of the scope of legal protection thereby placing them at greater risk of exploitation and abuse” (81)

Most children who migrate in order to work are in the older age groups (Whitehead 2005). According to Punch (1998), children migrating for labor are often fifteen or sixteen, though in Iverson’s (2002) study of child migrant workers in South Asia finds that some male migrants begin at a much younger age

4.4 Psycho-social impact

Migration may have psycho-social impacts on children due to the experience moving from the country of origin to the country of destination, and also due to exclusion and marginalization in countries of destination. Leaving their communities, migrant children lose contact with their family and friends, as well as lose customs and traditions. At the same time, coming into a new community, they may be required to become accustomed to new language, culture and lifestyle. Even if children may adapt to new contexts more quickly than adults, this may generate conflict with parent or other members of same migrant group. All these factors may be intensified by the size of the social and cultural differences between the country or place of origin, and exacerbated by poverty and unemployment conditions that often characterize migrants, particularly at the beginning of the migration process (James 1997; Sluzki 1979; Hicks et al 1993, in Stevens and Vollebergh 2008).

Stevens and Vollebergh (2008) recently review available academic literature addressing the psycho-social impact of migration on children, comparing their mental health with that of native children. They posit that migration has a potentially negative psycho-social impact due to the process of migration and associated stress, migrants’ frequent status as minorities in the host society, and the cultural background of particular migrant groups. However, the empirical evidence available showed that migration can have negative or positive impacts. As in the cases of health and education, the psycho-social impact of migration varied greatly

depending on specific characteristics of the migrant group and its receiving country, as well as other methodological factors such as variance in data collection (informants used). In their review of quantitative research, the authors found no studies that addressed the mental health of children migration South-South.

This dearth of information about child migrant mental health in developing countries calls for further research.

5. Empirical challenges and data requirements

One of the possible causes of limited empirical evidence on the impact of migration on children is the absence of surveys designed specifically for this purpose. Almost the entire body of quantitative empirical research about children left behind and migrant children relies on micro data derived from standard household surveys. Surveys such as these may provide some information on migration and remittances, but have not been specifically designed to analyze the ensuing economic implications on household members. As McKenzie and Sasin (2007) point out, surveys with limited information about migrant members pose significant empirical challenges to the research on the social and economic effects of migration and remittances. In one telling example, the World Bank (2006) analyzes the development impact of remittances to Latin America using data drawn from surveys conducted in 11 countries; however, 9 out of 11 of those countries provide no data on migrant members.

Access to data and survey with sample design based on census data may be excessively costly or simply non available. A recent paper by McKenzie and Mistiaen (2007) has assessed the merits of three alternative sample definition procedures with an experiment carried out in Brazil on Japanese-Brazilian families, that tend to send migrants to Japan; these methods were namely random selection of households from “a door-to-door listing using the Brazilian Census to select census blocks”, snowball survey “using Nikkei community groups to select the seeds”, and “an intercept point survey collected at Nikkei community gatherings, ethnic grocery stores, sports clubs, and other locations where family members of migrants are likely to congregate”. McKenzie and Mistiaen (2007) find that the last two methods perform well with respect to the most common – and much more resource-demanding – census-based approach, but that the heavy reliance on community groups and community gatherings casts doubts about their adoption in more general settings. There currently seems to be no alternative sound and well-established approach to sample design in migration surveys than the one that builds upon census data

Migration is an extremely sensitive issue and collecting information on migration patterns may generate a large number of cases of non response. Migrants may face conditions of illegality or undocumentation, relatives might be unwilling to disclose much information about them, and recipient households may feel uncomfortable about revealing detailed information about the amount of remittances receipt. The risk of non response is likely to increase with the length of the questionnaire, and with the level of detail of the questions. For example, in the *ENEMDU* 2005 labour market survey on Ecuador employed by Bertoli (2007), 964 households reported to have received remittances from abroad in November 2005, but just 494 of them also report to have a member residing abroad. The high rate of non response was due mostly to questionnaire design – rather than to possible problems with sample design. While the initial question on remittances receipt included in the income section was anonymous, additional questions in the migration section were not. The questionnaire required household member to report – *inter alia* - the names of the migrants, their current country of residence and the year of emigration, and respondents may be unwilling to disclose these information about relatives that were most likely to lack a regular residence permits.

Analyzing the impact of parent migration on children left behind requires overcoming some significant analytical challenges due to the non-random selection of migrant households. This includes the analysis of sample selection bias and endogeneity.

