

## Inclusive Growth Analysis in Economies Prone to International Migration

Jennifer Keller  
Elina Scheja<sup>1</sup>

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### **Abstract:**

*Inclusive growth (IG) analysis involves analyzing the available data in a country to determine the best course of action for accelerating growth and/or improving the distribution of the opportunities and benefits from the growth process. In economies in which international migration is a significant trend, that determination may be especially challenging. The international migration phenomenon can contribute to (or detract from) growth and its distribution through myriad number of complex and sometimes divergent channels, and these effects can change substantially over time. The ability to analyze these impacts, however, is often significantly handicapped by a lack of appropriate data. Moreover, because the migration decision is inherently a private decision made by households in the best interest of their welfare, determining the policy conclusions based on the results of inclusive growth analysis is often unclear. Governments are rightfully wary of interfering with the migration process.*

*This paper examines the issue of international migration in inclusive growth. The aim is to provide the practitioners of inclusive growth diagnostics a useful framework for assessing the nature of the international migration phenomenon, and to highlight the key tools utilized in evaluating its current and potential impact on shared growth.*

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<sup>1</sup> Jennifer Keller ([jkeller@worldbank.org](mailto:jkeller@worldbank.org)) is a Senior Economist at the World Bank, Poverty Reduction and Economic Management Network, Economic Policy and Debt Department. Elina Scheja ([escheja@worldbank.org](mailto:escheja@worldbank.org)) is an Economist at the World Bank, Office of the Vice President, Country Services Department. This paper was funded through the multi-donor Diagnostic Facility for Shared Growth (DFSG), established to support the development and dissemination of methodological tools and approaches to better determine the binding constraints to shared (inclusive) growth in different country contexts. The findings in this paper reflect those of the authors, and do not represent the views of the World Bank or any of the countries contributing to the DFSG.

## 1. Introduction

**Inclusive growth analysis, at its core, involves analyzing the available data to determine the best course of action for accelerating growth and/or improving the distribution of the benefits from the growth process.** That determination is made by analysis of both macroeconomic and microeconomic data utilizing a variety of tools. In recent years, the context-specificity of such analyses has been emphasized as critique against the cross-country regressions and blue-print recipes for growth that were frequently used in the past. The research has in recent years moved more towards country-specific analysis that focuses on finding the binding constraints for growth in a particular country<sup>2</sup>. Moving from pre-specified models and standard methods to context-specific approaches implies that the country context will very much determine the core questions and type of technical analysis that will be undertaken in any particular area.

**In countries in which international migration is a significant trend, understanding the nature of growth and how it is shared (both currently and into the future) inevitably entails a deep understanding of the migration phenomenon.** Still, despite the increasing attention to international labor mobility, migration and remittances are frequently left out from the mainstream studies analyzing growth dynamics. Excluding migration dynamics from the growth studies bypasses an important component in the countries' shared growth outcomes and risks biasing the analysis of economic trends with significant interactions with migration and remittances.

**The empirical literature on international migration provides ample evidence to suggest that migration can contribute significantly to more inclusive growth,** through poverty alleviation, investments in education and health outcomes, as well as overall economic development (see e.g. Ratha *et al.* 2011; UNDP 2009, World Bank 2006). Through remittances, migration provide families with opportunities which would otherwise be unavailable, including investments in health and education, in businesses, or in savings, which can help to smooth consumption and reduce vulnerability to economic shocks (Adams *et al.* 2008; World Bank 2006, p. 126). Remittances can also act as a substitute to domestic credit alleviating existing constraints to access to finance (Taylor 1992).

**But not all of the effects of migration and remittances are favorable.** Migration entails the loss of workers and skills, at least temporarily, who might otherwise contribute to growth and development. In some cases, migration can lead to increasing income inequality (see e.g. Anyanwu & Erhijakpor 2010 for Africa), as opportunities to migrate might be limited by poor households' credit constraint to cover transportation and job searching costs abroad. Particularly for illegal migration, moving abroad can result in poor working conditions and violation of human rights of migrants (see e.g. Kebede 2001). Even when the process is legitimate, migration always occurs at a great social cost for the households who send a family member abroad (D'Emilio *et al.* 2007; Kahn *et al.* 2003).

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<sup>2</sup> One of the most influential frameworks for context-specific analysis has been the Growth Diagnostics by Hausmann, Rodrik and Velasco (2005), although a variety of other frameworks and approaches have been employed to describe the unique growth context of the country in question.

**Despite commonalities of economies with large-scale migration, there is significant heterogeneity across the world in the way migration and remittances impact growth and poverty.** To begin, the impacts of migration on poverty can differ substantially depending on the characteristics of migration. In some countries, people living in poverty are better able to participate in and benefit from the income opportunities presented through migration, normally creating positive and substantial effects on poverty reduction, at least in the short-term. In others, the opportunity to draw benefits from migration is only available for better-off groups, resulting in more limited poverty relieving effects. The impact of migration and remittances can also vary over time. Remittances, which may be highly beneficial to inclusive growth in the short term, may reduce the country's competitiveness, erode returns to capital, and limit longer-term productivity gains that can be realized in the country, ensuring a 'policy trap' of dependence on migration.<sup>3</sup> More generally, with myriad transmission channels through which migration and remittances can contribute to growth and its distribution, including through income, consumption, investment, government policies, potential parental absence, and removal of potential entrepreneurial individuals from the community, countries can realize substantially divergent benefits (and costs) from the migration phenomenon.

**The purpose of this paper is to clarify the links between international migration and inclusive growth and provide guidance to analysts on exploring these links with available data.** Starting with a review of the theoretical underpinnings of labor mobility and its role in shared growth, the authors offer a practical framework for analyzing migration phenomenon in an inclusive growth analysis. The framework aims to provide guidance to practitioners on the channels through which migration impacts growth and its distribution, and the research that must be conducted to determine the ultimate impact of current and future migration patterns on sustained and inclusive growth. It also highlights the tools that are frequently used in inclusive growth diagnostics in migration-prone economies, as well as the ways that economists deal with data limitations and challenges. Finally, the paper discusses policy challenges and options emerging from migration-enhanced inclusive growth analysis.

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<sup>3</sup> As put forward in the DFSG funded Moldova growth diagnostic: World Bank (2011) "Moldova After the Global Crisis", June.

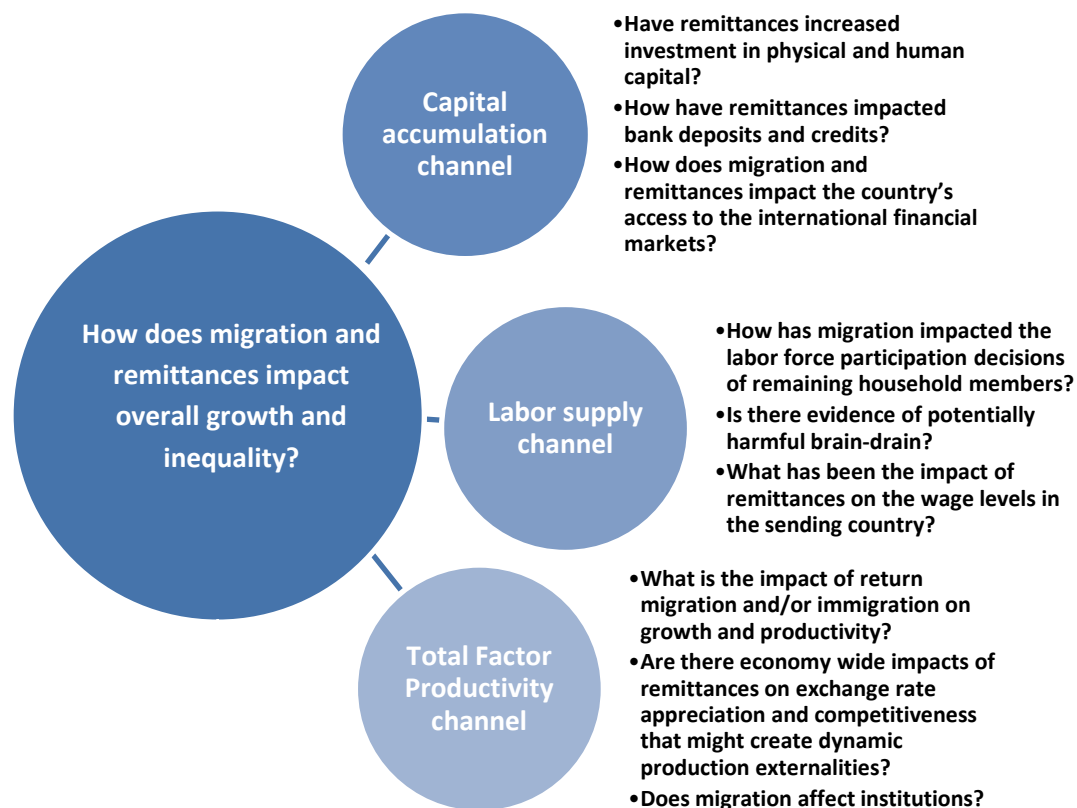
## 2. Theoretical Underpinnings of Labor Mobility and Inclusive Growth

**The analysis of migration/growth/equity links is informed by a broad economic literature**, providing the analytical structure for understanding the determinants of migration, its impacts, and its reaction to exogenous shocks, including policy changes. This overview draws both from the established growth literature as well as migration literature to outline the framework in which migration sensitive inclusive growth analysis is carried out.

**The decision to migrate is made by individuals aiming to maximize their utility.** This decision is dependent on three basic elements: the benefit of migrating, the cost of the same, and the individual's willingness and/or ability to react to the expected difference in welfare. While the classic economic theory views migration as a one-off decision of a rational agent to move when the expected earnings are higher in the destination, the so-called new economics of labor migration (NELM) views the migration process as a calculated strategy of a whole household. Here migration is viewed as a way to minimize family income risks or to overcome capital constraints on production through remittances, and return migration is observed once the original goals have been achieved and it is rational for the household to bring all workers back home (Stark 1991). The *pull* factors fueling migration by increasing the benefits include higher wages abroad, enhanced working conditions, and ability to gain experience abroad. The *push* factors that contribute to the welfare difference between the home country and the destination country include phenomenon such as unemployment and poor investment climate in the domestic economy. The cost of migration and the possibilities of reacting to a perceived welfare change are determined by policy in the sending and the receiving country, including e.g. decisions on border control, visa regimes, and availability of information about labor market opportunities abroad.

**Understanding the driving forces behind labor mobility is thus an important empirical consideration, but so are the welfare implications of such mobility.** The theoretical underpinnings of the welfare impact of labor mobility are presented here within the growth accounting framework, as described in Barajas *et al.* (2009). The myriad of different theoretical channels through which migration and remittances affects growth suggested in the literature are classified and presented under the three headings of growth accounting (Figure 1).

**Figure 1: Disentangling the impact of migration and remittances on growth**



**Source:** Authors.

**(i) Capital accumulation channel**

The direct growth impact of migration works through remittances that increase the resources available to households. The inflow of remittances can directly ease credit constraints and provide means for the households to invest in physical and human capital. In addition, large remittance inflows improve the creditworthiness of domestic investors by augmenting household collateral and thus lower the cost of capital in the domestic economy. Finally, remittances inflows have been shown to reduce output volatility and promote macroeconomic stability, which in its turn reduces the risk premium required by investing firms making domestic investment more attractive. The key questions to analyze in this context are listed below:

- **Have remittances increased investment in physical and human capital?** In addition to purely monetary gains through remittances, migration can impact the future employability of the domestic workforce through increased investments in education and health by the remittance-receiving households. There is a growing body of evidence suggesting that the income from remittances is disproportionately spent on education and health rather than everyday consumption, at times because the migrant has set this as a condition for financial support or simply through the income

effect of remittances (Adams 2005; Valero-Gil 2008; Nagarajan 2009). Remittances have also been found to enable farm households to invest in capital goods that increase the productivity of household labor, and thus facilitate structural transformation into other sectors of the economy (Lucas 1987). Migration can thus impact the employability of the economic actors through improved access to working capital as remittances increase household savings allowing the non-migrating household members to start businesses (World Bank 2006, 127).

