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ABSTRACT

Human Smuggling^{*}

Despite its importance in global illegal migration, there is little, and mostly theoretical research on human smuggling. We suggest an analytical framework to understand the micro structure of the human smuggling market. Migrants interact with smuggling and financing intermediaries; these may or may not be integrated with each other, and with the migrants' employers. Policies of receiving countries (border controls, employer sanctions, deportation policies, sales of visa) affect the interactions in the smuggling market, and, hence, migration flows. We review the theoretical work, point to the scarce empirical evidence, and identify challenges for future theoretical, empirical work and policy advice.

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1. Introduction

While of increasing empirical importance, the phenomenon of human smuggling in illegal migration has only recently received notable attention in academics. A search in scholar.google.com reveals that among the more than 20,000 hits for “human smuggling” almost all stem from the late nineties or later. Economics has been quiet about smuggling and illegal migration until recently, while scholars in law, criminology, sociology, political science, and demography have discovered the topic somewhat earlier (e.g. Salt, 2000, Salt and Stein, 1997).

Illegal migration, in contrast, has been an important topic in economics for quite a while, at least since Ethier’s (1986) analysis of the host country’s problem and Djajic’s (1987) two-country model of illegal migration. These models are very informative on a macro-level and they point to important institutional determinants of illegal migration such as the structure of the host country’s labor market. However, they do not look at the micro structure of the market for migration, which is increasingly determined by the relationship between intermediaries that finance and organize illegal migration, and their “customers”, the potential migrants. As human smuggling is a multi-billion global business, it lends itself readily to micro-economic analysis.ⁱ We will hence use the neutral language of microeconomics, although we are quite aware that illegal migration and human smuggling is a dangerous, violent and often humiliating business.

We discuss the small but growing micro-economic literature on the human smuggling business, and will show that the predictions about the effects of policies such as border controls, employer sanctions, deportation policies and amnesties depend quite crucially on whether or not the micro structure of illegal migration, i.e., the relationship

between migrants and intermediaries is considered. In most of this paper, we will maintain a positive perspective. The normative aspects will be discussed later, albeit in a non-exhaustive way.

A first important step to integrating intermediaries in the economic analysis of illegal migration is to clearly identify the reason for their existence. First, international migration is a costly activity, not only in terms of the risk for health and life involved, but also in terms of the financial means needed. During the first wave of modern international migration during the 17th century, an estimated 60% of the migrants from the British Isles to the North American colonies overcame financing constraints by selling themselves into indentured servitude for a limited period of time. A first striking difference to modern human smuggling is that in the times of indentured servitude, transportation costs were very high compared to wages. Nowadays, transportation per se is cheap but the legal barriers to migrations are high. This drives migration costs up and creates the business for intermediaries. The second difference is that, at the time, indentured servitude was legal; people had the right to “sell” themselves and the contracts between the “owner” and the migrant were enforced. Contemporaneous societies, however, are quite concerned about the moral and economic repercussions of such intermediaries, and servitude contracts are outlawed.

The second important reason for the existence of intermediaries in illicit migration are economies of scales in technology and access to networks. Intermediaries have the know-how to make migration happen, in terms of getting migrants from the home to the host country, potentially avoiding border controls and internal enforcement activities. They provide housing, food and work, which although oftentimes of low quality, may not be available for illegal migrants who cannot operate in the legal sector.

Intermediaries have information that migrants may not have, they have access to employer and social networks, and can hide the migrants from law enforcement agencies seeking to deport the migrants. Economies of scale in transportation and in the provision of work provide further rationales for the existence of intermediaries.

Because of its illegal character, the relationship between intermediaries and migrants is fraught with problems of potential abuse. The contracts between migrants, smugglers and employers are not enforceable, therefore each party in these relationships is subject to the risk of opportunistic behavior of counterparties. To overcome the contractual imperfections, smugglers oftentimes vertically integrated with employers of migrants. However, as they cannot vertically integrate with the migrant, the moral hazard problems – both on the side of the intermediary and on the migrant’s side – remain important features of the relationship. Intermediaries may not only have substantial bargaining power vis-à-vis the migrants, they may also behave in opportunistic ways *ex post*, for instance, by charging the migrants higher prices than agreed upon, or paying lower wages. They may also be prone to *ex ante* opportunistic behavior. The most extreme form of such *ex ante* opportunistic behavior is coercion, and the presence or absence of coercion can be used to define the limits between smuggling and trafficking. While the use of smuggling involves that migrant and intermediary agree to enter a contractual relationship, trafficking means that the migrant is coerced into the relationship.