5.1 Endogeneity of migration decision

One of the limits in the analysis of the impact of migration on migrant children and children left behind is considering migrant and non migrant household as similar and remittances closer to a randomly assigned transfer, that is treating migration and remittances as exogenous (Cox Edwards and Ureta; Kanaiaupuni and Donato 1999; Frank and Hummer 2002). But migration decisions, and consequently, remittances, are not random events: migrant families are systematically different from non-migrant families, a fact that generates sample selection bias issues, thereby hindering sound analysis of the impact of remittances (Hildebrandt and McKenzie 2005). For example, unobserved characteristics of households

may affect both the educational attainment of children and the migration status of individuals in the household. Due to budget constraints, poor families may be not able to pay school costs or afford the costs linked with migration (ie. travel, documents, accommodation, and initial unemployment). As a result, only comparatively wealthy families may migrate, thereby causing overestimation of the (positive) effects of migration on education. Similarly, an examination of the relationship between migration and child mortality can be equally skewed if, in general, households with migrant members are wealthier than households without migrant members (Brockhoff 1990). Without proper controls for household wealth, any results on the impact could be affected by serious sample selection bias. Coefficient for remittances in a school attendance equation also could be biased. Consequently, higher wealth levels (a previously ignored factor) could in fact explain – at least in part – the positive impact of migration remittances on their recipients, in terms of school enrolment. Furthermore, patterns of positive selection *within* the household with respect to education may also bias the result: often, those who migrate have a higher than average educational level. However, if specific data on the educational level of the migrant members themselves are unavailable, it is difficult to assess whether education plays a significant role in the selection *across* households.

A similar problem may arise when an external event may have a direct impact on children well being and at the same time determine the decision of migration or increase the level of remittances sent by migrating parents. For example, negative income shocks such as agricultural shortages or sudden job loss can prevent children from attending school and, at the same time, induce transfers from abroad to partially mitigate the shortfall. If so, remittances could be correlated with variables that have a negative impact on children's school enrolment, resulting in a downward bias for the estimated coefficient (Hanson and Woodruff 2003). Finally, household decisions about migration depend on the perceived costs and risks of migration. In analyzing the impact of migration prospects on the incentives to invest in education in rural China, de Brauw and Giles (2006) find that with lower barriers to internal mobility (previously restricted through the hukou system), incentives for the children residing in rural areas to enrol in the high school have decreased. de Brauw and Giles (2006) argue that “when large numbers of families opt out of educational investments in favor of the relatively attractive migrant wage available to middle school graduates, they effectively

resign themselves to the long-term prospect of earning considerably less than urban youth,” thus contributing to a widening of the existing inequality across the rural-urban divide.

It is possible to deal explicitly with the issue of selection bias through various estimation techniques, such as the instrumental variable approach and propensity score matching³⁹. Acosta (2006) finds that estimates that are robust to the endogeneity of remittances provide a more differentiated picture: the impact of remittances is attenuated once families are distinguished according to their asset holdings level, reduced to less than one half, and though remittances increase school attendance for girls and boys aged 11 to 14, no significant effect is found for older boys. Lubotsky and Wittenberg (2005)⁴⁰, using a multiple proxy approach, reached a similar result, and concluded that school enrolment rates do not significantly improve with remittances. More accurate treatment of non random selection of migrant households has characterized recent research. In this respect, Hildebrandt and McKenzie (2005) follow Woodruff and Zenteno (2001) in their use of historical migration data to instrument for current migration from Mexico, and draw their data from the 1997 round of the Encuesta Nacional de Dinámica Demográfica, the same data source Frank and Hummer (2002), as aforementioned, used previously.

Following Hanson and Woodruff (2003), data that are relevant to address the endogeneity issue can be drawn also from complementary, historical data sources. Ideally, one should try to collect retrospective information, as current data may provide a poor picture of the situation prevailing at the time of migration, and are also endogenous to migration. However, retrospective information is hard to recall for migration episodes that happened several years before the time of the survey.

The issue of the endogeneity of the migration choice can be more properly addressed through the use of panel data, as in Yang (2004 and 2006). In this respect, it is important to stress that panel data are better suited to address research questions referred to children rather than household outcomes in general. Intuitively, this is due to the fact that remittances tend to be stable over time, so that any difference-in-difference estimator that resolves endogeneity

³⁹ Formal definitions of instrumental variables, and propensity score matching are given in Pearl, (2000) and Rosenbaum et al. (1983).

⁴⁰ As quoted in Acosta 2006.

problems suffers from the limited variability of the variable of interest. Even if one focuses on migrant rather than recipient households, a fixed-effect estimator would be cancel any difference between non migrant and migrant households with no migration episode between the first and the last round of the survey.⁴¹ The limited variability of either migration or recipient status over the time in which the different round of the panel are collected may represent less of a concern when one focuses on the children left behind. As Mansuri (2006) observes, many choices related to children – as those referring to education – tend to be time-sensitive; hence, one could also exploit also variation among different siblings of the same household in addition the variability in household migrant or recipient status alone.

5.2 Data limitation and definition of household

The United Nations System of National Accounts, in its 1993 revision, succinctly defines a household as "a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food." Such a definition entails that migrants are generally not regarded as members of any household in their origin countries, because – even though they may pool a part of their income true remittances – they do not share housing or food with the other members.⁴² The only exception may refer to the household head or to members who have been living out of the household for less than three months (e.g. the Ghanaian survey employed by Adams, 2006).

