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Radu Vranceanu, Claire Naiditch

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Claire NAIDITCH
Radu VRANCEANU

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- DR 09015 -

Remittances as a Social Status Signaling Device

Claire NAIDITCH[*]*, Radu VRANCEANU*[**]

December 2009

[*] ESSEC Doctoral Program and CES-Matisse, University Paris 1 Panthéon-Sorbonne, E-mail: claire.naiditch@ensae.org
[**] ESSEC Business School, Department of Economics, BP 50105, Cergy Cedex, France. E-mail: vranceanu@essec.fr

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ABSTRACT:

Like all human beings, migrants may have a concern about their prestige or social status in the eyes of left home family and friends. They can remit money in order to signal their economic success and increase their status. We show that, if migrants' income is private information, unsuccessful migrants might accept a worsening of their living conditions and send back home large amounts of remittances only in order to make residents believe that they are successful. In some cases, successful migrants can signal their true favorable economic situation by remitting an even larger amount.

Key-Words:

- Imperfect Information
- Poverty
- Remittances
- Signaling

RESUME :

L'article étudie les transferts des migrants en tant que moyen pour signaler leur situation économique aux yeux des résidents. En information imparfaite, les migrants pauvres peuvent transférer plus que normal, pour se faire passer pour des migrants ayant réussi. Les migrants riches peuvent adopter des stratégies de signalisation plus agressives encore.

Mots-clés :

- Information imparfaite
- Pauvreté
- Signal
- Transferts des migrants

JEL Classification : F24, D82, O15, Z13

December 24, 2009

REMITTANCES AS A SOCIAL STATUS SIGNALING DEVICE

Claire Naiditch* **and Radu Vranceanu†**

Abstract

Like all human beings, migrants may have a concern about their prestige or social status in the eyes of left home family and friends. They can remit money in order to signal their economic success and increase their status. We show that, if migrants' income is private information, unsuccessful migrants might accept a worsening of their living conditions and send back home large amounts of remittances only in order to make residents believe that they are successful. In some cases, successful migrants can signal their true favorable economic situation by remitting an even larger amount. The game presents various equilibria that differ with respect to the proportion and nature of the migrants who sacrifice consumption opportunities to status revealing actions.

JEL Classification: F24, D82, O15, Z13
Keywords: Migration, Remittances, Social Status, Perfect Bayesian Equilibrium, Signaling.

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*CES-Matisse University Paris 1, Paris, France. Mail: claire.naiditch@ensae.org.

†ESSEC Business School, BP 50105, 95021 Cergy, France. Mail: vranceanu@essec.fr.

1 Introduction

In 2008, according to the International Organization for Migration (IOM), there were more than 200 million estimated international migrants in the world (IOM, 2008). They comprise 3% of the global population (United Nations, 2006); taken altogether, they would constitute the 5^{th} most populous country in the world (US Census Bureau, 2008). The New Economics of Labor Migration analyses migration as an implicit contractual arrangement between the migrant and his family, where, in a first stage, the family supports the development of the migrant and, in a second stage, the latter provides support to his family (e.g., Stark and Levhari, 1982; Stark and Bloom, 1985; Stark and Lucas, 1985; Stark and Lucas, 1988). In the absence of institutional mechanisms to deter violation (the legal powers of the state for instance), such sequential arrangements are time-inconsistent: a selfish, opportunistic migrant would break the contract and cut the ties with the family that sponsored him. However, as argued by Stark and Lucas (1988), implicit familial contractual arrangements can be enforced either because of mutual altruism or because migrants retain a strong degree of identification, allegiance, and social connectedness with their origin community. The family can also resort to different threats and sanctions against the "deviant" migrant: ostracism, denial of present and future family solidarity, loss of rights to inherit family land or real estate property, loss of rights to benefit from the care of the village community for one's elderly parents or younger children (Poirine, 1997, Stark and Lucas, 1998). Other authors have pointed out that social norms referring to what should be seen as the "good" behavior of migrants can help enforcing such implicit contractual arrangements (Philpott, 1968).

Transfers of funds from the migrant to his left-home family, or remittances, are one important element of these implicit contractual arrangements. Over the years, these flows became a major source of financing the developing world: for instance, in 2007, remittance flows from these migrants are estimated at US$ 337 billion worldwide, US$ 251 billion of which went to developing countries (World Bank, 2008). In their comprehensive survey of the literature on remittances, Rapoport and Docquier (2006) draw an almost exclusive list of motives to remit: altruism, exchange of services and investment, an implicit family loan arrangement, and/or an implicit family

insurance arrangement. From existing data on migration and remittances, is very difficult to measure the contribution of each motive to the total flow of remittances. Lucas and Stark (1985) argued rather convincingly that altruism is probably the main one.

Without challenging any of these motives, in this paper we would add to the list another possible motive for remitting money. Like all human beings, migrants are concerned about their social status and prestige in their origin community. Given the specific context of migration, where ties and contractual arrangements with left-home friends and family play a substantive role, status concerns might be even stronger for migrants than for ordinary people. Migrants can use remittances to signal their success abroad and thus increase their status. So far, economic literature on migration has paid little attention to this motive to remit, although anecdotal evidence abound. Among the scarce hard evidence, Neveu and Copans (1993), in their monograph about Bangladeshi in London, argue that there is a very strong social pressure on the migrant visiting his origin country to show his success to his family and home community through ostentatious consumption behavior. Fatou Diome (2003) tells the same story in her novel on the dark side of migration, where an extremely poor Senegalese migrant living in Paris, going back to his home village, spends a lot, hides his real migrant living condition and describes France as heaven on earth.

Status-seeking behavior is a well-established strand of analysis in economics, that can be traced back to the early writings by Veblen (1899) on conspicuous consumption by the "leisure class", the importance of relative consumption as shown by Duesenberry (1952) or the definition by Hirsch (1976) of "positional goods" as those goods whose consumption is perceived as having a substantial impact on status.[1] Many recent economic analyses of status build on the work by Frank (1984; 1985a), according to whom an individual's status can be inferred from his ordinal rank in the income distribution of the relevant group. In this framework, if income is not observable but consumption of a conspicuous good is, in the Nash non-cooperative equilibrium, people will overconsume this "futile" commodity (e.g., Frank, 1985b; Hopkins and Tornienko, 2004). Ireland (1994) argues that corrective taxes imposed on such goods can improve social welfare. However, Glaezer and Konrad (1996) notice that people can resort to faked conspicuous goods (wear zirco-

[1] See Weiss and Fershtman (1998) or Truyts (2009) for surveys of the literature on the economics of social status.

nium instead of diamond rings) in order to overcome the curse of excessive spending. They argue that, in turn, individuals can donate money to charity in order to demonstrate their absolute measure of wealth (individual's wealth can also be assessed in a relative perspective, but this is not essential to their results); they bring empirical evidence according to which donations are larger in average when the name of the donor is publicly disclosed. A similar argument is put forward by Harbaugh (1998).

In this paper, we work out a formal model of migrants' transfers where the status-seeking motive plays an important role. At difference with Frank (1984; 1985a) and in line with Glaezer and Konrad (1996) and Harbaugh (1998), status is defined here as *the perception* by the origin community of the migrant's earned income.[2] The measure used in this paper is thus absolute, not relative. One original contribution of this paper to the literature on giving is to acknowledge that migrants can remit money strategically in order to manipulate residents' expectations, and model the expectation formation mechanism accordingly. For so doing, we analyze the interaction between migrants and left-home residents within the classical signaling approach by Spence (1973).[3] Migrants differ according to the income they earn abroad, and their income is private information.[4] They send back home remittances for altruistic motives but also to signal their economic situation. We show that, in some cases, in equilibrium unsuccessful migrants can accept a deterioration of their living standards and remit a relatively high amount only to make their family believe that they have succeeded, and thus retain a high social status. However, such a generalized strategy is detrimental to successful migrants. Indeed, if unsuccessful migrants remit the same amount as the successful ones, members of the local community cannot rule out the possibility that a migrant who sends large remittances is actually unsuccessful, thus the prestige of successful migrants is to some extent deteriorated. In some circumstances, successful migrants are prompted to remit an extremely high amount, only to signal without any ambiguity their

[2] This treatment of status is an obvious simplification that does not captures all dimensions of social status, such as esteem building and conformity to social norms (Bernheim, 1994).

[3] See also Spence (2002) for a review of the literature on signalling, and Riley (1975, 1979) for analyses of the signalling equilibria specific of this game.

[4] Naiditch and Vranceanu (2009) analyze the opposite case where altruistic migrants have imperfect information about the residents' economic situation.

professional success in the host country, and secure their high status in their home community.