This becomes evident when one compares the definitions of smuggling, and trafficking provided by the UN Convention on Transnational Organized Crime (UN TOC, 2004) Trafficking is here defined as “*the recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of*

coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation.”

Smuggling is “*the procurement, in order to obtain, directly or indirectly, a financial or other material benefit, of the illegal entry of a person into a State Party of which the person is not a national or a permanent resident*”(Article 3).

In most of this paper, we look at smuggling, that is, we assume that migrants enter the relationship with intermediaries without being coerced, at least *ex ante*.ⁱⁱ We are aware that this distinction is a fuzzy one, and discuss this problem in the last section. We here review the literature we are aware of, without claiming to be exhaustive, neither in terms of theory, nor in terms of empirical literature we may have overlooked.

In what follows we suggest frameworks to think about many of the above issues, in terms of the reasons of existence, the potential for abuse, and the consequences of the micro structure of illegal migration on the effect of polices. We review the small number of available models to better understand the relationship between intermediaries and potential migrants. We also highlight how different strategies of the receiving countries, such as border enforcement, internal enforcement and deportation policies are likely to affect the relationship, the division of rents and the outcomes in terms of quantities and types of equilibrium migration. We conclude by discussing a list of challenges in terms of theory, empirical work, and policy advice.

2. Theoretical frameworks for human smuggling

The model of Friebel and Guriev (2006) is the first to consider the micro structure of illegal migration. It adds to the existing analyses of migration behavior by taking into

account that migration involves costs that most migrants cannot finance themselves, and that the policies of host governments – by affecting the relationship between migrants and intermediaries – change migration outcomes both in terms of quantities and skill composition. The effects of policies targeted against illegal migration in a model with a smuggling intermediary are indeed quite different from the ones of traditional models that do not consider the micro structure of the market for illegal migration.

In Friebel and Guriev's model, migrants need to enter a host country in which expected wages are higher than in the home country. Intermediaries are integrated structures that provide the smuggling services, as well as financing and jobs. A (potentially small) proportion of high-skilled, wealthy migrants hire the intermediary to provide the smuggling services and pay them cash. Low-skilled potential migrants are wealth-constrained.ⁱⁱⁱ They can enter a contract with the intermediary in which the intermediary provides the smuggling services and finances the illegal migration. The migrant in turn promises to pay back his debt through the labor income after successful migration, in the host country.

This model is inspired by the incomplete contracting literature in corporate finance (see Tirole, 2006), inasmuch as it assumes that, in a way similar to a wealth-constrained entrepreneur vis-à-vis his investors, a potential migrant cannot commit himself to paying back the debt to the intermediary, rather than defaulting strategically. Consequently, the main source of *ex post* opportunistic behavior or moral hazard is on the side of the migrant. The model thus reflects the reality of modern illegal migration as the contract between the intermediary and the migrant cannot be enforced in the legal sector of the host country (in contrast to the indentured servitude contracts of the 17th century). However, as long as the migrant stays in the illegal sector of the host country,

the intermediary can enforce the contract through the threat of violence, by excluding the migrant from a network, or by keeping the migrant in a safe house. When the migrant exits the relationship by moving to the legal sector, he defaults on the repayment of the debt to the intermediary. Upon doing so, however, he takes the risk of being deported to the home country, which occurs with probability D . The larger D , i.e., the stricter a country's deportation and legalization policies, the smaller a migrant's default probability.

Hence, a decrease in D makes it less likely for the intermediary to recover his investment, involving that less low-skilled, wealth-constrained migrants can be smuggled into the host country. By the same token, a decrease in D also means that migrants who are not wealth-constrained find it more interesting to migrate, because they take lower risks of being sent home when trying to transit to the legal sector. The total quantitative effect on migration is ambiguous, but the skill composition of migrants increases when D decreases.

