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**Intentions to Return of Clandestine Migrants:  
Comment**

*By* ODED STARK and LUKASZ BYRA

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# Intentions to Return of Clandestine Migrants: Comment

*Oded Stark and Lukasz Byra\**

## Abstract

We take issue with the reasoning of Coniglio et al. (2009) that whereas better-skilled illegal migrants will prefer to return-migrate, lower-skilled illegal migrants will not. We argue that under asymmetric information, all the illegal migrants are initially paid a wage based on the average productivity of the group of illegal migrants. The better-skilled illegal migrants thus face two “taxes:” being paid less than if they were legal, and being averaged down. Therefore, better-skilled illegal migrants can be expected to expend more effort to become legal than lower-skilled illegal migrants. And once legalized, there is no reason for the better-skilled illegal migrants to want to return to their country of origin more than the lower-skilled illegal migrants. Thus, it is the lower-skilled illegal migrants that are likely to dominate the return migration flow. We argue that in other respects too, the model of Coniglio et al. is not based on reasonable assumptions, and that even under the postulated assumptions, the model suffers from several inconsistencies. In particular, when the rate of return to savings is an increasing function of skill level, we would expect there to be few better-skilled individuals among illegal migrants in the first place. Also, an obvious distinction between savers and borrowers is ignored.

## 1. Introduction

In a recent issue of this *Review*, Coniglio et al. (2009) sought to explain why better-skilled illegal migrants will find it optimal to return to their country of origin, whereas lower-skilled illegal migrants will not. Employing a simple two-period life-cycle framework with individuals who are heterogeneous with respect to their skill level, and where illegality causes “skill waste” by reducing a migrant’s rate of return to skill (a form of taxation on earnings), an illegal migrant faces the following decision at the end of the first period of his life: to stay put and face a fixed positive probability of legalization, or to return home. As modeled, the outcome of this decision hinges crucially on a presumption that not only the individuals’ earnings, but also the rate of return to the savings that the individuals accumulate during the first period of their life depend positively on skill level. These savings cannot be put to full use in the host country because of the migrant’s illegal status, and thus are “taxed” in a similar way to the migrants’ earnings. Coniglio et al. maintain that better-skilled illegal migrants find it optimal to return to their home country, where they can use their savings to undertake an entrepreneurial activity, which in turn provides them with a higher rate of return to their savings than they would have received had they remained in the host country. The model appears to constitute an attempt

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\* Stark (corresponding author): Universities of Bonn, Klagenfurt, and Vienna; Warsaw University; Warsaw School of Economics. Address for correspondence: Oded Stark, ZEF, University of Bonn, Walter-Flex-Strasse 3, D-53113 Bonn, Germany. E-mail: ostark@uni-bonn.de. Byra: Faculty of Economic Sciences, Warsaw University, Długa Street 44/50, 00-241 Warsaw, Poland. E-mail: lbyra@wne.uw.edu.pl. The support of Georgetown University Edmund A. Walsh School of Foreign Service in Qatar is gratefully acknowledged.

to justify analytically empirical results that are claimed to support the predictions of the model.

A study of return migration is appropriate and helpful, especially when return is not due to an exogenous reversal of the wage differential between destination and origin. It is particularly revealing to pursue an inquiry that attributes a decision to return to broader reasons than success or failure. In this comment we argue, however, that the study by Coniglio et al. is less useful than anticipated. For example, had Coniglio et al. resorted appropriately to considerations of informational asymmetry, their results would have changed qualitatively. To wit, under asymmetric information, all the illegal migrants are initially paid a wage based on the average productivity of the group of illegal migrants. The better-skilled illegal migrants thus face two “taxes:” being paid less than if they were legal, and being averaged down. Therefore, better-skilled illegal migrants can be expected to expend more effort to become legal than lower-skilled illegal migrants. And once legalized, there is no reason for the better-skilled illegal migrants to want to return to their country of origin more than the lower-skilled illegal migrants; when the averaging is gone, the lower-skilled illegal migrants will have less of a gain coming their way from continued migration. Thus, it is the lower-skilled illegal migrants who are likely to dominate the return migration flow. In other respects too, the model of Coniglio et al. is not based on reasonable assumptions. And even under the postulated assumptions, the model suffers from several inconsistencies. In particular, when the rate of return to savings is an increasing function of skill level, we would expect there to be few better-skilled individuals among illegal migrants in the first place. Also, an obvious distinction between savers and borrowers is ignored. As we intimate below, the skills of the illegal migrants should not really matter in determining the returns to their savings. The claim of Coniglio et al. to the contrary notwithstanding, we also show why a positive correlation between the probability of legalization and a migrant’s skill level may invalidate the model’s key result.