Giving proper attention to the inherently dynamic nature of migration (both in terms of space and time) is crucial. Researchers should collect data that provides a comprehensive picture of all household members, whether they members are physically in the household or migrating at the time of data collection. A different spatial concept of family and household is necessary (Vanwey 2004). If migration of one of the parents is the result of a household

⁴¹ This is the reason why the analysis by Yang (2004, 2006) are particularly convincing, as he actually exploited the opportunity determined by the exogenous variations in the levels of remittances by Filipino migrants induced by the uneven impact of the East Asian crisis of 1997 – the year in which his panel data were collected - on the bilateral exchange rates of the Philippines peso with the currency of the various countries of destination of the migrants.

⁴² The comprehensive Statistical Information and Monitoring Programme on Child Labour (SIMPOC) set up by the ILO in the 1990s relied on a narrow definition of household membership, that is likely to have acted as a severe constraint on the analysis of the determinants of child work in countries characterized by a high incidence of adult migration.

decision, rather than merely the result of an individual decision, migrants and left behind family members should be seen as part of the same household, regardless the fact they do not live in the same place or under the same dwelling.⁴³

Ünalán (2005) advances an alternative definition of household membership and that actually served as a basis for the project “Push and Pull Factors of International Migration” jointly undertaken by the EUROSTAT and NIDI. Ünalán (2005) reports that “the usual concept of household was extended to include not only those persons who are living together and have communal arrangements concerning subsistence and other necessities of life, but also those who are presently residing elsewhere (inside the country or abroad) but *whose principal commitments and obligations are to that household and who are expected to return to that household in the future or whose family will join them in the future.*” (Ünalán 2005), p. 221, emphasis added).

The above *broad definition* of household membership may represent a step in the direction of providing necessary information on household of origin when looking at migrant children, or absent household members when looking at children left behind.⁴⁴ Moreover, it is consistent with the theoretical representation of migration as the outcome of a joint households decision process, where members’ obligations towards their households are independent of their place of residence.

It is also crucial to acknowledge how the extended family influences the decision to migrate, and hence design the questionnaire accordingly. Bryant (2005) correctly argues that “the extended family plays a major role in all aspects of migration. They participate in the decision to migrate, and often lend or give money for the contract and travel”. This entails that information on the household alone – even in its *broad version* proposed by Ünalán (2005) - could fail to convey relevant information about the migration process, and hence

⁴³ Including migrants in the household can be seen as an extension of the so called housekeeping concept of household as defined in the e United Nations Principles and recommendations for population and housing censuses, where an household is defined as “A group of two or more persons living together who make common provision for food or other essentials for living. The persons in the group may pool their incomes and may, to a greater or lesser extent, have a common budget; they may be related or unrelated persons or constitute a combination of persons both related and unrelated (DESA 1997: 1.324). Some countries use an alternative approach defined “household-dwelling” approach which regards all persons living in a housing unit as belonging to the same household (DESA 1997: 1.326).

⁴⁴ The fuzziness of the broad definition provided in Ünalán (2005) suggests that one may complement it with some objective criterion, such as not regarding as a household member someone who migrated more than, say, 10 years ago.

limit the ability to control for the non random selection of migrant and recipient households. Two identical nuclear households can have a differential probability to migrate because of the different structures of their respective extended families, and this issue becomes crucial when the focus of the analysis is on the children left behind. The decision concerning adult migration is most likely to be heavily influenced by the extent to which other relatives could take care of the children of the would-be-migrants.⁴⁵

Using a broader definition of household may require finding the migrant in their receiving country or at least tracing the migrant's status and path in the country of origin. Identifying the migrant and/or his or her household of origin can be tricky and in some cases, impossible, because the members of the household of origin must declare the migrant (who would be physically absent and therefore not apparent to the data collector). Furthermore, if an entire household migrated, the task is virtually impossible.⁴⁶

5.3 Migrant household and recipient household

The broad definition of household membership clearly provides a natural reference point to identify migrant households, as these are the households that have an absent member. There is a huge variability in the literature on the definition of a migrant household; although in most cases this is driven by the characteristics of the data source rather than by any *a priori* choice.⁴⁷

⁴⁵ Note that this opens up the critical question concerning which household the children are living with.

⁴⁶ In a study done by Eurostat and NIDI, the usual concept of *household* was extended to include not only those persons who are living together and have communal arrangements concerning subsistence and other necessities of life including persons who were reported to be living temporarily elsewhere in the country but still regarded as members of the household (*narrow definition*), but also those who are presently residing elsewhere but whose principal commitments and obligations are to that household and who are expected to return to that household in the future or whose family will join them in the future (*broad definition*). Using this approach, both the household and the shadow household are captured within the definition (Ünalán 2005).