Increases in the strictness of border controls have more straightforward consequences: they reduce the net present value of all migrants, and thus decrease migration of both types of workers. The model thus generates quite different testable predictions about the effects of border controls versus deportation policies. While in macro models without wealth-constraints and smuggling intermediaries, border controls and deportation policies have quite similar effects: both policies reduce the net present value of migration. In the model of Friebe and Guriev, the prediction is that border controls decrease the size of migration flows, while deportation policies change the skill composition. These predictions are testable, in a cross-country perspective, because countries invest differently in border controls, and have different degrees of strictness

with respect to deportation policies, and longitudinally, because spending on enforcement measures changes when a government with a different ideology comes into office.

The model also provides an economic rationale for a policy against migration that is tough with respect to border controls, but soft on deportation policies. Not sending migrants home who default on the debt contracts by trying to move out from the illegal sector is not only appealing from a moral point of view, but would also reduce the inflow of migrants.

This setup also highlights an additional positive effect of amnesties and legalization of illegal migrants (besides the one highlighted in Chau, 2001, in which large amnesties can be used as a commitment device to enhance the credibility of employer sanctions). In Chau's model there are however no intermediaries. In Friebel and Guriev's model, expected amnesties increase the risk of migrant's default on the debt to intermediary. Therefore, the smugglers are less interested *ex ante* to enter into the relationship with wealth-constrained migrants; this, in turn, may reduce the overall migration flow.

The Friebel and Guriev model is highly stylized and does not take into account important elements of the market for illegal migration. In particular, in the model, the risk of *ex post* opportunistic behavior is only present on the side of the migrant. In Tamura (2010), migrants have no financial constraints. Rather, the migrant can commit himself to pay the smuggler upon successfully arriving in the host country. The source of moral hazard is thus the smuggler, and not the migrant. Some smugglers may be able to force the migrants to work without pay, once the migrant has entered a relationship with the smuggler. Tamura (2010) hence assumes rationality and symmetric information

in the transaction just as Friebel and Guriev (2006): migrants choose whether or not engage with a intermediary under full awareness that they may have to work without pay if they contract with “exploitative” smugglers. Thus, exploitation is quite similar to “indentured servitude” in Friebel and Guriev, but the source of such bonded labor is not contractual consent but *ex post* opportunistic behavior. *Ex ante* coercion, however, is not considered.

The policy setup is very rich. The government may raise the intensity of enforcement as measured by the probability of apprehension at the border, or within the host country. It may also vary the penalty for border apprehension and for the illegal employment (in both cases the penalty is imposed both on the migrant and on the smuggler). Smugglers vary in terms of their capacity to exploit and choose whether to exploit the migrants depending on the government policies. The migrants observe the smugglers’ capacity to exploit and therefore infer their risk to be exploited.

In this setting – like in Friebel and Guriev – migration policies affect not only the total flow of migration but also its composition and characteristics. In particular, through tightening the policies along any of the six dimensions (probabilities of detention within the country and at the border; fines in case of detention at the border and within, for migrant and smuggler, respectively), the government reduces the level of exploitation as certain exploitative smugglers exit the market or become non-exploitative. This result is based on the important assumption that the government imposes penalties for exploitative employment but not for a non-exploitative employment of illegal immigrants. Hence, the effect of stricter immigration policy is different for exploitative and non-exploitative smugglers. Such an assumption seems realistic and potentially related to the political difficulty of penalizing non-exploitative

employers of illegal immigrants. The paper also provides scope for empirical testing, however, mainly along the lines of the amount of exploitation.

Tamura's theory highlights the need for analyzing the business of intermediaries and smugglers, and exploitative and non-exploitative employers of illegal immigrants separately. Different policies affect different links in the "illegal immigration value chain." For example, border apprehensions affect smugglers, while employer sanctions affect employers. Given that contracting between smugglers and employers (as well as migrants) takes place outside the legal system, these markets are highly imperfect and therefore it is difficult for the parties to pass the burden of potential penalties and sanctions up and down the "value chain".

The results are somewhat different once the symmetric information assumption is dropped. Like in the "lemons market" of Akerlof (1970), Tamura's (2011) follow-up model shows that if the capacity to exploit is the smuggler's private information, in equilibrium there is no way for "non-exploitative" smugglers to signal their type. Therefore, such smugglers are driven out of the market and only "exploitative" smugglers prevail. Here the policy implications become more nuanced. Stricter enforcement reduces exploitation but increases the overall flow of illegal immigrants (as the non-exploitive smugglers re-enter the market). Hence, Tamura (2011) allows test along the dimensions of migration flows and thus complements Friebel and Guriev.