## 2. An Outline of the Model of Coniglio et al.

Individuals (illegal migrants), who are heterogeneous with respect to their skill level, live for two periods and derive utility from consumption in each period. Specifically,

$$U = \ln(C_1) + \delta \ln(C_2), \quad (1)$$

where  $C_1$  and  $C_2$  are consumption in the first and second period, respectively, and  $\delta$  is a discount factor. Illegal migrants are already in the host country,  $B$ , and earn, in the first period,

$$w_1 = a\tau w^B,$$

where  $w^B$  is  $B$ ’s mean wage,  $a \in [\underline{a}, \bar{a}]$  is the individual’s skill level, and  $\tau \in (0,1]$  captures the magnitude of the skill waste associated with illegal migrant status. The individual’s income in period 2 depends on his decision of whether to stay in  $B$ , or to return to his home country,  $A$ . If he returns, his second-period earnings are:

$$w_2^R = aw^A,$$

where  $w^A$  is the mean wage in  $A$ . If the illegal migrant stays in the host country, he will face a positive probability of obtaining legal status, and thus of fully exploiting his skills in the labor market in  $B$ , in which case his *expected* second-period earnings will be given by

$$w_2^{NR} = haw^B,$$

where  $h \equiv \gamma + (1 - \gamma)\tau$ , and where  $\gamma$  stands for the probability of obtaining legal status. Also,  $\gamma$  is assumed to be independent of the individual's skill level.

Finally, it is assumed that the rate of return to savings accumulated from first-period earnings depends on skill, and on the illegal / legal status. The latter dependency is explained by the fact that illegal migrants have limited access to the host country's markets and institutions to allow them to reap full benefits from their savings. The former dependency is explained by noting that the savings of illegal migrants are likely to be put to use in entrepreneurial activities where the rate of return depends on skill. Assuming that the nominal interest rate is the same in the two countries,  $R^A = R^B = R \equiv (1 + r)$ , we get that the rate of return to savings is  $aR$  if an individual returns to his home country, and  $a\tau R$  if he stays in the host country.

Thus, the expected present value of the lifetime income of an illegal migrant who returns to his home country is

$$W^R = a\tau w^B + \frac{1}{aR}aw^A, \quad (2)$$

whereas the expected present value of the lifetime income of an illegal migrant who remains in the host country is

$$W^{NR} = a\tau w^B + \frac{1}{a\tau R}haw^B. \quad (3)$$

An illegal migrant maximizes (1) subject to the intertemporal budget constraint

$$C_1 + \frac{1}{aR}C_2 = W^R \quad (4)$$

if he were to return to his home country, and subject to the intertemporal budget constraint

$$C_1 + \frac{1}{a\tau R}C_2 = W^{NR} \quad (5)$$

if he were to remain in the host country. He then compares his optimal consumption bundle subject to (4) with the optimal consumption bundle subject to (5). If (1) subject to (4) yields a higher utility than (1) subject to (5), the migrant returns to his home country, and if the opposite holds, he does not.

It is then argued that, under some range of the values of the parameters, there is an individual characterized by skill level  $a = a^*$  who is indifferent between returning to his home country and staying in the host country: individuals with skill level  $a < a^*$  stay, individuals with skill level  $a > a^*$  return. This result follows from the assumption that the rate of return to savings is determined both by the individual's skill level, and by his illegal / legal status.

### 3. A Critique

#### *General Concerns*

Imagine that a cloud associated with illegal status is informational asymmetry concerning a migrant's true skill level: whereas their skills are perfectly known to the migrants themselves, employers in the host country are aware only of the skill distribution of the illegal migrants, and thus they cannot match their wage payments with individual characteristics, at least not to begin with. Consequently, employers pay a uniform wage to all illegal migrants, based on the average skill level of the group. In this setting, asymmetric information penalizes the better-skilled illegal migrants, and rewards the lower-skilled illegal migrants. Two scenarios could then be considered: (a) During the first period, an employer observes the performance of each of his migrant employees. Since better-skilled individuals are characterized by higher productivity, and lower-skilled workers by lower productivity than the average, the employer will learn the true skill level of his employees and, in the subsequent period, will be able to match individual skills with corresponding wage payments. Thus, even if to begin with all the illegal migrants are employed in a similar or in the same occupation, true skill levels will unravel over time as a natural by-product of the employment relationship; and then, employers will want to retain skilled workers more than unskilled ones. Consequently, the employers are likely to be inclined to help the former more than the latter to become legal. (b) The employers cannot decipher the true skill level of individual employees. But then, it is in the interest of an illegal skilled migrant worker to signal to his employer his true skill level. The very effort to become legal can be seen as a form of signaling, and we should expect the better-skilled illegal migrant workers to invest in signaling that reveals their true, individual skill level, and the lower-skilled illegal migrant workers not to. In each of these two scenarios, the adjustment associated with separating the better-skilled workers from the lower-skilled workers results in the lower-skilled workers facing lower second-period earnings, and the better-skilled workers enjoying higher second-period earnings. Consequently, the better-skilled illegal migrants will be less likely than the lower-skilled illegal migrants to return to the home country in the second period.<sup>1</sup>

