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Three Essays on Illegal and Temporary Migration

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Contents

1 Introduction

According to the International Organization for Migration (IOM), there are an estimated 191 million migrants worldwide in 2005, up from 176 million in 2000. Migrants comprise 3.0 per cent of the global population. In 2006, remittance flows are estimated to have exceeded USD 276 billion worldwide, USD 206 billion of which went to developing countries. There are roughly 30 to 40 million unauthorized migrants worldwide, comprising around 15 to 20 percent of the world's immigrant stock. In 2006, there were 24.5 million internally displaced persons (IDPs) in at least 52 countries as a result of conflict compared to 23.7 million IDPs in 50 countries the year before. In 2006, the global number of refugees reached an estimated 9.9 million persons.

These figures suggest that international migration is a complex phenomenon, the dynamics of which are increasingly becoming a crucial policy topic worldwide. Actually, one of the Western governments' primary goals is to control such a constant and dynamic phenomenon, diversifying policy intervention in order to maximize its potential benefits and minimize related costs.

My dissertation focuses on two of the most important aspects concerning migration, from a host country point of view: undocumented immigration on the one hand, and temporary versus permanent immigration on the other hand. The thread of my work is the issue of immigrants integration in the destination country. In particular, I deal with integration in labor market, in consumption patterns and in natives' sentiments towards immigrants.

In the first chapter, the host country chooses the optimal migration policy to control undocumented immigrants flows. I consider a two-sector model: in the first sector a wage-setting mechanism exists, because of the existance of a labor union. In the second sector there is perfect competition. The labor union prefers an enforcement policy, because its members could earn a higher wage if low-wage labor force is prevented from entering the country. In particular, labor union prefers *domestic* enforcement to *border* enforcement, because the first one is more effective since it punishes both the undocumented immigrants detected in the host country and the employers detected employing illegal workers. Finally, I assume that an amnesty is considered by the Government to regularize all illegal immigrants already working in the country. I show that if the labor demand is unelastic enough, the labor union benefit from from an amnesty, because it has a gain in terms of bargaining power with small losses in terms of wage.

In chapter 2, I use data collected by the International Social Survey Pro-

gramme (ISSP) to compare the drivers of individual attitudes towards *overall* migration and towards *illegal* migration across countries. The 2003 National Identity module contains responses to questions on social, economic and political topics concerning both legal and illegal migration. I'm interesting in studying this cross-country data-set from three different points of view: labor market channel, welfare-state channel and non-economic channel. I found that the labor market channel is a decisive factor in shaping attitudes towards both overall and illegal immigration, while the welfare state channel is relevant only for overall immigration. The reason is that undocumented immigrants are perceived as competitors by unskilled native workers and as complements by skilled native workers. Moreover, illegal migrants have no access to welfare-state, unlike the legal ones. Finally, non-economic determinants, such as the impact of immigration on crime rates, have a larger effect on immigration preferences when I look at illegal immigration.

The last chapter deals with the effects of immigrants integration policies on destination country, focusing on consumption as a signal for assimilation. I develop a dynamic model in which immigrants can choose to stay in the host country permanently or to return to the country of origin at the beginning of period 2. Immigrants decide to stay if their disutility from effort of assimilation is low enough. I find that, in equilibrium, permanent immigrants spend more effort to integrate and choose an optimal level of labor and consumption larger than temporary migrants. Since permanent migrants contribute to stimulate demand, thus increasing the welfare of natives, the social planner will implement integration policies to reduce the migrants' disutility from assimilation and to convince them to stay permanently. This could be seen as a further prove that, under some condition, immigration can be welfare-improving for destination countries.

2 Illegal Immigration: Should Labor Unions Favor Amnesties?

Abstract

We develop a general framework in which different policies about illegal migration are examined. We consider a partially unionized economy and show how the presence of both legal and illegal immigrants affects the different sectors. We explicitly analyze the union's behaviour under alternative immigration policies and show the interactions among sectors due to the presence of the union. Our results suggest that the labor unions benefit from a strict enforcement policy but, once undocumented immigrants have entered the country, they can prefer the legalization of illegals workers.

JEL Classification: F22; J31; J51; J61
Keywords: illegal immigrants, migration policy, labor union, amnesty

2.1 Introduction

Illegal immigration[1] is one of the most important causes for concern among citizens in the Western World. Recently, ever increasing attention has been paid to the economic impact of immigration on the resident population. A growing body of literature focuses on *legal* immigration, analyzing the effects it produces on the destination country, depending on the skills mix of migrants and natives and on the characteristics of the receiving economy. But when we look at *illegal* immigration, many difficulties arise, mostly because of the lack of comparable data. The exact size of illegal stocks and flows is difficult to establish[2]: most sources agree that 4-7 million irregular immigrants live in the European Union, representing 5% of the overall immigrant population and around 1% of the overall population[3]. Approximately 11-12 million illegal aliens are estimated to live in the United States, most of them coming from Mexico[4].

Although the lack of data limits our understanding of its impact on the social, political and economic level, starting from Ethier's (86) pioneering study, economic research has produced a significant body of theoretical analysis on the impact of undocumented migrants on host countries[5].

Most of the literature on illegal migration focuses on the welfare effects of immigrants in the destination country, being a cause for great concern for public opinion. In fact it's widely believed that illegal immigrants represent a burden for the society in destination country, at least from the point of view of public expenditure. They don't pay taxes but use public services[6]. Moreover they are often involved in criminal activities[7] and their presence can be seen as a signal that the government doesn't enforce the existing law; finally the border patrol

[1] According to Pew Research Center, We define *illegal immigrant* a person who lives in a country but is not a citizen of that country, has not been admitted for permanent residence and is not in a set of specific authorized temporary statuses permitting longer-term residence and work (Passel 2006).

[2] See Bean et al. for a survey of estimating flows and stock of migrant population

[3] See: Duvell, F. 2006. Illegal Immigration in Europe. Houndmills: Palgrave Macmillan.

[4] http://www.cis.org/

[5] Bond & Chen (1987); Tenorio & Bucci (1996); Djajic (1987); Chiswick (1988); Djajic (1997); Djajic (1999); Yoshida (2000) and Yoshida & Woodland (2005).

[6] Camarota (2004) shows that illegal immigrants create a net fiscal deficit because of their low education levels and resulting low incomes and tax payments, not because of their legal status or heavy use of social services. He finds also that if illegal aliens were given amnesty and began to pay taxes and use services like legal immigants with the same education levels, the estimated annual net fiscal deficit would increase because the tax payments would be not enough to offset the increase in costs.

[7] In a very recent paper, Bell et al. (2010) examine the relationship between immigration and crime, finding that there is no observable effect and that immigrant arrest rates are not different to natives.

activities are very resource-consuming but visibly uneffective, if the number of undocumented entries continues to increase.

On the other hand, illegal immigrants, working for illegally low wages, produce goods and services that otherwise would be unproduced, or be produced at greater costs; moreover irregular migrants often are employed in very specific labour market niches where local workers are not willing to work (for example housecleaning or care for elderlies); finally, they exert more effort than legal workers, fearing to be denounced and expelled. As a result, different social groups have opposite interests over immigration policy: labor unions prefer strict border and interior enforcement, in order to protect wage and employment levels, while business groups lobby in favor of open borders and no domestic enforcement.

As a result, the policies concerning immigration are often adjusted according to economic evaluations. All governments in power state that the control of national borders is one of the main goals of the immigration policy and promise a tight hand against unauthorized entries and stays. Despite the official announcements, the policy makers' position on undocumented migration is ambiguous. Illegal immigrants are present in most countries and visibly work in a lot of economic sectors: agriculture, apparel, construction and in service sectors as restaurant, housecleaning, child care and elder care.

Hanson and Spilimbergo (2001) state that enforcement policies are ineffective by choice: they analyse the correlation between sectoral shocks and illegal immigration policy in the U.S., finding that the enforcement policies tend to be relaxed when the demand for undocumented workers is high.

In a recent paper Facchini et al. (2007) show empirically that interest groups play a key role in shaping immigration in selected sectors. They link migration policy outcomes to the lobbying activities of pro and anti-immigration pressure groups.

In this paper we develop a general framework to examine different policies on illegal migration. Considering a partially unionized economy, we first show how the presence of both legal and illegal immigrants affects each sector. Then, we explicitly analyze the union's behaviour facing alternative immigration policies and show the interactions among sectors due to the presence of the union. Our results suggest that labor unions benefit from a strict enforcement policy but, once undocumented immigrants have been entered the country, they can prefer the legalization of illegals workers. An amnesty produces effects that are opposite to those obtained with the enforcement policy: both of them affect

positively the union's utility, but in a different way and magnitude. On the one hand, stricter enforcement has no effects on union membership and a positive effect on regular workers' wage; on the other hand an amnesty has a positive effect on membership and, consequently, on the union's bargaining power and the local workers' wage, but reduces the legal workers' wage in the non-union sector. This holds at least in the short-run, when the labor demand function is sufficiently inelastic.

Our work contributes to a growing literature on illegal immigration in several ways: first, the hypothesis of presence of labor union allows us to capture the labor-market rigidities of the modern economies (such as minimum wage or barrier to entry). As a consequence, we can show in a more complete analysis the consequences of migration policy on the labor market. Secondly, I assume the presence of both legal and illegal immigration, showing how the former affects the latter's labor market and viceversa. Finally, I consider two possible migration policies: border and/or domestic enforcement on the one hand and amnesty on the other hand, analyzing the effects produced by each policy on a labor market with rigidities.

The paper is organized as follows. In section 2 the general framework is presented: we describe the unionized sector and the competitive sector; then we show the solution. The third section contains the comparative static results, showing how changes in the enforcement policies affect the equilibrium. Then we model the social planner's maximization problem and determine the optimal level of enforcement. In the section 5 we assume that an amnesty occurs as a shock and study the effect on both sectors. Finally brief conclusions are presented.

2.2 The Model

Let us consider a small open economy producing only one good and consisting of 2 sectors: the union sector (U), where a labor union (having a bargaining power α^h) is able to set a minimum wage (w^M) higher than the equilibrium level, and the non-union sector (NU), where the union has a lower barganing power (α^l) and the minimum wage doesn't exist. In the former there is unemployment, while the latter works as a perfectly competitive labor market. The

skilled workers own the firms in both sectors; so they are the employers and maximize profits.

Because of existing wage differentials across countries, a number of immigrants desire to enter this economy and work as perfect substitutes for local unskilled workers, but only those immigrants with a work permit are authorized to enter the country, while the others try to cross the border illegally. Consequently the total labor force is divided into three types of agents: local workers (L), regular immigrants (R) and illegal immigrants (I). The number R of regular immigrants admitted in the country is the sum of the regular migrants employed in the union sector and those employed in the non-union sector: $R = R^U + R^{NU}$.

Existing immigration policies are sector-specific: the western Government use occupational shortages as criteria to favor immigration[8]. For example, in the United Kingdom, a sectors-based migrant worker scheme was introduced in 2002 for low-skill jobs in the sectors of hotels and food manufacturing[9]; in Australia, potential immigrants in required occupations receive extra points in the immigrant selection process[10]. Hence, in this paper we assume that migration and *illegal* migration are sector-specific: the Western countries may wish to attract cheap foreign workers to work in low productivity sectors, "which tipically involve low wages, temporary jobs, and where working conditions harsh, unpleasant, often unsafe, and lack compliance with labor legislation'' as Djajic (1997) asserts.