Auriol and Mesnard (2012) dig deeper into the industrial organization of the market for human smuggling. They abstract from financing constraints; the intermediary is only providing the smuggling services required for migration. The smuggling market is assumed to be concentrated, because of the legal restrictions to entry (other reasons of concentration could be limited access to transport technologies

or to networks in the host country). The assumption about market concentration is not only reasonable, it also gives rise to interesting, novel effects. In particular, if the smuggler has some market power, policies that raise the costs of the smuggling tend to increase the exploitation of migrants through the price that migrants have to pay. A government can try to eliminate the smuggling market by providing visas to sale to migrants. While this undermines the market power of the smuggling network, it increases the flow of migrants and deteriorates the skill composition. The latter effect stems from the fact that higher-skilled migrant have higher willingness to pay. Hence, a decrease in prices raises the flows and attracts less skilled migrants. The prediction concerning skill composition is similar to the one in Friebel and Guriev, in which higher deportation policies have the same effects.

Auriol and Mesnard, however, have a richer policy space. Hence, in the presence of the policy tradeoff “exploitation of migrants versus migration control (in terms of quantities and qualities)” they can treat the question whether a combination of instruments can improve the situation. Auriol and Mesnard show that it is indeed possible to improve on both dimensions of the objective function by using the funds raised by the sales of visa for investment into border controls and employers sanctions, thus, raiding the profits of smuggling networks. Auriol and Mesnard also provide calibrations to show that the prices for visa sales needed to drive smugglers of Chinese migrants out of business would be up to 47,000 dollars. Auriol and Mesnard’s (2012) paper does not only go a step further to better understand the micro structure of the market for smuggling, it also raises an interesting debate about the welfare implications of different policies, a topic we will get back to in the next section.

Djajic and Vinogradova (2011) provide another complementary analysis. They consider a situation of wealth-constrained migration; their interest, however, is not so much the strategic interaction between intermediaries and migrants, but endogenizing the saving decision of migrants. Migrants decide when to leave and whether or not to use a loan by the intermediary, maximizing the intertemporal utility stream of their lifetime. If a migrant saves for a longer period of time, he can migrate without entering a debt/labor contract, but if migration is desired to be earlier, bonded labor is the only option.

A number of noteworthy results originate from the model. First, it is optimal for migrants to enter debt/labor contracts when migration costs are low and foreign wages are high. In the case of higher migration costs or lower foreign wages, it becomes preferable to save longer and finance migration by proper funds. Second, in terms of the policy prediction, tougher border controls reduce the incidence of debt/labor contracts, which is in contrast to Friebel and Guriev (2006) in which tougher border controls by increasing the costs of migration push more people into entering debt/labor contracts. Third, employer sanctions are likely to reduce the incidence of debt/labor contracts.

Djajic and Vinogradova (2011) and their companion paper (Djajic and Vinogradova, 2011a) in which the duration of the servitude period during which migrants pay back their debt is endogenized, have interesting normative implications: when saving and the payback period are endogenized, bonded labor is not necessarily a destiny of wealth-constrained migrants, but may be a choice variable similar to the one of many of the migrants in the first wave of indentured servitude during the 17th century. This posits intricate welfare issues that we discuss in the next section.

3. Challenges

The theoretical literature has looked at integrated (Friebel and Guriev, 2006) and non-integrated intermediaries (Tamura, 2010) who may or may not have market power (Auriol and Mesnard, 2012). Moral hazard may be present on the side of the migrant (Friebel and Guriev, 2006) or the intermediary (Tamura, 2010, 2011). Also, the migrant's capacity to pay the smuggling services up-front can be endogenized (Djajic and Vinogradova, 2011 and 2011a). The literature thus captures a broad range of institutional settings and decision problems of the relevant parties. The theories also look at a broad range of policy instruments, spanning from border controls, to deportation and legalization policies, employer sanctions and the sales of visa.