Thus, if illegal migrants do not elect to return because of a boost in their earnings, will they do so because the rate of return to their savings is higher at home than in the host country? Although it seems reasonable that when the probability of securing legal status is sufficiently low *some* individuals will be so inclined, could it be the case that these very individuals are the better-skilled illegal migrants? In support of such a possibility, Coniglio et al. cite a study by McCormick and Wahba (2001). However, that study seems to be of little help because it refers to legal migrants. McCormick and Wahba find that for literate (equivalent of skilled) returnees, skill acquisition overseas matters for starting an entrepreneurial activity, whereas the opposite holds for illiterate (equivalent of unskilled) returnees. The explanation is that illiterate (unskilled) migrants are employed in occupations characterized by little opportunity for learning. However, and along the lines of the reasoning of Coniglio et al., skilled illegal migrants work in similar occupations to unskilled illegal migrants, since they cannot match their skills with fitting occupations due to that same illegal status. Thus, the skilled illegal migrants encounter few learning opportunities, and they do not return to their home country equipped with amplified knowledge that is conducive to starting entrepreneurial activities. This reasoning should translate into an observation

that when it comes to launching an entrepreneurial activity by (former) illegal migrants, skills matter little.

Starting the analysis with the migrants already in the host country, Coniglio et al. sidestep dealing with the decision of whether or not to migrate illegally to the host country to begin with. In the context of the model developed by Coniglio et al., it seems appropriate to ask why a would-be migrant does not take a loan to start an entrepreneurial activity in the first period of his life. Since in the model of Coniglio et al. an individual's skill level is common knowledge in both his home country and in the host country (after all, both foreign and domestic employers pay wages according to the individuals' skill level, though their wages are "taxed" on account of their illegal presence in the host country), the selection of applicants for the receipt of loans will presumably depend on their skill level because, as Coniglio et al. assume, the returns to entrepreneurial activity depend positively on the individual's skill level. If in the home country the probability of receipt of a bank loan is an increasing function of skill level, and if all individuals aspire to obtain a loan to start businesses, skilled individuals will be little represented in the illegal migration flow; and in the extreme, they will not resort to illegal migration at all.

#### *Inconsistencies Within the Model of Coniglio et al.*

Coniglio et al. treat the probability of obtaining legal status as a parameter. This assumption impinges importantly on their results. Consider an individual who is indifferent between staying in the host country and returning to his home country. Adopting the notation of Coniglio et al., we denote this individual as having skill level  $a = a^*$ . For this individual,  $U^{NR}(C_1^{NR}(a^*), C_2^{NR}(a^*)) = U^R(C_1^R(a^*), C_2^R(a^*))$ . It can be shown that when the probability of legalization is independent of skill level, namely when  $\gamma'(a) = 0$ ,  $\frac{\partial U^{NR}}{\partial a} < \frac{\partial U^R}{\partial a}$ . This indicates that for skill levels  $a > a^*$  the optimal decision is to return. However, when the probability of legalization is an increasing function of skill level, namely when  $\gamma'(a) > 0$ , the prediction of return may not hold.<sup>2</sup> In particular, a sufficiently high  $\gamma'(a)$  translates into the opposite result, which turns the model on its head. And, as already intimated, we consider it to be the case that the probability of securing legal status increases with skill level.

Considering the issue of saving vs. borrowing, two problems arise. Leaving aside the "taxation" of earnings on account of the illegal status, the individual's per-period earnings are  $aw^j$ , where  $w^j$  is the mean wage in country  $j$ ,  $j \in \{A, B\}$ . In this context, in order for some (least-skilled) individuals to earn less than the mean wage, there must be some (least-skilled) individuals characterized by skill level  $a \in (0, 1)$ . Since Coniglio et al. assume that the returns to savings are  $aR$ , the presence of individuals with skill level less than unity means that these individuals lose if they save (provided that  $a < 1/R$ ). Conversely, it means that if they borrow to increase consumption in the first period with the intention of repaying the debt in the second period, they will have to repay only  $aR < 1$  for each unit borrowed. This is unreasonable.