- **How have remittances impacted bank deposits and credits?** In some cases migration is a response to failures in the market for insurance and credit, so that emigration of one household member works as a second best solution to relax the credit constraint of the household (Taylor 1992). Remittances can also improve the creditworthiness of the household, enabling access to loans from financial institutions. Savings from remittances can also spur the development of local financial institutions that are liquidity constrained (Toxopeus & Lensik 2007) and raise the aggregate level of deposits and credit intermediated by the local banking sector (Aggrawal *et al.* 2006). As more households gain access to financial services and the customer base expands, the market for financial intermediation is also likely to mature and improve the delivery of financial services. Investigating trends in domestic lending and investment can help answering this question.
- **How does migration and remittances impact the country's access to the international financial markets?** Remittances provide often badly needed foreign exchange strengthening the balance of payments. The ratio of debt to exports of goods and services would in many cases increase significantly if remittances were excluded from the denominator (World Bank 2006, p. 101). Including remittances correctly into the debt sustainability analysis alters the amount of fiscal adjustment required to place the debt on a sustainable path, and improves the country's credit rating (Abdih *et al.* 2009). This makes it easier for the remittance-receiving country to borrow from the international financial markets, and thus leverage the development impact of migration into other sectors of the economy. Remittances can also lower the macroeconomic risk taken by the investors, as remittances have been found to have a stabilizing effect on the country's total output hereby reducing output growth volatility (Chami *et al.* 2009), and remittances also serve as an insurance at the macro level as the inflows have been observed to increase after a natural disaster or an economic downturn (Yang 2006). Further, the diaspora is frequently involved in the development of their former communities through hometown associations (Ghosh 2006, p. 86; World Bank 2006, pp. 95-96), and also serves as an invaluable source of information and contacts in the destination country. Another way of leveraging access to finance is through issuance of Diaspora bonds or via securitization of future remittances inflows (Kethar & Ratha 2009; World Bank 2006, p. 103), although such financial instruments come with substantial risks associated with the exchange rate volatility, interest rates, and inflexibility in debt management, which limits the wide-spread use of these instruments.

## (ii) Labor Supply Channel

Emigration by definition reduces the number of workers in the domestic economy (assuming the migrants were part of the labor force and not e.g. discouraged from searching for work), while immigration increases labor supply. Remittances, on the other hand, have an indirect impact. Remittances work as income transfers and the recipient household may substitute this unearned income for labor income and divert these additional resources to consumption of leisure.

- **How has migration impacted the labor force participation decisions of remaining household members?** It has been argued in the literature that remittance income makes the remaining household members less likely to engage in income-generating activities as their incomes are maintained by remittance. However, empirical studies have found that it is equally possible that remittance-receiving households devote *more* hours to work, utilizing remittance as seed money for self-employment or capital-intensive businesses (Yang 2008). These indirect effects on employability can create new opportunities for the economic actors at large, but may also distort the market and create inequalities in opportunities. Further, the impact differs across the workforce and remittances have been found to reduce child employment during school days and increase educational achievement (Yang 2008).
- **Is there evidence of potentially harmful brain-drain?** High emigration of high-skilled workers or the so-called “brain-drain” can mean the loss of public resources invested in their education, reduce the sending country’s access to health and education services, and worsen the business environment, which in its turn hampers the growth prospects going forward. For some countries, such as Angola, Guinea-Bissau, and Mozambique, expatriation rates are over 50 percent of the educated population (Gupta *et al* 2007). Brain drain is heavily debated especially in relation to health professionals, and there is no question that many developing countries with large numbers of highly-educated workers resident abroad face severe shortages of health workers. But it is important to bear in mind that the shortage of health professionals often stems from causes totally unrelated to migration (Clemens 2007). Some economists argue that the risk of brain drain is severely overestimated and that the opportunity to emigrate may even increase the supply of highly-educated workers as the possibility of emigrating abroad increases the interest in and returns to higher education in general (World Bank 2006, p. 68).
- **What has been the impact of remittances on the wage levels in the sending country?** Related to the different migration rates of the skilled and the unskilled, one of the often-neglected channels of international remittances is the impact of these transfers on wages and earnings in sending countries. While migration may impact labor supply decisions at home, these decisions may also raise the reservation wages of the remaining household members, and create labor shortages in some skill levels driving up the wages.

### (iii) Total Factor Productivity Channel

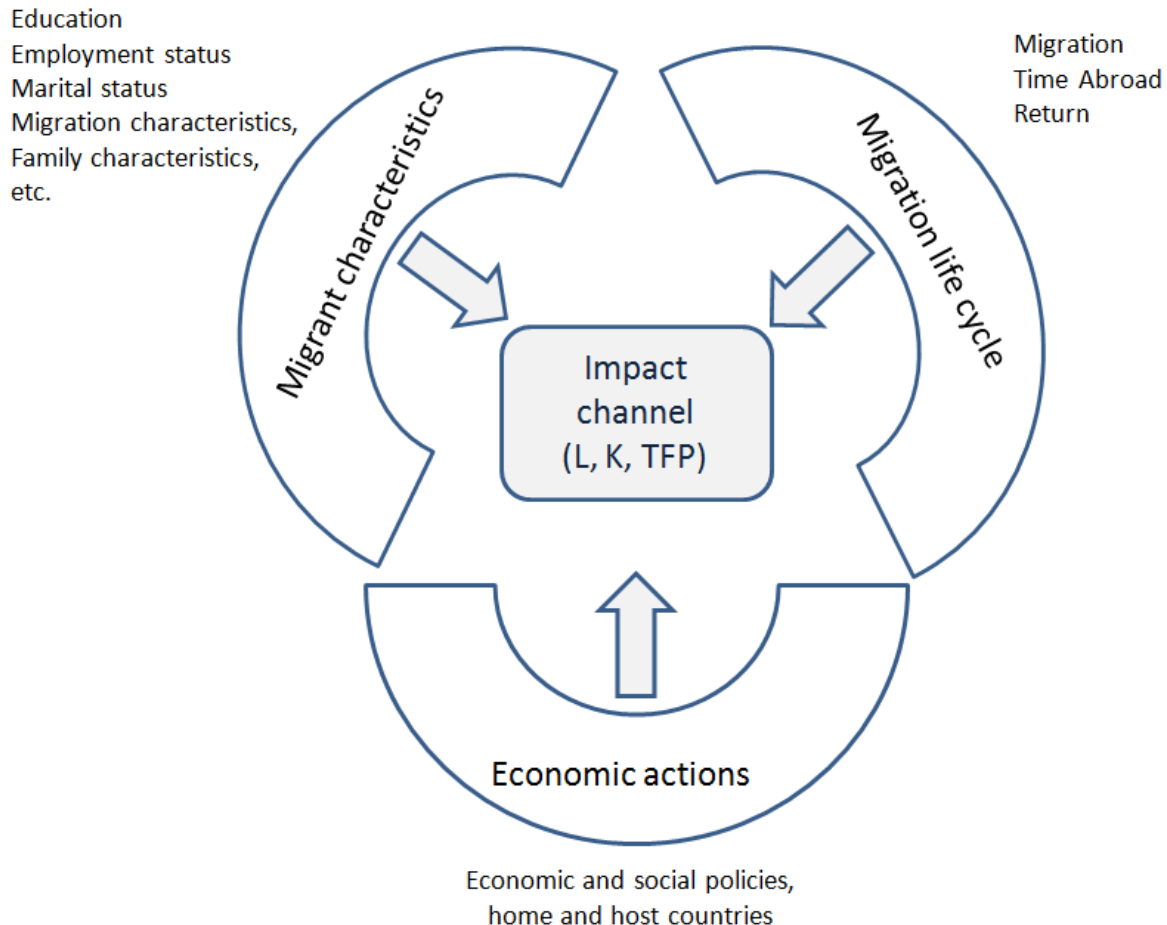
Remittances may affect total factor productivity (TFP) growth through their effects on the efficiency of domestic investment and through effects on the size of domestic productive sectors that generate dynamic production externalities. Remittances have also been argued to impact the quality of institutions by making government corruption less costly for households that receive remittances from abroad. Also the know-how of the returning migrants and the networks generated by migration may increase the productivity of the domestic firms.

- **What is the impact of return migration and/or immigration on growth and productivity?** Skilled in and out migration can enhance the productivity of the economy in general, and the small scale businesses in particular. Dustmann *et al.* (2010) argue that return migration can lead to mitigation of the brain drain, if not even the creation of a brain gain, as the migrants who return are more productive in their home countries than those who left. Access to information through the diaspora and the skills learned by returning and incoming migrants can improve technology, management and institutions in the sending and receiving country, respectively. For these benefits to materialize, it is important to ensure that the return migrants have access to job opportunities at home.
- **Are there economy wide impacts of remittances on exchange rate appreciation and competitiveness that might create dynamic production externalities?** While large inflows of remittances have been found to relieve poverty and impact investments in the receiving country positively, even larger inflows that are spent on domestic non-tradables can lead to exchange rate appreciation, which may reduce the competitiveness of the domestic tradables sector. Yet, whether the Dutch disease is present and if so, how large it is in a particular country will need to be determined on case-by-case basis. Rajan and Subramanian (2005) found no evidence that remittances would have a Dutch disease type of impact in developing countries, and as remittances tend to be relatively stable and persistent over a long period of time, this effect could be more easily managed compared to an abrupt shock through natural resource windfall (IMF 2005).
- **Does migration affect institutions?** Large remittance inflows have been argued to have an impact on microeconomic determinants of business environment through the quality of the receiving country's institutions. It is suggested that high ratios of remittances to GDP would weaken the control for corruption, reduce government effectiveness, and deteriorate the rule of law (Chami 2008). This effect comes about when the presence of remittances expands the revenue base so that the government finds it less costly to appropriate resources for its own purposes. However, as remittances are allocated in small amounts directly to the households the risk of corruption is diminished. Large overall remittance inflows could also help to hide government inefficiencies as households' welfare increase through foreign sources (World Bank 2010a). As the consumption increases despite poor policies, the demands for change and government responsibility will be weaker allowing political mismanagement to continue longer than otherwise would have been the case.



Whether these theoretical channels prove to have an impact in a given country depends on a variety of factors that vary from country to country, and the actual impacts through any channel will depend upon the interaction of three key factors: (i) the stage of migration, (ii) the individual characteristics of the migrant, (iii) and the actions or policies taken (either by origin or destination countries) which may impact migrant decisions (Figure 2).

**Figure 2: International migration’s development impact prism**



Source: Authors.

**International migration brings different benefits and costs to the economy (through labor, capital and productivity) along the different migration stages.** For example, the beginning stage of migration where the migrant leaves the country may initially reduce the supply of labor in the sector in which the migrant was previously employed. The time the migrant spends abroad may result in capital accumulation by the family (through remittance transfer) and investment in education. The stage of return may bring particular contributions to society (for example, through improvements to productivity with knowledge transfer).

**The magnitude of those costs and benefits will be determined by migrant and structural characteristics.** The characteristics of migrants – all the characteristics which have bearing on the contributions the migrant and/or migrant family could make to development, including aspects of education, employment, the nature of migration (permanent or temporary; single or family, etc) – will have an impact on the ultimate benefits/costs from migration to the home country. An unemployed worker with poor employment prospects at home, for example, will entail fewer lost economic contributions than an employed worker with continued strong employment prospects, whereas a highly -skilled migrant, other things equal, will entail higher lost economic contributions to the sending country. But also, structural characteristics in home and host countries will impact the ultimate development impact of migration. For example, a high cost of transferring remittances in host countries will reduce the value of remittances sent home by migrants, while a strong investment climate in the home country will improve the potential for investment by returned migrants.

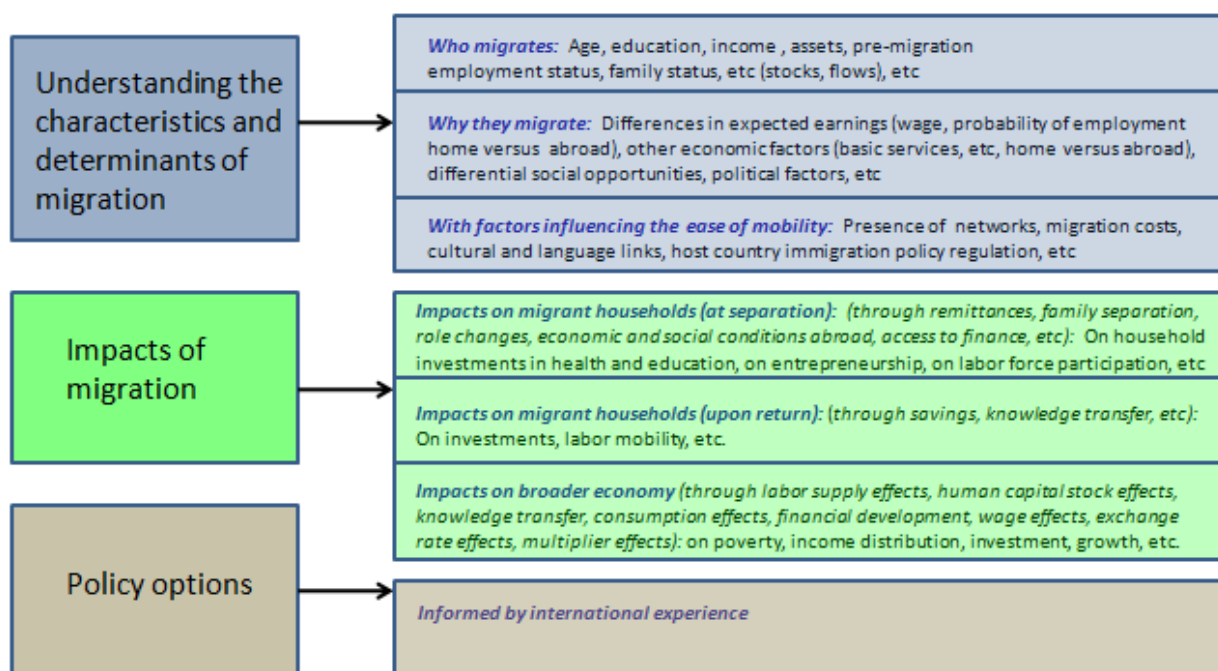
**The overall impact of migration on growth is indeterminate.** In general, studies focusing on the labor supply response of the remittance-recipient households tend to find that remittances lower work efforts and hence reduce long-term growth (Azam & Gubert 2006; Chami *et al.* 2003), while other studies focusing on capital accumulation and efficiency of domestic investment find that remittances improve financial access and financial development and therefore stimulate growth (Toxopeus & Lensik 2007, Giuliano & Ruiz-Arranz 2005, Gupta *et al.* 2007). Which channel dominates depends on the multitude of factors which together form the country context of migration.