⁴⁷ Hildebrandt and McKenzie (2005) classify "households according to whether or not they had at least one member aged 15 and over who had migrated" at least three years before the survey; Hanson and Woodruff (2003) define a migrant household as an household that reports to have a member who has migrated to the US, irrespective of the date of migration; McKenzie (2006) and McKenzie and Rapoport (2006) define a household as migrant "if the household has a member aged 19 and over who has ever been to the U.S. to work, or who has moved to the U.S. in the last five years for any other reason", so that this latter definition may also encompass tourists rather than migrants, and it does not require the migrant to be still residing abroad; similarly, Mansuri (2006) argues that "since migration is typically recurrent, a household is classified as a migrant household if it reported at least one male member with some migration

Further successful data collection would also call for surveys at different points in time, thereby respecting the dynamism of the status of members in a migrant/receiving household. Some of the effects of migration are likely to be instantaneous (e.g. the impact of the migration of an adult member on the household demand for child work in rural areas), while others are likely to be cumulative or evolve non-linearly over time (e.g. migration could increase the demand for child work in its early stage, as the household needs to pay back the debts incurred to finance the migration costs, while later reducing the incidence of child work through remittances transfers). The analysis of cumulative effects may require a definition of migrant households not restricted to current migration episodes (Mansuri 2006; McKenzie and Rapoport 2006).

The identification of recipient households clearly depends on the recall period that is used in the survey; moreover, recipient households are often identified from survey questions focused on a broader concept of inter-household transfers, which does not include only remittances. For instance, Adams (2006) identifies a household as recipient if it has received cash or in kind transfers, even if the remitter resides in the same village, the transfers are made just once a year or need to be repaid back; this may be a relevant drawback in societies where inter-household transfers are substantial.

Adams (1998) underlines that surveys collect no information on the savings held by migrants in their residence country; still, these savings could be held abroad because of a higher return or for precautionary motives, and transferred at the time of return or when the household decides to undertake a lumpy investment, as the purchase of an house or a plot of land. Household saving and investment decisions out of current income are likely to be influenced by the awareness of an incoming transfer that would not be captured in survey data. If remittances are a substitute for incomplete credit markets, then - just like with credit - what is relevant is not just the amount of money that is actually received, but rather the sheer possibility to access this source of financing.

experience current or past”, and he focuses only on male migrants for economic reasons; Taylor and Mora (2006) use a survey that collects “detailed data [about] the household head, the spouse of the household head, all other individuals living in the household, and all sons and daughters of either household head, regardless of where they resided at the time of the survey”, and a household is then classified as migrant if anyone of the individuals listed above is currently an internal or international migrant, irrespective of whether he was residing in the household prior to migration.

6. Conclusions

This paper primarily serves the purpose of introducing, prompting, and facilitating further discussion and research on the impact of migration on children in developing countries, highlighting in particular the dearth of quantitative or empirical research on the subject.

South-South migration in general and of children in particular, has been largely ignored in the serious academic literature. This literature review sought to outline the currently available data, information, and research, and to point to areas of further research.

This paper gave treatment to a variety of groups of children (children left behind, forced child migrants, child victims of trafficking, and independent child migrants) in a variety of contexts (permanent, long term, short term, seasonal, international, internal, and transnational) as well as the outcomes and impacts of migration those children might face (in terms of health, education, labor, and psycho-social effects).

Identification and analysis of the rare quantitative studies that do exist has shown that the effects of migration are complex and warrant further study.

Finally, this paper clarifies how further study might be best conducted, explaining empirical challenges such as data limitations, endogeneity, and trouble in creating sound definitional frameworks.

Bibliography

Adams, R. and J. Page. 2005. Do International Migration and Remittances Reduce Poverty in Developing Countries? *World Development* 33 (10): 1645-1669.

Addleton, J. 1984. The impact of international migration on economic development in Pakistan. *Asian Survey* 23 (5): 574-596.

Acosta, P. 2006. Labour Supply, School Attendance, and Remittances from International Migration: the Case of El Salvador. World Bank Policy Research Working Paper No. 3903, Washington.

Acosta, P., C. Calderón, P. Fajnzylber and H. López. 2006. Remittances and Development in Latin America. *The World Economy* 29 (7): 957-87.

Acosta, P., P. Fajnzylber and J. H. Lopez. 2007. The Impact of Remittances on Poverty and Human Capital: Evidence from Latin American Household Surveys. World Bank Policy Research Working Paper No. 4247, Washington.

Adams, R. H. 2006. Remittances and poverty in Ghana. World Bank Policy Research Working Paper No. 3838, Washington.

Adams, R. H. 2005. Remittances, Poverty and Investment in Guatemala. In *International Migration, Remittances and the Brain Drain*, ed. C. Özden and M. Schiff, 53-80. Washington, DC: The World Bank.