As a result, illegal immigrants work only in the non-union sector, but the regular workers (local workers and legal immigrants) can choose the sector where they want to look for a job. In order to semplify the framework, I assume that the employers in the union sector prefer to hire local workers at first, and then some regular immigrants (R^U) if there is excess labor demand. According to a closed-shop arrangement, firms are allowed to hire only labor union members so all legal workers employed in both the unionized and non unionized sectors join the union. Existing union regulations require that illegal immigrants are the only workers that cannot join it.

As in Ethier (1986), the policy maker devotes an amount of resources to border enforcement (E) and domestic enforcement (D)[11]. The former affects

[8] OECD (2006)
[9] Institute for Employment Studies (2006).
[10] Miller (1999)
[11] For example, Hanson (2006) asserts that the U.S. Government spent $2.2 billion on border enforcement in 2005. In terms of annual Border Patrol Officer hours, they increased

illegal aliens only while attempting to cross the frontier, the latter consists in monitoring the hiring practices by firms, impling an expected cost also for the employer.

Since union membership consists only of the regular labor force, the utility function of the labor union depends on the wage level and on the total employment level N:

$$W = N u(x)$$

where: $N = L + R$ is the number of union members working in both sectors, $x^j = x(w^j)$ is the legal workers' consumption function depending on the wage w^j with $j = L, R$, $u(x)$ is a generic utility function such that: $u' > 0$, $u'' < 0$. We can use the indirect utility function of income $V(w^j) = u(x(w^j))$, with $V'>0$ and $V''<0$. Hence:

$$W = NV(w^j) \tag{1}$$

All the workers in this sector earn the minimum wage (exogenous in our model), that is a function of the union's bargaining power ($w^M = w^M(\alpha)$, such that $w^M_\alpha > 0$ and $w^M_{\alpha\alpha} < 0$, where $\alpha = \alpha(N)$ such that $\alpha_N > 0$ and $\alpha_{NN} < 0$).

Normalizing the good price to unity, in the unionized sector the short run output depends only on labor input:

$$Q^U = F(N^U) \implies F'(N^U) = w^M \implies F_N = w^M \tag{2}$$

Equation (2) shows the labor demand in the unionized sector.

In the NU sector the employers can choose to hire local workers, regular immigrants or illegal immigrants. Since all the local workers are employed in the union sector, only immigrants apply for a job in the NU sector. The firms pay a competitive wage (w^R) to regular migrants and a lower wage (w^I) to illegal migrants. The reason for this is that it's forbidden by law to hire immigrants lacking a work permit, and as a result an employer detected employing illegal workers is punished with a fine[12] $\kappa = \kappa(I)$, with $\kappa(0) = 0$, $\kappa'(I) = k_I > 0$, $\kappa''(I) = k_{II} > 0$[13]. The probability of being caught employing undocumented workers depends on the amount of resources devoted by the

enormously in the 1990s, rising from 2.5 million in 1994 to 9.8 million in 2001.

[12] I assume that this fine summarizes the whole loss for the employer, including time and cost spent in searching and training both the former and the new worker.

[13] Usually the actual fine to be paid is constant, but the total loss (as defined in the previous footnote) caused by the apprehension of the marginal illegal worker increases. Finally, the

policy maker to domestic enforcement (D) and on the numbers of illegal workers hired[14]. Therefore an employer is punished with a probability $p = p(D, I)$, such that $p(I = 0) = 0$, $p'(I) = p_I > 0$, $p''(I) = p_{II} > 0$ $p(D = 0) = 0$, $p'(D) = p_D > 0$, $p''(D) = p_{DD} < 0$, $p_{ID} > 0$. The total expected cost of hiring an illegal immigrant includes the wage (w^I) and the expected penalty pk.

The production function of a risk-neutral firm is:

$$Q^{NU} = f(N^{NU}) \tag{3}$$

Where:

$$N^{NU} = R^{NU} + I \tag{4}$$

with $R^{NU} = R - R^U =$ regular migrants employed in the non-union sector.

The firm's profit function is:

$$\Pi^{NU} = f(N^{NU}) - R^{NU}w^R - Iw^I - pk \tag{5}$$

By maximizing this function we obtain the optimal number of N^{NU} and I, taking equation (4) into account and recalling that regular workers and illegal immigrants are perfect substitutes. In equilibrium, a firm hires workers as long as their marginal product is equal to their marginal cost:

$$f_N = w^R \tag{6}$$

$$f_N = w^I + pk_I + p_I k \tag{7}$$

This means that from the employer's point of view the wage for illegal immigrants (w^I) is lower than their marginal product and is decreasing in the number of illegals and in the amount of resources devoted to the enforcement.

In equilibrium, employers hire both regular and illegal immigrants if their expected costs are equal:

$$w^R = w^I + pk_I + p_I k \tag{8}$$

financial cost of the penalty increases as the fine increases (see Epstein and Heizler-Cohen, 2007)

[14] We assume that if a firm hires more illegal immigrants, it's more likely to be located and detected by the authority.

As long as the cost of hiring illegal workers is lower than w_R, the employer employs I; afterwards, regular workers are preferred.

Note that the equation $w^I = w^R - pk_I - p_I k$ implies that $\frac{\partial w^I}{\partial I} < 0$.

Immigrants are risk-neutral, so their decisions depend only on the expected wage in each country. In particular, they are willing to work if the expected wage in the host country is at least equal to the wage in the home country w^h.

In the union sector immigrants compare their reservation wage with the minimum wage, considering the cost of migration, the cost of settling in a foreign country and the probability not to find a job:

$$t(w^h - 2c) + (1-t)(w^M - c - \gamma) \geq w^h \Longrightarrow$$

$$\Longrightarrow w^M \geq w^h + \frac{1+t}{1-t}c + \gamma \tag{9}$$

Where t is the probability to be jobless and $(1-t)$ is the probability to find a job. The cost of migration c includes the financial costs of migrating and is costant across migrants. It has to be paid every time they move across countries. Therefore, if an immigrant looking for a job in the unionized sector is unemployed, he has to return to the country of origin, where his reservation wage is w^h, net of twice the cost of migration c. If he finds a job in the union sector, he earns the minimum wage but he has to substain a cost γ of settling in the destination country, as well as the cost of migrating once. Hence, he will stay if the benefit of working in the union sector is at least equal to the benefit of going back to the source country.

Similarly, in the NU sector immigrants compare the potential wage with their reservation wage. So they are willing to work as regular workers if:

$$w^R - c - \gamma \geq w^h \Rightarrow w^R \geq w^h + c + \gamma \tag{10}$$

Furthermore, accepting to work as undocumented immigrants, they have to pay a penalty λ if detected in the host country, which can be interpreted as representing, for instance, the distress for being expelled. This happens with a probability $s = s(D, E)$ that depends on both border and domestic enforcement, with $s(D=0) = 0, s'(D) = s_D > 0, s''(D) = s_{DD} < 0$ and $s(E=0) = 0, s'(E) = s_E > 0, s''(E) = s_{EE} < 0$

$$s(w^h - 2c - \lambda) + (1-s)(w^I - c - \gamma) \geq w^h \Longrightarrow$$

$$\Longrightarrow w^I \geq w^h + \frac{1+s}{1-s}c + \frac{s}{1-s}\lambda + \gamma \tag{11}$$

Again, he will stay if the benefit of working as undocumented is at least equal to the benefit of going back to the source country.

Equalizing the demand and the supply functions of I (equations 8 and 11), we obtain the number of illegal migrants employed in the host country in equilibrium. Therefore, given an enforcement budget (D, E) the optimal level of I is given by:

$$s(D,E) = \frac{pk_I + p_I k}{pk_I + p_I k - 2c - \lambda} \tag{12}$$

The equations (4), (6), (8), (11) allow us to determine the variables we are interested in: w^I, w^R, I, N^{NU}.

2.3 Comparative Statics

Now we can study how these variables are affected by a change in the government's enforcement policy, deriving the following comparative static results:

With respect to E:

$$\frac{dw^I}{dE} = \frac{s_E}{(1-s)^2}(2c+\lambda) > 0 \tag{13}$$

$$\frac{dI}{dE} = \frac{\frac{s_E}{(1-s)^2}(2c+\lambda)}{-pk_{II} - p_{II}k + f_{NN}} < 0 \tag{14}$$

$$\frac{dw^R}{dE} = \frac{f_{NN}\frac{s_E}{(1-s)^2}(2c+\lambda)}{-pk_{II} - p_{II}k + f_{NN}} > 0 \tag{15}$$

$$\frac{dN^{NU}}{dE} = \frac{\frac{s_E}{(1-s)^2}(2c+\lambda)}{-pk_{II} - p_{II}k + f_{NN}} < 0 \tag{16}$$

If the border enforcement (E) increases, the probability (s) to be caught rises for an illegal immigrant. In this case w^I rises as well, because an immigrant requires a higher wage to come to the host country as an illegal worker, in order to be compensated for the higher risk. For this reason in the non-union sector

the demand for undocumented workers decreases, and the employers are also willing to pay a higher wage to the regular workers.

With respect to D, we obtain very similar results. The only difference is that a stricter domestic enforcement directly affects the employers' behaviour:

$$\frac{dw^I}{dD} = \frac{s_D}{(1-s)^2}(2c+\lambda) > 0 \tag{17}$$

$$\frac{dI}{dD} = \frac{\left[p_D k_I + p_{ID} k + \frac{s_D}{(1-s)^2}(2c+\lambda)\right]}{-p k_{II} - p_{II} k + f_{NN}} < 0 \tag{18}$$

$$\frac{dw^R}{dD} = \frac{f_{NN}\left[p_D k_I + p_{ID} k + \frac{s_D}{(1-s)^2}(2c+\lambda)\right]}{-p k_{II} - p_{II} k + f_{NN}} > 0 \tag{19}$$

$$\frac{dN^{NU}}{dD} = \frac{\left[p_D k_I + p_{ID} k + \frac{s_D}{(1-s)^2}(2c+\lambda)\right]}{-p k_{II} - p_{II} k + f_{NN}} < 0 \tag{20}$$

Assuming border and domestic enforcement are equally effective on each variable they directly affect, it's clear that domestic enforcement produces greater effects than border enforcement, in particular on the wage of regular workers, on the number of illegal workers employed in sector NU and on the total employment in that sector. This is because the employers change more their behaviour when they face a direct risk. Nevertheless border and domestic enforcement have the same effect on the wage of undocumented immigrants.

In both cases the effect on N^{NU} is equal to the effect on I: it means that the employment of R is unaffected by a change in E or D. From (4):

$$\frac{dR}{dE} = \frac{dN^{NU}}{dE} - \frac{dI}{dE} = 0 \tag{21}$$

$$\frac{dR}{dD} = \frac{dN^{NU}}{dD} - \frac{dI}{dD} = 0 \tag{22}$$

The intuition is that tighter immigration policies make labor costs higher, reducing the level of employment.

