SOCIAL AND ECONOMIC EFFECTS OF MIGRATION

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vorgelegt von

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For copyright reasons the individual chapters cannot be included in the electronic version of this dissertation. The reader is asked to refer to the journal articles which can be accessed on pages 8-10.
Chapter 1

Overview

Labor migration is one of the oldest and most effective poverty reduction strategies (Ferrie and Hatton, 2014; Clemens, 2011). The effects of the movement of people across borders can be studied by taking the perspectives of the host country of migrants, that of their country of origin or by taking a migrant-centered view. The host country perspective has historically been representing the largest share of the migration literature in economics as the majority of economists tend to focus on developed countries, which are worried about immigration. Many papers that take such a perspective analyze spillovers of immigration on the native population of rich countries, for example on wages (Borjas, 2003; Ottaviano and Peri, 2012). Typically, these studies apply macroeconomic approaches, but microeconomic techniques have been on the rise as available data and methods improve. Development economists first studied migration by taking whole countries of origin as the unit of observation. The most influential early papers in this literature studied whether losing the human capital of emigrants harms their countries of origin (brain drain) and subsequently whether it may induce positive spillovers by making education generally more attractive to pursue (brain gain; for a survey discussing both mechanisms see Docquier and Rapoport, 2012). In recent years estimating the growth effect of migrants’ remittances received considerable attention. These efforts led mostly to inconclusive results because macroeconomic data do not represent the relevant facts in sufficient detail and are riddled with measurement error (Clemens and McKenzie, 2014). Although the growth effects of remittances have been hard to pin down many recent papers find that the positive effects of emigration on the countries of origin such as poverty reduction abound (e.g. Adams and Page, 2005).

This reflects that labor migrants from poor countries can often at least double their incomes having substantial effects on their families (and the rest of society). The move abroad can thus be modeled as an extremely profitable investment of individuals (Sjaastad, 1962) or families (Stark and Bloom, 1985) to improve or diversify income, which however involves substantial risk. As with of any investment decision the consequences
of migration depend crucially on who decides to take these risks (Borjas, 1987; Grogger and Hanson, 2011). This explains why important effects of migration such as poverty reduction are most consistently observed in studies that are able to account for such self-selection by applying data at the individual level. In spite of the relative poverty that labor migrants often face when judged from the standard of their host countries they decide to go abroad because most of them turn out to gain individually. While they can hence usually be considered winners, even members of their own families, for instance children or parents may end up losing. This raises important distributional considerations (e.g. Beine et al., 2008), which again are best studied analyzing micro data. Incorporating family ties complicates analyses of migration but needs to be considered in many contexts because the extra dose of realism can turn over results completely.

Analyzing the welfare of migrants and their families is important in itself but it is often wholly neglected in the policy debate on immigration. What happens to migrants and their families however is crucial for properly understanding both the host country perspective as well as that of the sending country. In this dissertation I therefore analyze the social and economic effects of labor migration from such a migrant-centered perspective. The three papers contribute to understanding questions that are at the very heart of migration research: How are migration decisions taken? What are the effects of migration on non-migrants? How do migrants fare while working abroad? In summary, the papers are not only concerned with the development effects of migration but also have implications for the effects of immigration.

The most immediate spillover of migration is the effect on the left behind family. Improving the lives of family members is often the main motivation for migration. Therefore the causal effects on the left behind are very important to understand. Nonetheless there has been very little research on the effect of migration as well as the mechanisms that cause them, partly because of a lack of suitable data (for a survey Antman, 2013). Two groups of non-migrant family members are the most vulnerable - children and the elderly. The effects of migration on left behind children have received considerably more attention than those on the elderly. Accordingly, I analyze the effects of migration on the elderly left behind by migrants and the reverse effect they have on the migration of their younger family members in the first two papers of this dissertation. The data were collected during a joint project with colleagues from the Maastricht School of Governance\textsuperscript{1}. The first paper in this dissertation using these data is called \textit{Siblings' Interaction in Migration Decisions: Who Provides for the Elderly Left Behind?} (chapter 2). In this single-authored paper I try to contribute to a better understanding of migration decisions.