Many of the issues of human smuggling still remain open. We believe that the applicability of human smuggling theories for policy advice could be largely increased by tackling the following challenges: (i) building richer theories that take into account the upstream and downstream factors that are relevant for human smuggling, and make it possible to adapt theories to the specificities of the respective home and host countries; (ii) enhancing the theoretical and empirical knowledge about the parameters relevant for human smuggling activities; (iii) creating better distinctions between smuggling and trafficking and generating more reliable data; (iv) clarifying welfare issues and policy coordination.

Richer theories on illegal migration and human smuggling

Current theories do not model the labor market for illegal migrants in the host countries and, in this respect, fall back behind Ethier's (1986) analysis that does incorporate institutional features of the host country's labor market. A more recent exception is

Epstein and Heizler (2008) who investigate the effects of minimum wages in the host country on stocks of illegal migrants. They show that there is a positive relationship between the two. In the case of human smuggling, it is evident that the liquidity of the labor market, the productivity of the migrants and the distribution of bargaining power during and after the bondage period is crucial for wage determination. In turn, the wages earned during and after bondage determine the incentives of migrants to use intermediaries, the contract terms and the composition of migrants. Theories of the labor market for illegal immigrants, and of entrepreneurship among migrants are an important building block for a better understanding of illicit migration with the help of intermediaries. In particular, if membership in a social network is important for employment after bondage, the incentives to default on the intermediary are reduced. This may explain why long-haul migration from China has been maintained for quite a while: networks help enforcing contracts between migrants and intermediaries as the migrants seem to fear exclusion from the networks. Ethnicity may, however, also increase the possibility to default on implicit agreements, when links are weak, the ethnic minority is in itself heterogeneous or too small to maintain an economic identity. Related topics are further developed in the chapter on migration, ethnicity and economic integration.

Another theory gap consists in the household reactions to policies undertaken by home countries. Particularly important are information campaigns, which so far have not been considered by the existing theories of human smuggling. This is somewhat logical, because these theories usually build on symmetric information between migrant and smuggler. A notable theoretical exception is Tamura (2011). Mahmood and Trebesch (2010), in their empirical analysis, show that information asymmetries exist,

and argue for information campaigns to reduce trafficking. Furthermore, Dula et al (2006) investigate to what extent it is optimal to shift some of the burden of policies against illegal immigration to home countries.

Understanding the nature of the labor market for illegal immigrants is also important for estimating properly the long-term costs of illegal status of the migrants. If the illicit jobs do not provide opportunities for accumulating human capital, the migrants would fall further behind their counterparts in the legal sector of the host, but possibly also in the home country; this issue is discussed by Kossoudji and Cobb-Clark (2002).

Both broader and deeper is the question how the demand for illegal migration and smuggling services is affected by economic development and the resulting change in wage distribution, risk aversion and expectations. In particular, whether or not workers are willing to subject themselves to the immense hardship and risks associated with illicit migration will depend on the standard of living in the home country and on norms.

Parameters relevant for the human smuggling market

In the absence of large data bases allowing econometric tests of the theories and their implications, calibrations of the theories seem the right approach. Indeed, some of the theories have been complemented by calibrations to check for the internal consistency of the theory (as in the case of Friebel and Guriev, 2006) or to generate implications (as in the case of Auriol and Mesnard, 2012). Auriol and Mesnard gather a host of available data to determine the critical visa process that would eliminate the market for

smuggling. They also highlight the sensitivity of these prices to other policy variables, for instance, deportation policies.

But even for the relatively limited requirements involved by calibrations, the data situation is far from satisfactory, the need for better data is evident for trafficking (Laczko, 2002) and smuggling alike. While information about short-haul migration and human smuggling, in particular, between Mexico and the U.S. is of quite high quality (e.g., Hanson et al, 2002, Gathmann, 2008), data from long-haul migration is much harder to come by. Exceptions include some sociological work about Chinese migrants that is based on some hundreds interviews and provides quite detailed information (Chin, 1999). Other interesting sources are the New Immigrant Survey (Jasso et al., 2000),^{iv} the survey on irregular migration in Italy by Coniglio et al (2006). There are other sources that while far from perfect, could provide useful information for calibrations. Examples from reports of governmental and non-governmental organizations include UNDOC , Clandestino, case studies and reports by the International Organization for Migration (IOM) and even media reports, when used with a grain of salt.