An equilibrium of this game is defined as situation where migrants adopt their optimal remitting strategy given the residents' beliefs about their success in the host country, and residents' beliefs are correct given the optimal strategies implemented by the migrants. Depending on the various parameters, the game presents several types of equilibria, where migrants play either pure or mixed strategies. Besides one separating equilibrium where remitting strategies unambiguously signal the type of migrant, in general migrants tend to remit too much as compared with the perfect information case. The counterpart of this large flow of remittances is a relative self-impoverishment of migrants in host countries. Most worrying are situations where unsuccessful migrants remit more than the perfect information amount, thus sacrificing personal development opportunities. For a wide range of parameter values, the game presents multiple equilibria: two or more equilibria are feasible and which one actually arises depends on equilibrium beliefs. Since systems of beliefs can differ from one ethnic group to another, remitted amounts and remitting strategies can vary for otherwise similar migrants living in the same developed country. Several policy implications can be inferred from the model; we will focus on those that aim at protecting the less successful migrants.

The paper is organized as follows. Section 2 introduces the basic assumptions. Section 3 defines and analyzes the properties of the various equilibria. The final section presents the conclusion.

2 The model

2.1 Main assumptions

The model is cast as a game between the migrant, who decides on the remitted amount, and the local community (or residents) who must make the best expectations about the migrant's success. The number of migrants is normalized to one.

We denote by y the migrant's income in the host country. This income is representative of one migrant's type. To keep the formalization as simple as possible, we assume that a migrant can either succeed economically and get the high income y^H, or fail economically and get the low income y^L, with $y^L < y^H$. Let λ denote the *prior probability of success*.

The migrant's origin community knows y^L and y^H, as well as λ. However, the true situation of each particular migrant is private information to him.

The migrant shares his income between his own consumption C and the money he remits to his family, T. Consumption should be seen here as a generic term, encompassing a wide array of goods and services, that include items essential for the migrant's personal development such as education and health care. Such a budget constraint can be written:

$$y^i = pC + T, \text{ with } i \in \{L, H\}. \tag{1}$$

To keep the model simple, the price of the consumption good, p, can be normalized to one without loss of generality.

Migrants' multiple objectives can be captured by a utility function. Firstly, their satisfaction is positively related to their own consumption. Secondly, we assume that they are altruistic: they infer some satisfaction from helping their family to enhance consumption by transferring money. Finally, their satisfaction is an increasing function in their status, and the latter depends on how their family and community perceive their economic success. Assuming that *private utility*, i.e. utility that the consumer would maximize in absence of status concerns and *status related utility* are additively separable (Ireland, 1994; Glaezer and Konrad, 1996), we write the migrant's total utility as:

$$U(C, T) = u(C, T) + bE\left[y|T\right], \tag{2}$$

The private utility function $u(,)$ is twice differentiable, with $u_C \equiv \frac{\partial u(C,T)}{\partial C} > 0$ and $u_T \equiv \frac{\partial u(C,T)}{\partial T} > 0$. We also assume that migrant's preferences imply that C and T are normal goods: in absence of status concerns, should the migrant's income increase, he would both consume and transfer more.[5] The term $E\left[y|T\right]$ is the income of the migrant such as perceived by his origin community; given that the transfer T can convey some information about the true income of the migrant, we wrote these expectations conditional on it. The positive parameter b (with $b > 0$) is the weight the migrant attaches to his social status.

[5] With a specific utility function, such as a Cobb-Douglas form, the model can be solved explicitly. However, since the general form suffice to get a precise definition of the equilibria and to put forward their main properties, we follow Besancenot et al. (2009) and use the general form.

Thus, the migrant of type $i \in \{L, H\}$ determines the optimal amount of remittances by solving the programme:

$$\max_{T} \left\{ U(y^i - T, T) = u(y^i - T, T) + bE\left[y|T\right] \right\}. \tag{3}$$

2.2 The perfect information set-up

In a perfect information set-up, migrants' income is public information. This trivial situation will provide us a useful benchmark for analyzing the imperfect information case.

If a migrant's income is public information, his utility can be written: $U(y^i - T, T) = u(y^i - T, T) + by^i$, where by^i is a constant. The optimization programme is thus elementary. The optimal amount is implicitly defined by the equality between the marginal utilities of consumption and remittances:

$$u_C(y^i - T, T) = u_T(y^i - T, T), \quad \forall i \in \{L, H\}. \tag{4}$$

Let us denote by T^L (respectively T^H) the optimal amount of remittances in the perfect information set-up, for a migrant earning the low income y^L (respectively y^H). In Figure 2, the optimal choice is represented as the point A (respectively B). Following the assumption according to which remittances are a normal good, $y^H > y^L \Rightarrow T^H > T^L$.

To simplify notation, from now on we will denote the private utility of a migrant earning y^i and transferring T^j (it can be the optimal amount or not), i.e. $u(y^i - T^j, T^j)$, by the more compact form u^{ij}. Then, the overall utility of a migrant earning the wage y^i and remitting the amount T^j is:

$$\begin{aligned} U(y^i - T^j, T^j) &= u(y^i - T^j, T^j) + bE\left[y|T^j\right] \\ &= u^{ij} + bE\left[y|T^j\right]. \end{aligned} \tag{5}$$

With this notation, in the perfect information set-up, the optimal utility level of the successful migrant is: $U(y^H - T^H, T^H) = u^{HH} + by^H$, and the optimal utility level of the unsuccessful migrant is: $U(y^L - T^L, T^L) = u^{LL} + by^L$.

According to the definition of the optimal remitted amount, we know that: $\forall T^j \neq T^L$, $u^{LL} > u^{Lj}$ and $\forall T^j \neq T^H$, $u^{HH} > u^{Hj}$. Finally, we necessarily have: $u^{HH} > u^{LL}$ (since $y^H > y^L$).

In the following we will take into account only the case where the optimal transfer of the successful migrant, T^H, is lower than the income of the unsuccessful migrant, y^L, i.e.: $T^H < y^L$; migrants who did not succeed in the host country are thus able to remit T^H if they wish. Given that T^H is an increasing function of y^H, this condition is tantamount to assuming that the income gap $\left(y^H - y^L\right)$ is not to large.[6] In the opposite case, if unsuccessful migrants cannot copy the strategy of successful migrants, neither imitation nor signaling are possible and the problem would become trivial.

2.3 The imperfect information set-up

We now turn back to the interesting case where a migrant's income is private information.

2.3.1 The decision tree

In this case, the remitted amount T^j can convey some additional information about the migrant's income. Then, a migrant who failed in the host country could be tempted to use remittances strategically, in order to manipulate residents' expectations. Indeed, under certain conditions, a migrant earning y^L may choose to remit the same amount T^H as a successful migrant in order to induce his family and origin community into thinking that he actually succeeded.

Let us denote by π the probability that a migrant earning the low income y^L decides to implement the strategy T^H (π will de determined later on).

If unsuccessful migrants try to mimic the successful ones, then there is also scope for a signaling strategy for the latter. Indeed, according to the traditional argument in signalling literature, under certain conditions, some successful migrants may find it worthy to signal their success without ambiguity by remitting an even higher amount, denoted by T^S (with $T^S > T^H$). Here T^S should be seen as the (smallest) amount of remittances, in the range of feasible strategies for successful migrants, that is too costly (or impossible) to be implemented by unsuccessful migrants. Hence, unsuccessful migrants would never play T^S.

Let us denote by μ the probability that a migrant earning the high income y^H decides to signal

[6] For instance, with Cobb-Dougals preferences, it can easily be shown that the condition $T^H < y^L$ requires that: $y^H < \left(\frac{y^L}{T^L}\right) y^L \Leftrightarrow y^H - y^L < \frac{y^L}{T^L}(y^L - T^L)$.

himself (T^S and μ will be determined later on).