**Investigating each of the theoretical channels and their magnitude within a given country context emerges as imperative in understanding the overall growth and distributional impact of labor mobility at a country level.** Disaggregating the analysis by different groups of economic actors will shed light on the effect of each of these channels on distribution of growth and thus its inclusiveness. The theory does not provide a clear answer to the direction or the magnitude of the effect of labor mobility, it is the responsibility of the country analytics to provide the answer on case-by-case basis based on the various clues provided in the literature.

### 3. A basic framework for analysis of international migration in inclusive growth diagnostics

**Inclusive growth diagnostics in an economy with substantial labor migration can be aided by three building blocks suggested in this paper**, which together provide the foundation for understanding the economy’s growth/poverty/equity linkages and the key priorities for shared growth into the future (Figure 3). These building blocks support the suggested steps of an inclusive growth analysis consisting of a background analysis of development trends, profiling the economic actors, and finding the binding constraints for inclusive growth (Ianchovichina & Lundstrom 2009; Corso 2011). The framework is aimed to provide stimulus for migration sensitive studies going forward . The list of questions presented here is neither comprehensive, nor are all questions expected to be answered in rigorous detail, but the shape of the study will be guided by the country context.

**Figure 3: Building Blocks for Migration-Sensitive Inclusive Growth Analysis**



Source: Authors.

#### 1<sup>st</sup> Building Block: Characteristics of International Migration

The first building block concerns an understanding of the characteristics of migration phenomenon and the economic actors who migrate. In particular, it requires finding out who is moving and why. The characteristics of migration play a large role in its ultimate impacts on the economy (both currently and

into the future), and thus characterizing migrants is a fundamental exercise for understanding the nature of shared growth.

**Describing the migration profile of a country includes asking a variety of questions to better understand the broad trends.** It involves looking at the volume of migration – is the number of migrants increasing or decreasing? What did growth and broad economic factors (including poverty and inequality) look like before migration accelerated (if applicable)? Where are migrants going - mainly to neighboring countries? What has been the trend in remittances? What are the trends in return migration?

**Characterizing migration also includes deeper profiling of the migrants and their households by education, sector, and other relevant characteristics.** Is core migration coming from rural areas or urban areas? Are they primarily educated workers or low-skilled workers? Is there a gender component to migration, in migrant skill-level, chosen destinations or sectors? The classification of the core migrant groups will not only help to determine who is on the front line for first-round impacts (primarily through remittances), but will also highlight potential weaknesses in the domestic economy (high emigration regions or sectors). If the dominant migrant group is from agriculture, for example, it immediately sheds light on issues with the domestic agriculture sector, in terms of providing productive employment opportunities. Additionally, the migrant composition helps to identify if there are any disparities in access to foreign labor markets among the population. Paying attention to the educational status of the migrants will also help to highlight areas of future investigation. What are the domestic job prospects (and returns to education) for key migrant groups? How are migrant skills being utilized abroad? Do they have the skills that match the demand in the destination countries, or are migrants overqualified for the jobs they work abroad? Evidence of brain waste can highlight problems with low ability to utilize highly-skilled labor at home or skewed structure of the education system in the domestic economy, or host country selection effects of immigration policy (with restrictions on recognizing foreign qualifications or limiting lower-skilled workers resulting in higher educated migrants filling jobs). On the impact side, identifying brain waste also highlights a key source of lower household gains from migration (compared with migrant skills better utilized in host economies).

**In addition to overall trends and characteristics of migration, it is important to try to understand the main determinants of migration.** Understanding the key determinants of migration is important both for understanding potential weaknesses in the domestic economy, and to be able to project migration (and remittances) in the medium term, which will be crucial to determining policy actions for inclusive growth. Here one would like to determine the main economic, demographic, and political factors that influence the migration patterns in the country. What are the job prospects for migrants domestically? How do wages compare with foreign labor markets? What are the job prospects where migrants are settling? Are there different determinants for the poor versus non-poor? Are underlying determinants likely to change over the medium term? Further, what is driving remittances into or out of the country? Are there different determinants for the poor versus the non-poor? Are underlying determinants likely to change over the medium term?

**Analyzing the driving forces of migration involves analysis to determine the push and pull forces that shape the migration flows.** Are we observing stress migration due to lack of opportunities at home, or is migration induced by lucrative opportunities abroad? What determines the sending of remittances? Are they predominantly determined by the characteristics of the migrants? Are they related to financial factors – like exchange rates, interest rates, inflation and the costs of remitting money home? How do they relate to economic conditions abroad and at home? Inevitably, looking at the determinants of a country's migration will help identify potential problems that exist in the domestic economy.

## **2<sup>nd</sup> Building Block: Impact of International Migration and Remittances**

**The second building block for inclusive growth analysis in migration prone economies involves evaluating the impacts of migration (and remittances) on channels of growth and the way it is shared, now and into the future.** The analysis of direct and indirect consequences of migration and remittances helps to determine how labor mobility interacts with the growth and poverty reduction processes. Determining how the current migration pattern has contributed to more inclusive growth involves analyzing the poverty implications at the household level, and also looking at the economy-wide consequences that arise from the aggregated impact of all individual household decisions.

**Insight can be gained from comparing impacts to other countries.** For example, if remittances have reduced national poverty by 2 percentage points in one country, compared with 10 percentage points in neighboring economies, it sparks immediate questions about why. The answers will identify the unique migration characteristics of the country, and its ability to benefit from migration.

**In order to describe the poverty impact of migration and remittances, it is important to investigate how labor mobility has impacted the probability of falling into poverty.** Although country circumstances vary, the literature points to a clear poverty reducing impact of migration and remittances and evidence from different parts of the world suggests that remittances reduce the depth and severity of poverty, as well as indirectly stimulate economic activity (for an overview, see e.g. Ratha *et al.* 2011). Remittances have also been found to have an income stabilizing effect at the household level (World Bank 2006).

**Not only the overall level of income, but also its distribution matters for inclusive growth: How has migration impacted inequality?** Empirical evidence suggests that income increases through remittances are not equally distributed among the population. Cross-country analysis reveal that remittances are related to greater income inequality in Africa and Latin America, while other studies come to a contradictory conclusion arguing that migration enhances the welfare of the rural poor disproportionately based on case studies in individual countries (see e.g. Anyanwu & Erhijakpor 2010; Portes 2009; Adams 1991). The effect on income inequality might in fact be evolving in time so that although migration may raise inequality initially, as only the relatively well-off have the resources to send workers abroad and therefore receive remittances, but once migrant networks are established in the destination countries, the cost of migration falls so that the less-well-off can afford to migrate. In order to answer this question one needs to see who are the receivers of remittances and, if possible, compare the income growth with non-receiving households.

**After describing the overall trends in poverty and inequality (i.e. the outcome of the growth process), it is important to disentangle the channels through which migration and remittances impacts growth dynamics in order to draw relevant policy conclusions for enhancing the welfare impacts.** An analysis of the broader economy will help to determine how migration has impacted overall growth and its distribution. As discussed in the theory section, following the growth accounting framework the impact of migration and remittances can be broken down into their effects on capital accumulation, labor supply, and total factor productivity as discussed above.

### **3<sup>rd</sup> Building Block: Policy Options**

**The third building block for inclusive growth analysis involves determining what policies are needed, if any, to ensure sustainable growth and inclusion into the future.** The policy recommendations arising in this building block are informed by the experiences of other countries, as there are no universally applicable solutions to managing the dynamic process of migration. While the first two building blocks will point to how migration has impacted the economy (both positively and negatively), the goal of the third building block is to determine the set of policies to improve the growth/poverty/equality relationship over the long term.

**Depending on the nature of migration in a given country, the government may wish to intervene by changing the transmission channels of welfare impacts, manipulating the patterns of migration, or modifying the possibilities for future migration.** However, it is important to distinguish between what can be done in terms of the *volume* of migration and in terms of the *welfare impact* of the same. Ironically most of the policy efforts have been devoted on the former, whereas the empirical evidence suggests that policy can only be effective in enhancing the latter. All measures aimed at restricting free mobility of individuals are problematic because migration is a private decision made by households and constraining this choice implies interfering with fundamental liberties of the citizens. These types of coercive methods are most commonly applied to restrict the mobility of high-skilled workers both in the sending countries as well as in the receiving countries. Still, the impact of these policy efforts tend to be insignificant, as the main driving force of immigration is relative differences in wages and employment opportunities, as argued above. This is not to say that the national policy would not have any impact on migration; although it fails to have the intended impact on the volume of migration it can have a significant impact on the quality of migration. Thus, it is argued here that while most of the recommendations for improving outcomes of migration rely on taking migration volumes as given, there are unexploited opportunities to enhance the impact of migration e.g. by providing legal channels for mobility, controlling the recruitment channels to counteract exploitation, and enhance the effectiveness and management of remittance flows by making the official channels more attractive and affordable.

**Providing solid guidelines for deriving policy recommendations from an inclusive growth analysis is not straightforward, as migration as a phenomenon is heavily politicized.** Actions taken by the governments in reality are not always the ones that would arise from a cost-benefit analysis for the country. Some existing practices in the realm of migration policy being exercised by the countries are presented in box 1. Please note that the description of existing practices does not necessarily imply good

practice, but many of the policies exercised under the flag of migration policy are in fact counterproductive to development.

#### **Box 1: Examples of Current Migration Policies Exercised in Different Countries**

- **Restricting the movement of (high-skilled) workers:** The severity of restrictions vary from denying exit visas to making the emigrants pay a high tax upon leaving the sending country, or applying so-called ethical recruitment schemes in the destination country. Despite the name, these policies involve severe restrictions of individual freedom, and they have found to be fundamentally inefficient in addressing the skill shortages in sending countries (Clemens 2007). Alternative policy options could include improving incentives for local workers to stay, as well as increasing the number and availability of skilled workers domestically (Clemens 2009).
- **Managing migration through collaboration between sending and receiving countries:** Labor mobility, especially when undocumented, is commonly a source of tension between the sending and the receiving country. Still, collaboration between the countries would be in both countries' best interest, not to mention the migrants'. An example of such collaboration is the Mali-France Consultation on Migration where the countries meet at the ministerial level to discuss the integration of Malians who want to remain in France, co-management of migration flows, and cooperative development of emigration areas in Mali (Martin *et al.* 2002).
- **Providing information to prospective emigrants and protecting their rights:** Large part of international migration takes place through recruitment companies whose sometimes unserious practices can leave the migrant in debt and with worse working conditions than promised. Facilitating migration via safe and legal channels through active monitoring of recruitment processes, protecting the human rights of migrants (irrespective of their legal status), and engaging in coordination between the sending and the receiving country will help to fight exploitation and trafficking (UNDP 2009, p. 103). Providing knowledge about the migration process and language of the destination country will also help to manage expectations, enhance integration and facilitate adjustment of migrants to the new labor market (UNDP 2009, p. 104; Ruiz 2008).
- **Facilitating remittance flows and lowering their costs:** The development impact of remittances could be enhanced by making it cheaper and safer to send money home through official channels. Ratha (2007) has suggested an "International Remittances Agenda" to facilitate the flow of international remittances.
- **Informing policy choices by improved data collection:** Making the right policy decisions requires knowing the current state of affairs. When it comes to migration, comprehensive and up to date data are often not available for policy makers to base their decisions on. Thus, improving data collection on migration and remittances may help to gain a more thorough understanding of the situation (Black & Skeldon 2009).