Proposition 1: *A stricter enforcement reduces the number of illegal immigrants, producing no effect on regular employment. This is because the labor costs rise due to higher wages.*

From the labor union's point of view, the total membership doesn't change, because the decrease of N^{NU} is caused only by I. But the union's utility function is affected through the change in w^R: from (1) if the regular migrants see their wage w^R increased, their consumption $x(w^R)$ and consequently their utility $u(x^R)$ increase as well:

$$\frac{dW}{dE} = \frac{\partial W}{\partial V(w^R)} \frac{\partial V(w^R)}{\partial w^R} \frac{\partial w^R}{\partial E} > 0 \tag{23}$$

$$\frac{dW}{dD} = \frac{\partial W}{\partial V(w^R)} \frac{\partial V(w^R)}{\partial w^R} \frac{\partial w^R}{\partial D} > 0 \tag{24}$$

Finally the minimum wage prevailing in the union sector, w^M, is unaffected by the enforcement policy, because the bargaining power is a function only of total mermbership.

Consequently, the labor unions are better off when the government tightens the enforcement policy, because their members have a greater utility. In particular, unions prefer domestic enforcement to border enforcement, because of the greater change in w^R (19 vs 15).

Proposition 2: *A stricter enforcement policy increases the union' utility, because its members earn a higher wage. In particular, domestic enforcement produces a greater change in wages than border enforcement.*

2.4 The Optimal Enforcement Policy

The social planner in the host country implements an enforcement policy in order to maximize the welfare of domestic citizens. Since illegal immigrants are perfect substitutes for unskilled local workers, the labor unions demand stricter enforcement, while employers benefit from open borders. In addition to the citizens' utility, the social planner also has to take into account other social and economic elements in the social welfare function. First we consider the social cost related to the presence of undocumented workers, arising from a lot of reasons: illegal immigrants consume public goods and services without paying taxes; they are often involved in illegal activities and their presence can be seen as a signal of indulgence towards illegality. Secondly there's a social

cost arising from the unemployment, that is a direct function of the level of minimum wage. Finally, the social planner considers the financial costs of the enforcement policy. I assume that this cost is totally financed with the fines received through punishing the employers caught hiring illegal immigrants.

The social welfare function is:

$$G = \Pi^U + \Pi^{NU} + \beta_1 LV(w^M) - \beta_2 Z(w^M) - \beta_3 B(I)$$

where Π^U and Π^{NU} are the profit functions of the employers in both sectors, $LV(w^M)$ is the total utility of the native workers, $Z(w^M)$ is the social cost of unemployment in the union sector, with $Z'(w^M) > 0, Z''(w^M) > 0$ and $B(I)$ is the social cost resulting from the presence of illegal immigrants, with $B(0) = 0, B'(I) > 0, B''(I) < 0$.

If we make the profits explicit we have:

$$G = F(N^U) - w^M N^U + f(N^{NU}) - Rw^R - Iw^I - pk + \beta_1 LV(w^M) - \beta_2 Z(w^M) - \beta_3 B(I) \tag{25}$$

The social planner maximizes this function in order to determine the optimal enforcement level:

$$\max_E \quad G$$

$$s.t. \quad E + D = pk$$

By substituting the constraint into the objective function and remembering that $\frac{dN^{NU}}{dE} = \frac{dI}{dE}$, we obtain:

$$\frac{dI}{dE}(f_N - w^I - \beta_3 B_I) - 1 = R\frac{dw^R}{dE} + I\frac{dw^I}{dE} \tag{26}$$

At the optimum the variation in the utility of all citizens, deriving from a variation in the number of illegals, must be equal to the variation in the total earnings of all immigrants, due to a variation in the wage rate. So if enforcement increases, the difference between the decrease in output and the decrease in the cost of the illegals is equal to the higher wages paid by the employers to all foreign workers.

We have the same results with respect to D:

$$\frac{dI}{dD}(f_N - w^I - \beta_3 B_I) - 1 = R\frac{dw^R}{dD} + I\frac{dw^I}{dD} \tag{27}$$

Proposition 3: *A stricter enforcement policy reduces the number of illegal immigrants and the remaining migrants (regular or illegal) earn higher wages. The natives benefit from a reduction in social costs that more than offsets the loss in terms of production sustained by the employers.*

2.5 An Amnesty

In recent years there has been vigorous debate in many Western countries concerning the desiderability of granting an amnesty to unauthorized migrants. In spite of the doubtful effectiveness of the amnesty as an immigration policy tool, many governments continue to use them in order to reduce irregular immigration: in 1986 the United States regularized over 2.5 million clandestine workers as a result of the introduction of the Immigration Reform Control Act (IRCA); Italy legalized nearly 700.000 illegal aliens during the last regularization program in 2002, thus legalizing 1.4 million illegal migrants since its first amnesty in 1986. Spain granted six amnesties from 1985 to 2005 and thus legalized a total of approximately 1.2 million illegal migrants, whereas the last amnesty in 2005 alone accounted for the legalization of approximately 700.000 illegal aliens.

From the host country's government perspective, a regularization program increases tax and social security revenues and help to reduce the size of the underground economy. On the other side, social tensions can rise from encouraging further illegal immigration and from fear of an increase in the use of public services, as well as a decrease in the wages of competing workers.

The issue of immigration amnesties has been studied in depth in the literature. Epstein and Weiss (2001) argue that there exist an optimal timing for an amnesty to occur, because of the homogeneous income of illegal workers. According to Epstein and Weiss, the social costs of illegal immigration are presumably higher than the social costs of legal migration. The reason is that

illegal migrants have a higher probability of getting involved in crime either as victims or as felons. In addition a large presence of illegal migrants may be seen as a sign of uneffectiveness of the government in power. Furthermore, a large stock of not tax-paying migrants might also lower the incentive to pay taxes in parts of the legal population. Last but not least the presence of illegal aliens and their conditions might be considered as morally inhumane. However, although it appears – at a first glance – that illegal migration is supply-side driven and rejected by domestic citizens, this is not completely true. There exists a demand for illegal immigrants as well.

Karlson and Katz (2003) offer an interesting explanation for why governments on the one hand limit the influx of migrants through border enforcement and on the other hand repeatedly grant legal status by applying amnesty programs. If the government wishes to attract only illegal migrants with high ability[15], it may choose a policy mix of enforcing the border and offering the possibility of becoming legalized with a certain probability which attracts only high-skilled illegal migrants. This self-selecting process is achieved through higher expected wage income of skilled compared to unskilled migrants after legalization.

Krieger and Minter (2007) focus on the effects of unilateral policy measures in an economic union such as the EU. While the previous literature on immigration amnesties focuses on the case of a single independent legalizing country, they have expanded this analysis to the case where the legalizing country is part of a federation with little restrictions on labor and household mobility. In this setting some new aspects have to be considered. For instance, the immigration policy of the legalizing country does not only affect the welfare of its own residents but also the welfare in the fellow member states. Those countries are affected by the increased mobility of legalized migrants and therefore by a higher migratory pressure of unskilled individuals.

Let us now assume that the government decides to grant an amnesty to all illegal immigrants already working in the country, and allow them to become legal. This usually happens to reduce the increasing enforcement budget and all the other social costs from illegal immigration. After an amnesty there are no more illegals and the domestic enforcement is no longer useful.

In the non-union sector the new firm's production function is:

[15] An amnesty is likely to attract both low and high ability workers.

$$\Pi^{NU} = f(N^{NU}) - R^{NU*}w^R \tag{28}$$

After the amnesty employers hire only one type of workers, because illegal immigrants are regular and earn a wage equal to their marginal product.

Since the legal labor supply (R^{NU}) increases and the market is competitive, w^R will decrease in equilibrium. Therefore new potential immigrants are no longer encouraged to migrate in this country either legally or illegally, because the decrease of R makes the wage differential across countries lower.

Since we are in a closed-shop setting, all workers entering the legal labor market after working as illegals, must join the labor union. Therefore, as long as R^{NU*} increases, the rise of union membership in non-union sector is equal to the reduction of illegal immigrants. Moreover the larger the number of illegal immigrants before amnesty, the larger the increase of union's utility after amnesty.

Despite the decrease in w^R the union's utility increases, because the rise in union membership more than compensates the initial loss of utility. Therefore we can argue that the workers' utility decreases because of w^R, but the unions' utility increases because of R.

What happens to w^M? We assumed that the minimum wage is a function of the union's bargaining power, that depends in turn on the total union membership. If regular labor supply increases, more workers enter the union and the membership goes up. As a result, the union gains more bargaining power and becomes able to set a higher minimum wage in the union sector. But an increase in the minimum wage leads to a reduction in the employment level in the same sector. Here, the opposite of what happens in the non-union sector occurs: while the competitive wage w^R decreases because of the increasing labor supply (R^{NU}), in the unionized sector the employment level goes down because of the minimum wage pushed up by labor union. Moreover, the increase in the union membership in the non-union sector is partially compensated by the reduction in employment in the union sector.

The objective function of the union (equation 1) can be written as:

$$W = R^{NU}V(w^R) + N^UV(w^M) \tag{29}$$

The total effect of the amnesty on the union's utility is:

$$\frac{dW}{dR} = R\frac{\partial V(w^R)}{\partial w^R}\frac{\partial w}{\partial R}^R + V(w^R) + N^U\frac{\partial V(w^M)}{\partial w^M}\frac{\partial w}{\partial \alpha}^M\frac{\partial \alpha}{\partial R} + V(w^M)\frac{\partial N^U}{\partial w^M}\frac{\partial w^M}{\partial \alpha}\frac{\partial \alpha}{\partial R} \tag{30}$$

The effects of an amnesty on the two sectors reflect the specific features of the two labor markets: in a perfectly competitive labor market more workers are employed at a lower wage. In a labor market where the union has a high bargaining power, fewer workers are employed at a higher wage.

The final effect depends on how elastic is the labor demand in the economy. If the labor demand is elastic and if the wage rate and the level of employment are free to adjust, a change in one variable produces at least an equal change in the other one. But if some rigidities exist in the market, as in the union sector because of the presence of a powerful union, or in non-union sector if the labor demand is unelastic, then the unions benefit from an amnesty, because it has a great effect on the bargaining power, without large losses in terms of wage. In our model this happens for sure in the union sector, where the labor union introduces a strong element of rigidity, but also in the non-union sector. In fact in the short-run there are no available substitutes for labor, so the labor demand cannot go down too much. If the labor demand is unelastic, a higher minimum wage rises the total income, because it produces a less than proportional change in the labor demand. In this case labor unions obtain a great benefit from the amnesty. It's obvious that unions try to take actions that reduce the wage elasticity of demand for their members' labor.

Proposition 4: *If the labor demand is unelastic enough, the unions benefit from an amnesty, because they have a great gain in terms of bargaining power, with small losses in terms of wage.*

2.6 Conclusions

In this paper we examined an economy where a labor union represents unskilled workers and a number of legal and illegal immigrants are present. Many studies have discussed both theoretically and empirically the topic of migration, investigating some related issues: the welfare effects, the optimal enforcement policy, the determinants of immigrants' decisions. Most of these studies argue that

migration of unskilled workers is detrimental for the natives, if they are perfect substitutes. If we allow for illegal migration, the positive welfare effects derive from the higher profits of firms. But very few papers consider the presence of a labor union being able to act in the interest of unskilled workers, granting them a protection they wouldn't have in a perfectly competitive labor market. Here we have shown that it's true that labor unions oppose unskilled migration and benefit from a strict enforcement policy but, once undocumented immigrants have entered the country, the unions can find the legalization of illegals in its interest. Thus, if the union is powerful enough, it can benefit from a previously harmful circumstance.