Figure 1 represents the decision tree:

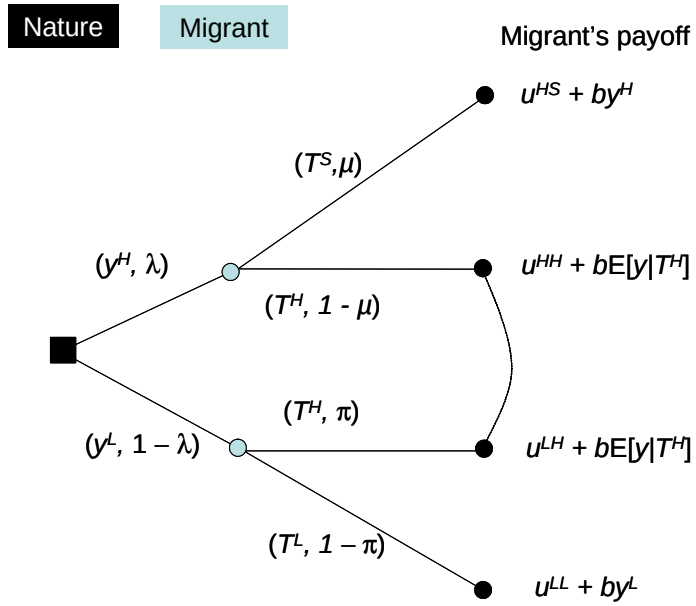


Figure 1: Decision Tree

The sequence of decisions goes like this: First step, Nature decides whether the migrant is successful (y^H) or unsuccessful (y^L). Next step, migrants, depending on their type, decide on the amount to remit, $T^j \in \{T^L, T^H, T^S\}$. Then the local community observes the remitted amount and update their priors about the status of the migrant; the dotted curve that connects the two intermediate branches indicates that residents who observe a transfer T^H cannot infer with zero error margin whether the migrant is successful or unsuccessful. Finally, the migrant reaps the full benefit from private consumption and social status; the game is over.

2.3.2 The migrant's expected income conditional on his remitted amount

At the beginning of the game, the local community knows the income distribution, that is, they know y^L and y^H and the migrants' probability of success, λ. Before observing the remitted amount, their expectations about the migrant's income are merely $E[y] = \lambda y^H + (1-\lambda)y^L$. Once they observe the remitted amount, they can update their expectations accordingly.

If residents receive the low remitted amount T^L, they know for sure that the migrant did not

succeed in the host country.[7] Likewise, if they receive the high amount T^S, residents know without any ambiguity that the migrant is successful (by definition of the signaling strategy). However, if they receive the intermediate amount T^H, residents cannot know if the migrant did indeed succeed in the host country, or if he failed and is pretending to be successful.

The residents' equilibrium beliefs can be written as success probabilities contingent upon the observed remitted amount:

$$\begin{cases} \Pr\left[y^H|T^L\right] = 0 \\ \Pr\left[y^H|T^H\right] = \dfrac{\Pr\left[T^H|y^H\right]\Pr\left[y^H\right]}{\Pr\left[T^H\right]} = \dfrac{(1-\mu)\,\lambda}{(1-\mu)\,\lambda + (1-\lambda)\,\pi} \\ \Pr\left[y^H|T^S\right] = 1 \end{cases} \tag{6}$$

and with $\Pr\left[y^L|T^H\right] = 1 - \Pr\left[y^H|T^H\right]$.[8]

Thus, in equilibrium, the expected value of the migrant's income, conditional on his remitted amount, is:

$$\begin{cases} E\left[y|T^L\right] = y^L \\ E\left[y|T^H\right] = y^H \Pr\left[y^H|T^H\right] + y^L \Pr\left[y^L|T^H\right] = \dfrac{(1-\mu)\,\lambda y^H + (1-\lambda)\,\pi y^L}{(1-\mu)\,\lambda + (1-\lambda)\,\pi} \\ E\left[y|T^S\right] = y^H \end{cases} \tag{7}$$

where $E\left[y|T^H\right] \in [y^L, y^H]$.

2.3.3 The signalization strategy T^S

Successful migrants, who play T^H in the perfect information set-up, if copied by unsuccessful migrants, can signal themselves by sacrificing some private utility by transferring an amount T^S bigger than T^H (the loss is then $u^{HH} - u^{HS}$). We refer to this fully separating strategy as the "signalling strategy". In order to determine T^S, we notice firstly that poor migrants cannot transfer more than they earn. Hence, any transfer higher than y^L should unambiguously signal the migrant as being rich.

Secondly, if the poor migrant remits the amount T^L, he signals himself as being poor. He then reaps the utility $U\left(y^L - T^L, T^L\right) = u^{LL} + by^L$. For sure, no poor migrant would undertake a

[7] It is never interesting for a successful migrant to remit the low amount T^L: not only his private utility would decline, but also he makes his home community believe that he failed.

[8] $\Pr\left[y^H|T^H\right]$ is not defined in this case where T^H is not an equilibrium strategy, i.e. if $\pi = 0$ and $\mu = 1$. In Section 3 we suggest how to analyze these out-of-equilibrium beliefs.

remitting strategy that brings him a utility level lower than this one. Hence, successful migrants who want to make sure that no poor migrant will copy them (even if this strategy makes residents believe that such a poor migrant is rich), must remit an amount T^j such that:

$$U\left(y^L - T^L, T^L\right) > U\left(y^L - T^j, T^j\right) \tag{8}$$

$$u^{LL} + by^L > u^{Lj} + by^H. \tag{9}$$

For $T^j > T^L$, the function $u^{Lj} = u\left(y^L - T^j, T^j\right)$ is decreasing in T^j. Hence, if there is one T^j that verifies the condition (9) with equality, all transfers bigger than this critical one will satisfy the condition. Then, a possible signaling amount would be the *lowest* transfer verifying condition (9) and is implicitly defined by:

$$u^{LL} + by^L \simeq u^{Lj} + by^H. \tag{10}$$

Let us denote the solution of the former equation by $\hat{T}$.

Following the standard analysis of the Spence (1973) signalling game, in the case where $\hat{T} < y^L$, there can be an infinite number of signaling strategies $\hat{T}+\epsilon$, (with a small $\epsilon > 0$) backed by beliefs such as $\Pr[y^H | T \geq \hat{T}+\epsilon] = 1$ and $E[y^H | T < \hat{T}+\epsilon] = 0$. Riley (1975) argued that the most efficient signaling strategy (the Pareto Dominating Fully Separating Strategy) has the best chances to be implemented. To keep the model simple, we follow this line of reasoning and admit that the remitted amount that unambiguously signals a migrant as being successful is defined by:

$$T^S = \min\left\{\hat{T}, y^L\right\}. \tag{11}$$

with $T^S > T^H$.

The different amounts (T^L, T^H and T^S) remitted by unsuccessful and successful migrants (y^L, y^H) and the connected private utility levels (u^{LH}, u^{LL}, u^{HS} and u^{HH}) are represented in the Figure 2. The horizontal axis indicates the remitted amount and the vertical axis indicates consumption. Points A and B represent the perfect information optimal choice of the unsuccessful (income y^L) and the successful migrant (income y^H). Point A' is the choice of an unsuccessful migrant who would transfer T^H, point B' is the choice of a successful migrant who would transfer the signaling amount T^S (in this graph, we consider that $T^S < y^L$).

We can remark that according to the normal goods assumption, when the migrant's income increases, the optimal amounts of transfer and consumption increase. In general, with two goods both normal, the income expansion path is a positive slope curve. Here we have represented the income expansion path as a straight line (this is the case for instance for Cobb-Douglas preferences). We can notice that when y^H goes up, T^H will go up as well; at the same time, the gap between u^{LL} and u^{LH} increases, while that between u^{HH} and u^{HS} is narrowing, to disappear when $T^H = T^S$, at point N). In the Appendix we show that the relative position of $u^{LL} - u^{LH}$ as compared to $u^{HH} - u^{HS}$ depends to a large extent on the gap between y^H and y^L.