**Source:** Ratha *et al.* 2011.

**It is important to bear in mind that many policy recommendations arising from a migration sensitive inclusive growth analysis are likely to be unrelated to migration.** Individual migration decisions are

driven by an incentive structure, and understanding the driving forces behind these decisions may lead to areas of reform that are and should be under the control of the government economic policy. For example, if emigration is driven by poor investment climate, a public reform may change the nature of this push factor. Further, if most remittances are channeled through informal channels, reforming and improving the effectiveness and reliability of the formal banking system may induce more remittances to be channeled through the banks. In fact, most policy actions that stem from a migration analysis and that would have an impact of migration and remittances, are seemingly unrelated to migration as such but they deal with larger economic inefficiencies. For example instances of Dutch Disease caused by remittances inflows are not cured by a single policy maneuver but the need persistent follow-up and active management. Tackling these issues may well lead to broader inclusive growth benefits that go further than its impact on migrant household into benefitting the society at large. Thus, the policy recommendations will need to be informed by the migration analysis, but the conclusions will need to be incorporated into a broader inclusive growth analysis.



## 4. Inclusive growth analysis in practice: Key technical approaches from migration-prone economies

**While the objective of inclusive growth analysis is to determine the priorities for sustainably increasing the participation, contribution and benefits of the poor in the growth process, the methodology can take many forms.** Sometimes analysts have adopted a top down approach, where the starting point for the study is a major development problem, such as large and persistent spatial disparities in income growth, and the study aims to understand the root causes behind this challenge. In some cases, there are specific characteristics of the economy which dominate the country's growth dynamics and create particular resources and challenges for achieving shared growth, which then become a logical starting point for an inclusive growth analysis. For instance, oil-led economies share common development challenges of Dutch Disease and poor linkages to the rest of the economy, and the inclusive growth analysis can help to find ways to overcome such limitations and broaden the growth path. In other cases, economists approach inclusive growth analysis in a bottom-up fashion, analyzing a particular vehicle for growth (such as trade) to determine its potential for raising growth and improving the distribution of its benefits. Here the starting point is the vehicle for growth, and the aim of the analysis is to maximize its impact on inclusive growth.

**The presence of international migration is viewed as a country context (particularly over the short term).** Analysts conducting inclusive growth analysis in migration prone countries view the ability to influence migration in a major way, at least in the short term, as limited particularly as migration is at least strongly determined by demand conditions in host countries, outside the purview of sending countries. Particularly for countries in which large outflows of labor are already occurring, determining policies to ensure more inclusive growth must contend with a phenomenon largely beyond government control.

**Migration may also be seen as a vehicle for inclusive growth.** Analysts also view migration as a potential vehicle for more inclusive growth, utilizing migration and other policy in an effort to better shape the characteristics, flow, and conditions of migrants, ultimately towards growth and development goals. The Philippines is perhaps the most visible example of a country that has taken coordinated efforts to manage the emigration process toward the attainment of its development objectives, but an increasing number of countries are exploring options for migration as a growth vehicle. The idea of migration as a growth vehicle may seem more apparent for migrant-sending countries, but it equally applies to receiving economies. Moreover, classifying a country as a 'sending' country versus a 'receiving' country is no longer self-evident, with most economies dealing with both outflows and inflows of migrants, with both phenomena influencing the growth dynamics in their countries (Box 2).

## **Box 2: Inclusive Growth Analysis Needs to Account for Incoming Migrants**

Governments are traditionally interested in promoting the welfare of their citizens at home as well as abroad. This well-intended ambition has at times led to ignoring or using unconstructive rhetoric towards foreign nationals residing within the country's borders. Still, incoming migrants form an ever-increasing part of the work force in many countries, and they have substantial impact on the host economy (for an overview of the theoretical growth implications, see Moody 2006). The issue of immigrants has mainly been discussed in the literature in relation to South-North migration, but unlike commonly believed, around half of the official international migration from the South is to other developing countries (Ratha & Shaw 2007). Still these official statistics are likely to underreport South-South migration especially between contiguous countries with less-efficient border controls, as almost 80 percent of the South-South migration is estimated to take place between countries with contiguous borders (Ratha *et al.* 2011).

Immigrants both in the South and in the North have significant impact on the economies in which they reside (van der Mensbrugghe & Roland-Holst 2009). The welfare gain for the destination country works mainly through the fact that immigration increases the supply of labor, which increases employment, production and thus GDP (Ortega and Peri 2009). Immigration has also been found to increase the productivity of the receiving economies through freeing up the local workforce to move to higher productivity occupations. In Spain, for example, immigrants were able to provide affordable child care services and consequently they increased the labor force participation rate of Spanish women substantially, who were now able to take higher productivity jobs (Conde-Ruiz *et al.* 2008). Still, the total economic contribution of the immigrants is often not well captured, as immigrants (especially if illegal) are frequently absent from data.

Despite the benefits of immigration, public and the policymakers at the destination country commonly believe that immigration can become an economic burden for their domestic constituencies. Immigration is feared to lead to loss of jobs, heavy burden on public services, social tension and increased criminality (UNDP 2009, p. 70). The main channels for negative economic outcome for the destination countries are increased job competition that allegedly brings down the wages for the locals, and the increased fiscal burden for caring for a growing population of immigrants (Ratha *et al.* 2011). The fears of immigrants stealing the local jobs (Papademetriou *et al.* 2009) or lowering wages (Longhi *et al.* 2005) are often overstated, as the migrants enter a segregated labor market where local knowledge, language skills, and legal status makes a difference in productivity and ability to find jobs. The fiscal impact of immigration depends on how extensive the social safety nets and welfare services are, to what extent migrants are allowed to access the domestic welfare system, and how the immigrants contribute to the system as taxpayers. In the developing countries the welfare benefits might not be as numerous, and neither is the tax contribution of mostly undocumented immigrants likely to be substantial, but the migrants' value added to production and economic growth is still a net gain for the country. Whether positive or negative, the net fiscal impacts of immigration are not likely to be large (UNDP 2009, p. 89).

For an inclusive growth study, the focus will need to be not only on the nationals of the country but also the immigrants who form a part of the labor force and who contribute to the growth dynamics of the economy. Immigration and emigration impact growth and its distribution, and inclusive growth analysis needs to look at both sides of the phenomenon.

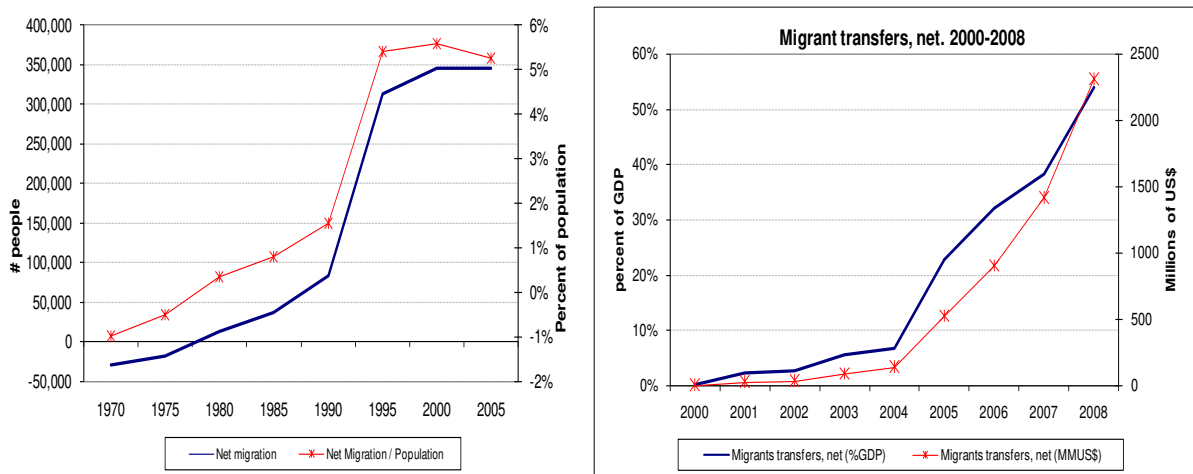
## 4.1 Determining the importance of migration in the shared growth picture

**While migration is an important feature in many migrant-sending countries, inclusive growth analysis in migration-prone countries begins with growth analysis.** It is through growth analysis, and the analysis of the country's past growth and poverty reduction trends, the sources of growth, the path of investment and its physical and human capital stock, the returns to factors of production, the financing of growth, the population and labor market dynamics, and the productivity performance across sectors, firms and regions, that allow the economist to understand the main challenges and opportunities individuals face in accessing productive employment and investment opportunities. For migration-prone economies, greater exploration of the role of migration in growth and development will be dictated by necessity, considering the relative importance of the mobile labor force to the economy.

**There is no unique threshold for determining the importance of migration to an economy.** Rather, economists generally view factors like high levels of migration (relative to the domestic labor force), high levels of skilled migration (relative to the skilled domestic labor stock), high levels of remittance transfers (relative to GDP), or strongly increasing levels of any one of these features to provide sufficient rationale for examining the migration/growth/distribution links more carefully.

**The importance of migration to an economy might be established through basic migration statistics.** The strong and rapid migration phenomenon from Tajikistan, for example, was evident through aggregate emigration and remittance statistics. Tajikistan's net emigration of the labor force began following independence in 1991, and by 2005, almost 12 percent of the population had left the country (World Bank 2010b). Meanwhile, the remittances sent by migrant workers over the period skyrocketed, reaching almost 50 percent of the GDP by 2008 (Migration and Remittances Team, World Bank). This evidence made migration analysis in inclusive growth study fundamental (Figure 4).

**Figure 4: Emigration and remittances in Tajikistan**

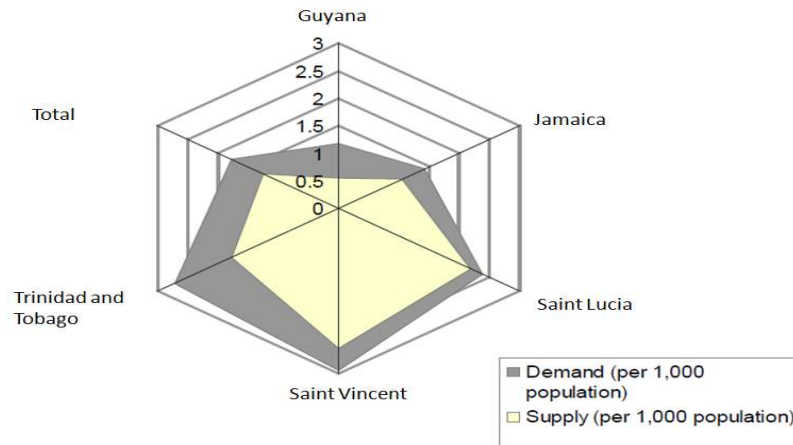


Source: World Bank (2010a)

**Migration analysis may be warranted if key segments of the labor force (such as skilled workers) are involved.** The need for migration analysis is not restricted to cases where the migration phenomenon is

large. Loss of key segments of the labor force or population may have large impacts on growth even as a relatively rare phenomenon. Nursing shortages in the English-speaking Caribbean, for example (Figure 5), which developed as a result of migration, may have broader growth impacts, as sub-quality health care lowers the ability to attract businesses and retirees.

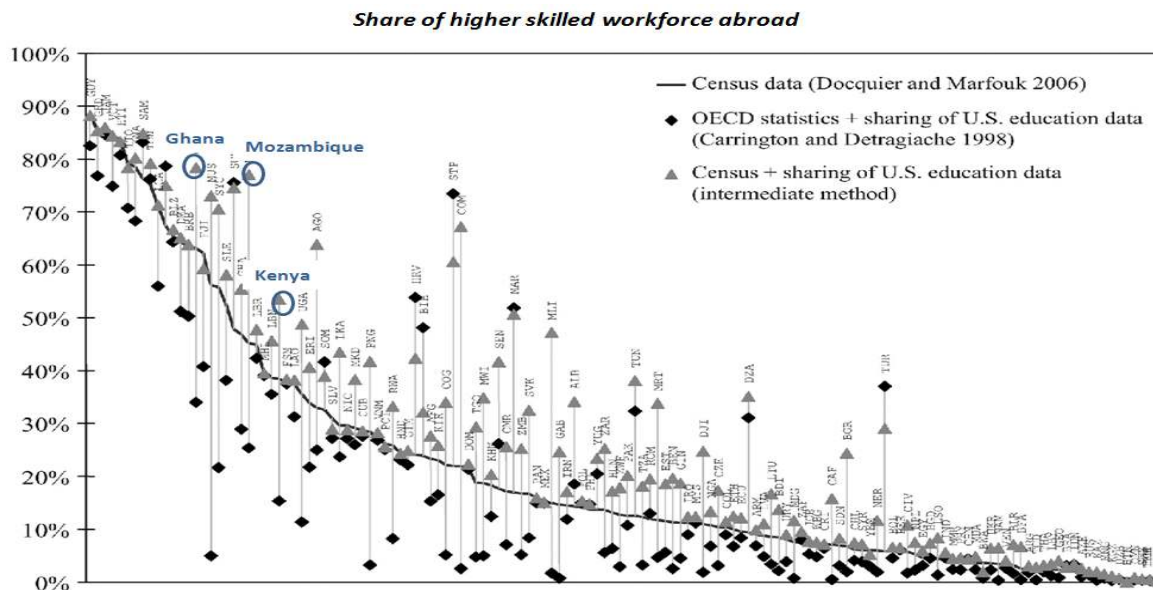
**Figure 5: Nurse Shortages in Select Caribbean Economies**



Source: World Bank, 2009a.