Adams, R. H. 1998. Remittances, Investment, and Rural Asset Accumulation in Pakistan. *Economic Development and Cultural Change* 47 (1): 155-73.

Adams, R.H. and J. Page. 2003. International migration, remittances, and poverty in developing countries. World Bank Policy Research Working Paper No. 3179, Washington.

Ashenfelter, O. 1978. Estimating the Effect of Training Programs on Earnings. *Review of Economics and Statistics* 60: 47-57.

Bagasao, I. 2004. Migration and Development: The Philippine Experience. *Small Enterprise Development* 15 (1): 62-67.

Barham, B. and S. Boucher. 1998. Migration, remittances, and inequality: estimating the net effects of migration on income distribution. *Journal of Development Economics* 55: 307-31.

Battistella, G. and M. C. G. Conaco. 1998. The Impact of Labour Migration on the Children Left Behind: A Study of Elementary School Children in the Philippines. *Journal of Social Issues in Southeast Asia* 13 (2): 220-241.

- Battistella, G., and M. C. G. Conaco. 1996. Impact of Migration on the Children Left Behind. *Asian Migrant* 9 (3): 86–91.
- Becker, G. 1974. A Theory of Marriage, Part II. *Journal of Political Economy*, 82(2), Part 2: S11-S26
- Becker, G. 1991. *A Treatise on the Family*. Enlarged Edition, Cambridge: Harvard University Press, Chapter 8.
- Bertoli, S. 2007. Great Expectations – An Assessment of the Development Promises of Workers’ Remittances. Ph.D. dissertation, University of Florence.
- Bhalotra, S. and C. Heady. 2003. Child Farm Labour: the Wealth Paradox. *The World Bank Economic Review* 17 (2): 197-227.
- Borjas, G. 2003. The labor demand curve is downward sloping: Reexamining the impact of migration on the labor market. *Quarterly Journal of Economics* 118 (4): 1335-1374.
- Borraz, F. (2005). Assessing the impact of remittances on schooling: the Mexican experience. *Global Economy Journal*, 5 (1).
- Brockerhoff, M. 1990. Rural-to-Urban Migration and Child Survival in Senegal. *Demography* 27: 601-16.
- Bryant, J. 2005. Children of International Migrants in Indonesia, Thailand, and the Philippines: A Review of Evidence and Policies. Working Paper 2005-05. Florence: UNICEF Innocenti Research Center.
- Castillo G., M. A., and S. I. Palma C. 1996. *La emigración internacional en Centroamérica*. Guatemala: FLACSO, Programa Guatemala.
- Case, Ann, I-Fen Lin and Sara McLanahan. 2000. Educational Attainment in Blended Families. NBER Working Paper No. 7874.
- Chant, S. and M. Radcliffe M. 1992. Migration and Development: The importance of Gender. In *Gender and Migration in Developing Countries*, ed. S.Chant. Bellhaven Press: London.
- Cockburn, J. 2001. Child Labour versus Education: Poverty Constraints or Income Opportunities? CREFA Working Paper No. 01-16. Quebec: Université Laval.

Coronel, E. and F. Unterreiner. 2005. *Social Impact of Remittances on Children's Rights: The Philippines Case*. Manila: UNICEF.

Cox Edwards, A. and M. Ureta. 2003. International Migration, Remittances and Schooling: Evidence from El Salvador. *Journal of Development Economics* 72 (3): 429–61.

Crush, Jonathan and Sally Peberdy. 2004. Southern Africa: Mainstreaming Migration. Southern Africa Migration Project.

Curran, S. and A. Saguy. 2001. Migration and Cultural Change: A Role for Gender and Social Networks. *Journal of International Women's Studies* 2 (3): 54-77.

De, P. and D. Ratha. 2005. Remittance Income and Household Welfare: Evidence from Sri Lanka Integrated Household Survey. Unpublished paper, *Development Research Group*. Washington: World Bank.

deBrauw, A. and J. Giles. 2006. Migrant Opportunities and the Educational Attainment of Youth in Rural China. IZA discussion paper No. 2623.

de Haan, A. 2005. Migration in the Development Studies Literature: Has it come out of marginality? Paper For Unu-Wider Jubilee Conference Future Of Development Economics, Department for International Development, June 2005.

de Haas, Hein. 2007. *Migration and Development: A theoretical perspective*. COMCAD Arbeitspapiere - Working Papers No. 29. Centre on Migration, Citizenship and Development, University of Bielefeld.

de Luna Martínez, J. 2005. Workers' Remittances to Developing Countries: A Survey with Central Banks on Selected Public Policy Issues. World Bank Policy Research Working Paper No. 3638, Washington.

Dobson, N. 1973. *A History of Belize*. Port of Spain, Trinidad and Tobago: Longman Caribbean.

Duflo, E.. 2003. Grandmothers and Granddaughters: Old-Age Pensions and Intra-household Allocation in South Africa. *World Bank Economic Review* 17 (1): 1-25.