These figures stem from quite different sources, and they are generated by quite different techniques. Thus it would be very useful to review them systematically in order to generate a matching of different pairs of home and host countries with the respective information about wealth constraints and financing sources of migrants, risk aversion (for a recent theoretical contribution, see Woodland and Yoshida, 2006), information available for migrants, prices for smuggling service, physical risks involved with travelling and during the (potential) periods of bonded labor, deportation and legalization probabilities in the host countries, work place inspections, penalties for

employers etc. Similarly, it would be useful to know more about the different employment characteristics in host countries of migrants coming from different countries.^v

Distinctions between smuggling and trafficking

Throughout the paper we have used a clear distinction between smuggling and trafficking. The terms have, however, been used interchangeably by some researchers and practitioners. A lack of consensus on the use of the terms complicates the analysis of these activities, (see Salt and Hogarth in Laczko and Thompson, 2000: 18-23). However, recent efforts to create legal instruments to fight against human smuggling and trafficking have helped in providing a much clearer distinction between these activities. The widespread definition of smuggling versus trafficking that is based on whether or not migrants are coerced into a relationship or not, is useful for building theoretical frameworks. However, Tamura's (2010) analysis shows that the frontiers between the concepts are not that clear cut. Even when migrants are not coerced to enter the relationship, they may nonetheless be exploited as post. Moreover, they may be aware of this *ex ante* and may still enter the relationship. Mahmoud and Trebesch (2010) use as a definition of trafficking the presence of coercion *ex ante* or *ex post* and argue that "high emigration areas are often disadvantaged... so that migrants... may be more willing to take risks, and possibly even consent to hazardous working conditions abroad", which, again, shows that the distinction between the concepts is quite fuzzy.

The problem is far-reaching not only because of the lack of conceptual clarity, but also because the data used often cannot distinguish perfectly whether a person is trafficked or smuggled. We see two sources of the problem. Traditionally, *any* migrant

who was smuggled *or* trafficked was seen as a victim. Only recently, we have got used to make the distinction necessary to investigate illicit migration with intermediaries. Policy makers and NGOs now increasingly see the difference, and it can be expected that more care will be given interviewing migrants to identify clearer smuggled from trafficked migrants.

A second, potentially harder to correct problem lies in the incentives of the migrants interviewed. As most migrants would like to stay in a host country, they have no incentives to reveal that they entered the relationship willingly, in particular, as victim protection programs and leniency programs are designed for victims of trafficking, not for the clients of smuggler intermediaries. Sampling techniques should be developed that allow more detailed investigations about the precise circumstances of a migrant's coming to a host country. In particular, retrospective questions, to legalized migrants who need not fear deportation any more, could help to find out more about whether or not migration decisions involved *ex post* and/or *ex ante* coercion, while any migrant expecting to be deported if no coercion was involved would have strong incentives not to reveal the truth. Besides retrospective questions, researchers could ask migrants whether or not they had access to people who had migrated, or, even easier, to the internet. It seems doubtful that anyone who has access to internet would not have known about some of the risks involved in migration. Notice that we are not advocating a different treatment of smuggled or trafficked migrants, but argue that identifying different types of migrants is crucial for research, and policy advice.

There is no easy solution for the problem of distinguishing smuggled from trafficked migrants, but it has serious implications. While the technology of trafficking and smuggling is quite similar, the political and moral implications are very different.

Illicit immigration has features that distinguish it from the traditional cost-benefits considerations that determine migration decisions without intermediaries, for instance in the Harris and Todaro (1970) framework. This entails kinship and friendship networks, and political dimensions, like the vulnerability to conflicts and internal displacements. Taking these dimensions into account introduce a new set of challenges to empirical work. It requires more care in designing questionnaires and in qualifying people into smuggled versus trafficked migrants, understanding their motives, expectations, strategies and constraints.

Intricate welfare issues, and policy coordination

Most of the papers we have discussed are purely positive. They investigate how increases or decreases of policies such as border enforcement, employer sanctions, deportation policies or amnesties affect the optimizing behavior of the parties involved and thus the outcomes of migration. The absence of normative analyses may be owing to the fact that positing a welfare function of a government creates three types of problems.