And a quick glance at emigration of tertiary educated workers from African economies like Kenya, Ghana and Mozambique, for example (where between 50-80 percent of high skilled laborers have migrated), points to an issue requiring further analysis (Figure 6).

**Figure 6: Estimates of “Brain Drain” worldwide**



Docquier, Lohest, and Marfouk; 2007.

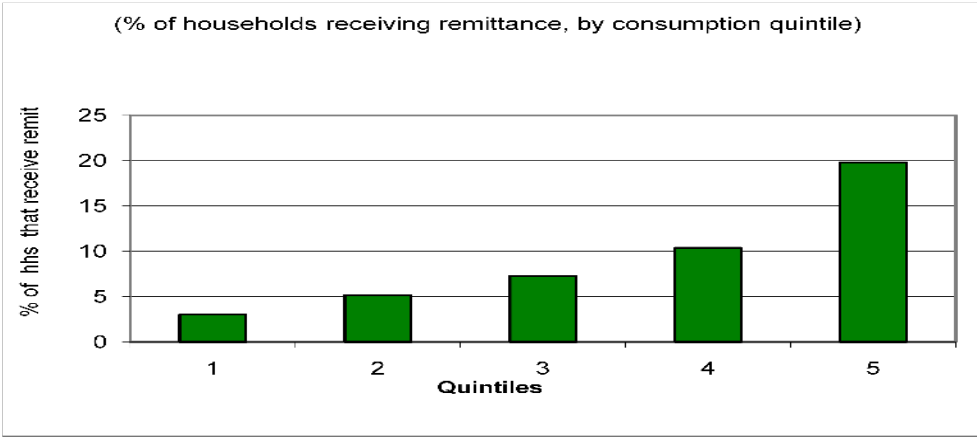
Even countries only moderately affected by migration currently may need to take into account migration as a potential feature of future growth. With increasing labor shortages in industrialized economies, there is potential for migration to become an important economic phenomenon even in countries with currently marginal migration levels. In several North African economies, for example, high skilled emigration was only approaching the levels associated with negative developmental impact. However, in one major migration/growth study,<sup>4</sup> demographic and skills projections over the next thirty years were persuasive evidence of a strongly increased pull of skilled workers from the region to Europe, likely leading to detrimentally high skill emigration rates from North African countries. Inclusive growth analysis not only concerns the analysis of obstacles to current growth and its distribution, but the analysis of potential resources and challenges for growth and its distribution in the future.

### 4.2 Characterizing migrants and the determinants for migration

Since first round impacts of the act of migration flow to migrant families, primarily through remittances, understanding the characteristics of the migrants and their households is integral to inclusive growth analysis. Understanding the characteristics of the migrants themselves also provides important clues about the determinants of migration in the country, including potential investment and employment deficiencies within the home country, and about factors that facilitate migration.

Of particular relevance for inclusive growth analysis is the access of different groups to migration opportunities over time. The greater is the ability for the poor or economically marginalized to access the upward mobility opportunities from migration, the greater is the opportunity for the benefits of migration (at least in the short term) to be inclusive. As a result, inclusive growth analysis in labor sending countries generally tries to establish how migration is distributed throughout the population, usually with regard to household income or migrant education (Figure 7 and Table1). Deeper analysis of the distribution of migration opportunities by gender, age, schooling, income, region of origin, etc. further identifies differences in the population in the incentives and abilities for migrating.

**Figure 7: Distribution of remittances in Morocco, by household consumption level**



Source: World Bank Staff estimates from 2001 LSMS data.

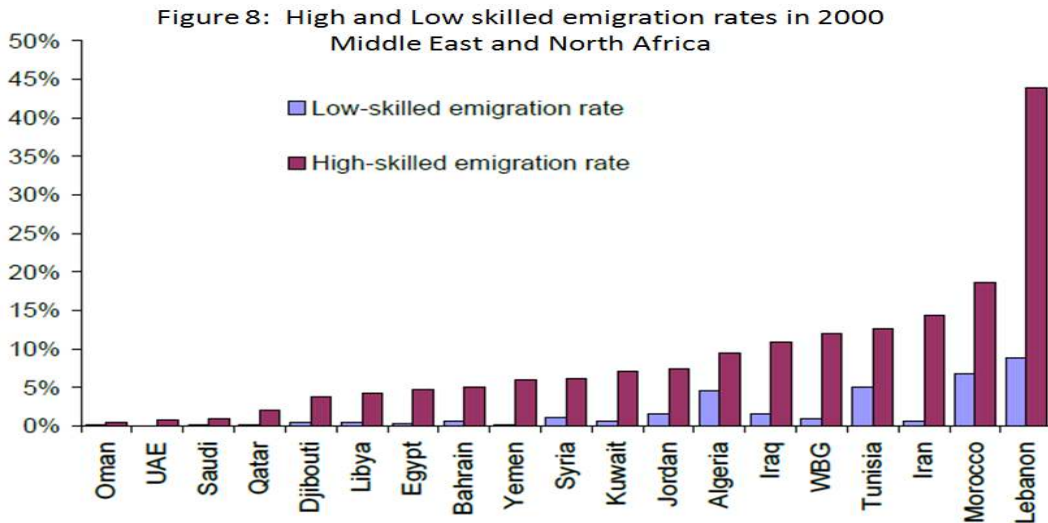
<sup>4</sup> World Bank, 2009b.

**Table 1: Distribution of emigration by schooling completed, Mexico**

	Men		Women	
	Stayers	Migrants	Stayers	Migrants
No School	5.77	11.95	8.08	12.68
Less Than Elementary	17.18	7.58	17.92	8.12
Elementary	23.14	23.00	25.53	23.50
Lower Secondary	30.86	24.49	27.33	23.38
High School	13.38	22.24	14.47	21.54
College	9.68	10.73	6.67	10.77

Source: Caponi, 2006.

**Migration profiles pay particular attention to emigration of skills.** Migration impacts like “brain drain” – the loss of skilled laborers in an economy to the point where it inhibits growth and development – are empirically difficult to measure at the country level. But a migration profile which identifies the migration rates of higher educated workers<sup>5</sup> can shed light on the *potential* for brain drain to be an important or emerging issue in growth and investment, such as in the case such as Lebanon, where more than 40% of higher skilled workers lived abroad in 2000 (Figure 8).

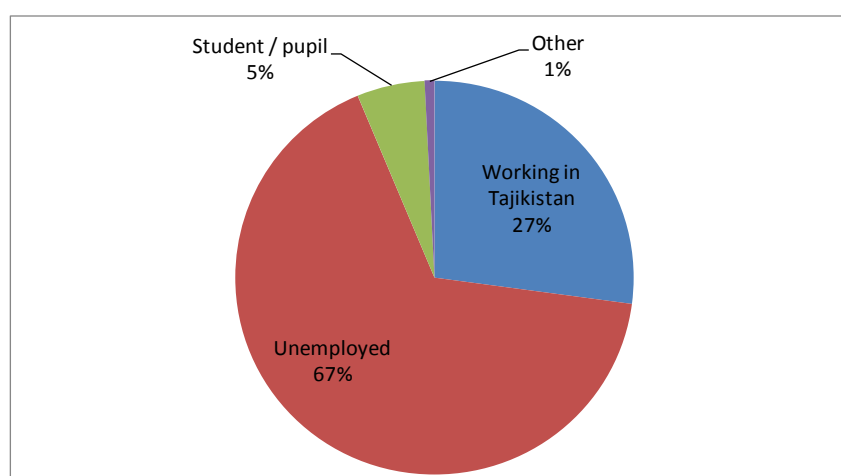


Source: Estimates based on Docquier, Lowell, Marfouk database (2006).

<sup>5</sup> A database developed by Docquier, Lowell and Marfouk provides an extension to the work by Docquier and Marfouk (2006). The data-base draws on harmonized immigration data collected in receiving countries, where information about the country of birth, age and educational attainment of the immigrants is available, typically in national censuses and registers. DLM collected data from the 30 OECD members states, for two periods (1990 and 2000), with the highest level of detail on country of birth and level of educational attainment.

**In addition to understanding its characteristics, analysts seek to better understand the motivation for migration abroad.** Thus migration profiles will try to compare employment/income opportunities domestically and abroad. Domestic opportunities are often difficult to assess, but where surveys exist on the pre-migration employment status of international migrants, they provide valuable insight into these motivating factors. According to Tajikistan's 2007 LSMS, for example, more than two thirds of Tajik migrants were unemployed the year before they migrated (Figure 8). This information draws a clear picture of employment abroad serving as an important outlet for unemployment pressures in Tajikistan. Even broad labor statistics from the sending country (such as unemployment rates by education and region, returns to education by education level and region, etc) can provide a picture on labor demand conditions motivating migration.

**Figure 9: Migrants' Work Status before Migrating from Tajikistan in 2007**

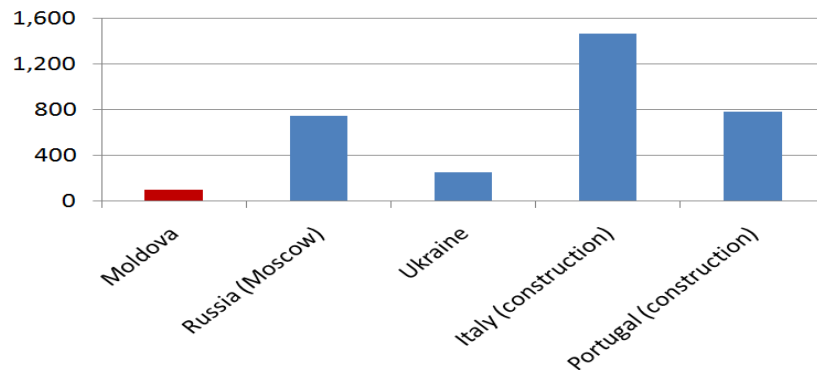


Source: LSMS as presented in World Bank (2010a).

**Domestic opportunities must be complemented with understanding of the opportunities abroad.** Because inclusive growth is concerned with the distribution of opportunities to contribute to and benefit from growth (including through migration), ideally, analysts are interested in comparing the employment opportunities for migrants and non-migrants domestically and abroad. Household or other sending-country surveys may inquire about characteristics of missing members abroad, or alternatively, analysts may consult host country data, which may provide invaluable information on migrant employment options abroad. Host country labor force surveys, for example, may report on a range of migrant characteristics (such as education, country of origin, time in the host country, etc), as well as information on current work conditions (including sector of employment/job characteristics, wages, etc). Where specific information on migrant wages abroad is unavailable, analysts will utilize more general data on wages or employment to gauge employment conditions. In the growth analysis undertaken in Moldova, for example, average domestic wages for Moldovans were compared with average monthly wages in primary destination countries, to the degree possible controlling for the sector of known employment (Figure 10).



Figure 10: Average monthly wages in Moldova versus primary destination countries



Source: World Bank (2011).

**Analysts not only explore the incentives to migrate, but factors impacting the ability to migrate.** Information on the migration process, even if anecdotal, about how they secured a job, how they funded their travel abroad, what cultural/language links they had to the destination country, distance/transport between the countries, etc. help to understand the facilitating environment for migration decisions.

**Where data permits, more sophisticated empirical models, including gravity models, may be employed to analyze labor mobility between countries.** Gravity models seek to explain migration flows (or stocks) from one country to another by each country's economic characteristics and bilateral geographic characteristics. The technique has traditionally been utilized to analyze gross trade flows between countries, but more recently it is being utilized to explain bilateral migratory flows (Rotte and Vogler, 1999; Pedersen, Pytlikova and Smith, 2004; Mayda, 2005; Peri, 2005; Gubert and Nordman, 2006). In its most basic form, the gravity equation explains the total emigration from one country of origin to a country of destination using economic characteristics (population and GDP per capita) of each of the two countries and bilateral geographic characteristics (distance, common border, access to sea, common language). Occasionally, if the data allow it, additional characteristics of the countries of origin and destination are included in order to account for immigration policies and other relevant characteristics (Gubert & Nordman 2006).

### 4.3 Analyzing the impact of migration on inclusive growth

**High levels of out-migration prompt natural areas of investigation in inclusive growth analysis.** Three broad areas in particular are the focus of the analysis in migration-prone economies.

