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Liquidity-constrained migrants ☆

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ABSTRACT

Liquidity constraints represent a major obstacle for potential migrants trying to meet the high cost of undocumented international migration. Some cover it by borrowing from a smuggling organization with a commitment to repay the loan by working in the destination country as bonded laborers. This paper compares alternative ways of financing migration and shows that debt bondage is optimal only if the international wage differential is sufficiently large in relation to migration costs. Tougher border controls as well as internal enforcement measures can be expected to reduce the incidence of debt-bonded relative to self-financed migration, although they may not necessarily lower the overall inflow of illegal aliens.

1. Introduction

In an effort to control immigration over the last couple of decades, the advanced countries have introduced new barriers to international mobility of low-skilled workers. With the increasing complexity of overcoming these barriers, migrants are relying more and more on the services of human smuggling organizations to help them reach their desired destination. As reported by Petros (2005), the fees for smuggling services vary depending on the distance traveled, the means of transport, and the entry strategy, reaching tens of thousands of dollars on certain long-haul routes. Although the amounts paid to smugglers may not be very large in relation to the expected income abroad, from the perspective of low-skilled workers in the poor developing countries, the cost of migration represents a big obstacle that stands in the way of their migration plans.[1]

A key question is how to pay for the cost of migration. One possibility is to accumulate enough savings out of income earned in the source country. We might expect this "self-finance" solution to be attractive when the cost of migration is low in relation to the source-country wage. When the cost is in the tens of thousands of dollars, as in the case of undocumented migration from China to Western Europe and North America, there may be no scope for accumulating the required amount out of earnings at home. In such cases it would be necessary to borrow in order to migrate.

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[1] There is a growing empirical literature that offers evidence on the effects of liquidity constraints on international migration. Angelucci (2004) uses data from the Progresa program in Mexico to study the impact of transfers to liquidity-constrained, rural households on both internal and international migration. She finds that unconditional cash transfers are associated with a 60% increase in the average migration rate, while the likelihood of having migrants in the household is a positive function of the amount received through the program. In the case of El Salvador, Halliday (2006) reports that higher household wealth is positively associated with migration to the U.S.A. For internal migration in Russia, Andrienko and Guriev (2004) find evidence that inter-regional migration is constrained by lack of liquidity and that it rises with an increase in income. All these studies point to the importance of liquidity constraints in restricting contemporary international migration, confirming what we already know about the role of such constraints in the 18th and 19th centuries (see, e.g., Hatton and Williamson (1992, p. 7) and Chiswick and Hatton (2006, p. 2). See also Grubb (1985), Galenson (1984), and Hatton and Williamson (1994, 1998).

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Borrowing can take place from a network of family and friends, part of which may already be located in the host country, or by getting indebted to a human smuggling organization. When borrowing from relatives or friends, the loan agreement is typically informal, with the interest obligations (if any) and the contract-enforcement mechanism varying from one culture to another. By contrast, when a migrant borrows from a smuggling organization, enforcement is very strict and the rates of interest are often 20%, 30% or even 60% per annum.[2] These rates reflect not only the risk incurred by the lender but also the high transactions and enforcement costs. As a way of controlling these costs, the smuggler typically obliges the migrant to become a bonded laborer with (a partner of) the smuggling organization until the loan is paid off. While in bondage, the migrant's freedom of movement is limited and the wage earned is usually lower than the free-market wage in the host country.[3]

The purpose of the present study is to investigate the problem facing liquidity-constrained candidates for migration and to characterize the conditions under which they choose debt bondage as the optimal mode of financing their migration costs. This analysis is essential to an informed debate on what factors contribute to the growing incidence of debt-bonded migration and how immigration policies, including border controls and internal enforcement measures of the host countries, affect migration decisions. The scope of our study is limited to voluntary debt-bondage contracts, which are entered into on the basis of more or less perfect information.[4] An analysis of human trafficking, which involves deception, strategic behavior, coercion, kidnapping, and violence, is beyond the scope of our paper.[5]

The present study is not the first to analyze the behavior of debt-bonded agents in a model of international migration. Friebel and Guriev (2006) examine the interaction between wealth-constrained migrants and smugglers, with a focus on the conditions under which the latter are willing to offer credit to the former. They confine their analysis, as we do, to voluntary debt-bondage arrangements and provide a number of important new findings on the effectiveness of border controls and deportation measures in deterring illegal immigration of liquidity-constrained individuals. Friebel and Guriev (2006), however, do not explicitly model saving behavior. Their candidates for migration are endowed with a certain initial stock of assets, which can be either greater or smaller than the cost of migration. If it is smaller, they can migrate only as bonded laborers. By contrast, the focus of the present study is on the optimizing behavior of liquidity-constrained individuals, including their saving behavior. This opens up a wider range of options for a potential migrant, both with respect to the mode of financing and the optimal timing of departure from the source country.