\textsuperscript{1}The field work in Moldova, one of the countries with the highest emigration rates worldwide, was conducted by Marcus Böhme and myself with the help of more than 40 local enumerators (see also Böhme and Stöhr, 2014).
and migration costs. This can help explain why there are relatively few migrants worldwide in spite of enormous wage differentials (already noted by Smith, 1776). I analyze social interaction in families in a setting typical for many developing and emerging countries: Migration is an effective poverty reduction strategy for families, yet the presence of elderly parents who depend on care potentially discourages migration. Their children thus face a trade-off between individual consumption and providing income or care to the elderly. My paper is the first to explicitly model and estimate social interaction between siblings’ migration decisions in such settings. The interaction between siblings consists of two effects which have opposite signs. First, traditional caregiving structures are at risk of breaking down because workers who migrate make subsequent migration of their siblings more profitable, for instance by providing them with assistance abroad. This can cause chain migration. Second, a specialization effect increases individual siblings’ incentives to remain at home and provide care when their siblings migrate. This effect stabilizes traditional caregiving structures. The empirical part of the paper uses structural as well as non-structural econometrics to estimate the aggregate peer effect and the implications of social interaction on care and income provision. The estimates indicate that siblings’ interaction strongly decreases equilibrium emigration rates as potential migrants take into account the health of their parents. Furthermore, aggregate care provision is remarkably robust to migration of adult children. This highlights the resilience of families’ informal security arrangements in the face of large-scale emigration. This explains why so many potential migrants remain home in spite of large wage differentials and it has important implications for policies that aim at the population left behind.

Broadly defined health is the most important aspect of elderly people’s lives which could be negatively affected by migration of family members. The choice variables of potential migrants in the first paper, remittances and care, are health inputs. Their effectiveness in improving health is the focus of "Alone but Better Off? Adult Child Migration and Health of Elderly Parents in Moldova" in chapter 3. In this paper Marcus Böhme, Ruth Persian, and I estimate the causal effect of biological children’s migration on the health of elderly people\(^2\). We analyze various dimensions of health, including physical and psychological as well as subjective and objective indicators. We use an instrumental variables strategy that we developed for the specific context. Contrary to some of the existing literature, we do not find evidence of any negative effects of migration. Instead we find positive migration effects on body mass index (BMI), mobility and self-reported health as well as no significant effects on depression and cognitive capacity. An assess-

\(^2\)Data collection and cleaning were done jointly with former colleague Marcus Böhme. Exploratory analyses were conducted by Ruth Persian, who worked under my supervision as an intern. The final analyses were conducted by myself with input from the coauthors. All authors contributed to writing up the paper.
ment of possible channels suggests that these positive outcomes are linked to an income effect which in turn improves diet of the elderly left behind. Furthermore we observe causal time use change from subsistence farming to leisure and sleep entailing further beneficial effects. These positive effects seem to compensate the elderly for decreasing social contact with their migrant family members.

Migration of the working-age population thus should not be seen as having a clear negative effect on elderly people who are (alongside children) the arguably most vulnerable group of non-migrants to be adversely affected by spillovers of migration. While some of the most visible consequences can be dire, they are ameliorated because migrants typically care about their parents and thus will not make decisions without considering them. If the situation of elderly whose children migrate is problematic, not the migrants but the general circumstances that make them leave (e.g. poverty) will be to blame. This may be the most general lesson from the two papers: Migrants can be trusted to make the best of the circumstances they face while considering their close family. Policy should take into account the trade-offs faced by migrants and improve their ability to achieve first-best outcomes, for instance providing sufficient care while working abroad.

The third paper in this dissertation does not study the effects of emigration on the population left behind but analyzes a facet of migrants’ working lives once abroad - their use of foreign language skills. How well migrants can apply their skills in the destination country labor market determines migrants’ income and both their own lives and that of their families and communities in the country of origin. Hence, the earnings of migrants do not only affect the development impact of migration but matter to migration decisions in the first place.

While abroad, labor migrants work in occupations that range across all skill levels depending on their qualifications and opportunities. Supplying labor in the host country migrants potentially cause another negative spillover, this time on the non-migrants at their destination: the wage effect on native workers (e.g. Card, 2001; Borjas, 2003; Ottaviano and Peri, 2012). There are also positive spillovers because labor migrants may possess skills that are scarce in their host country. This is implicit in the literature on the beneficial effect of diversity on productivity and innovation which often studies ethnic or cultural heterogeneity caused by migration (e.g. Ager and Brückner, 2013; Lee, 2014). Even ignoring such effects, migrants are substitutes for native workers in some domains, but are complementary in others and can thereby increase the complexity and average skill-intensity of the jobs of the native workers they compete with (Peri and Sparber, 2009; D’Amuri and Peri, 2014). Furthermore, migrants are thought to supply particular skills or characteristics which help foster trade (Gould, 1994; Head and Ries, 1998; Rauch, 2001) or FDI (Javorcik et al., 2011). More generally, migrants possess particular
skills and characteristics that may ease informational asymmetries in the global economy (Rauch, 2001; Portes and Rey, 2005). Migrants thus play a crucial role in the host country economy and are therefore of greatest interest to labor economists.