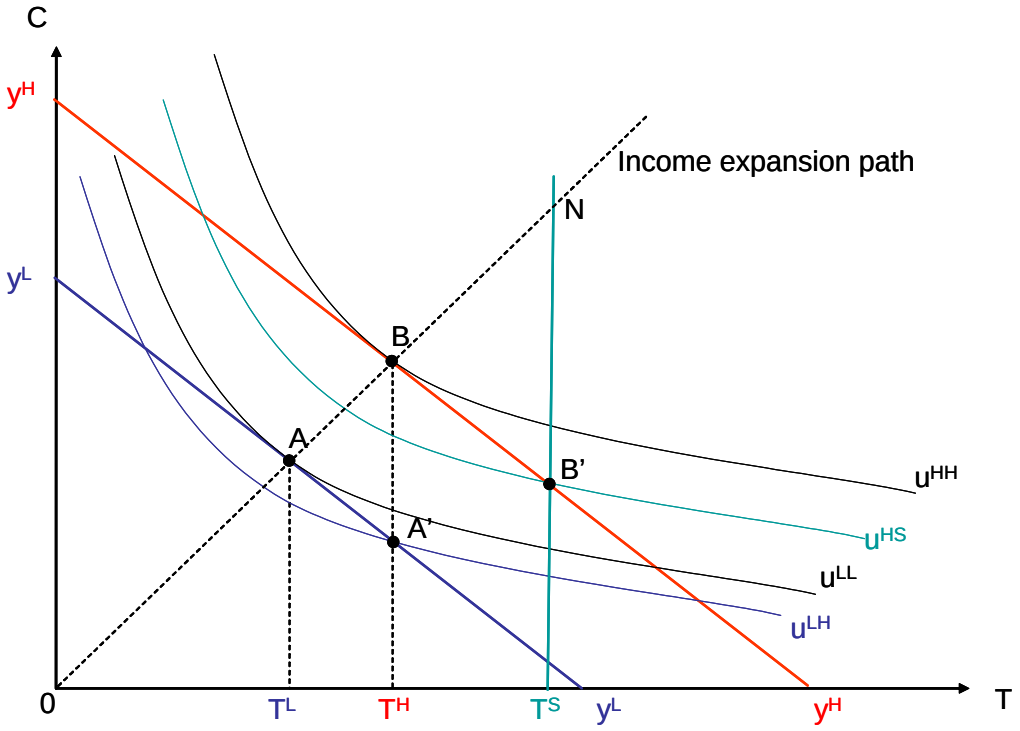


Figure 2: Remittances and consumption

In the following, we will denote the private utility losses from adopting a suboptimal strategy by $\Delta u^L \equiv u^{LL} - u^{LH}$ (for the unsuccessful migrant who plays T^H) and $\Delta u^H \equiv u^{HH} - u^{HS}$ (for the successful migrant who plays T^S). The cumulate loss is denoted $\Sigma\Delta u \equiv \Delta u^L + \Delta u^H$.

3 The different equilibria

A Perfect Bayesian Equilibrium of this game is defined as a situation in which each migrant plays his optimal strategy given the residents' beliefs, and the residents' beliefs are correct given the optimal strategy of the migrants.

We can then distinguish between three types of equilibria: separating equilibria where migrants' strategies perfectly reveal their type, pooling equilibria where all migrants implement the same strategy and thus no information about the type of migrants can be inferred from their remitting behavior, and hybrid equilibria where migrants play Nash mixed strategies and their strategies carry some but not full information about their type.

This section presents the conditions of existence of the various equilibria and their properties.

3.1 Separating equilibria

3.1.1 The Low separating equilibrium (trivial)

This trivial equilibrium is similar to the perfect information equilibrium. Thus unsuccessful migrants do not find it worthwhile to manipulate information ($\pi = 0$) and successful migrants do not find it worthwhile to signal themselves ($\mu = 0$). Given residents' beliefs, income expectations (Eq. 7) are: $E\left[y|T^L\right] = y^L$, $E\left[y|T^H\right] = y^H$ and $E\left[y|T^S\right] = y^H$.

Migrants' optimal strategies depend on their payoffs (Figure 1). This equilibrium exists if the following conditions are fulfilled:

$$\begin{cases} U\left(y^L - T^L, T^L\right) \geq U\left(y^L - T^H, T^H\right) \\ U\left(y^H - T^H, T^H\right) \geq U\left(y^H - T^S, T^S\right) \end{cases} \tag{12}$$

$$\begin{cases} u^{LL} + by^L \geq u^{LH} + bE\left[y|T^H\right] \\ u^{HH} + bE\left[y|T^H\right] \geq u^{HS} + by^H \end{cases} \tag{13}$$

$$\begin{cases} b\Delta y \leq \Delta u^L \\ 0 \leq \Delta u^H \end{cases}. \tag{14}$$

The latter condition being always true, this equilibrium exists if:

$$b\Delta y \leq \Delta u^L. \tag{15}$$

The total remitted amount then is similar to the perfect information total; it amounts to: $\mathcal{T}^{low} = \lambda T^H + (1-\lambda) T^L$, linearly increasing with the probability of success, λ.

3.1.2 The High separating equilibrium

In this equilibrium all successful migrants find it worthwhile to signal themselves by adopting their expensive T^S strategy ($\mu = 1$), and all poor migrants follow the T^L strategy ($\pi = 0$). In equilibrium, none of them would follow the strategy T^H.

Residents' equilibrium beliefs are $\Pr[y^H|T^L] = 0$ and $\Pr[y^H|T^S] = 1$. Furthermore, if all successful migrants remit the high amount T^S, sending any amount less than this should be interpreted as a signal of poverty. So, should one migrant decide to deviate and play T^H, we admit that he will be considered as being of the unsuccessful type: $\Pr[y^H|T^H] = 0$. Given these beliefs, income expectations are: $E\left[y|T^L\right] = y^L$, $E\left[y|T^S\right] = y^H$ and $E\left[y|T^H\right] = y^L$.

For sure, when all successful migrants remit T^S, no unsuccessful migrant would remit the intermediate amount T^H, since this strategy would reduce his private utility without increasing his status: $U(y^L - T^H, T^L) = u^{LH} + by^L < U(y^L - T^L, T^L) = u^{LL} + by^L$.[9]

Turning now to successful migrants, this equilibrium exists if the following sufficient condition is fulfilled:

$$U\left(y^H - T^S, T^S\right) \geq U\left(y^H - T^H, T^H\right) \tag{16}$$

$$u^{HS} + by^H \geq u^{HH} + bE\left[y|T^H\right] \tag{17}$$

$$b\left(y^H - E\left[y|T^H\right]\right) \geq \Delta u^H \tag{18}$$

$$b\Delta y \geq \Delta u^H. \tag{19}$$

The total remitted amount then is: $\mathcal{T}^{high} = \lambda T^S + (1-\lambda) T^L$, also linearly increasing with the with the probability of success, λ.

3.2 The Pooling equilibrium

In this equilibrium all migrants choose the same remitting strategy, i.e. all remit the intermediate amount T^H. If all unsuccessful migrants find it worthwhile to manipulate information, we have

[9] We show here that equilibria where all successful migrants signal themselves ($\mu = 1$) and some or all unsuccessful migrants manipulate information ($\pi > 0$) are impossible.

$\pi = 1$ and, since successful migrants do not signal themselves, we have $\mu = 0$. Income expectations become $E\left[y|T^L\right] = y^L$, $E\left[y|T^S\right] = y^H$ and $E\left[y|T^H\right] = \lambda y^H + (1-\lambda)\, y^L$.

This equilibrium exists if the following necessary conditions are fulfilled:

$$\begin{cases} U\left(y^L - T^L, T^L\right) \leq U\left(y^L - T^H, T^H\right) \\ U\left(y^H - T^S, T^S\right) \leq U\left(y^H - T^H, T^H\right) \end{cases} \tag{20}$$

$$\begin{cases} u^{LL} + by^L \leq u^{LH} + bE\left[y|T^H\right] \\ u^{HS} + by^H \leq u^{HH} + bE\left[y|T^H\right] \end{cases} \tag{21}$$

$$\begin{cases} b\Delta y \geq \frac{\Delta u^L}{\lambda} \\ b\Delta y \leq \frac{\Delta u^H}{1-\lambda} \end{cases} \tag{22}$$

or, in the more compact form:

$$\frac{\Delta u^L}{\lambda} \leq b\Delta y \leq \frac{\Delta u^H}{1-\lambda}. \tag{23}$$

A non-empty interval for $b\Delta y$ exists only if:

$$\frac{\Delta u^L}{\lambda} \leq \frac{\Delta u^H}{1-\lambda} \Leftrightarrow \lambda \geq \bar{\lambda} \equiv \frac{\Delta u^L}{\Sigma \Delta u}. \tag{24}$$

Thus, this equilibrium can exist only if the probability of success is larger than a critical threshold, that we denote by $\bar{\lambda}$. Indeed, the stigma of failure should be larger in a context where most of the other migrants are successful; hence the incentive to manipulate information should be the strongest in this environment.

The total remitted amount then is: $\mathcal{T}^{pool} = T^H$, independent from the probability of success, λ.

If in this equilibrium unsuccessful migrants seem to be better off than in the perfect information setup, $U\left(y^L - T^L, T^L\right) < U\left(y^L - T^H, T^H\right)$, a caveat however applies. If unsuccessful migrants prefer this outcome, it is because they benefit from a strong status enhancing effect; yet, in order to achieve this result, they need to sacrifice their personal consumption, and undergo an immisering path. No poor migrant can escape this trap, since if he sends back home less than T^H he would be immediately spotted as a misachieved person.

3.3 Hybrid equilibria

In a hybrid equilibrium at least one type of migrants plays a mixed strategy. Hence, at least one equilibrium condition is a zero trade-off condition, according to which the migrant is indifferent between playing one strategy or another.