- (i) At the broadest level, economists are interested in knowing whether the patterns of migration have resulted in an improvement in both growth and the distribution of income.
- (ii) Economists are interested in knowing how *domestic* investment, employment, and productivity have been impacted by the migration phenomenon, since there is an inherent



discomfort with relying heavily on outside labor opportunities for an economy's growth and development.

- And, (iii) they are interested in knowing what migration is likely to look like into the future, and what that will mean for future growth and distribution.

**The characteristics of migrants provide partial clues about current migration impacts.** The link between 'who migrates' and whether migration leads to more inclusive growth is complex. Even if the majority of migration opportunities go to the poor, for example, it is not necessarily clear that the overall impact of migration will be greater income equality or poverty alleviation. That is because while the act of migration brings clear benefits at the household level (benefits like increased income from remittances, increased investments into children's education, increased capacity for entrepreneurship upon return, etc), the social returns to migration may be distributed along any lines.

**Analysts blend both microeconomic and macroeconomic analysis to determine the overall impacts of migration on growth and distribution, and its likely impact going forward.** Drawing on the established tools of migration analysis, growth analysis, and poverty analysis, they blend techniques and approaches to evaluate these key questions related to the current and future impacts of migration on investment, employment and productivity, and the forces that create the cycle of migration.

#### **(i) Impacts on household outcomes**

**Although analysts are interested in the economy-wide impacts of migration, many of those impacts are measured in a partial equilibrium setting looking at the effects on migrant households.** Utilizing primarily nationwide household surveys (but also labor force and ad hoc surveys), they utilize microeconomic estimation techniques to determine how migration and remittances impact poverty, labor force participation, entrepreneurship, household expenditures (particularly in educational investments, investments in health, housing, land, business investment, etc), and agricultural production (crop yield and the result of adopting improved technology).

**While countries generally exhibit similar outcomes at the household level, there is heterogeneity in terms of the magnitude and the specific features of these impacts.** Table 2 gives an overview of just some of the microeconomic evidence on poverty, labor force participation and business formation. While directionally, migration impacts countries similarly, differences in migrant and household characteristics, the stage of migration, and host and sending country structural features result in different impacts at the household level.

**Table 2: Selected evidence of migration impact analysis at the microeconomic level**

Outcome variable examined	Countries studied	Findings
Poverty	71 countries worldwide (Adams and Page, 2005)  10 Latin American countries (Acosta et al 2006)  Morocco (Sasin, 2009)  Egypt (Assaad et al, 2009)  Philippines (Yang and Martinez, 2006)	Reduces household poverty rate by 3.5 percent for every 10 percent increase in remittances per capita  Reduces poverty by 0.4 percentage points for each percentage point increase in remittances/GDP  Receiving remittances reduces the probability of being poor by 9 percentage points.  Reduces the probability of poverty by 3 percent for every 100 LE of remittances  Reduces hh poverty rate by 2.8 percentage points for each 10 percent increase in remittances
Labor force participation	Egypt (Assaad and Binzel, 2009)  Morocco (Silva, 2008)  Nicaragua (Funkhouser, 1998)  Philippines (Rodriguez and Tiongson, 2001)	Increases LF participation of women, reduces wage work of young men  Reduces LF participation of men and women, increases the likelihood of self-employment  Reduces LF participation for men and women  Reduces the LF participation of men and women
Business investment	Mexico (Massey and Parrado, 1998)  Albania (Kilic et al, 2007)	Current migrant reduces household business formation, past migrant increases the odds of business formation by 3 percent  Each additional year of migration stay in Greece increases the probability of business ownership by 7 percent.

**(ii) Impacts of emigration on the broader economy**

Analysts complement microeconomic techniques with macroeconomic techniques, designed to determine the broader impacts of migration on the economy. The empirical analysis of emigration and

remittances on a country's overall economic growth, however, is more challenging than analyzing household outcomes. Not only is the causality difficult to establish (with emigration and remittances both impacting and being impacted by growth), but the actual direction of the relationship fluctuates. For example, remittances to the home country increase with greater investment opportunities at home (in periods of higher growth), but they also increase with negative domestic growth shocks (as part of a household risk sharing strategy). At the aggregate level, it would be difficult to disentangle these effects.

**Empirical research has reached conflicting findings on the growth/migration relationship.** Despite the robust evidence on the link between migration and poverty reduction at the household level, the literature on the relationship between remittance inflows and economic growth in migrant-sending countries remains inconclusive. Empirical studies have found little evidence in support of a positive impact of remittances on economic growth (IMF 2005, World Bank 2006; Spatafora 2005; Barajas et al. 2009; Singh *et al.* 2009). In general, studies focusing on the labor supply response of the remittance-recipient households tend to find that remittances lower work efforts and hence reduce long-term growth while other studies find that remittances improve financial access and financial development and therefore stimulate growth (Azam & Gubert 2006; Chami *et al.* 2003). The channels that dominate in each country context are subject to the inclusive growth analysis with the ultimate impacts depending on the structural characteristics of the receiving economy and its capacity to absorb large financial inflows, the country-specific transmission mechanisms, and elasticities, primarily the marginal propensities to import, consume and invest.<sup>6</sup> In addition to structural specificities of a particular country's economy, the broader institutional and political environment, the quality of institutions, and their development level all influence the way remittances impact a country's economy.<sup>7</sup>

**While the ultimate impacts of migration on growth are difficult to determine, country studies have explored a range of other macroeconomic impacts of migration** including the effects on domestic wages, effects on the exchange rate and competitiveness, the effects on labor market shortages and domestic investment, the effects on access to finance and investment, as well as impacts on public finances.

**In high remittance receiving economies, analysts pay particular attention to the potential impacts on competitiveness from exchange rate appreciation.** Massive inward remittance flows can lead to a real exchange rate appreciation, known as the Dutch Disease effect. Despite the positive contribution of remittances to poverty and household welfare, most studies have found that remittances have a negative effect on exchange rate appreciation and export competitiveness. As a result, in countries in which migration is a significant phenomenon, at least superficial examination of remittance/exchange rate trends is undertaken (see an example from Moldova in figure 11). More sophisticated analysis at the country level adopts a standard approach to include remittance flows in the set of fundamentals that enter a cointegrating equation for the real exchange rate, together with other potential real exchange rate determinants (see for example Bourdet and Falck, 2006 for an application to Cape Verde).

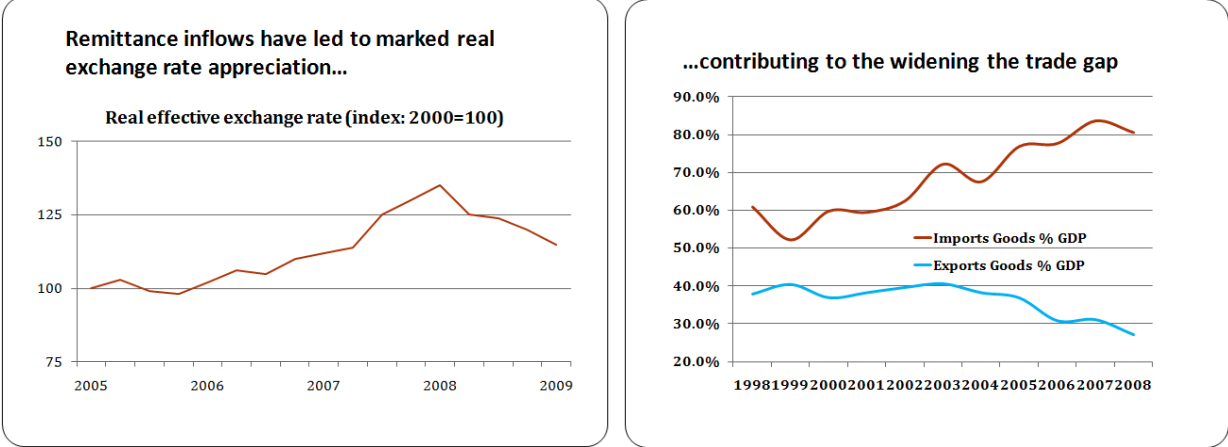
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<sup>6</sup> See e.g. Kireyev A., *The Macroeconomics of Remittances: The Case of Tajikistan*, p. 18.

<sup>7</sup> Mansoor A., Quillin Br. (eds), *Migration and Remittances, Eastern Europe and the Former Soviet Union*, p. 8

Additionally, analysis may be undertaken to determine the impacts of the differential effects of exchange rate appreciation (which will negatively impacting export sectors and tradable goods and positively impact the profitability of non-tradable goods), which will differ among countries depending upon how remittances are spent (consumption versus investment).

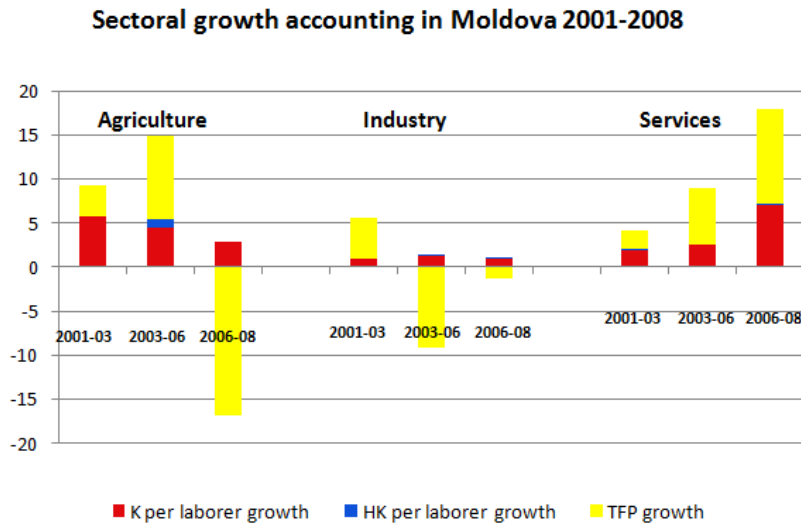
**Figure 11: Remittances and exchange rate appreciation in Moldova**



Source: World Bank 2011.

**High levels of outmigration also create the potential for shortages of key laborers needed for growth and investment in certain sectors.** Thus, growth analysis in migration-prone economies will investigate how migration has impacted the labor supply generally, and the growth in sectors depending upon the predominant migrating labor skills. In the case of Moldova, migrating agricultural workers resulted in a doubling of the real wages in agriculture, while productivity and growth per worker was declining – a symptom of growing labor shortages arising from migration (Figure 12).

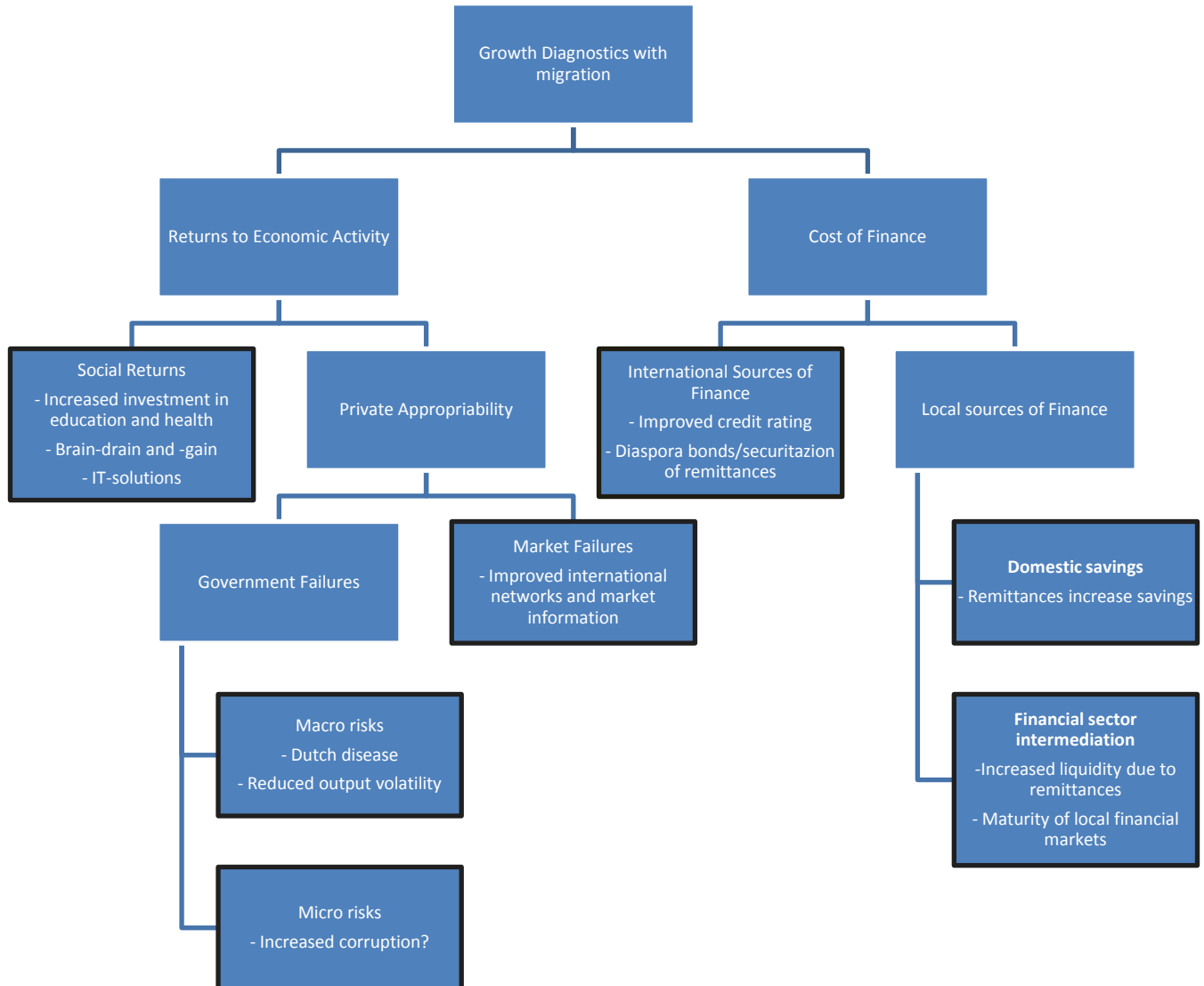
**Figure 12: Information on emigrant sector of prior employment combines with information on resulting sectoral wages and growth/productivity to assess labor shortages**



Source: World Bank 2011.