Our objective is to determine how a worker's optimal migration strategy is related to the cost of migration, the conditions in the labor markets at home and abroad, and the cost of borrowing from a smuggling organization. We find that debt bondage is the preferred option when the international wage differential is sufficiently large in relation to migration costs. More restrictive border-control measures can reduce the incidence of debt-bonded migration. Depending on the wage gap between the host and source countries, however, such measures may merely induce migrants to switch from one mode of financing to another, rather than reduce the total flow of undocumented immigrants. Tougher internal enforcement policies that increase the costs and risks facing employers of bonded laborers are found to reduce the incidence of debt-bonded migration, increase the incidence of self-financed migration and reduce the overall inflow of undocumented workers. Our model suggests that the reduction in the inflow is likely to be from the relatively poorer of the sending countries.

The remainder of the paper is organized as follows. Section 2 describes the market for human smuggling and defines the migrant's optimization problem in the debt-bondage and self-finance scenarios. Section 3 compares the utility of remaining at home with the utilities of migrating under these two alternative financing schemes and characterizes the conditions under which one or the other is more attractive. The links between our model and some stylized facts are discussed in Section 4. Section 5 extends the baseline model (i) to include the possibility of optimally combining self finance with a debt-bondage arrangement in order to pay for the cost of migration and (ii) to account for the fixed costs of entering into a loan agreement with a smuggling organization. Section 6 concludes the paper by summarizing its main results and offering suggestions for future research.

2. Self-financed vs debt-bonded migration

We compare two alternative ways of paying for migration costs: By accumulating savings out of source-country income (self-financed migration) and by borrowing from a smuggler with a commitment to repay the loan out of income earned in the destination country (debt-bonded migration). Either way, once the migration cost is paid, we assume that the smuggling organization guarantees passage to the destination.[6]

Human smuggling operations take many different shapes and forms. Some are run by genuine travel agents, who gradually entered the smuggling business in the process of trying to help their clients realize their travel plans without proper documentation. Enterprises of this type can be found throughout South, South-East, and East Asia. They charge a fee for providing business or academic credentials, letters of invitation, false or modified stolen passport, and other documentation needed for travel to the desired destination. They seem to operate competitively in areas where their customers live, their track record is well known in the community, and they depend very much on their reputation in attracting new clients. Smuggling of Chinese undocumented migrants into Western Europe and North America has similar features in that the reputation of the service provider is a key asset. Moreover, Chinese smuggling networks "…avoid criminality which is likely to attract sustained law-enforcement activity" (Silvertone, 2011, p. 109). These considerations limit the scope for client abuse and opportunistic behavior on the part of the smugglers.[7]

[2] See Kwong (1997, p. 38), Gao (2004, p. 11) and Sobieszczyk (2000, p. 412). According to Kwong, in the case of Chinese migrants to the West, interest rate of 2% per month is most common.

[3] According to Jordan (2011): "An example of a debt bondage situation is a person who agrees to repay a debt of $5000 for recruitment fees and travel costs allegedly paid by the employer/enforcer. The worker agrees to sew clothes until this 'debt' is repaid. The market wage for the work is $50 per day but the employer/enforcer only deducts $20 a day from the debt…". See Gao and Poisson (2005), Human Rights Watch (2000), Kwong (1997), Salt (2000), Sobieszczyk (2000), Stein (2003), Surtees (2003), and Vayrynen (2003) for informative discussions of the conditions facing migrants in debt bondage.

[4] In light of some media reports on the experience of illegal immigrants, it may seem odd that we should think of human smuggling and debt-bonded migration in the context of a perfect-information framework. As we shall see below, whether such a framework is a reasonable approximation depends largely on the characteristics of the market for human smuggling and the role of an operator's reputation in enabling him to attract new clients.

[5] The problem of trafficking is analyzed from a theoretical perspective by Tamura (2010, 2013). He examines the equilibrium degree of migrant exploitation by the smugglers in a model where the migrants are not liquidity constrained, but have enough personal savings to pay the smuggling fee on arrival at the destination. A recent empirical study by Mahmoud and Trebesch (2010) examines the factors that influence the incidence of trafficking within a migrant population. Their work, as well, does not touch on the issue of how migration is financed.

[6] This is usually the case in the Chinese market for human smuggling. The client is initially required to make a fractional down payment. If a smuggling attempt is unsuccessful, the contract calls on the smuggling organization to try again to bring the client to the destination. Full payment for smuggling services is made only after the client arrives safely at the destination.

[7] Chin (1999) reports on the basis of his New York survey that smuggled Chinese nationals often considered their smugglers (or "snakeheads") as philanthropists. Another survey based on 129 interviews with snakeheads in New York City, Los Angeles, and Fuzhou, conducted by Zhang and Chin (2002), provides details on the structure of Chinese human-smuggling operations into the United States and on the relationship between the smugglers and their clients. There is a clear sense that the smugglers are genuinely concerned about the responsibilities to their clients. See Djajić and Vinogradova (2013) for further discussion.