Given how central the labor market success of migrants is to both the development effects of migration and spillovers in migrants’ host country as well as their country of origin it is surprising how little is known about skills of migrants that may yield a competitive advantage for them. The third paper "The Returns to Occupational Foreign Language Use: Evidence from Germany" (chapter 4), which is again single-authored, advances the understanding of the potential of foreign language skills in the labor market. Returns to foreign languages are expected to differ between migrants and non-migrants for example because migrants may possess complementary cultural knowledge that make their skills more productive in some activities. Hence, specific focus is put on the differences between the two groups. I analyze returns to productive application of foreign language skills rather than channels such as signaling ability to employers. A matched dataset based on the German Socioeconomic Panel and IAB (Institut für Arbeitsmarkt- und Berufsforschung) task data are used in order to enrich the panel data with otherwise uncovered detail on occupational characteristics. I use panel econometric techniques to identify the wage premium that arises from occupational foreign language use by observing jumps in wages upon occupational change into more or less foreign-language-intensive occupations. This technique allows me to eliminate the effect of the mere possession of skills or the effect of time-invariant factors that led to the possession of skills. The estimates show that expert-level English skills allow workers to reap large wage premia, even though no systematic returns to other foreign languages are found. Also basic or intermediate English skills for workers do not yield significant returns beyond their potential role in signaling ability. In addition to returns to occupational use of fluent English, such a signal provided by language skills can benefit non-migrants in particular. The point estimates of migrants’ returns to expert-level English use are roughly twice as large as those of non-migrants. These returns originate in service occupations and particularly in the parts of the service sector which directly involve international factor flows (e.g. sales, tourism). It would be in exactly such occupations, where we would expect migrants to successfully apply unobserved yet important skills that are complementary to their foreign language skills such as international experience that their non-migrant counterparts lack. The paper furthermore underscores the importance of policies fostering migrants’ ability to acquire host country language skills in order to make use of their full potential. Also, my results suggest that the second generation of immigrants supplies a particularly interesting set of skills that is worth unlocking by ensuring these workers are well educated and fully able to participate in the labor market.
In the paper I find English alone is associated with significant and systematic returns after eliminating individual unobserved heterogeneity. No additional returns to immigrants using their native language are found, which would be expected if employers demanded country-of-origin-specific languages. The importance of English is striking evidence that the current *lingua franca* dominates other languages value-wise in occupational use and is likely to be key to unlocking migrants’ potential also for trade and FDI-enhancement. On a more general level the results imply that international or transnational skills of individual workers are important in a globalizing world. They may be associated with increasing returns over time because they have a labor-augmenting role. Without them, workers will increasingly struggle to find jobs. Thus, not only ensuring a skilled work force is important. Workers need to learn skills that allow them to communicate and work internationally. This way they cannot only provide labor, which will be especially welcome in aging rich countries; they can act as catalysts helping to link up markets and thus improve efficiency. Again, this finding suggests that migration should be welcomed, because in addition to huge gains for migrants themselves even non-migrants may benefit from positive spillovers.

With its three papers, this dissertation contributes to both the development economics and labor economics literatures on migration. The papers share a common interest in the main protagonists - the migrants. Specifically, I analyze the migration decision within families, effects of emigration on some of the family left behind and the rewards individual immigrants can earn by applying their skills. All three papers do not only highlight the high stakes the migration decision has for potential migrants; the papers furthermore highlight the existence of positive and negative spillovers of migration on non-migrants that can play a key role in shaping migration and its effects.
Chapter 2

Siblings’ Interaction in Migration Decisions: who Provides for the Elderly Left Behind?

by Tobias Stöhr¹

DOI: 10.1007/s00148-015-0546-z

Abstract:
In most poor countries with high emigration rates elderly people are dependent on their children for the provision of care and income. This paper is the first to explicitly model and estimate social interaction between siblings’ migration decisions in such settings. The interaction consists of two effects with opposite signs; a chain migration effect that can cause traditional caregiving structures to break down and an opposing specialization effect that increases family members’ incentives to remain at home and provide care when their siblings migrate. The estimates for Moldova, one of the countries with the highest emigration rates in the world, indicate that siblings’ interaction strongly decreases their equilibrium emigration rates. Siblings’ interaction is found to increase in line with the incentives that are assumed in the model. Hence, the paper provides evidence of the robustness of families’ informal security arrangements to large-scale emigration and has important implications for policies that aim at the population left behind.