An amnesty produces effects that are opposite to those obtained with the enforcement policy. Both policies affect positively the union's utility, but in a different way and magnitude. Stricter enforcement has no effects on union membership and a positive effect on regular workers' wage. On the contrary, an amnesty has a positive effect on the membership and, consequently, on the union's power and the local workers' wage, but it reduces the legal workers' wage in the non-union sector. This holds at least in the short-run, when the labor demand function is inelastic enough.

As a result, labor unions encourage the enforcement policy, but when the number of illegal immigrants becomes very high, they prefer an amnesty, in order to increase their own utility by incorporating a huge labor force.

The framework used here is amenable to various extensions. First in our model we don't contemplate an active role of the employers. They benefit neither from enforcement policy nor from amnesties, because of the increasing costs. But if they are able to bargain on the enforcement policy or on the timing of amnesties, the results could be considerably different. This is even more true if we allow for capital mobility across countries.

Second, it could be interesting also to develop an empirical analysis to investigate the attitude of natives towards illegal immigrants. In the last years the efforts to collect data about immigrants living and working in the underground in the rich countries are increasing, in U.S. as well as in Europe. Such analysis could explain which variables affect the authorities' decisions on the enforcement and the deportation policy, the amnesties, the willingness to allow illegals to use welfare state services and the reasons why the authorities choose to implement different migration policies in different regions of the country.

References

[1] Bandyopadhyay, Subhayu & Bandyopadhyay, Sudeshna C., 2005. "Illegal Immigration: Optimal Enforcement and Capital Mobility" Working Papers 05-02, Department of Economics, West Virginia University.

[2] Bean, Frank D. & King, Allan G. & Passel, Jeffrey S., 1983. "The Number of Illegal Migrants of Mexican Origin in the United States: Sex Ratio-Based Estimates for 1980," Demography 20 (1, February): 99–109.

[3] Bell, Brian & Machin, Stephen & Fasani, Francesco, 2010. "Crime and Immigration: Evidence from Large Immigrant Waves". IZA Discussion Paper No. 4996, June.

[4] Bond, Eric W. & Chen, Tain-Jy, 1987. "The welfare effects of illegal immigration", Journal of International Economics, Elsevier, vol. 23(3-4), pages 315-328, November.

[5] Camarota, Steven A. 2004. "The High Cost of Cheap Labor: Illegal Immigration and the Federal Budget", Center for Immigration Studies, August.

[6] Djajic, Slobodan, 1985. "Illegal Aliens, Unemployment and Immigration Policy", Working Papers 591, Queen's University, Department of Economics.

[7] Djajic, Slobodan, 1997. "Illegal Immigration and Resource Allocation", International Economic Review no. 38, pages 97-117, February.

[8] Djajic, Slobodan, 1999. "Dynamics of Immigration Control", Journal of Population Economics no. 12, pages 45-61, February.

[9] Epstein, Gil S. and Heizler-Cohen, Odelia, 2007. "Illegal Migration, Enforcement and Minimum Wage", IZA Discussion Paper No. 2830, June.

[10] Ethier, Wilfred J, 1986. "Illegal Immigration: The Host-Country Problem", American Economic Review, American Economic Association, vol. 76(1), pages 56-71, March.

[11] Facchini, Giovanni & Mayda, Anna Maria & Prachi, Mishra, 2007. "Do Interest Groups Affect Immigration?", IZA Discussion Papers 3183, Institute for the Study of Labor (IZA).

[12] Gaytan-Fregoso, Helena & Lahiri, Sajal, 2000. "Foreign aid and illegal immigration," Journal of Development Economics, Elsevier, vol. 63(2), pages 515-527, December.

[13] Guzman, Mark & Haslag, Joseph & Orrenius, Pia, 2008. "On the determinants of optimal border enforcement," Economic Theory, Springer, vol. 34(2), pages 261-296, February.

[14] Hanson, Gordon H., 2006. "Illegal Migration from Mexico to the United States," Journal of Economic Literature, American Economic Association, vol. 44(4), pages 869-924, December.

[15] Hanson, Gordon H. & Spilimbergo, Antonio, 2001. "Political economy, sectoral shocks, and border enforcement," Canadian Journal of Economics, Canadian Economics Association, vol. 34(3), pages 612-638, August.

[16] Hazari, Bharat R. & Sgro, Pasquale M., 2003. "The simple analytics of optimal growth with illegal migrants," Journal of Economic Dynamics and Control, Elsevier, vol. 28(1), pages 141-151, October.

[17] Hillman, Arye L. & Weiss, Avi, 1999. "A theory of permissible illegal immigration", European Journal of Political Economy, Elsevier, vol. 15(4), pages 585-604, November.

[18] Institute for Employment Studies, 2006. "Employers' Use of Migrant Labour", Home Office Online Report 03/06.

[19] Kondoh, Kenji, 2004. "International Immigration and Economic Welfare in an Efficiency Wage Model: The Co-existence Case of Both Legal and Illegal Foreign Workers" . Pacific Economic Review, Vol. 9, No. 1, pp. 1-12, February.

[20] Krieger, Tim & Minter, Steffen, 2007. "Immigration amnesties in the southern EU member states - a challenge for the entire EU?" Working Paper Series 2007-04, Center for International Economics, University of Paderborn.

[21] Miller, P.W., 1999. "Immigration policy and immigration quality: the Australian points system", American Economic Review, 89(2), pages 192-197.

[22] OECD, 2006. "Managing migration - are quotas and numerical limits the solution?" in: International Migration Outlook, Sopemi 2006.

[23] Palivos, Theodore, 2007. "Welfare effects of illegal immigration", Discussion Paper Series 2007_01, Department of Economics, University of Macedonia, revised Dec 2007.

[24] Palivos, Theodore & Yip, Chong K., 2010. "Illegal immigration in a heterogeneous labor market", Journal of Economics, vol. 101, issue 1, pages 21-47.

[25] Passel, Jeffrey S., 2006. "The Size and Characteristics of the Unauthorized Migrant Population in U.S.", Pew Research Report, March.

[26] Solano-Garcìa, Angel, 2006. "Does illegal immigration empower rightist parties?" Journal of Population Economics, Springer, vol. 19(4), pages 649-670, October.

[27] Tenorio, R. & Bucci, G. A., 1996. 'On financing the internal enforcement of illegal immigration policies', Journal of Population Economics 9(1), 65–81.

[28] Woodland, Alan D. & Yoshida, Chisato, 2006. "Risk preference, immigration policy and illegal immigration," Journal of Development Economics, Elsevier, vol. 81(2), pages 500-513, December.

[29] Yoshida, Chisato, 2000. *Illegal Migration and Economic Welfare*, Springer.

[30] Yoshida, Chisato, 2004. "The Optimal Enforcement of a Finance-Constrained Immigration Law," Open Economies Review, Springer, vol. 15(1), pages 57-62, January.

3 Does the Illegal Status Affect Attitudes Towards Immigrants? A Cross-Country Analysis of Individual Preferences

Abstract

Individual preferences are a decisive factor in defining migration policies. An increasing body of literature has analyzed the drivers of individual attitudes towards immigration, focusing on overall immigration. In particular, recent studies have shown that economic factors play a key role, through labor market and welfare state channels. On the contrary, few things are known about the attitudes towards illegal immigration. This paper compares attitudes towards *overall* immigration and attitudes towards *illegal* immigration within a cross-country analysis, in order to investigate whether the main results still hold when we deal with irregular immigrants. My results confirm that labor market channel and welfare channel are both relevant, but they have a stronger impact on attitudes towards overall immigration. On the contrary, non-economic drivers have a larger effect on immigration preferences when we look at illegal immigration.

JEL Classification: F22; F1; J61

Keywords:illegal immigrants, attitudes, immigration preferences, labor market

3.1 Introduction

Illegal immigration[16]is one of the most important causes for concern in both advanced and developing countries.

The International Organization for Migration (IOM) states that irregular migration "occurs outside the rules and procedures guiding the orderly international movement of people" and estimates that irregular immigrants account for one-third to one-half of new entrants into developed countries, marking an increase of 20 per cent over the past ten years. All large-scale regularisations have revealed unauthorised populations of at least 1% of the total population. By definition, the exact size of stocks and flows of irregular immigrants is difficult to establish, but recently a number of attempts have been made to produce data as homogeneous as possible. According to these estimates, the undocumented migrant population in Europe is about 4 million, while in the US it reaches 12 million[17].

Besides cases of family reunification, the undocumented migration phenomenon mainly involves people escaping the poorest and overpopulated parts of the world and seeking better economic and social opportunities, political refugees in search of asylum and refugees fleeing violence and wars. However, authorizations for legal migration are usually limited by host Governments, by adopting restrictive policies in order to limit the admission of unskilled immigrants.

Due to security and financial concerns, an increasing amount of resources are devoted to preventing people from entering without authorization, and to enforcing the return of non-citizens who are not (or no longer) authorized to stay. The control of national borders, workplace inspections and expulsions, are among the main instruments of the immigration policy of most countries.

Despite the official announcements and the large expenditure of efforts and resources, this phenomenon is far from being solved. Information on the work status of irregular migrants indicate that they tend to be concentrated in a number of sectors, namely agriculture, construction, food processing, hotels and restaurants, household work, cleaning and personal care. On the one hand

[16] In common speech the terms "irregular" (with no regular status), "undocumented" (without the appropriate papers) and "unauthorized" (without legal permission for entry, stay or work) are used as synonyms, although denote different facets of the wider phenomenon of irregular migration (Clandestino, 2009). I refer to "illegal immigrants" as people entering staying a country other than where they were born, in a way that violates the immigration laws of the destination country and whose presence in the territory – if detected – may be subject to termination through an order to leave and/or an expulsion order because of their status.

[17] see: OECD, International Migration Outlook, Sopemi 2009

the nature of these jobs, generally low-skilled and low-paid, may suggest that these jobs are not particularly attractive for the domestic workforce. On the other hand, employers prefer to hire irregular immigrants rather than native workers because, as illegals, they are willing to accept the most tiring and lowest paid employment conditions, providing cheap and flexible workforce. This peculiarity can explain why national Governments seem to be more or less lenient towards illegal immigrants or face this issue differently at different times. Official migration policies often conflict with political evaluations and, as a result, are implemented in a more or less stringent way, according to the sentiment prevailing on the political scene.

Apart from business groups, interested in open borders, public opinion is at best divided concerning immigration. This attitude concerns not only illegal immigrants, but also the legal ones, as they are considered as direct competitors in the labor market.

Individual preferences are a decisive factor in defining migration policies. An increasing body of literature has analyzed the drivers of individual attitudes towards immigration, focusing on overall migration. In particular, recent studies have shown that economic factors play a key role, through the labor market and the welfare state channel. On the contrary, little is known about attitudes towards illegal immigration. Do these results still hold when we deal with irregular immigrants? Since legality and security issues are paramount in this debate, do economic channels lose importance? How do individuals' perceptions change? Why do we observe such differences in individual preferences across countries?