First, the objectives of “planners” may be manifold and, quite often, contradicting. For a broader view on the topic, see the chapter on the political economy of migration in this chapter. In respect to our topic of human smuggling, it seems that contradictions in objectives and policies are not always clear to policy makers. The analysis of Auriol and Mesnard (2012) for instance shows that the goal of reducing migrant streams and eradicating the smuggling intermediaries contradict each other, which only comes to the forefront when the market for smuggling is modeled explicitly. Similarly, Friebel and Guriev (2006) point to tradeoffs between the quality and the

quantity of illegal migrants that are far from evident. Political economy considerations may also come into play. Conservative voters tend to like a tough stance on illegal migrants, but entrepreneurs, often also constituents of conservative parties, tend to like the idea of cheap labor and labor market competition; further examples can be found in the chapter on attitudes towards immigrants. Hence, it cannot be excluded that governments may take contradictory policy measures, for instance tough border controls, but lax employer sanctions to please both types of constituents by the same time.

The second obstacle to the formulation of normative analyses stems from the fact that policy goals and measures are often formulated on different levels. This has horizontal aspects: different federal agencies in a given country may be unable or unwilling to coordinate. In the context of the EU, Mayer et al (2010) have investigated the problems of coordinating on a joint immigration policy. While the border states like Italy must bear much of the costs of border enforcement, they are usually not the final destination for many if he smuggled migrants, who may rather migrate further to the more attractive labor markets in say Germany or the U.K. Consequently, the core countries of the EU may not agree on the desirability of legalization campaign of the border countries, and the willingness to invest in border enforcements may be lower in the border countries than in the core. On the EU level, there are initiatives to take care of this conflict of interest, for instance, through FRONTEX. So far, the results of this type of coordination effort seem to be less than satisfactory.

The third point that makes a welfare analysis quite intricate are the moral tradeoffs involved. Unless one takes the arguably quite extreme position that only the welfare of citizens should be considered, moral tradeoffs emerge necessarily when a country tries

to protect its borders. Unless perfect enforcement of borders were available such that the phenomenon of illegal migration ceases to exist altogether, any policy involves tradeoffs with respect to smuggled and trafficked individuals. These are not only forced into humiliating conditions through the need of staying into the shadow, but many of them are deported, often into the quite dangerous condition in the homes country (see the chapter on refugee migration). It could seem morally more acceptable to deport back smuggled people who knew about the risks and took a deliberate decision, rather than trafficked people. But whether or not these can be discerned is a topic discussed above.

This short discussion is meant to suggest that a consensus what is morally sound behavior with respect to illegal migrants is very much needed, but we are far from it. Thus, government policies against illegal migration may very much be of a short-term and partial nature, reacting to pressure by various interest groups, beliefs or the media. While this justifies the positive perspective on many papers, and in-depth political economy analyses, it makes policy advice difficult, beyond the challenges because of theories with limited scope, lacking knowledge about important parameters, and fuzzy definitions of the type of migrants considered.

4. Concluding remarks

To date, the research on human smuggling consists mainly of a small number of theoretical papers. While there is some scope for improvement of the theories, the main challenges seem to lie in improving the empirical knowledge, in order to be able to adjust theories to the respectively relevant condition of home and host country pairs. A host of empirical information is available and awaits systematic use, but additional efforts should be undertaken, from economists, legal scholars, sociology and

anthropology alike to generate information that can be used for calibrations of the existing and new theories. In order to have reliable information as a basis of policy advice, new sampling techniques should be developed and care should be given to distinguish smuggling from trafficking. While smuggling and trafficking may look quite similar at first sight, both the mechanisms and the welfare implications are quite different. We also argue that a broad discussion about welfare definitions is needed to develop a normative analysis of the problem.

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ⁱ For an early attempt to sketch the economics of human smuggling and trafficking , see Schloenhardt (1999).

ⁱⁱ In the paper by Tamura (2010), discussed below, coercion and exploitation occurs, but only *ex post*.

ⁱⁱⁱ Notice that the model assumes perfect correlation between skills and wealth, an assumption that could be relaxed.

^{iv} The New Immigrant Survey is a survey of new legal immigrants. But the data set also contains migrants retrospective answers about the mode of entry in the 1990s.

^v In the context of trafficking, Akee et al (2011) have matched the existing data on trafficked migrants between countries and have tested a gravity model.