Furthermore, Coniglio et al. explicitly assume that migrants save rather than borrow. The issue of saving vs. borrowing is however endogenous, and *ex ante* we do not know whether an individual will be a saver or a borrower. Consider an individual who decides to remain in the host country. As indicated by the discount factor  $\delta < 1$ , he values second-period consumption less than first-period consumption. Moreover, his expected earnings in the second period are higher than his earnings in the first

period,  $w_1 < w_2^{NR}$ . Thus, it seems reasonable that such an individual will choose to transfer some of his second-period earnings to increase his first-period consumption, and thus become a borrower rather than a saver. Indeed, the optimization problem of a non-returnee requires that

$$C_2 = \delta a \tau R C_1,$$

which implies, bearing in mind that there are some (least-skilled) individuals characterized by skill level  $a < 1$ , that  $C_1 > C_2$  may well hold and thus, an individual may well be a borrower.

The problems listed above imply that if we were to assume that the individuals' rate of return to savings depends on the individuals' skill level, then the budget constraints (4) and (5) are not specified reasonably. In particular, we should have that borrowers pay  $R$  rather than  $aR$  for each unit borrowed, and that the rate of return to savings of the individuals characterized by skill level  $a < 1$  should be  $R$  rather than  $aR$ . Consequently, more than two budget constraints will be needed.

Finally, Coniglio et al. make a mistake that impinges quantitatively, although not qualitatively, on their results. They assume that whereas the rate of return is the same for both countries and is equal to  $R \equiv (1 + r)$ , the actual returns to savings are lower in the host country due to the "taxation" of illegal migrants, and thus are equal to  $\tau R$ , where  $\tau \in (0, 1]$ . However, Coniglio et al. also assume that there is a positive probability of legalization,  $\gamma$ . This implies that the expected returns to savings in the host country are  $[\gamma + (1 - \gamma)\tau]R > \tau R$ .

#### 4. Conclusion

The model proposed by Coniglio et al. is not an appealing tool for addressing the interesting issue of the return migration of illegal migrants. When illegality is associated with asymmetric information rather than only with the "taxation" of earnings and the rate of return to savings, the results of Coniglio et al. no longer hold. Treating the rate of return to savings as depending on the skill level of an illegal migrant is a stretch, and raises the question of why better-skilled individuals migrate in the first place. Furthermore, even within the model's framework, it is easy to see that the results obtained by Coniglio et al. can well be turned around once we allow for a positive correlation between the probability of legalization and skill level, which we contend better reflects the underlying reality. Also, Coniglio et al. explicitly assume that individuals are savers rather than borrowers, and the model itself contains inconsistencies such as that the rate of return to savings depends so strongly on the individual's level of skill as to make the debt of the least able borrowers shrink over time.

#### References

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## Notes

1. Similar conclusions follow when we consider a segmented labor market in which illegal migrants are confined to occupations where productivity, and consequently wages, do not depend on skill level (as, for example, in farm work where a mechanical engineer is as productive at picking tomatoes as an illiterate worker). In such a setting, we would expect an illegal, better-skilled worker to exert more effort to secure legal status than an illegal, lower-skilled worker. After all, once legalized, the lower-skilled worker is still likely to be confined to the same occupation (and thus to the same wage rate) as before, whereas the better-skilled worker will be able to change his occupation, allowing him to make better use of his skills. In addition, if illegality as such is associated with a “tax” on earnings, both the better-skilled and the lower-skilled illegal migrants will benefit from legal status, and thus both could be expected to seek it. However, better-skilled migrants should be expected to invest more in becoming legal because of the additional gain from being able to change their occupation.

2. For  $\gamma'(a) = 0$ , we have that  $\frac{\partial U^{NR}}{\partial a} < \frac{\partial U^R}{\partial a}$  if  $\tau w^A < h w^B$ , which is always true. However, for  $\gamma'(a) > 0$  we have that  $\frac{\partial U^{NR}}{\partial a} < \frac{\partial U^R}{\partial a}$  only if  $\tau w^A + h'(a) \left( a w^B + \frac{1}{\tau R} w^A \right) < h(a) w^B$ , which may or may not hold, depending on the magnitude of  $h'(a)$ .