3.3.1 Hybrid equilibrium A: partial manipulation of information, no signalization

In this equilibrium some but not all unsuccessful migrants find it worthwhile to manipulate information ($\pi \in]0;1[$) and successful migrants do not signal themselves ($\mu = 0$). Income expectations are $E\left[y|T^L\right] = y^L$, $E\left[y|T^S\right] = y^H$ and $E\left[y|T^H\right] = \dfrac{\lambda y^H + (1-\lambda)\,\pi y^L}{\lambda + (1-\lambda)\,\pi}$.

The necessary conditions for this equilibrium to exist are:

$$\begin{cases} U\left(y^L - T^H, T^H\right) = U\left(y^L - T^L, T^L\right) \\ U\left(y^H - T^S, T^S\right) < U\left(y^H - T^H, T^H\right) \end{cases} \tag{25}$$

$$\begin{cases} b\left(E\left[y|T^H\right] - y^L\right) = \Delta u^L \\ b\left(y^H - E\left[y|T^H\right]\right) < \Delta u^H \end{cases}. \tag{26}$$

The former condition leads to the definition of the equilibrium probability of manipulation:

$$\pi = \frac{\lambda}{1-\lambda}\left[\frac{b\Delta y}{\Delta u^L} - 1\right]. \tag{27}$$

A necessary condition for this equilibrium to prevail is:

$$0 < \pi < 1 \Longleftrightarrow \Delta u^L < b\Delta y < \frac{\Delta u^L}{\lambda}. \tag{28}$$

The second condition $b\left(y^H - E\left[y|T^H\right]\right) < \Delta u^H$, is tantamount to:

$$b\Delta y < \left[1 + \frac{\lambda}{(1-\lambda)\,\pi}\right]\Delta u^H. \tag{29}$$

In equilibrium (with π defined by equation 27), this condition is equivalent to:

$$b\Delta y < \Sigma\Delta u. \tag{30}$$

Thus, this equilibrium exists if: $\Delta u^L < b\Delta y < \frac{\Delta u^L}{\lambda}$ and $\Delta u^L < b\Delta y < \Sigma\Delta u$, or, in a compact form, if:

$$\Delta u^L < b\Delta y < \min\left\{\frac{\Delta u^L}{\lambda}, \Sigma\Delta u\right\}. \tag{31}$$

Notice that when the Hybrid equilibrium A prevails, the proportion of unsuccessful migrants choosing the manipulating strategy is given by Equation (27). It is increasing with λ: the higher the probability of success, the higher the proportion of manipulating migrants among the unsuccessful ones. However, the scope for this equilibrium to prevail decreases with the probability of success: the Hybrid equilibrium A exists only if $\Delta u^L < b\Delta y < \frac{\Delta u^L}{\lambda}$, and the interval narrows as λ goes up.

Whether the right-hand limit for $b\Delta y$ is $\frac{\Delta u^L}{\lambda}$ or $\Sigma\Delta u$ depends on the probability of success, λ. We have already defined the critical threshold $\bar{\lambda} \equiv \dfrac{\Delta u^L}{\Sigma\Delta u}$. If $\lambda > \bar{\lambda}$, then $\frac{\Delta u^L}{\lambda} < \Sigma\Delta u$: it can then be shown that the proportion of manipulating migrants is necessarily higher than a certain threshold: $\pi \in \left]\frac{b\Delta y - \Delta u^L}{\Delta u^H}; 1\right[$. If $\lambda < \bar{\lambda}$, then $\Sigma\Delta u < \frac{\Delta u^L}{\lambda}$: it can then be shown that the proportion of manipulating migrants is necessarily lower than the previous threshold: $\pi \in \left]0; \frac{b\Delta y - \Delta u^L}{\Delta u^H}\right[$.

The total remitted amount is: $\mathcal{T}^A = \lambda T^H + (1-\lambda)\left[\pi T^H + (1-\pi)\, T^L\right]$, or, with π defined by Eq. (27): $\mathcal{T}^A = \left[\lambda \frac{b\Delta y}{\Delta u^L}\right]\left(T^H - T^L\right) + T^L > \mathcal{T}^{low}$.[10] Notice that $\mathcal{T}^A$ increases with the probability of success λ, faster than $\mathcal{T}^{low}$: $\left[\frac{\partial \mathcal{T}^A}{\partial \lambda} = \frac{b\Delta y}{\Delta u^L}\left(T^H - T^L\right)\right] > \left[\left(T^H - T^L\right) = \frac{\partial \mathcal{T}^{low}}{\partial \lambda}\right]$.

While both the manipulating unsuccessful migrants and the "honest" ones have the same total utility, the manipulating ones are diminishing their immediate consumption.

3.3.2 Hybrid equilibrium B: total manipulation of information, partial signalization

In this equilibrium all unsuccessful migrants find it worthwhile to manipulate information ($\pi = 1$) and some successful migrants find it worthwhile to signal themselves ($\mu \in]0;1[$). Residents' expectations take the form: $E\left[y|T^L\right] = y^L$, $E\left[y|T^S\right] = y^H$ and $E\left[y|T^H\right] = \dfrac{(1-\mu)\,\lambda y^H + (1-\lambda)\, y^L}{(1-\mu)\,\lambda + (1-\lambda)}$.

This equilibrium prevails if the following necessary conditions are fulfilled:

$$\begin{cases} U\left(y^H - T^S, T^S\right) = U\left(y^H - T^H, T^H\right) \\ U\left(y^L - T^H, T^H\right) > U\left(y^L - T^L, T^L\right) \end{cases} \tag{32}$$

$$\begin{cases} b\left(y^H - E\left[y|T^H\right]\right) = \Delta u^H \\ b\left(E\left[y|T^H\right] - y^L\right) > \Delta u^L \end{cases}. \tag{33}$$

The first indifference condition defines the equilibrium proportion of successful migrants who

[10] Indeed, in the Hybrid equilibrium A, we have: $b\Delta y > \Delta u^L$.

choose the signaling strategy:

$$\mu = 1 - \left(\frac{1-\lambda}{\lambda}\right)\left[\frac{b\Delta y}{\Delta u^H} - 1\right]. \tag{34}$$

An equilibrium exists if:

$$0 < \mu < 1 \Leftrightarrow \Delta u^H < b\Delta y < \frac{\Delta u^H}{1-\lambda}. \tag{35}$$

The second condition, $b\left(E\left[y|T^H\right] - y^L\right) > \Delta u^L$, is equivalent to:

$$b\Delta y > \left[1 + \frac{(1-\lambda)}{(1-\mu)\,\lambda}\right]\Delta u^L, \tag{36}$$

or, after replacing μ by its equilibrium value, to:

$$b\Delta y > \Sigma\Delta u. \tag{37}$$

Since $\Sigma\Delta u > \Delta u^H$, the two equilibrium conditions can be written in a compact form as:

$$\Sigma\Delta u < b\Delta y < \frac{\Delta u^H}{1-\lambda}. \tag{38}$$

A non-empty interval for $b\Delta y$ exists only if the frequency of successful migrants is large enough:

$$\Sigma\Delta u < \frac{\Delta u^H}{1-\lambda} \Leftrightarrow \lambda > \bar{\lambda}. \tag{39}$$

Notice that in the Hybrid equilibrium B the proportion μ of successful migrants choosing the signaling strategy is increasing with the probability of success λ. It can then be shown that the proportion of signaling migrants is necessarily higher than a certain threshold: $\mu \in \left[\frac{\Sigma\Delta u - b\Delta y}{\Delta u^L}; 1\right[$. Moreover, the possibility for this equilibrium to prevail increases with the probability of success: the Hybrid equilibrium B can occur only if $b\Delta y < \frac{\Delta u^H}{1-\lambda}$, and this binding value increases with λ.

The total remitted amount is: $\mathcal{T}^B = \lambda\left[\mu T^S + (1-\mu)\,T^H\right] + (1-\lambda)\,T^H = T^S - \left[(1-\lambda)\,\frac{b\Delta y}{\Delta u^H}\right]\left(T^S - T^H\right) > \mathcal{T}^{low}$.[11] Notice that $\mathcal{T}^B$ increases with the probability of success more than $\mathcal{T}^{low}$: $\left[\frac{\partial \mathcal{T}^B}{\partial \lambda} = \frac{b\Delta y}{\Delta u^H}\left(T^S - T^H\right)\right] > \left[\left(T^S - T^H\right) = \frac{\partial \mathcal{T}^{low}}{\partial \lambda}\right]$.