¹I would like to thank Marcus Böhme, Brian Krauth, Judith Heidland, Toman Omar Mahmoud, Kacana Sipangule, Andreas Steinmayr, Rainer Thiele, Michaella Vanore, the editor, four anonymous referees and seminar participants at the Kiel Institute for the World Economy, the University of Kiel, Maastricht School of Governance, SMYE 2013 and the 2013 AEL conference. All remaining errors are my own. Financial support from EuropeAid project DCI-MIGR/210/229-604 is acknowledged.
Chapter 3

Alone but Better Off? Adult Child Migration and Health of Elderly Parents in Moldova

by Marcus H. Böhme, Ruth Persian and Tobias Stöhr

DOI: 10.1016/j.jhealeco.2014.09.001

Abstract:
Increasing labor migration and simultaneous aging of societies are two important demographic developments many poor countries face. Elderly people who are left behind may experience a decrease in welfare when their children migrate. This paper investigates the effect of migration on various dimensions of elderly health using unique data from Moldova, which has one of the highest emigration rates in the world. We find positive migration effects on body mass index (BMI), mobility and self-reported health. No effects are found on depression and cognitive capacity. We find evidence that these positive outcomes are linked to an income effect which leads to improvements in diet and identify a reallocation of time use from subsistence farming to leisure and sleep which may have further beneficial effects. These positive effects seem to compensate the elderly for decreasing social contact with their migrant family members.

1We thank Rainer Thiele, Holger Görg, the editor Andrew Street, and two anonymous referees for valuable comments. Financial support from EuropeAid project DCI-MIGR/210/229-604 is acknowledged. The usual disclaimer applies.
Chapter 4

The Returns to Occupational Foreign Language Use: Evidence from Germany

by Tobias Stöhr

DOI: 10.1016/j.labeco.2015.01.004

Abstract:
This paper analyses the wage premia associated with workers’ occupational use of foreign languages in Germany. After eliminating time-invariant unobserved heterogeneity and other confounding factors, sizable returns of about 0.12 log points to applying fluent English skills are found in the general population, while the point estimate for immigrants is 0.26 log points. Returns to occupational use of other foreign languages are, if anything, restricted to a few specialized occupations. I find evidence that the particularly large returns of immigrants originate in parts of the service sector that are linked to imports and exports. As immigrants do not earn significant wage premia for applying their native language on the job in addition to those for English, any trade-fostering potential of immigrants is more likely to be unlocked by complementary fluency in the two business languages German and English.

1I would like to thank Marcus Böhme, Sebastian Braun, Holger Görg, Toman Omar Mahmoud, Rainer Thiele, the handling editor Bas van der Klaauw, two anonymous referees and seminar participants in Kiel and at project workshops in Beijing and Tübingen for valuable comments. The usual disclaimer applies. Financial support from Volkswagen Foundation Project "Europe’s Global Linkages and the Impact of the Financial Crisis: Policies for Sustainable Trade, Capital Flows, and Migration" is acknowledged.
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URL http://fmx.sagepub.com/cgi/doi/10.1177/1525822X14528450


URL http://www.gutenberg.org/files/3300/3300-h/3300-h.htm

Eidesstattliche Erklärung

Ich erkläre hiermit an Eides Statt, dass ich meine Doktorarbeit „Social and Economic Effects of Migration“ selbständig und ohne fremde Hilfe angefertigt habe und dass ich alle von anderen Autoren wörtlich übernommenen Stellen, wie auch die sich an die Gedanken anderer Autoren eng anlehndenden Ausführungen meiner Arbeit, besonders gekennzeichnet und die Quellen nach den mir angegebenen Richtlinien zitiert habe.

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Work in Progress

"When is foreign exchange intervention effective? Evidence from 33 countries", with Marcel Fratzscher, Oliver Gloede, Lukas Menkhoff, and Lucio Sarno.

"Heterogeneous Immigrants and Foreign Direct Investment: The Role of Language Skills", with Matthias Lücke.

Policy papers and media coverage

"The Effect of Migration in Moldova and Georgia on Children and Elderly Left Behind - Country Report Moldova", with Matthias Lücke.

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