Dustmann, C. and B. Speciale. 2007. Remittances and public spending on education. Paper presented at the conference on "Transnationality of Migrants," Riga, 26-27 October.

Everitt, John C. 1984. The Recent Migrations of Belize, Central America. *International Migration Review* 18 (2): 319-325.

Fajnzylber P. and J. Humberto López. 2007. *Close to Home – The Development Impact of Remittances in Latin America, Conference Edition*. World Bank: Washington.

Foster, G. 2004. Safety Nets for Children Affected By HIV/AIDS in Southern Africa. In *A Generation at Risk? HIV/AIDS, Vulnerable Children and Security in Southern Africa*, ed. R. Pharoah. ISS Monograph 109: Chapter 4.

Foster, G. 2000. The Capacity of the Extended Family for Orphans in Africa. *Psychology, Health & Medicine* 5: 55–62.

Frank, R. and R. Hummer. 2002. The Other Side of the Paradox: The Risk of Low Birth Weight among Infants of Migrant and Non-migrant Households within Mexico. *International Migration Review* 36 (3): 746-65.

Frank, R. and E. Wilksmith. 2005. The Grass Widows of Mexico: Migration and Union Dissolution in a Binational Context. *Social Forces* 83 (3): 919-947.

Frayne, Bruce and Wade Pendleton. 2001. Migration in Namibia: Combining Macro and Micro Approaches to Research Design and Analysis. *International Migration Review* 35 (4): 1054-1085

Freund, C. and N. Spatafora. 2005. Remittances: Costs, Determinants, and Informality. World Bank Policy Research Working Paper No. 3704, Washington.

Funkhouser, E. 1995. Remittances from international migration: A comparison of El Salvador and Nicaragua. *Review of Economics and Statistics* 77 (1): 137-146.

Government Accountability Office, United States. 2007. *Human Trafficking: A Strategic Framework Could Help Enhance the Interagency Collaboration Needed to Effectively Combat Trafficking Crimes*. Washington.

Hagen-Zanker, J. S. and M. R. Muñiz Castillo. 2005. Remittances and Human Development: The Case of El Salvador. Maastricht Graduate School of Governance Working Paper No. 2005/1.

Hanson, G. H. and C. Woodruff. 2003. Emigration and educational attainment in Mexico. Mimeo, University of California at San Diego.

Hatton, Timothy J. and Jeffrey G. Williamson. 2002. What Fundamentals Drive World Migration? NBER Working Paper No. 9159.

Hicks, R., R.N. Lalonde and D. Pepler. 1993. The Mental Health of Immigrant and Refugee Children: Psychosocial Considerations in the Mental Health of Immigrant and Refugee Children. *Canadian Journal of Community Mental Health* 12: 71–87.

Hildebrandt, N. and D. J. McKenzie. 2005. The Effects of Migration on Child Health in Mexico. Policy Research Working Paper No. 3737, Washington (forthcoming in *Economia*).

Holland, P. W. 1986. Statistics and Causal Inference (with discussion). *Journal of the American Statistical Association* 81: 945-970.

Itzigsohn, C. 1995. Migrant remittances, labour markets, and household strategies: A comparative analysis of low-income households strategies in the Caribbean basin. *Social Forces* 74 (2): 633-655.

James, D.C.S. 1997. Coping with a new society: The unique psychological problems of immigrant youth. *Journal of School Health* 67: 98-102.

Jokisch, B. 2001. Desde Nueva York a Madrid: Tendencias en la migración ecuatoriana. *Ecuador Debate* 54: 59-84.

Kapur, D. and J. McHale. 2003. Migration's New Payoff. *Foreign Policy* 139: 48-57.

Kanaiaupuni, S. and K. Donato. 1999. Migradollars and Mortality: The Effects of Migration on Infant Survival in Mexico. *Demography* 36: 339-53.

Kelly, E. 2002. *Journeys of Jeopardy: A Review of Research on Trafficking in Women and Children in Europe*. International Organization for Migration.

Koechlin, V. 2007. International remittances and income inequality: An empirical investigation. *Journal of Economic Policy Reform* 10 (2): 123-141.

Kritz, Mary M., Charles B. Keely and Silvano M Tomasi. 1981. Global trends in migration: theory and research on international population movements. Center for Migration Studies, 1981.

Kuhn, R. 2006. The Effects of Fathers' and Siblings' Migration on Children's Pace of Schooling in Rural Bangladesh. *Asian Population Studies* 2 (1): 69-92.

Levitt, Peggy. 1998. Social Remittances: Migration-Driven Local-Level Forms of Cultural Diffusion. *International Migration Review* 32 (4): 926-948.

López-Córdova, E. 2006. Globalization, Migration and Development: The Role of Mexican Migrant Remittances. INTAL-ITD Working Paper No. 20, the Inter-American Development Bank.