As in the Pooling equilibrium, all poor migrants play the manipulating strategy; they have no other choice than to sacrifice their private utility for the sake of status-seeking.

[11] Indeed, in the Hybrid equilibrium B, we have: $b\Delta y > \Delta u^H$; and it is always true that $T^S \geq T^H > T^L$.

3.3.3 Hybrid equilibrium C: partial manipulation, partial signalization

It can be shown that in the very special case where $b\Delta y = \Sigma\Delta u$, there is an equilibrium where some but not all unsuccessful migrants do resort to manipulation ($\pi \in]0;1[$) and some but not all successful migrants carry out the signalization strategy ($\mu \in]0;1[$). Income expectations are: $E\left[y|T^L\right] = y^L$, $E\left[y|T^S\right] = y^H$ and $E\left[y|T^H\right] = \dfrac{(1-\mu)\,\lambda y^H + (1-\lambda)\,\pi y^L}{(1-\mu)\,\lambda + (1-\lambda)\,\pi}$.

The necessary conditions for existence of this equilibrium are:

$$\begin{cases} U\left(y^L - T^L, T^L\right) = U\left(y^L - T^H, T^H\right) \\ U\left(y^H - T^H, T^H\right) = U\left(y^H - T^S, T^S\right) \end{cases} \tag{40}$$

$$\begin{cases} b\left(E\left[y|T^H\right] - y^L\right) = \Delta u^L \\ b\left(y^H - E\left[y|T^H\right]\right) = \Delta u^H \end{cases} \tag{41}$$

$$\begin{cases} b\Delta y\,(1-\mu)\,\lambda = \left[(1-\mu)\,\lambda + (1-\lambda)\,\pi\right]\Delta u^L \\ b\Delta y\,(1-\lambda)\,\pi = \left[(1-\mu)\,\lambda + (1-\lambda)\,\pi\right]\Delta u^H \end{cases} \tag{42}$$

Summing the two necessary conditions, we get the existence condition:

$$b\Delta y = \Sigma\Delta u. \tag{43}$$

Dividing the two necessary conditions, we get a relationship between the equilibrium values of μ and π:

$$\frac{(1-\mu)\,\lambda}{(1-\lambda)\,\pi} = \frac{\Delta u^L}{\Delta u^H}. \tag{44}$$

or, if we choose to express π as a function of μ (the reverse would be possible as well):

$$\pi = (1-\mu)\left(\frac{\lambda}{1-\lambda}\right)\left(\frac{\Delta u^H}{\Delta u^L}\right). \tag{45}$$

with the additional restriction $\pi \in]0;1[$ and $\mu \in]0;1[$. There is an infinite number of pairs (μ, π) verifying these conditions.

Given that $b\Delta y = \Sigma\Delta u$, we can check that for $\mu = 0$ (no signaling by rich migrants) we obtain the frequency of unsuccessful migrants who manipulate information such as provided by equation (27) in the case of Hybrid equilibrium A, and, for $\pi = 1$ (all unsuccessful migrants try to manipulate), we get the frequency of signaling rich migrants, such as defined by equation (34) in the analysis of the Hybrid equilibrium B.

In this atypical equilibrium, income expectations $E\left[y|T^H\right]$ are independent of the frequencies π and μ:

$$E\left[y|T^H\right] = \frac{(1-\mu)\,\lambda y^H + (1-\lambda)\,\pi y^L}{(1-\mu)\,\lambda + (1-\lambda)\,\pi} = \frac{\Delta u^L}{\Sigma\Delta u} y^H + \frac{\Delta u^H}{\Sigma\Delta u} y^L. \tag{46}$$

This can occur if an increase in the number of rich migrants who decide to signal themselves (μ) is matched by a reduction in the number of manipulating unsuccessful migrants (π) such that the expected income conditional on observing T^H is unchanged.

In equilibrium, the total remitted amount is: $\mathcal{T}^C = (1-\lambda)(1-\pi)T^L + [(1-\lambda)\pi + \lambda(1-\mu)]\,T^H + \lambda\mu T^S = \left[(1-\lambda) - \lambda\,(1-\mu)\left(\frac{\Delta u^H}{\Delta u^L}\right)\right] T^L + \lambda(1-\mu)\left[1 + \left(\frac{\Delta u^H}{\Delta u^L}\right)\right] T^H + \lambda\mu T^S > \mathcal{T}^{low}$. Notice that $\mathcal{T}^C$ increases with the probability of success: $\frac{\partial \mathcal{T}^C}{\partial \lambda} = \left(T^H - T^L\right)\left[1 + (1-\mu)\left(\frac{\Delta u^H}{\Delta u^L}\right)\right] + \mu\left(T^S - T^H\right) > 0$.

Finally, we should notice that a hybrid equilibrium with no manipulation ($\pi = 0$) and partial signalization ($\mu \in]0;1[$) is impossible. Indeed, since the strategy T^H signals that the migrant is successful (since no unsuccessful migrant adopts it), a successful migrant has no incentive to adopt the more expensive T^S strategy.

3.4 Summary of equilibria and welfare considerations

In this paper, we have two distinct welfare measures. One pertains to total utility, the other to private utility, which is a component of total utility, the other component being connected to the status-seeking behavior. On purely utilitarian grounds, only total utility should be taken into account. However, our specific context, one cannot neglect the fact that, in some of the equilibria, poor migrants have no other choice than to sacrifice personal consumption (and thus personal development opportunities) only in order to comply with a form of social norm, that emerges as an aggregation of individual status-seeking behaviors. Thus, when interpreting the various equilibria, a central place must be given to private utility.

Table 1 summarizes the different equilibria, such as characterized by the equilibrium probabilities π and μ. The range of possible types depend on the prior probability of success λ with respect to the threshold $\bar{\lambda} = \frac{\Delta u^L}{\Sigma\Delta u}$.

EQUILIBRIA	π	μ	Case $\lambda \geq \bar{\lambda}$	Case $\lambda < \bar{\lambda}$
- Low separating	0	0	$b\Delta y \leq \Delta u^L$	$b\Delta y \leq \Delta u^L$
- Hybrid A	$]0;1[$	0	$\Delta u^L < b\Delta y < \frac{\Delta u^L}{\lambda}$	$\Delta u^L < b\Delta y < \Sigma\Delta u$
- Pooling	1	0	$\frac{\Delta u^L}{\lambda} \leq b\Delta y \leq \frac{\Delta u^H}{1-\lambda}$	impossible
- Hybrid C	$]0;1[$	$]0;1[$	$b\Delta y = \Sigma\Delta u$	$b\Delta y = \Sigma\Delta u$
- Hybrid B	1	$]0;1[$	$\Sigma\Delta u < b\Delta y < \frac{\Delta u^H}{1-\lambda}$	impossible
- High separating	0	1	$\Delta u^H \leq b\Delta y$	$\Delta u^H \leq b\Delta y$

Table 1: The different types of equilibria

The critical values of the equilibria are: Δu^L, $\frac{\Delta u^L}{\lambda}$, Δu^H, $\frac{\Delta u^H}{1-\lambda}$ and $\Sigma\Delta u$. The probability of success is lower than 1 ($\lambda < 1$), thus necessarily: $\Delta u^L < \frac{\Delta u^L}{\lambda}$ and $\Delta u^H < \frac{\Delta u^H}{1-\lambda}$. Moreover, $\Sigma\Delta u > \Delta u^L$ and $\Sigma\Delta u > \Delta u^H$. Finally, when $\lambda > \bar{\lambda}$, then: $\frac{\Delta u^L}{\lambda} < \Sigma\Delta u < \frac{\Delta u^H}{1-\lambda}$; and when $\lambda < \bar{\lambda}$, then: $\frac{\Delta u^H}{1-\lambda} < \Sigma\Delta u < \frac{\Delta u^L}{\lambda}$.

We show in the Appendix that the relative position of Δu^L and Δu^H depends to a large extent on Δy. If the income differential is strong, then $\Delta u^L > \Delta u^H$, and if the income differential is weak, then $\Delta u^H > \Delta u^L$.

In the case $\lambda < \bar{\lambda}$, the range of equilibria is rather narrow. The Low separating equilibrium and the Hybrid equilibrium A are mutually exclusive. For $b\Delta y \in [\Delta u^H, \Sigma\Delta u]$, we have a typical multiple equilibria situation, with both Hybrid equilibrium A and the High separating equilibrium being feasible. The Low separating equilibrium and the High separating one can both exist if $\Delta u^H < \Delta u^L$ (which can happen if Δy is large enough). In a multiple equilibria configuration, which one actually materializes ultimately depends on residents' beliefs. A very small income differential would bring about the very efficient Low separating equilibrium. To the opposite, another equilibrium without an additional burden for poor migrants would occur with certainty only for a large income differential, i.e. for $b\Delta y > \Sigma\Delta u$ (in this case, the High separating is the single possible equilibrium).