A commonly used framework to track different growth channels has in recent years been the **Growth Diagnostics approach by Hausmann *et al.* (2005)**, which can also be used for empirical analysis in migration-prone countries. The Growth Diagnostics examine the constraints to growth prevailing in the business environment where the economic agents operate and provides guidance for narrowing down the number of constraints into the most binding ones. In the analytic framework the low level of economic activity is seen to be caused either by high cost of finance or low returns to economic activity. Migration and remittances can enter the analysis in any part of the growth diagnostics. In Figure 13, the original growth diagnostics tree is presented with suggestions for possible entry points for migration and remittances that one should be aware of when analyzing growth patterns in a remittances dependent economy. The suggestions are based on the theoretical linkages discussed in the previous sections. However, this is not to say that all the entry points are equally relevant in all country contexts, but suggestions are aimed at stimulating empirical analysis.

**Figure 13: Framework for Migration Sensitive Business Environment Analysis**



**Source:** Adapted from Hausmann, Rodrik and Velasco (2005) by the authors.

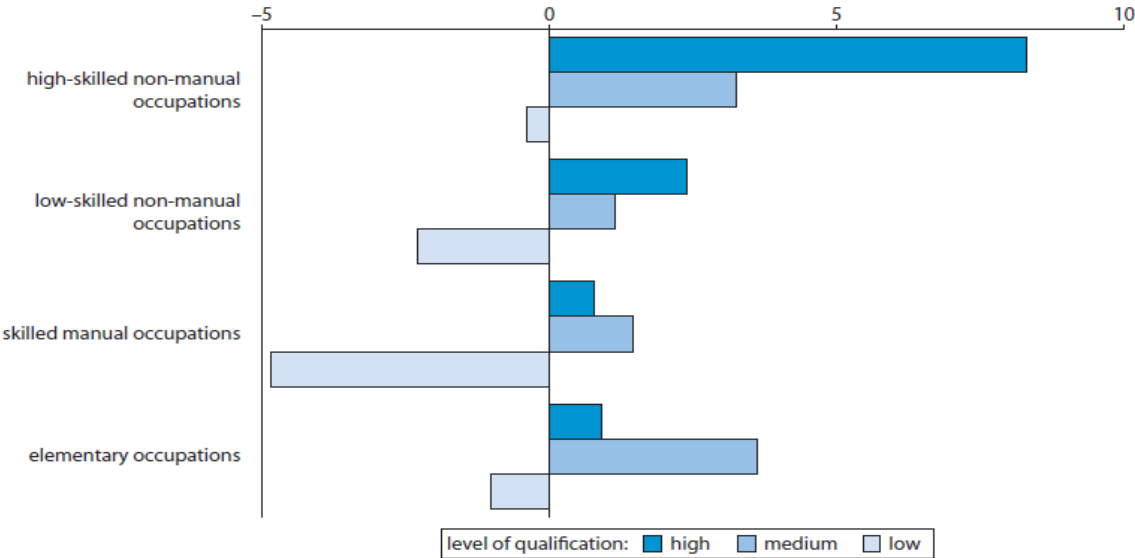
### (iii) Prospects for migration into the future

**Growth analysis in migration-prone economies will delve into the prospects for migration into the future, which involves estimations of labor developments in the primary migrant destination regions.** Analyzing prospective migration is warranted partly because of countries' dependence upon remittances for growth and poverty alleviation, and partly because domestic investment and growth into the future will depend crucially on available labor and capital. Demographic projections of labor receiving countries help to clarify the probability for continued migrant labor needs, though it will not ensure the role of the sending country in filling that need. That will depend on host country migration policy as well as the match-up between the sending country skill base and the skills demanded in the destination economies.

Skills forecasts in destination countries are generally based on macro-econometric projections of sectoral production, productivity and employment, broken down by occupations or skills, using advanced methodologies. Often several variants or scenarios are calculated, which – based on alternative assumptions – provide a range of the number of future jobs and their particular skill requirements<sup>8</sup>.

It is generally beyond the country-economist to determine the skill needs of the primary destination countries of their emigrants. However, projections are available from multiple sources for most industrialized economies to which migrants move. Such skill projections for Europe were put to use in forecasting the potential for Middle East and North African economies to fill labor shortages into the medium term (see Figure 14). These projections showed that MENA’s primary destination market would require more than 12.5 million additional jobs filled at the highest qualification level across all occupational groups, while it would lose some 8.5 million jobs at the lowest qualification level. These projections were then coupled with MENA demographic projections and scenarios on education to determine the potential for MENA migrants to supply the needed labor to Europe.

**Figure 14: Projected employment changes (in millions) 2006-2015 by Occupation Group and Skill Level EU-25, Norway and Switzerland**



Source: World Bank 2009b.

In addition to determining how migration might fit labor market needs, analysts are interested in how changes to migration will impact key economic variables. For this, computable general equilibrium models (CGE) are generally well-suited to analyzing a wide range of economic policy questions. General equilibrium analysis can only provide scenarios, and the results are determined by the assumptions

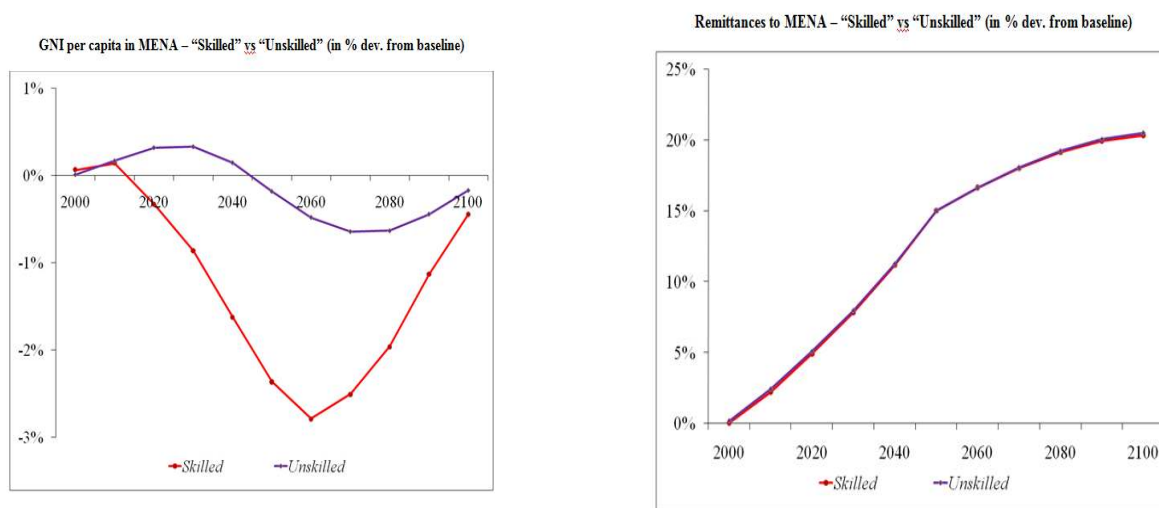
<sup>8</sup> CEDEFOP, 2008.

underlying the model. However, the scenarios can be a useful tool for examining a range of impacts a country could experience in the face of changes in migration.

**CGE modeling has been utilized to investigate various economy-wide phenomenon.** Of particular interest to economists are the potential impacts of skilled migration, particularly in countries where large stocks of the tertiary-educated population are migrating abroad. One of the most comprehensive studies using a CGE model was done by Dixon *et al.* (2008), who investigated the impact of a reduction of illegal immigrants on the U.S. economy. Further, a recent significant contribution to the existing literature on predicting migration patterns is the work done by Tyers and Shi (2007) who modeled a baseline scenario of the dynamic impact of aging populations up to 2030. The authors conclude that the population decline in the industrialized countries may be faster in the near future than has been previously anticipated, and that the reduction in labor force in developed regions is likely to reduce the total savings in these countries. Yet, this change is accompanied by slower growth in aggregate demand in the industrialized countries, and higher levels of savings in the developing countries. Also, the changes in dependency ratios are likely to be substantial, although remedied by increased labor migration.

**CGE modeling was adopted in the MENA region (Docquier and Marchiori, 2010) to considered potential increases in emigration** including different mixes of skill levels, different outcomes on employment abroad (allowing for brain waste), ex-ante affects on human capital acquisition at home (allowing for brain gain), and education policy changes, to consider impacts on demographic variables, fiscal variables, GDP/GNI per capita, and even a measure of inequality (skilled-to-unskilled income ratios). A few of these scenario results are presented in Figure 14, which show likely impacts on GNP from large increases in skilled versus unskilled emigration (in this case, with dramatic negative implications on GNI per capita with a doubling of skilled migration rates), as well as likely changes in remittances (in this case, with largely no difference over time).

**Figure 14: Economic effects of increased migration from MENA (results of one scenario)**



**Source:** Docquier and Marchiori, 2010.



## 4.4 From analysis to policy

Though the particulars differ from country to country depending upon the unique characteristics of the economy and migration's role, the policy recommendations from growth analysis in migration-prone countries congregate around two basic objectives: first, particularly over the short term, to maximize the positive development impacts of migration and manage its negative consequences; and second, over the longer term, to ensure that the economy creates sufficient domestic opportunities for investment and productive employment.

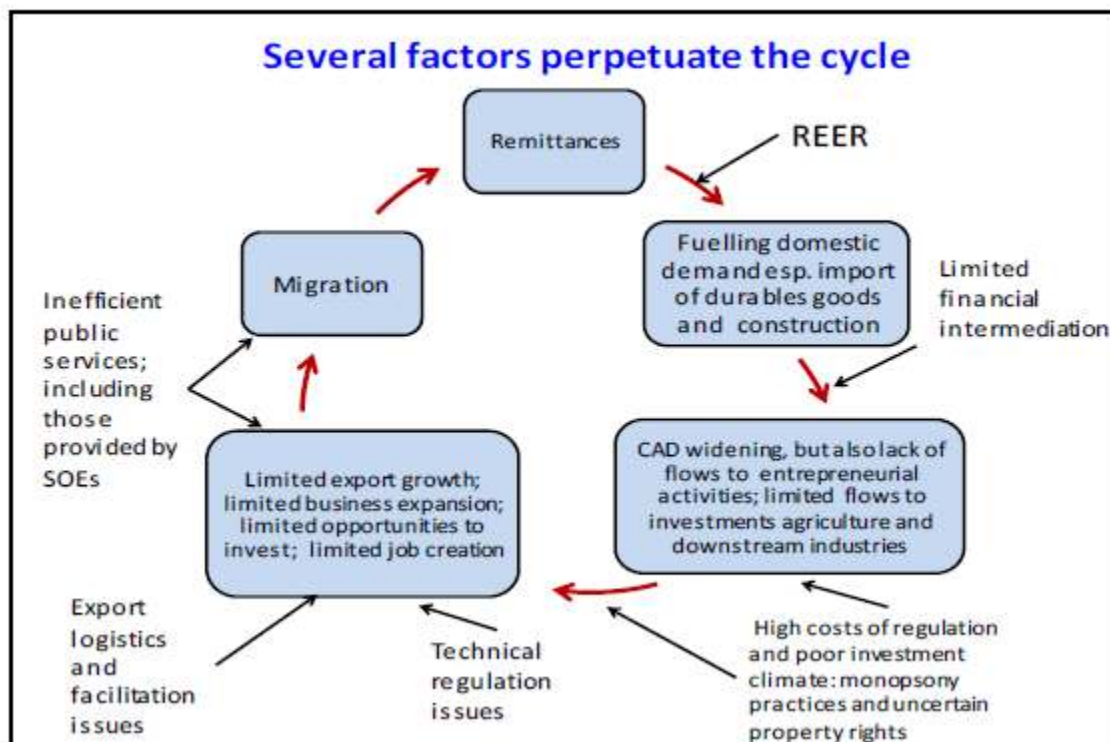
**Maximizing the positive impacts of migration is based on an understanding that strong migration outflows are largely beyond the capacity of the sending country to influence in the short term** (with migration responding to differential opportunities at home and abroad). In the context of continuing flows, the objective is to maximize the economic gains from migration and remittance flows while managing the potentially negative impacts. Among the policies considered, country studies focus on lowering the cost of sending remittances through formal channels; using remittances to deepen the financial sector and to reduce the costs of borrowing; managing the macro-economic impact of high remittance inflows into the economy, and involving migrants and return migrants as partners in development – including by linking migrants with employment opportunities at home and abroad.