Lopez, Jose Roberto and Mitchell Seligson. 1991. Small business development in El Salvador: The Impact of Remittances. In *Migration, Remittances and Small Business Development: Mexico and Caribbean Basin Countries*, eds. Diaz-Briquets, Sergio and Sidney Weintraub. USA: Westview Press.

Lubotsky, D. and M. Wittenberg. 2006. Interpretation of Regressions with Multiple Proxies. *The Review of Economics and Statistics* 88 (3): 549-562.

Lucas, Robert E.B. and Oded Stark. 1985. Motivations to Remit: Evidence from Botswana. *The Journal of Political Economy* 93 (5): 901-918

Macours, K. and R. Vakis. 2007. Seasonal Migration and Early Childhood Development. Social Protection Discussion Paper No. 0702, the World Bank, Washington.

Maguid, A. M. 1999. Los esfuerzos de las poblaciones: las migraciones en Centroamérica. in *Estado de la Región en desarrollo humano sostenible*. 359-384. San José, Costa Rica: Editorama, S.A.

Malone, L. 2007. Migrants' Remittances and Investments in Children's Human Capital: The Role of Asymmetric Preferences in Mexico. Mimeograph, University of California, Santa Cruz.

Mahler, Sarah J. and Dusan Ugrina. 2006. Central America: Crossroads of the Americas. *Migration Information Source* online:
<<http://www.migrationinformation.org/Feature/display.cfm?id=386>>

Mansuri, G. 2006. Migration, School Attainment and Child Labour: Evidence from Rural Pakistan. World Bank Policy Research Working Paper No. 3945, Washington.

McKenzie, D.J. 2006. Beyond Remittances: the Effects of Migration on Mexican Households. In *International Migration, Remittances and the Brain Drain*, ed. C. Özden and M. Schiff, 123-148. Washington, DC: World Bank.

McKenzie, D, J. 2007. A Profile of the World's Young Developing Country Migrants." *World Bank Policy Research Working Paper* 4021. World Bank: Washington DC

McKenzie and Mistiaen. 2007. Surveying migrant households : a comparison of census-based, snowball, and intercept point surveys. World Bank Policy Research Working Paper No. 4419, Washington.

McKenzie, D.J. and H. Rapoport. 2006. Can Migration reduce educational attainment? Evidence from Mexico. World Bank Policy Research Working Paper No. 3952, Washington.

McKenzie, D.J and M. J. Sasin. 2007. Migration, Remittances, Poverty, and Human Capital: Conceptual and Empirical Challenges. World Bank Policy Research Working Paper No. 4272, Washington.

Nyiri, P. and I. Saveliev, eds. 2002. *Globalizing Chinese Migration: Trends in Europe and Asia*. Aldershot, England and Burlington, VT: Ashgate.

Parrenas, R. 2005. Long Distance Intimacy: Class, Gender and Intergenerational Relations between Mothers and Children in Filipino Transnational Families. *Global Networks* 5: 317–33.

Pearl, J. *Causality: Models, Reasoning, and Inference*, Cambridge University Press, 2000

Pharoah, R. 2004. *A Generation at Risk*. ISS Monograph Series, No. 199.

Phongpaichit, P. 1993. The labour-market aspects of female migration to Bangkok. In Internal migration of women in developing countries. Proceedings of the United Nations Expert Meeting on the Feminization of Internal Migration, Aguascalientes, Mexico, 22-25 October 1991, [compiled by] United Nations. Department for Economic and Social Information and Policy Analysis. New York, New York, United Nations, 1993:178-91.

Pilon, Marc. 2003. Foster Care and Schooling in West Africa: The State of Knowledge. The UNESCO 2003 EFA Monitoring Report. UNESCO.

Puri, S. and T. Ritzema. 1999. Migrant Worker Remittances, Micro-Finance, and the Informal Economy: Prospects and Issues. ILO Working Paper No. 21.

Ratha, Dilip, and William Shaw. 2007. *South-South Migration and Remittances*. Washington, DC: World Bank.

Rapoport, H. and F. Docquier. 2006. The Economics of Migrants' Remittances. In *Handbook on the Economics of Reciprocity, Giving, and Altruism*, eds. L. A. Gerard-Varet, S. C. Kolm and J. M. Ythier. Amsterdam: North Holland.

Richter, K. and N. Havanon. 1995. Women's economic contribution to households in Thailand. Implication for national development and social welfare. Nakhon Pathom, Thailand, Mahidol University, Institute for Population and Social Research [IPSR].

Rosenbaum, P. R., and Rubin, D. B., 1983, The Central Role of the Propensity Score in Observational Studies for Causal Effects, *Biometrika* 70, 41-55

Schiff, M. 2006. Migration's Income and Poverty Impact Has Been Underestimated. IZA Working Paper No. 2088. Institute for the Study of Labour, Bonn.