This paper tries to answer these questions by comparing attitudes towards *overall* immigration and attitudes towards *illegal* immigration across countries.

My results confirm that the labor market and the welfare state channel are both relevant, but that they have a stronger impact on attitudes towards overall immigration that towards illegal immigration. On the contrary, non-economic drivers have a stronger effect on immigration preferences when we look at illegal immigration.

The paper is organized as follows. Section 2 offers a brief review of recent works on immigration and individual preferences. In section 3, I present the data and explain methodological aspects, while the results are discussed in section 4. Section 5 concludes.

3.2 Literature

A large body of literature has investigated the impact of economic and non-economic drivers on individual preferences towards immigrants. Most of the recent studies have used indirect measures of attitudes, based on voting or lobbying choices and have focused on a single country, mainly US or Great Britain, with few examples of cross-countries analyses.

Bauer et al (2000) find evidence that immigration policy may affect the immigrant assimilation, and natives' preferences towards immigrants. In particular, they show that natives in countries selecting immigrants on their skills are more likely to think that immigrants are generally good for the economy than in countries which receive mainly asylum seekers and refugees.

Gang et al. (2002) examine the relative significance of some of the key forces that influence the attitudes of European Union citizens towards foreigners. They analyze the role of labor market competition, immigrant concentration, racial/ethnic bias, educational attainment, and a set of other variables that potentially determine attitudes towards immigrants, finding that people who directly compete in the labor market with immigrants have stronger negative attitudes towards foreigners, ceteris paribus. Moreover, communities with larger concentrations of immigrants may give rise to greater anti-immigrant sentiment, even if educational attainment may be a strong antidote to anti-foreigner sentiments.

Kessler (2001) uses data on the United States to show that individual preferences over immigration policy reflect both economic and non-economic concerns. The result is that measures of skill that appropriately link immigration induced changes in the labor market to wage and employment prospects of citizens are strongly associated with positions on immigration policy. Nevertheless, ideological conservatism and negative affective orientations, in both good economic times and bad, are significantly associated with opposition to further immigration.

Scheve and Slaughter (2001) analyze the determinants of individual preferences over immigration policy in the United States, finding a robust link between labor market skills and preferences: less skilled (more-skilled) people prefer more-restrictionist (less-restrictionist) immigration policy. Their finding suggests that individuals think that the U.S. economy absorbs immigrant in ows at least partly by changing wages.

Dustmann and Preston (2001a and 2001b) and Preston (2001a and 2001b)

use data on GB to analyze the effect of individual characteristics, labor market conditions and local concentration of ethnic minorities on attitudes regarding minority populations. Their results suggest that high concentrations of ethnic minorities lead to more hostile attitudes in England.

Only recently some contributions have filled the gap. In particular, Mayda (2006) uses two individual-level survey data sets to investigate the role played by both economic and non-economic drivers of preference formation and relates the results to the predictions of standard economic theories of immigration. She finds that both sets of determinants are important, underlining how economic factors are a key and robust explanation of individual preferences, after controlling for non-economic variables. Moreover, she documents the existence of a substantial cross-countries variation in terms of correlation between attitude towards immigration and individual skill: the latter seems to be positively correlated with the former in high per capita GDP countries, and negatively correlated in low per capita GDP countries. This result can be related to the labor-market channel and to changes in the relative supply of skilled to unskilled labor in the destination economy.

Facchini and Mayda (2007) focus on welfare-state determinants, showing how different adjustment mechanisms of the welfare-state might affect individual attitudes towards migrants. In particular, they find that unskilled immigration harms low income individuals in the *benefit adjustment model*, because tax rates are fixed and benefits reduce in order to balance the government's budget.

On the contrary, unskilled migrants worsen high income individuals in a *tax adjustment model,* because benefits are kept constant and tax rates adjust in order to offset a greater welfare cost. The opposite occurs when immigration is skilled. The empirical cross-country analysis provides findings that are consistent with the *tax adjustment model* and with labor-market determinants of immigration preferences.

Facchini and Mayda (2008), investigate the mechanisms of preferences formation and focus on the link between individual attitudes and actual migration policy implemented. Their results are consistent with the previous studies with regard to role played by economic factors and are confirmed over time by using data referred to different years. Moreover, they use the *median voter model* and the *interest groups model* in order to investigate firstly how median voter's opinions towards migration affect migration policies and, secondly, if these policies can be explained as the effect of interest groups' lobbying activities. As a result, they show that the empirical analysis provides evidence that is consistent with

both political-economy models.

All the papers we have discussed consider the *overall* migration, without distinguishing the cases of irregular immigrants. To the best of my knowledge one of the first attempts to analyze how individual attitudes towards illegal immigrants take shape has been carried out by Facchini et al. (2009). In particular they focused on two different legislative proposals on illegal immigration: the first one favored border enforcement and deportation of illegal immigrants (H.R. 4437); the second one, more lenient, expanded the number of guest workers, introducing a regularization program for aliens (S. 2611). They use individual preferences on these legislative proposals on immigration as a measure for individual attitudes towards illegal immigrants in US. Besides proving the robustness of economic factors as drivers of public opinion, through the labor market and the welfare state channels, they look at the role played by the media as a non-economic determinant. Indeed, they find that the attitude towards a *lenient* immigration policy is positively correlated to the respondents' skill and income, and that, from a non-economic point of view, public opinion is significantly correlated with media exposure.

In this paper, I combine some elements of the previous workers, thus extending the analysis in several directions: I look at illegal immigrants as a different production factor that competes only with unskilled native workers and not also with skilled ones: using a direct measure of individual preferences in order to compare attitudes towards *overall* immigration and attitudes towards *illegals* immigration, I investigate whether that the economic determinants are less important when public opinion deals with illegal immigrants. Moreover I exploit the panel nature of the data set in order to compare individual immigration preferences across different countries .

3.3 Data

I use data collected by the International Social Survey Programme (ISSP), a programme of cross-national collaboration that centers its researches on several topics of great importance for the social sciences. This survey covers 34 countries, including most Western countries, some South American countries, Eastern European countries and Asian countries.

I use the 2003 National Identity module, that contains responses to questions on several social, economic and political topics. The survey contains also an array of social and economic information on respondents, such as age, education, income, political preferences, religion, and labor market condition.

I'm interested in the answers to two specific questions. The first is: "There are different opinions about immigrants from other countries living in (respondent's country). (By "immigrants" we mean people who come to settle in (respondent's country)). Do you think the number of immigrants to (respondent's country) nowadays should be: (a) increased a lot, (b) increased a little, (c) remain the same as it is, (d) reduced a little, (e) reduced a lot". Besides the five ordered answers, the survey format also allows for "can't choose" (CC) and "not available" (NA) responses. This question is related to overall immigration, since it doesn't make any distiction on immigrants population. The second question is more specific: "How much do you agree or disagree with the following statement? (respondent's country) should take stronger measures to exclude illegal immigrants (exclude means "keep out" or "expel"): (a) agree strongly, (b) agree, (c) neither agree nor disagree, (d) disagree, (e) disagree strongly (and CC "can't choose")". Although the two questions are a little different, each of them allows us to understand individual attitudes towards the specific issue.

I recode respondents' answers to the first question (1="reduced a lot", to 5="increased a lot"), in order to create two identically ordered variables, such that the lowest value means high hostility towards immigrants and the highest answer is indicative of very positive attitudes.

I also create a dichotomous variable, equal to one for individuals who express pro-immigration attitudes (for those replying "increased a little" or "increased a lot"). An analogous dummy variable is created for illegal immigration question.

I use both ordered and binomial probit: in the former the dependent variable takes five possible values, while in the latter I join groups 1, 2 and 3 on one side, 4 and 5 on the other side, thus resulting in two possible alternatives: anti-immigration or pro-immigration. It might be argued that in this way some information is lost, but as I'm interested in the public opinion towards immigration, the difference between "positive" and "very positive" (or "negative" and "very negative") is not of a great concern. Furthermore, this choice gretly simplifies the interpretation of the results.

I restrict the sample to individuals who express an opinion and I use the ordered variables and the dummy variables as dependent variables.

I also use several questions contained in the survey, collecting informations

on age, gender, parents' foreign citizenship, years of education, area of residence (rural vs urban), social class, political affiliation with the right and trade union membership. The survey contains also questions on respondent's real income, on individuals' occupation and on topics such as national pride and identity, multiculturalism and political refugees. All these informations are used to control for non-economic determinants of immigration preferences. For example, the variable called *immig_economy* measures the perceived impact of migration from an economic point of view and *immig_crime* reveals the perception of impact of immigration on crime rates; *immig_publexp* contains answers to the following question: "How much do you agree or disagree with the following statement? Government spends too much money assisting immigrants", while *imm_rights* to: "How much do you agree or disagree with the following statement? <<Legal immigrants to (respondents' country) who are not citizens should have the same rights as citizens?>>".

A measure of individual skill is constructed from data on years of education and is used to test the implications of the factor-endowment model. In several specifications I substitute the *years of education* with another variable, that account for the highest education level of respondents, in order to check the robustness of my estimates. Since results do not change with the alternative skill measure, I only present the main regressions.

The results on overall immigration are partially comparable to those obtained by Facchini and Mayda (2008), although here I control for different sets of variables.

In each regression I present the marginal effects of regressors, controlling for country fixed effects in order to account for unobserved country-level characteristics. Moreover I cluster standard errors on country in order to allow for intragroup correlation, without requiring observations to be necessarily independent within groups, although independent across groups.

In next section I present the results of the empirical analysis, carried out using the probit estimator. Nevertheless, it's interesting to have a quick look at the data before presenting the probit estimates.

Generally speaking, individuals show remarkable hostility towards immigration: as shown in Table 1, most individuals in the sample (71.38% of the total) disagree with the statement that the number of immigrants should be increased either a little or a lot. The attitude towards immigrants, obtained as response to immigration questions and calculated with a categorical variable assuming values from 1 to 5, is low on average (2.29). A very small number (less than

10%) of respondent states to favor more immigration, although this result notably differs across countries. South Korea and Uruguay are the countries with the highest number of respondent favouring immigration; on the other hand, Germany, Great Britain and Russia are very adverse to immigration.

If we look at the question on *illegal* immigrants (Table 2), the hostile opinion is even higher. The most evident difference between attitudes towards immigrants and attitudes towards *illegal* immigrants is that in the last case the number of non-respondent (missing values) drastically reduce, as well as the number of respondents voting for the middle category (remain the same as it is). If the percentages of respondent opposing migration increase of 50% and more in most countries, the number of voters favouring migration remain the same or increases as well, although in smaller proportions. In other words, in this sample of countries, citizens have clearer opinion on *illegal* immigration than on immigration in general. As expected, the preferences towards *illegal* immigration is on average lower than that towards *overall* immigration. The median value in the overall sample is again equal to 2, but in the second table the country-specific median values are very frequently lower than i.

Fig.1 refers to the overall sample. Individuals opposing migration are more hostile towards illegal than towards non-illegal migrants; conversely, if respondents are open to migration, they are tolerant also towards irregular immigrants.