**But additionally, policy recommendations focus on a range of policies outside of migration to ensure the economy creates sufficient opportunities for investment and productive employment into the future.** Out-migration brings with it the potential of a 'policy trap'.<sup>9</sup> While migration can allow for many benefits to the population, the enhanced income from migration can perpetuate the push factors for migration. In the case of Moldova, remittances fueled the increase in consumption (mostly of imported goods), which opened up a large current account deficit, reduced competitiveness in Moldova, and stymied export industries in a more competitive global economy. As a result, Moldova shed jobs, which in turn encouraged more emigration abroad (Figure 15). Emerging from this policy trap involves a potential range of actions to develop other engines of growth and employment.

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<sup>9</sup> A term coined for the cycle created by migration-led growth in Moldova, World Bank, 2011.

Figure 15: The cycle created by Moldova's migration-led-growth 'policy trap'



Source: World Bank, 2011.

**Inclusive growth studies in migration-prone economies also recognize that the policies which impact the degree to which a country can benefit from migration are closely related to the policies which contribute to growth and development at home.** The elements of the incentive framework which would increase the positive returns from migration to the host country are precisely the elements which increase growth and development overall. High skilled workers with skills relevant for a private sector led economy not only increase the employment potential (and remittance potential) abroad, they increase the employment potential at home. Having an investment climate which provides sufficient job opportunities for these higher educated workers at home not only reduces skilled labor flight, it also increases the contribution of human capital to growth and development. An investment climate which attracts business development from returned migrants also attracts the domestic investment for economic growth and development. Having the institutions which support diaspora engagement will also contribute to a better climate for investors domestically<sup>10</sup>. In short, many of the priorities for enhancing the returns from migration are, not surprisingly, the priorities for enhancing inclusive growth.

<sup>10</sup> From World Bank, 2010c.

## 5. Dealing with Data Limitations

**Before concluding, a discussion on specific data concerns is in order to guide the practical work going forward.** Any economic analysis is only as good as the underlying data allows, but the nature of migration makes it difficult to record. Merely keeping track of migration flows has proven difficult due to the lack of harmonized international data as different definitions of migrants are in use. Differentiating migrant *stocks*, i.e. the population present in a country at a given time – from migration *flows* – i.e. the number of individuals admitted to a country in a given period – is important for measurement purposes, but rarely found in practice (Carletto & de Brauw, 2007). Few statistics measure migration flows and data are even scarcer when it comes to transit, circular, or irregular migration (World Bank 2010c, 25-26). Further, distinguishing *short-term* (temporary) from *long-term* (permanent) migration is important for policy purposes, as the determinants and effects of these types of migration are likely to be different. Related to the duration of migration is identifying *return migrants* in countries of origin. Measuring return flows may be particularly important, as return migrants have the potential to catalyze development in their home countries through their newfound skills and capital – yet, return migrants are very rarely reported separately from the domestic population. ( Carletto & de Brauw, 2007)

**In addition to conceptual dilemmas in measuring migration, both migration and remittances variables are most often measured with a substantial error due to the fact that statistics on migration are often outdated and lack information of large parts of the migrant stock.** Also remittance inflows are often misrepresented in the statistics and the official estimates of these flows are usually gross underestimates of the true volumes. In a recent survey of the central banks (Irving *et al.* 2010) wide discrepancies were discovered between the true estimated remittance flows and the figures reported in the balance of payment statistics sent to the International Monetary Fund (IMF). For example, in the case of Ghana, remittance inflows reported in the survey were some 18 times as large as the figure reported to the IMF. Similar discrepancies were also discovered on remittance outflows, where e.g. the United Kingdom reported three times as high remittance outflows than what was recorded in the balance of payments. The majority of the remittance flows go through untraditional channels, such as transfer companies, postal offices, or with friends or relatives who cross the border. As of yet, many of the newer market entrants' remittance services are unregulated and unreported, which make them invisible in the official statistics otherwise.

**To develop a comprehensive picture of migration, economists generally exploit a variety of data sources.** The empirical challenges associated with characterizing migration and understanding both its determinants and its impacts are well known. No single data source will accomplish the multiple goals of tracking total migration as well as the detailed data needed (over time) to study the determinants, consequences and mechanisms of migration. Since labor-sending countries often do not keep accurate records on either the number of migrants or detailed information on their characteristics, data on migrants often will need to be collected through censuses from the main labor-receiving countries. Labor force surveys in host countries, on the other hand, can provide important information on employment, unemployment and earnings, central to the aspirations of international migrants.

However, while data in host countries can provide invaluable information on migrant characteristics, they usually cannot inform about the impacts of migration or the individual motivation for migration since the data will generally not contain information on the situation of the migrant prior to migration needed to establish bilateral earnings differentials, nor can it represent the universe of expected earnings differentials across countries from which particular household migration decisions are made. Analysts usually rely on household surveys in labor sending countries as a primary source of information on migrants, as they will generally have data on both migrants and non-migrants, thus providing a vehicle for measuring migration's impacts<sup>11</sup> (for an example of such impact evaluation of remittances, see e.g. Mohapatra *et al.* 2004). Household surveys may address migration through different questions. They may inquire directly about the characteristics of household members who have left, or they may ask about prior experience abroad of current household members (a good source of information about the characteristics of return migrants)<sup>12</sup>. Often, however, the information on migration will be limited to whether the household is currently receiving remittances from another family member abroad (without further characterizing the family member).

**Even if the data would be perfectly measured estimating the welfare impacts of migration is challenging as the counterfactual is not available.** Existing national statistical systems are not designed to collect information on the situation of migrants prior to migration making estimations on the welfare impact a challenge World Bank (2010c, 49). Furthermore, when the whole household migrates, there is no one left to provide the data on their living conditions prior to and after the migration. Ideally one would like to know what the migrant would have earned had he stayed in the home country, which cannot be captured in a survey. Usually the only data point that is available is the flow of remittances representing a part of the current incomes. Following the migrant over time would provide a richer source of data, but as the migrants leave the country they are no longer captured in the national statistics.

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<sup>11</sup> Population censuses, continuous population registers, border or admission data, and registers of foreigners all can *potentially* collect data on the numbers of migrants (especially immigrants) and a few basic characteristics of migrants (such as age, sex, and country of birth, previous residence and/or citizenship), but they generally cannot collect the kinds of detailed data on international migrants needed to study the determinants, consequences or mechanisms/processes of migration. But there is significant disparity across countries in how household surveys inform migrant characteristics and impacts.

<sup>12</sup> A noted limitation of household surveys is that they will only capture data about emigrants when they depart from households in which someone remains behind who can provide information about the emigrant. Thus when the *entire household* has emigrated, there is no one left to provide data about them.

**Analysis of migration data is complicated by two major features:** First, *migrants self-select* (that is, by assumption, they choose to migrate precisely because they have some basis for perceiving a favorable outcome from the decision). As a result, economic migrants would in general be expected to have greater labor market success/earnings outcomes than identical non-migrants. Comparing the earnings of economic migrants to non-migrants and attributing this difference to migration will exaggerate the true impact of migration on earnings. Secondly, *decisions on migration, remittances, labor supply, household expenditure allocations, schooling decisions, et.c are made simultaneously*. Hence, characteristics which “explain” migration or remittances may also shape household expenditure patterns, education and healthcare choices, etc. Moreover, many of the characteristics which influence these decisions are unobservable (such as entrepreneurship, risk neutrality, etc). These issues make it difficult to establish causality and bias the typical reduced form regression framework.

**These challenges require the application of special econometric techniques, among which the instrumental variables technique is the most popular**, and involves finding a variable that affects migration and remittance behavior but that does not directly affect the outcome studied (except through its effect on migration and remittances). Amuedo-Dorantes and Pozo (2006), for instance, instrument remittances through Western Union offices in the state (per capita) the previous year. They allow for variation at the household level by interacting this variable with educational outcomes (i.e., the share of members in the household with secondary education and with the share of members in the household with post-secondary education, respectively).<sup>13</sup> Another method is to explore the time dimension of the data because it allows control for issues of time-invariant unobservable characteristics. By comparing a migrant with his/her non-migrant past (single difference), or, better, comparing the improvement brought by migration to a change for non-migrants (double difference) one can directly estimate gains from migration.

**Another empirical consideration in estimating the impact of remittances on household outcomes is the fact that remittances are not exogenous transfers but rather substitute for home earnings the migrant would have earned had they not gone abroad.** In equations utilizing the actual amount of remittances received as an independent variable, analysts should more accurately utilize the amount of remittance income over and above the predicted income of that migrant had he/she remained. One commonly utilized technique for estimating the migrant’s domestic earnings is to use the propensity score matching procedure, which predicts the migrant’s domestic earnings by picking ideal comparison groups from the larger survey who do not receive remittances. The propensity score matching technique has also been utilized to measure the impact of having a migrant/receiving remittances, by comparing individuals matched in all characteristics but one (belong to a remittance receiving family) , allowing one to see the difference that a single characteristic makes.

**A general format for estimating household outcomes using an instrumental variable approach is:**

$$Y_i = \alpha_0 + \alpha_1 R_i + \alpha_2 Z_i + \varepsilon_i \quad (\text{structural equation}) \quad (1)$$

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<sup>13</sup> For further examples of successful instrumental variables used in the empirical literature, see McKenzie and Sasin (2007).

$$Z_i = \beta_1 + \beta_2 R_i + \beta_3 IV_i + \delta_i \quad (\text{reduced-form for } Z) \quad (2)$$

for all  $i = 1, 2, \dots, n$  individuals.  $Y$  stands for the outcome variable (e.g., labor force participation) which is assumed to depend on a set of individual and household characteristics ( $R$ ) and the potentially endogenous vector of migration characteristics ( $Z$ )<sup>14</sup>. To overcome endogeneity, equation (2) is used where  $IV$  is the instrument variable for migration and remittances, and the error terms ( $\varepsilon$  and  $\delta$ ) are allowed to be correlated. The regression model used and the exact functional form in equations (1) and (2) depend on the nature of the dependent and endogenous variables examined.

**In all, a combination of statistical sources and econometric techniques are employed in migration analysis, depending significantly on the availability of data and country circumstances.** It is unlikely that all branches of analysis for profiling migrants and the migration process would be available or even relevant for a single country. But utilizing a variety of data can aid the analyst in deducing the nature of the linkages between migration and growth and its distribution. Being keenly aware of the data limitations, meanwhile, lends some humility to the policy conclusions drawn in a migration adjusted inclusive growth study.

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<sup>14</sup> From Assaad et al, 2009.

## 6. Concluding Summary

**As has been argued in this paper, migration is often ignored from inclusive growth diagnostics, but it has critical implications for how wealth is accumulated and shared.** The wide migration literature and growth theory reviewed in this paper help us to understand the driving forces of migration (push and pull forces), as well as how migration affects growth (through capital accumulation, labor supply, and total factor productivity). But the ultimate impacts of migration within any economy depend upon the characteristics of migrants, the stage of migration, and the policies and characteristics in both sending and receiving economies.

**Inclusive growth analysis in migration prone countries can be aided by the proposed building blocks of study, which investigate (i) who is migrating and why, (ii) what are the welfare impacts of migration, and (iii) what policy conclusions can be drawn from this knowledge.** How the empirical analysis is formed in practice depends on data availability as well as the country context that determines the key aspects to be explored. Using a combination of descriptive statistics as well as econometric tools will help to shed light on these phenomena.

**Conducting relevant economic analysis requires being able to draw plausible policy implications from the analytical results.** This is particularly challenging for migration prone economies given the highly politicized nature of the phenomenon and the lack of internationally recognized solutions to well-known problems. Understanding the interlinkages between migration and growth will still help the policy makers who will be better understand the broader economic phenomenon in the country, and to identify the priority action that are needed not only those to maximize the positive impacts of migration on inclusive growth, but to ensure the economy can create sufficient opportunities for inclusive growth encompassing the total population through investment and productive employment into the future.

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