Schiller, Nina Glick, Linda Basch and Christina Blanc-Szanton. 1998. Transnationalism: A New Analytical Framework for Understanding Migration. In *Towards a Transnational Perspective on Migration: Race, Class, Ethnicity, and Nationalism Reconsidered*, 1-24, eds. Nina Glick, Schiller, Linda Basch and Christina Blanc-Szanton. New York: New York Academy of Sciences.

Sluzki, M.D. 1979. Migration and Family Conflict. *Family Process* 18: 379–390.

Sorensen. 2004. Migrant Remittances as a Development Tool: The Case of Morocco. Danish Institute for Development Studies.

Ssengonzi, R. G. De Jong and C. Stokes. 2002. The Effect of Female Migration on Infant Mortality and Child Survival in Uganda. *Population Research and Policy Review* 21: 403-31.

Stark, O. 1995. Return and Dynamics: The Path of Labor Migration when Workers Differ in Their Skills and Information Is Asymmetric. *The Scandinavian Journal of Economics* 97 (1): 55-71.

Stark, O. and Y. Wang. 2002. Inducing Human Capital Formation: Migration as a Substitute for Subsidies. *Journal of Public Economics* 86: 29-46.

Taylor, J. E. and J. Mora. 2006. Does Migration Reshape Expenditures in Rural Households? Evidence from Mexico. World Bank Policy Research Paper No. 3842, Washington.

Taylor, E. 1999. The new economics of labour migration and the role of remittances in the migration process. *International Migration* 37 (1): 63-88.

Todaro, M. 1969. "A Model of Labor Migration and Urban Unemployment in Less Developed Countries". *American Economic Review* , 138-148

Ünalán, Turgay. Definition of Household Membership in International Migration Surveys. *Journal of Social Sciences* 1 (4): 220-225.

United Nations. 1998. Recommendations on Statistics of International Migration, revision 1. New York: United Nations.

United Nations High Commissioner for Refugees (UNHCR). 2006. Statistical Yearbook.

U.N. High Commission on Refugees (UNHCR). 2007. *2006 Global Trends*. Geneva: Division of Operational Services Field Information and Coordination Support Section.

United Nations 2004. Demographic Yearbook review National reporting of international migration data Implications for international recommendations
<http://unstats.un.org/unsd/demographic/products/dyb/techreport/migration.pdf>

United Nations, 2006 Summary of the High-level Dialogue on International Migration and Development, A/61/515

UNICEF. Progress for Children: A World Fit for Children Statistical Review (No. 6).

Van Arsdol, M.D. 1987. Health implications of migration to Bahrain. Unpublished.

Vanwey, L.K.. 2004. Altruistic and Contractual Remittances Between Male and Female Migrants and Households in Rural Thailand. *Demography* 41 (4): 739-756.

Vreyer (de) P. 1994. La demande d'éducation: déterminants économiques. *Afrique Contemporaine* 172: 92-107.

Whitehead, Ann and Iman Hashim, 2005. "Children and Migration." Unpublished background paper for DFID Migration Team. March. Development Research Center, University of Sussex. http://www.livelihoods.org/hot_topics/docs/DfIDChildren.doc

Woodruff, C. and R. Zenteno. 2001. Remittances and Microenterprises in Mexico. Mimeograph, Graduate School of International Relations and Pacific Studies, UC San Diego, La Jolla.

World Bank. 2006. The Development Impact of Workers' Remittances in Latin America – Volume II, detailed findings. Economic Report No. 37026, Washington.

World Bank. 2005. Global Economic Prospects. Economic Implications of Remittances and Migration, Washington.

Yang, D. 2004. International Migration, Human Capital and Entrepreneurship: Evidence from Philippine Migrants' Exchange Rate Shocks. Ford School of Public Policy Working Paper Series No. 02-011, University of Michigan (forthcoming in *The Economic Journal*).

Yang, D. and C. A. Martínez. 2005. Remittances and Poverty in Migrants' Home Areas: Evidence from The Philippines. In *International Migration, Remittances and the Brain Drain*, eds. C. Özden and M. Schiff (eds.), 81-22. Washington: World Bank.

Yeoh, Brenda S.A., and Theodora Lam. 2006. The Costs of (Im)mobility: Children Left Behind and Children Who Migrate with a Parent. Paper presented at the Regional Seminar on Strengthening the Capacity of National Machineries for Gender Equality to Shape Migration Policies and Protect Migrant Women, Bangkok.

Zachariah, K.C. and J. Conde. 1980. Demographic aspects of migration in West Africa. Vol. 1. Washington, DC: World Bank. World Bank Staff Working Paper No. 414.

Zlotnik, Hania. 2006. "The Dimensions of Migration in Africa." Pp. 15-37 in Tienda, et al. (eds.), *Africa on the Move: African Migration and Urbanisation in Comparative Perspective*. Johannesburg: Wits University Press