In Fig.2 cross-countries differences and analogies are evident. In almost all countries public opinion is under the average with regards to illegal migration, except for Spain and Uruguay. But countries distribution is more homogeneous and closer to the average value when we look at individual attitudes towards overall migration.

At first glance we can conclude that, as expected, the hostility to migrants is higher if we consider the "illegal" status: who is against migration is even more hostile towards illegals immigrants.

Several questions arise. Comparing the attitudes towards immigrants across countries we can't find a regular pattern. Individuals from countries which share similar characteristics from the political, economic or geographic point of view have diametrically opposed opinions. For example, respondents from the United States on average think in the same way as respundents from Poland or Slovak Republic, but are very far from other Western countries. With regards to Western European countries, Germany and Great Britain are among the most hostile countries in the sample, while Spain and Ireland are among the most open countries. When we focus on illegal immigration, Germany and Great Britain

are still among the most "closed" countries, but in both cases the attitudes on average don't change. In most countries the national mean value decreases, except for the Czech Republic, Poland, Spain, France, Portugal, Taiwan and Uruguay.

Why do these differences across countries? Which factors affect individual preferences in such a different way? Why are some populations so open to illegal immigrants? Are economic determinants enough to explain this phenomenon?

3.4 Empirical Results

In the first column of Table 3, I present a benchmark model of (overall) immigration attitudes, based only on the socio-economic characteristics of respondents, such as age, gender, parents' citizenship, type of community, education and individual income. The results show that age has no relevant effects on attitudes towards migrants, but individuals with higher level of education and income are more likely to be pro-immigrants. The gender effect is also significant, as well as the parents' foreign citizenship. Finally, citizens living in small cities or in rural communities are more hostile than those who lives in a big city.

Although this is a very basic specification, it suggests a positive and significative impact of skill and income on attitudes. Nevertheless, this preliminary result refers to the overall sample and tells us very little about cross-country heterogeneity.

According to standard economic theory, assuming a production function with constant returns to scale, the labor market channel should play a relevant role in explaining individual attitudes, because of the skill composition of migrants relative to natives. If unskilled immigrants enter the labor market, the unskilled wages will decrease and the skilled wages will increase. The opposite occurs in the case of skilled immigrants: skilled native workers will be hurt and unskilled will benefit from it. This is confirmed by the results of the analysis. In other words, labor abundant countries are more likely to favor unskilled immigration, and *viceversa* for low-skill countries. In order to analyze the country-specific impact of education and income on attitudes, I look at the relative skill composition of natives to immigrants. Because of the lack of comparable data, I use per capita GDP as a measure to differentiate the effect of skill by host country and

I combine it with individual data on skill and income. If I simply consider the two interaction variables, *educ*gdp,* that is equal to the education measure times the log of national per-capita GDP (PPP-adjusted), and *income*gdp,* which is the log of personal annual income times the log of national per-capita GDP, in international dollars, I find strong evidence for both the labor market and the welfare state channel. In particular, individual skill is positively correlated with attitudes in high per capita GDP countries and negatively correlated with pro-immigration preferences in low per capita GDP countries.

Since education and income are likely to be correlated with other individual characteristics which affect preferences, I test the robustness of my results adding variables into the benchmark model in order to control for other non-economic drivers.

3.5 Robustness Analysis

In regression 3 of Table 3, I use social, political and religious preferences as additional controls. I find that they are significant and don't change the sign of our key variables, except for the role of income. The marginal effect of education decreases and the marginal effect of income is much stronger when I control for ideological variables. These results still hold using other individual characteristics, such as the position in the social scale and the trade union membership. In regression 4 I control for *imm_rights*, *imm_crime and imm_culture* to investigate the impact on attitudes of cultural and social characteristic. In this way I can value the marginal effects of potential non-economic determinants of immigration preferences.

In regressions 6 and 7, I investigate if the illegal immigrants' presence has a marginal effect on attitudes towards migration. I find that in reach countries the illegal immigrant presence makes natives more tolerant if they think about *legal* migration.

Finally I control for *immig_economy, immig_jobs* and *immig_publexp*, in order to investigate if attitudes are correlated to other economic aspects, and I show that they basic result does not change. In regressions 8 and 9, I look at other economic characteristics of respondents, or variables capturing economic aspects of their life, considering the first regression of Table 3 as benchmark.

Again income and education are significant. Moreover, if we look at economic variables, the other variables, from ideological and social point of view, are still significant. This tells us that non-economic factors can, by themselves, affect attitudes, not only when related to economic drivers.

The results show the robustness of results. Age is still non significant, but the gender effect and the parents' foreign citizenship are again positive and significant. Individuals living in rural areas are less likely to be open to immigrants. Finally, the effect of education level is positive and significant when combined with GDP.

In Table 4 I repeat the analysis considering illegal immigrants and using *Pro-Illegal Immigration Dummy* as dependent variable.

The gender effect, quite strong in previous regressions, disappears when people answer questions related to illegal immigrants. On the contrary, the negative age effect becomes significant, even if the effect is small.

The labor market channel is still working. Indeed, since illegal immigrants are hired in low-skilled and low-paid jobs, they can be considered as unskilled native workers' competitors. As a result, unskilled workers are more likely to oppose illegal immigrants. In Table 4 the variable *educyrs* is positive and significant, showing the presence of labor market complementarities. More educated individuals are more likely to be pro-immigrants.

The welfare state channel is no longer working: individual income has no relevance, also when I consider only economic variables. This means that citizens appear not to be concerned about the impact of illegal immigrants on the welfare state. Peolpe are perceiving that illegal immigrants have limitated access to welfare state benefits. Nevertheless, security and cultural aspects are relevant.

In regression 6 I exclude from the regression two variables that are directly related to the economic status of the respondents (*social class* and *trade union*), and some variables related to non-economic characteristics, and I control for the fraction of illegal immigrants that lives in each country. Moreover, I combine this variable with two individual-specific variables: education and income. In such a way I can understand if illegal immigrants' presence affects individual attitudes through the labor market channel or the welfare state channel. I find that the immigrant presence by itself has a positive marginal effect on attitudes towards illegal immigration: this means that those who live in high illegal immigrant density areas is more likely to be tolerant towards them. This regressor is still positive and significant when is combined with an individual measure of education, proving the role of market labor theories. The welfare

channel is once again very relevant, and acts in the opposite direction: if the number of illegal immigrants is high, citizens are less tolerant towards them.

These results do not change when I control for variables related to questions on individual perceptions of the economy-wide costs and benefits of immigration.

When I focus on non-economic determinants of attitudes, I find that the age effect is less strong and significant.

In a very basic model of non-economic drivers I find that if respondents are old, or live in rural areas, or vote for conservative parties, they are less likely to favour illegal immigrants. Conversely, more educated people are more tolerant towards them. Controlling for variables related to security and cultural issues, both age effect and education effect disappears. This specification holds if I control for regressors that measure the open-mindness of individuals: *preserving tradition* and *immigration rights*. This result is consistent with the idea that the skill variable by itself summarizes the cultural level and the public spirit of people.

Finally I perform a last robustness check to have more evidence on the role of labor market channel as the main driver working through the skill factors. As Scheve and Slaughter (2001) and Mayda (2007), I split the sample into two groups, in order to separate individuals who belong to labor force from individuals out of labor force, such as retired, housewife (man), in home duties, permanently disabled or sick, others, not in labor force, not working. I run all these regressions on the subsample of countries with a well developed welfare state.

The results in Table 5 confirm that the impact of the skill on individual preferences is working through the labor market. If we look at the labor-force subgroup, all the previous results are confirmed: the gender effect is still positive and significant, as well as parents' foreign citizenship effect. The schooling effects are positive if considered as a direct determinant, but keep the non-linearity when we look at the country-specific effects.

In order to test the results of benchmark model, I compare the estimates with and without ideological controls (probit 2 and 3). Finally, I control for other, non-ideological omitted variables that can affect attitudes and are related to some social and economic issues as perceived by citizens. All the regression confirm the previous results.

This is not true in out-of-labor-force subsample. The age effect is stronger and negative correlate to attitudes, as well as the gender effect. As expected, the educational effect disappears when taken by itself and when combined with

other components, meaning that who is out of labor market don't see unskilled immigrant as competitors. This proves the effectiveness of the standard theories in predicting the preference formation mechanism.

Moreover this result is robust to the other specifications: in regression 3 I controll for political and religious preferences, and in regression 4 for other social and economic potential determinants.

Table 6 presents robustness checks performed with respect to illegal immigration.

The age effect is still significant but always negative, as well as the gender effect, where significant. Parents' citizenship is no longer significant in explaining individual preferences towards irregular immigrants. The positive sign of education confirm the previous results. Moreover, the significativity of skill variable only in the labor-force subsample and not in out-of-labor-force subgroup confirms the labor market channel story.

The non significativity of income confirm my previous estimates with regards to labor-force subsample. Looking at the out-of-labor-force subsample the log of individual real income is instead everywhere positive and significant. This particular result can be read in different ways: people out of labor market and with high income can be, for example, housewife with high family income that allow her to hire a low-paid maidservant.

Again the political preferences are strongly significant , while the religion play no role in this specification. Finally, controlling for security, cultural and economic issues the main result doesn't change.

3.6 Conclusions

Why are we so hostile towards illegal immigrants?

In order to answer the question I investigate the economic and non-economic determinants of individual attitudes towards illegal immigration and towards overall immigration.

The economic theory tells us that the labor market channel play a relevant role in explaining individual attitudes, because of the skill composition of migrants relative to natives. If unskilled immigrants enter the labor market, the unskilled wages will decrease and the skilled wages will increase. The opposite

occurs in case of skilled immigrants: skilled native workers will be hurt and unskilled will benefit from it. This is well confirmed by the results of the analysis. In other words, high-skill countries are more likely to tolerate unskilled immigration, and *viceversa* for low-skill countries. Since illegal immigrants are hired in low-skilled and low-paid jobs, they can be considered as unskilled native workers' competitors and, as a result, unskilled workers are more likely to oppose them. If this is the case, I expect that the labor market effects play a key role only partially when I consider individual preferences towards illegal immigrants.

I use the 2003 National Identity (National Identity II) module, that contains responses to question on social, economic and political topics. In particular, I use responses to several questions related to immigration issue as perceived by citizens. The survey has also a number of social and economic information on respondents, such as age, education, income, political preferences, religion, and labor market condition.

I find that this theory is confirmed. The labor market channel and the welfare state channel are both relevant, but they have a stronger impact on attitudes when the overall immigration is involved. When people think about illegal immigrants these effects lose their relevance, confirming that only a part of population see them as competitors. This result is confirmed when I split the sample into two subgroups in order to isolate the labor market channel in the labor-force subsample.

Non-economic variables are also found to be significantly correlated with immigration preferences. They are stronger in illegal immigration case, but don't change the main results.

References

[1] Bond, Eric W. & Chen, Tain-Jy, 1987. "The welfare effects of illegal immigration", Journal of International Economics, Elsevier, vol. 23(3-4), pages 315-328, November.

[2] CLANDESTINO Research Project, 2009. "Irregular Migration in Italy. Counting the Uncountable: Data and Trends across Europe", http://clandestino.eliamep.gr/.