In the case $\lambda \geq \bar{\lambda}$, we get the full range of feasible equilibria. For sure, the Low separating equilibrium, Hybrid A and Pooling ones are mutually exclusive. Given that $\frac{\Delta u^L}{\lambda} < \Sigma\Delta u$, Hybrid

A and Hybrid B are mutually exclusive as well. There are many configurations where multiple equilibria are possible (whenever intervals of existence do overlap). For instance, for $b\Delta y \in [\Sigma\Delta u, \frac{\Delta u^H}{1-\lambda}]$, both the Hybrid B and the High separating equilibria can exist. As $\frac{\Delta u^H}{1-\lambda} > \Delta u^H$, there are values of $b\Delta y$ for which both the Pooling and the High separating equilibrium can exist. Other situations of multiple equilibria can be put forward.[12]

As already mentioned, both the Hybrid B equilibrium and the Pooling one are extremely detrimental to poor migrants, since they all sacrifice consumption and development opportunities in order to implement the manipulating strategy. Like in the former case, either a very small income gap or a very large one would bring about a separating situation where poor migrants do not have to bear this burden.

4 Conclusion

In this paper, we have analyzed the remittance game between migrants and their origin community. Migrants differ with respect to their income, and this information is private. A migrant cares about status, defined here by how the local community perceives his earned-abroad income. Since remittances convey some information about a migrant's income, the latter can remit strategically in order to manipulate residents' expectations.

Our model shows that, if the income gap between a successful and an unsuccessful migrant is large enough, the latter would send more money than in the perfect information set-up in order to conceal his difficulties. In some cases, successful migrants would remit even more, to the point where no unsuccessful migrant can follow, only in order to signal themselves as being truly successful. In general, whatever the equilibrium, the total remitted amount is higher than it would be under perfect information. The counterpart of this extreme generosity is a self-immisering situation of the migrants. One main limitation of our analysis is its static character. In a dynamic perspective, the cost of undergone consumption and development opportunities should be higher, while status has a more ephemeral dimension. In this case, the scope for both manipulation by

[12] A special case of multiple equilibria is the Hybrid equilibrium C. While this equilibrium can occur only if $b\Delta y = \Sigma\Delta u$, in this special case, for every π we have one equilibrium μ, provided that the additional restrictions $\pi \in]0;1[$ and $\mu \in]0;1[$ hold.

poor migrants and signaling by successful migrants would narrow.

Among the various types of equilibria, some of them are characterized by extreme impoverishment of the least successful migrants. Policy recommendations should target this category, and prevent them from adopting immisering strategies. We have shown that either a small income gap or a very large one would lead to the desired outcome; however, the former outcome (reducing the income gap) not only has better ethical foundations, but can also be reached in a natural way by policies that support migrants' integration.

For a broad range of parameters, the game presents multiple equilibria. For instance, the pooling and the high separating equilibrium can both exist, and which one will actually arise depends on the equilibrium beliefs of the residents. Hence, it should not be surprising to observe that remitting strategies differ from one group of migrants to another, although they live in the same developed host country, have similar preferences and the same income gap. Clark and Drinkwater (2007) carry out a comprehensive study on the decision to remit of migrants in England and Whales; they point out that significant ethnic differences in the incidence of remitting subside even after controlling for the main observable characteristics. For instance, Caribbeans have a probability of remitting 19% higher than Indians, and only 18% of this (3.2 percentage points) can be explained by observable differences such as income or education. In the light of our analysis, such an outcome can be explained if we agree on that each ethnic group has developed his own set of beliefs; in turn, these different beliefs bring about a different type of equilibrium.

Several microeconomic studies on migrants' remittances notice a negative impact of the duration of migration on remitted amounts (Johnson and Whitelaw, 1974; Banerjee, 1985; Funkhouser, 1995). In other words, as migration lengthens, remittances decrease. The main explanation of this phenomenon is the decaying of altruism through time, according to the saying "out of sight, out of mind". Our analysis suggests an alternative explanation not involving the progressive disappearance of altruism. Indeed, we show that as long as his home community does not know his real economic situation, a migrant may find it worthwhile to remit more than he would if information were perfect, in order to dissimulate his failure or signal his success in the host country. Yet, it seems natural to assume that as migration lengthens, the asymmetry of information decreases

as the family receives other information on the migrant's economic position. After a while, his situation in the host country becomes public information. Once the migrant's true economic situation is revealed, there is no reason for the manipulating and signaling strategies and remitting amounts are adjusted downward even if the migrant still have the same altruistic feelings towards his family.

If we carry this reasoning one step further, any reform able to reduce the asymmetry of information between migrants and their origin community should contribute to improve the migrants' consumption utility. There is no miracle solution able to achieve this result. It seems logical to assume that members of the origin community can better observe a migrant's economic achievements if they can visit him frequently in the host country. Hence the reduction in telecommunications or in travelling costs, including the removal of administrative barriers, should go in the right direction.

For sure, this simple model cannot claim to provide a comprehensive explanation of the decision to remit. However, it contributes to the literature on remittances by emphasizing the impact that status-seeking behavior has on migrants' remitting strategy and on the total amount remitted.

References

Banerjee, B. 1984. The probability, size and uses of remittances from urban to rural areas in India. *Journal of Development Economics*, 16, 3, pp. 293-311.

Besancenot, Damien, Faria, Joao R., and Vranceanu, Radu. 2009. Why business schools do so much research: A signaling explanation. *Research Policy*, 38, pp. 1093-1101.

Bernheim, Douglas B. 1994. A theory of conformity, *Journal of Political Economy*, 102, 5, pp.841-877.

Clark, Ken, and Drinkwater, Stephen. 2007. An investigation of household remittance behavior: Evidence from the United Kingdom. *Manchester School*, 75, 6, pp. 717-741.

Chiang, Alpha C. 1984. *Fundamental Methods of Mathematical Economics*, McGraw-Hill, Singapoore.

Diome, Fatou. 2003. *Le Ventre de l'Atlantique*. Ed. Anne Carrière.

Duesenberry, James S. 1952. *Income, Saving and the Theory of Consumer Behaviour*. Harvard University Press, Cambridge.

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

Frank, Robert H.1984. Are workers paid their marginal products?, *American Economic Review*, 74, 4, pp. 549-571

Frank, Robert H.1985a. *Choosing the Right Pond, Human Behavior and the Quest for Status*, Oxford University Press, Oxford, UK.

Frank, Robert H.1985b. The demand for unobservable and other nonpositional goods, *American Economic Review*, 75, 1, pp.101-116.

Hirsch, Fred. 1976. *Social Limits to Growth*. Harvard University Press, Cambridge.

Harbaugh, William. 1998. The prestige motive for making charitable transfers, *American Economic Review, Papers and Proceedings*, 88, 2, pp 277-282.

Hopkins, Ed, and Kornienko, Tatiana. 2004. Running to keep in the same place: Consumer choice as a game of status. *American Economic Review*, 94, 4, pp. 1085-1107.

IOM. 2008. World Migration 2008: Managing labour mobility in the evolving global economy. *IOM World Migration Report Series*, 4, IOM.

Ireland, Norman J. 1994. On limiting the market for status signals, *Journal of Public Economics*, 53, pp. 91-110.

Johnson, George E., and Whitelaw, W. E. 1974. Urban-rural income transfers in Kenya: An estimated-remittances function. *Economic Development and Cultural Change*, 22, 3, pp. 473-479.

Naiditch, Claire, and Vranceanu, Radu. 2009. Migrant wages, remittances and recipient labour supply in a moral hazard model. *Economic Systems*, 33, 1, pp. 60-82.

Neveu, Catherine, and Copans, Jean. 1993. *Communauté, nationalité et citoyenneté: de l'autre côté du miroir : les Bangladeshis de Londres*. Karthala Editions.

Philpott, Stuart B. 1968. Remittance obligations, social networks and choice among Montserratian migrants in Britain. *Man, New Series*, 3, 3, pp. 465-476.

Poirine, Bernard. 1997. A theory of remittances as an implicit family loan arrangement. *World Development*, 25, 4, pp. 589-611.

Rapoport, Hillel, and Docquier, Frédéric. 2006. The economics of migrants' remittances. In S.C. Kolm and J. Mercier-Ythier (eds.), *Handbook on the Economics of Giving, Reciprocity and Altruism*, vol. 2, ch.17, pp. 1135-1198, North-Holland, Elsevier.