[2] Djajic, Slobodan, 1985. "Illegal Aliens, Unemployment and Immigration Policy", Working Papers 591, Queen's University, Department of Economics.

[3] Dustmann, C. and I. Preston 2006. "Is immigration good or bad for the economy? Analysis of attitudinal responses". *Research in Labor Economics* 24, 3-34.

[4] Dustmann, C. and I. Preston 2007. "Racial and economic factors in attitudes to immigration". *The B.E. Journal of Economic Analysis & Policy* 7 (1), Article 62.

[5] Facchini, G. and A. M. Mayda 2007. "Individual attitudes towards immigrants: Welfare-state determinants across countries". *Review of Economics and Statistics* 91, 295-314.

[6] Facchini, G., A. M. Mayda and R. Puglisi 2009. "Illegal Immigration and media exposure: Evidence on individual attitudes"

[3] Gang, Ira N. & Rivera-Batiz, Francisco L. & Yun, Myeong-Su, 2002. "Economic Strain, Ethnic Concentration and Attitudes Towards Foreigners in the European Union". IZA Discussion Papers 578, Institute for the Study of Labor (IZA).

[7] Guiso, L., P. Sapienza, and L. Zingales 2003. "People's opium? Religion and economic attitudes". *Journal of Monetary Economics* 50 (1), 225-282.

[8] Hanson, Gordon H., 2006. "Illegal Migration from Mexico to the United States," *Journal of Economic Literature*, American Economic Association, vol. 44(4), pages 869-924, December.

[9] Hanson, Gordon H. & Spilimbergo, Antonio, 2001. "Political economy, sectoral shocks, and border enforcement," *Canadian Journal of Economics*, Canadian Economics Association, vol. 34(3), pages 612-638, August.

[10] Kessler, A. 2001. "Immigration, economic insecurity, and the 'ambivalent' American public". The Center for Comparative Immigration Studies Working Paper no. 41.

[11] Kondoh, Kenji, 2004. "International Immigration and Economic Welfare in an Efficiency Wage Model: The Co-existence Case of Both Legal and Illegal Foreign Workers" . *Pacific Economic Review*, Vol. 9, No. 1, pp. 1-12, February.

[12] Mayda, A. M. 2006. "Who is against immigration? A cross-country investigation of individual attitudes toward immigrants". *Review of Economics and Statistics* 88 (3), 510-530.

[13] Scheve, K. F. and M. J. Slaughter 2001. "Labor market competition and individual preferences over immigration policy". *Review of Economics and Statistics* 83, 133-145.

[14] Solano-Garcìa, Angel, 2006. "Does illegal immigration empower rightist parties?" *Journal of Population Economics*, Springer, vol. 19(4), pages 649-670, October.

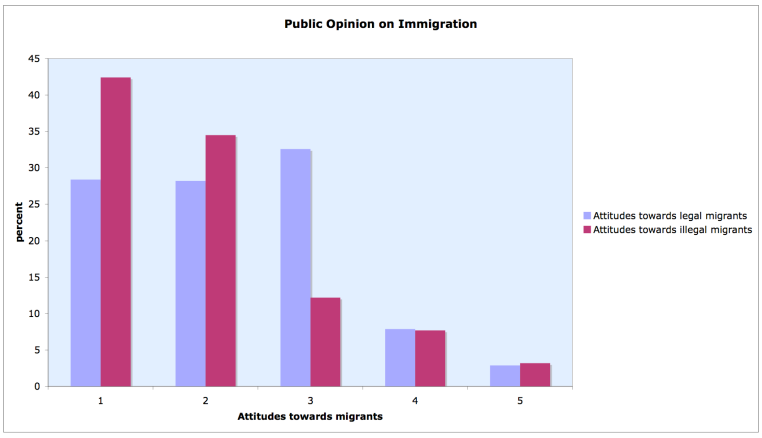

Figure 1: Attitudes towards overall immigration vs attitudes towards illegal immigration

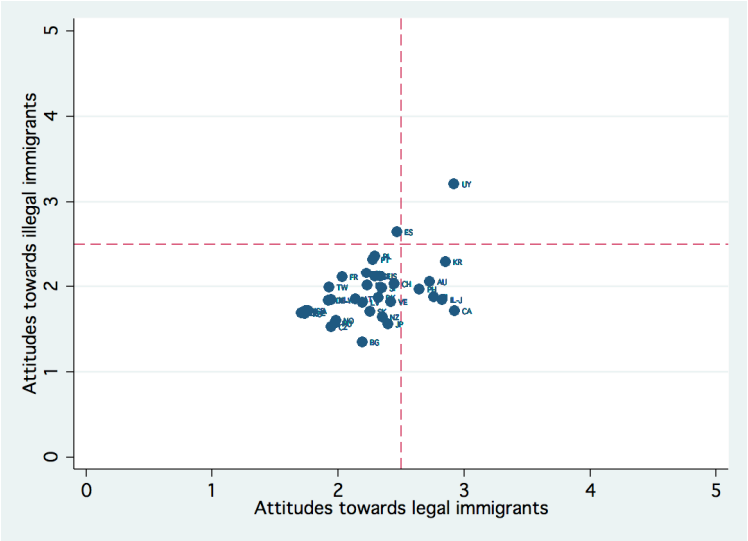

Figure 2: A cross-countries comparison of individual attitudes

Table 1: Individual Attitudes towards *Overall* Immigration

country	**Do you think the number of immigrants to [country] should be...** *Reduced a lot* [1]	*Reduced a little* [2]	*Remain the same as it is* [3]	*Increased a little* [4]	*Increased a lot* [5]	*Missing values* [.]	***mean***	***median***
AU	16.88	19.76	34.85	15.89	5.77	6.86	2.72	3
DE-W	40.76	24.59	20.64	3.57	0.89	9.55	1.89	2
DE-E	50.69	21.99	17.13	1.39	0.93	7.87	1.70	1
GB	51.07	22.87	14.93	3.44	1.66	6.04	1.74	1
US	23.72	28.77	28.68	5.48	3.34	10.02	2.29	2
AT	32.72	26.75	29.94	5.25	1.03	4.32	2.11	2
HU	34.38	30.56	27.23	1.67	0.39	5.78	1.97	2
IE	27.73	28.79	30.72	7.25	1.06	4.44	2.22	2
NL	38.23	27.23	24.11	2.50	0.96	6.98	1.93	2
NO	36.25	29.66	19.41	5.01	1.15	8.52	1.96	2
SE	25.73	27.40	27.05	8.11	2.29	9.43	2.27	2
CZ	0.00	71.43	0.00	14.29	14.29	0.00	2.71	2
SI	16.73	32.08	43.38	2.48	0.37	4.96	2.34	2
PL	19.42	20.67	28.97	3.52	1.72	25.69	2.29	2
BG	16.21	18.94	20.17	2.26	0.85	41.56	2.19	2
RU	39.01	25.14	10.26	1.64	1.68	22.28	1.74	1
NZ	27.07	27.89	25.62	10.85	3.00	5.58	2.31	2
CA	9.93	18.74	35.06	19.78	5.96	10.54	2.92	3
PH	17.92	19.58	37.67	11.50	5.58	7.75	2.64	3
IL-J	24.00	13.66	28.46	13.47	15.94	4.46	2.83	3
IL-A	45.39	36.18	14.47	2.63	0.00	1.32	1.74	2
JP	20.15	22.32	28.58	8.44	2.36	18.15	2.40	2
ES	13.21	35.31	35.90	5.84	2.46	7.28	2.45	2
LV	26.36	24.09	30.01	1.51	0.63	17.40	2.10	2
SK	26.37	15.58	25.15	7.14	2.09	23.67	2.25	2
FR	36.10	21.86	22.74	4.18	2.19	12.93	2.02	2
PT	19.09	35.01	39.10	2.38	0.59	3.83	2.28	2
CL	22.80	37.26	29.19	4.84	1.61	4.30	2.22	2
DK	25.99	21.73	36.09	7.90	1.22	7.07	2.32	2
CH	16.91	27.02	45.64	5.11	0.32	5.00	2.42	3
VE	20.04	28.38	42.18	3.95	2.81	2.64	2.40	3
FI	15.91	15.54	37.08	18.80	3.03	9.62	2.75	3
TW	34.34	31.76	18.02	3.33	1.09	11.46	1.93	2
KR	9.13	23.34	34.53	17.57	5.32	10.11	2.85	3
UY	6.17	20.35	46.41	12.80	5.89	8.38	2.91	3
Total	20.85	22.93	27.60	6.76	2.44	19.43	2.29	2

Table 2: Individual Attitudes towards *Illegal* Immigration

country	**[Country] should take stronger measures to exclude illegal immigrants**						***mean***	***median***
	Agree strongly [1]	*Agree* [2]	*Neither agree nor disagree* [3]	*Disagree* [4]	*Disagree strongly* [5]	*Missing values* [.]		
AU	41.18	28.79	12.20	8.60	5.48	3.74	2.05	2
DE-W	41.15	37.71	8.41	5.48	1.53	5.73	1.82	2
DE-E	51.85	33.80	3.94	5.32	2.32	2.78	1.69	1
GB	52.85	29.03	9.71	2.73	2.84	2.84	1.70	1
US	33.13	35.87	17.12	9.08	2.57	2.23	2.10	2
AT	52.06	22.94	10.19	8.13	3.29	3.39	1.84	1
HU	55.63	31.24	7.84	1.47	0.78	3.04	1.56	1
IE	31.40	46.28	9.37	9.76	1.06	2.13	2.01	2
NL	44.64	33.81	9.13	6.07	2.78	3.57	1.84	2
NO	53.58	34.74	6.38	2.01	1.22	2.08	1.60	1
SE	32.86	31.98	19.74	5.55	4.23	5.64	2.11	2
CZ	14.29	0.00	57.14	0.00	14.29	14.29	3.00	3
SI	31.43	44.76	12.32	5.88	1.75	3.86	1.98	2
PL	14.72	41.27	20.13	11.43	1.41	11.04	2.37	2
BG	61.45	19.89	3.77	0.47	0.28	14.14	1.35	1
RU	50.48	25.94	7.36	3.74	2.31	10.17	1.68	1
NZ	51.96	32.75	8.37	2.58	1.24	3.10	1.64	1
CA	48.70	33.59	10.88	3.28	0.69	2.85	1.70	1
PH	38.33	37.92	13.58	7.00	2.50	0.67	1.97	2
IL-J	50.85	25.52	11.67	7.97	2.56	1.42	1.84	1
IL-A	48.03	36.18	12.50	3.29	0.00	0.00	1.71	2
JP	62.16	19.24	8.26	2.09	2.72	5.54	1.56	1
ES	10.75	40.56	22.52	16.85	5.25	4.06	2.64	2
LV	40.98	43.63	8.70	2.52	1.64	2.52	1.77	2
SK	47.78	31.77	10.88	3.05	0.96	5.57	1.70	1
FR	43.16	23.74	12.93	8.81	7.56	3.81	2.10	2
PT	29.33	31.90	14.80	14.20	5.61	4.16	2.32	2
CL	26.83	41.09	15.40	11.37	1.21	4.10	2.16	2
DK	53.88	19.91	9.57	4.56	7.45	4.64	1.87	1
CH	32.45	43.83	10.96	10.32	1.06	1.38	2.02	2
VE	41.04	47.01	0.88	8.44	1.32	1.32	1.80	2
FI	39.23	33.23	14.95	4.44	1.04	7.11	1.87	2
TW	30.32	45.21	11.61	7.24	1.09	4.52	1.99	2
KR	26.31	34.83	21.75	13.00	2.59	1.52	2.30	2
UY	7.83	23.20	18.51	30.57	13.72	6.17	3.20	3
Total	37.16	33.97	12.54	8.67	3.21	4.44	1.96	2