Riley, John G. 1975. Competitive signalling, *Journal of Economic Theory*, 10, pp. 174-186.

Riley, John, G. 1979. Informational equilibrium, *Econometrica*, 47, 2, pp. 331-359.

Spence, Michael. 1973. Job market signaling. *Quarterly Journal of Economics*, 87, 3, pp. 355-374.

Spence, Michael. 2002. Nobel lecture: Signaling in retrospect and the informational structure of markets. *American Economic Review*, 92, 3, pp. 434-459.

Stark, Oded, and Bloom, David E. 1985. The new economics of labour migration. *American Economic Review*, 75, 2, pp.173-178.

Stark, Oded, and Levhari, David. 1982. On migration and risk in LDCs. *Economic Development and Cultural Change*, 31, 1, pp. 191-196.

Stark, Oded, and Lucas, Robert E. 1988. Migration, remittances, and the family. *Economic Development and Cultural Change*, 36, 3, pp. 465-481.

Stark, Oded, and Lucas, Robert E. Motivations to remit: Evidence from Botswana, *Journal of Political Economy*, 95, 5, pp. 901-915.

Truyts, Tom, 2009, Social status in economic theory, *Journal of Economic Surveys*, doi.10.1111/j.1467-641.2009.00579.

United Nations. 2006. *Trends in the Total Migrant Stock: The 2005 Revision*. United Nations, POP/DB/MIG/Rev.2005, http://esa.un.org/migration.

US Census Bureau. 2008. *International Data Base - Rank Countries by Population*, http://www.census.gov/ipc/www/idbrank.html.

Veblen, Thorstein. 1899. *The Theory of the Leisure Class*. Penguin Books, New York.

Weiss, Yoram, and Fershtman, Chaim. 1998. Social status and economic performance: A survey. *European Economic Review*, 42, pp. 801-820.

World Bank. 2008. World Bank's Migration and Development Brief 5 (July 10, 2008),.*Revisions to Remittance Trends 2007*, http://go.worldbank.org/NN93K4Q420.

A Appendix

In order to analyze the relative position of Δu^L and Δu^H depending on the value of Δy, we assume that y^L is constant, whereas y^H varies. Let us study the following function:

$$F(y^H) \equiv \Delta u^H - \Delta u^L = \left(u^{HH} - u^{HS}\right) - \left(u^{LL} - u^{LH}\right). \tag{47}$$

When y^L is constant, T^L and T^S are independent of y^H. So, u^{LL} does not depend on y^H.

Moreover, given our assumption according to which remittances are a normal good, we know that when y^H increases, T^H increases as well ($\frac{\partial T^H}{\partial y^H} > 0$). So, u^{HH} and u^{HS} are increasing functions of y^H and u^{LH} is a decreasing function of y^H.

Differentiating F with respect to y^H, we get:

$$\begin{aligned}
F'(y^H) &= \left(\frac{\partial u^{HH}}{\partial y^H} - \frac{\partial u^{HS}}{\partial y^H}\right) - \left(\frac{\partial u^{LL}}{\partial y^H} - \frac{\partial u^{LH}}{\partial y^H}\right) && \text{(A.48)}\\
&= \left[\frac{\partial u}{\partial C}\frac{\partial C}{\partial y^H}\right]\left(y^H - T^H, T^H\right) + \left[\frac{\partial u}{\partial T}\frac{\partial T}{\partial y^H}\right]\left(y^H - T^H, T^H\right)\\
&\quad - \left[\frac{\partial u}{\partial C}\frac{\partial C}{\partial y^H}\right]\left(y^H - T^S, T^S\right) + \left[\frac{\partial u}{\partial C}\frac{\partial C}{\partial y^H}\right]\left(y^L - T^H, T^H\right) + \left[\frac{\partial u}{\partial T}\frac{\partial T}{\partial y^H}\right]\left(y^L - T^H, T^H\right) && \text{(A.49)}\\
&= u_C\left(y^H - T^H, T^H\right)\left(1 - \frac{\partial T^H}{\partial y^H}\right) + u_T\left(y^H - T^H, T^H\right)\frac{\partial T^H}{\partial y^H}\\
&\quad - u_C\left(y^H - T^S, T^S\right) - u_C\left(y^L - T^H, T^H\right)\left(\frac{\partial T^H}{\partial y^H}\right) + u_T\left(y^L - T^H, T^H\right)\left(\frac{\partial T^H}{\partial y^H}\right) && \text{(A.50)}\\
&= \left[u_T\left(y^H - T^H, T^H\right) - u_C\left(y^H - T^H, T^H\right)\right]\frac{\partial T^H}{\partial y^H} + \left[u_C\left(y^H - T^H, T^H\right) - u_C\left(y^H - T^S, T^S\right)\right]\\
&\quad - \left[u_C\left(y^L - T^H, T^H\right) - u_T\left(y^L - T^H, T^H\right)\right]\left(\frac{\partial T^H}{\partial y^H}\right). && \text{(A.51)}
\end{aligned}$$

Yet, according to the definition of T^H, we have: $u_C\left(y^H - T^H, T^H\right) = u_T\left(y^H - T^H, T^H\right)$. Thus:

$$F'(y^H) = \left[u_C\left(y^H - T^H, T^H\right) - u_C\left(y^H - T^S, T^S\right)\right] - \left[u_C\left(y^L - T^H, T^H\right) - u_T\left(y^L - T^H, T^H\right)\right]\left(\frac{\partial T^H}{\partial y^H}\right). \tag{52}$$

Yet, $T^H > T^L$ so: $u_C\left(y^L - T^H, T^H\right) > u_T\left(y^L - T^H, T^H\right)$. Thus:

$$\frac{F(y^H)}{dy^H} \leq 0 \Longleftrightarrow \frac{\partial T^H}{\partial y^H} \geq \frac{u_C\left(y^H - T^H, T^H\right) - u_C\left(y^H - T^S, T^S\right)}{u_C\left(y^L - T^H, T^H\right) - u_T\left(y^L - T^H, T^H\right)}. \tag{53}$$

The marginal utility of consumption is decreasing with consumption and T^S is higher than T^H. Thus: $y^H - T^H > y^H - T^S$ and: $u_C\left(y^H - T^H, T^H\right) < u_C\left(y^H - T^S, T^S\right)$. Indeed, differentiating u_C, we get: $du_C = \frac{\partial u_C}{\partial C}dC + \frac{\partial u_C}{\partial T}dT$. Since the budget constraint is binding $\left(C + T = y^H\right)$, necessarily, we have: $dC = -dT$. Thus: $\frac{du_C}{dC} = \frac{\partial u_C}{\partial C} - \frac{\partial u_C}{\partial T} = u_{CC} - u_{CT}$. The condition $u_{CC} - u_{CT} < 0$ is the necessary and sufficient condition for T to be a normal good (see Chiang, 1984, ch. 12). Thus, when consumption decreases (from $y^H - T^H$ to $y^H - T^S$) and the budget constraint is binding ($\left(y^H - T^H\right) + T^H = \left(y^H - T^S\right) + T^S = y^H$), then the marginal utility of consumption increases: $u_C\left(y^H - T^S, T^S\right) > u_C\left(y^H - T^H, T^H\right)$.

Thus $\dfrac{u_C\left(y^H - T^H, T^H\right) - u_C\left(y^H - T^S, T^S\right)}{u_C\left(y^L - T^H, T^H\right) - u_T\left(y^L - T^H, T^H\right)} \leq 0$ while $\dfrac{\partial T^H}{\partial y^H} \geq 0$. Thus, the inequality (53) is always true; F is a decreasing function in y^H:

$$F'(y^H) \leq 0 \ \forall y^H > y^L. \tag{54}$$

Moreover, as can be observed in Figure 2, when y^H tends to y^L, $u^{LL} - u^{LH}$ tends to zero, while $u^{HH} - u^{HS}$ is positive, thus $\lim_{y^H \to y^L} F(y^H) > 0$. When y^H becomes so big that T^H reaches T^S (at point N in Figure 2), then $u^{HH} = u^{HS}$, while $u^{LL} - u^{LH}$ is positive. Thus $F(y^H) < 0$.

Thus, there exists a critical threshold such that for any wage level y^H below that threshold, $F(y^H)$ is positive and for any wage level y^H above that threshold, $F(y^H)$ is negative.

We thus showed that when Δy is not too high, Δu^H is higher than Δu^L; and when Δy is above a certain threshold, Δu^H becomes lower than Δu^L.

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