Table 3: Economic and Non-Economic Determinants of Attitudes Towards Overall Immigration

	1	2	3	4	5	6	7	8	9
Dependent Variable	*Pro Immigration Opinion Dummy*								
age	0.0000	0.0000	0.0003	0.0004	0.0005	0.0010	0.0013	0.0004	0.0005
	(0.0643)	(0.0906)	(0.6033)	(1.0707)	(1.4874)	(1.4172)	(1.3419)	(1.4131)	(1.2935)
gender	0.0192***	0.0156**	0.0118**	0.0102***	0.0062**	0.0320*	0.0044**	0.0115*	0.0021
	(3.7229)	(3.0247)	(3.1543)	(3.7110)	(2.5741)	(2.1748)	(2.9292)	(2.0220)	(1.7790)
parents_citiz	0.0446***	0.0441***	0.0469***	0.0162***	0.0193**	0.0499***	0.0128***	0.0130**	0.0122**
	(3.5028)	(3.4593)	(3.3004)	(3.5321)	(3.1998)	(3.4498)	(3.5694)	(2.7063)	(2.9643)
urban	-0.0327***	-0.0310***	-0.0385***	-0.0173***	-0.0280***	-0.0200***	-0.0201***	-0.0169**	-0.0192**
	(-5.6239)	(-5.2444)	(-4.2870)	(-3.7100)	(-3.6926)	(-3.3860)	(-3.5910)	(-2.9949)	(-2.8928)
educyrs	0.0008*	-0.0065*	-0.0221**	-0.0053*	-0.0250*	0.0079**	0.0563**	0.0074	0.0311
	(2.2600)	(-2.0285)	(-2.9208)	(-2.1765)	(2.1897)	(3.1862)	(2.9205)	(1.0389)	(1.5622)
log_realinc	0.0099**	0.0278*	0.0473**	0.0217**	0.0423**	0.0370**	0.0822**	0.0208*	0.0471*
	(2.6361)	(2.3440)	(2.7538)	(2.8510)	(2.7109)	(2.8691)	(2.6894)	(2.1325)	(2.1562)
educ_gdp		0.0006**	0.0023**	0.0004**	0.0027*	0.0006*	0.0057**	0.0007*	0.0033*
		(2.7235)	(2.8254)	(2.6414)	(2.2075)	(2.4276)	(2.5393)	(2.0262)	(2.1840)
income_gdp		0.0043**	-0.0060***	0.0029	0.0050	0.0051**	0.0089*	-0.0031**	0.0053
		(3.2682)	(-3.3173)	(0.2832)	(1.0602)	(2.6874)	(2.4635)	(-2.7774)	(1.4736)
party_pref			-0.0365**		-0.0060***		-0.0036**		-0.0040***
			(-3.2378)		(-3.8479)		(-2.7441)		(-4.5344)
religion			0.0142***		0.0106***		0.0110**		0.0077
			(3.8767)		(3.4309)		(2.8577)		(1.1711)
social_class			0.0163**		0.0077*		0.0078***		0.0029 ***
			(2.8085)		(2.1032)		(3.5251)		(3.5500)
trade_union			0.0018		-0.0192		-0.0008		-0.0072
			(0.0576)		(-0.6745)		(-0.0220)		(-0.2906)
pres_traditio				0.0273***	0.0356**		0.0040***		0.0220***
				(3.7544)	(3.3384)		(4.1115)		(3.9240)
imm_rights				0.0221***	0.0268***		0.0276*		0.0184**
				(6.5853)	(6.0240)		(2.4062)		(3.2228)
immig_crime				0.0925**	0.1049**		0.2304***		0.0487*
				(3.0714)	(3.2143)		(4.8004)		(2.3494)
immig_cult				0.1046***	0.0953***		0.1030***		0.0561***
				(8.3756)	(6.3393)		(3.5073)		(4.2384)
ILL_ratio						0.0000	0.0043*		
						(1.5482)	(2.0740)		
ILLratio_edu						-0.0003	-0.0043***		
						(-0.1390)	(-3.9740)		
ILLratio_inc						0.0020	0.0052***		
						(1.1982)	(3.6806)		
immig_econ								0.1194***	0.0808***
								(6.5170)	(5.5035)
immig_jobs								0.0585***	0.0219 ***
								(4.3739)	(4.3427)
imm_pubex								0.0343**	0.0306***
								(3.1749)	(7.2677)
observations	26803.00	26703.00	24447.00	23783.00	2058.00	21119.00	18496.00	19534.00	16197.00
r2_p	0.09	0.10	0.13	0.12	0.12	0.11	0.10	0.09	0.11

The sample includes only citizens of the country where they are interviewed. All regressions control for country fixed effects. The table shows the marginal effects, with (in brackets) the z statistics values. The standard errors are adjusted for clustering on country, in order to allow for intragroup correlation. *gender* is equal to 0 if the respondent is female, 1 if male. *parents'citizenship* is coded as follws: 1=both parents are citizens; 2=only one of them is citizen; 3=neither parents are citizens. *urban* is equal to 1 if the respondent lives in a big city, 2 if she lives in a suburb, in a small city or in a town, 3 if she lives in the country. *social class* is coded as follows: 1=lower class, 2=working class, 3=upper working class/lower middle class, 4=middle class, 5=upper middle class, 6=upper class. *trade union* is equal to 1 if the individual is member of a trade union, 0 otherwise. *party preferences* assumes values between 1 and 5 according as the vote intention is: far left, centre left, centre, right, far right. *religion* ranges from 1 to 5 according to the low or high attendance of religious services.

imm culture is a variable with value=0 if respondent don't agree with the following statement: "Immigrants improve society by bringing in new ideas and cultures"; value=1 otherwise.
imm crime is equal to 0 if the respondent thinks that immigrants increase crime rates, 1 otherwise.

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Table 4: Economic and Non-Economic Determinants of Attitudes Towards Illegal Immigration

	1	2	3	4	5	6	7	8	9
Dependent Variable	*Pro Illegal Immigration Opinion Dummy*								
age	-0.0014**	-0.0014**	-0.0012*	-0.0008***	-0.0007***	-0.0007**	-0.0010*	-0.0011*	-0.0005
	(-3.1603)	(-3.1659)	(-2.4972)	(-3.6689)	(-3.5933)	(-2.9611)	(-2.0202)	(-2.2912)	(-1.0769)
gender	-0.0202	-0.0194	-0.0031	-0.0073	0.0041	-0.0181	-0.0114	-0.0174	-0.0031
	(-1.3529)	(-1.2829)	(-0.1498)	(-0.5629)	(0.2171)	(-0.7875)	(-0.3636)	(-1.3288)	(-0.1851)
parents_citiz	0.0053	0.0053	0.0080	-0.0083	-0.0021	0.0101	0.0019	-0.0155	-0.0051
	(0.5729)	(0.5736)	(0.5237)	(-0.8471)	(-0.1258)	(0.6170)	(0.0843)	(-1.6066)	(-0.2925)
urban	-0.0077	-0.0078	-0.0037	-0.0021	-0.0109	-0.0032**	-0.0277	-0.0036	-0.0168*
	(-1.1441)	(-1.1315)	(-0.4642)	(-0.3130)	(-1.4433)	(-2.2874)	(-1.3247)	(-0.5589)	(-2.1853)
educyrs	0.0005***	0.0026**	0.0022**	0.0023**	0.0040***	0.0124**	0.1513***	-0.0018	0.0033
	(4.1334)	(3.4177)	(3.2872)	(3.4333)	(3.6410)	(2.2504)	(3.7736)	(-0.3919)	(0.5846)
log_realinc	-0.0066	-0.0107	-0.0340	-0.0198	-0.0323	-0.0190	-0.1238	-0.0246	-0.0362
	(-0.0769)	(-0.8869)	(-1.8666)	(-1.7774)	(-1.5506)	(-0.9019)	(-1.5348)	(-1.1883)	(-1.0770)
educ_gdp		0.0002**	0.0001**	0.0002**	0.0003***	0.0011**	0.0145***	0.0002	0.0003
		(3.3310)	(3.1960)	(3.3352)	(3.5492)	(3.1151)	(3.7609)	(0.4807)	(0.4616)
income_gdp		-0.0005	-0.0033	-0.0022	-0.0036	0.0035	-0.0142	-0.0023	-0.0040*
		(-0.3888)	(-1.6976)	(-1.6991)	(-1.7420)	(1.4945)	(-1.4498)	(-1.7998)	(-2.3382)
party_pref			-0.0357***		-0.0212*		-0.0480**		-0.0119 **
			(-3.3609)		(-2.3154)		(-2.7741)		(-3.4604)
religion			-0.0018		-0.0048		-0.0029		-0.0041
			(-0.1748)		(-0.4289)		(-0.1494)		(-0.5234)
social_class			0.0214**		0.0196**		0.0101**		0.0102***
			(3.0356)		(2.8047)		(3.4245)		(3.5620)
trade_union			-0.0215		-0.0139		0.0610		-0.0193
			(-0.9556)		(-0.5653)		(1.4388)		(-0.8329)
pres_traditio				0.0127***	0.0248***		0.0644**		0.0148***
				(3.7085)	(3.9903)		(3.3697)		(3.6827)
imm_rights				0.0080**	0.0043**		0.0044*		0.0054***
				(3.2556)	(2.6121)		(2.3597)		(3.0542)
immig_crime				0.1117***	0.1289***		0.1011**		0.0651***
				(9.4527)	(7.1761)		(2.7036)		(4.8298)
immig_cult				0.0555***	0.0418**		0.0459***		0.0192**
				(5.3375)	(3.0088)		(3.8181)		(3.2813)
ILL_ratio						0.0001***	0.0022***		
						(4.6296)	(4.5816)		
ILLratio_edu						0.0018**	0.0020**		
						(3.3339)	(2.7684)		
ILLratio_inc						-0.0016***	-0.0010***		
						(-6.2869)	(-3.7684)		
immig_econ								0.0367**	0.0192***
								(2.8046)	(4.3748)
immig_jobs								0.0384**	0.0052***
								(2.6664)	(4.4025)
imm_pubex								0.0460***	0.0479***
								(7.8044)	(14.0627)
observations	26953.00	26953.00	22238.00	21501.00	18123.00	17654.00	15474.00	16660.00	15259.00
r2_p	0.07	0.07	0.11	0.14	0.19	0.07	0.21	0.18	0.16

The sample includes only citizens of the country where they are interviewed. All regressions control for country fixed effects. The table shows the marginal effects, with (in brackets) the z statistics values. The standard errors are adjusted for clustering on country, in order to allow for intragroup correlation. *gender* is equal to 0 if the respondent is female, 1 if male. *parents'citizenship* is coded as follws: 1=both parents are citizens; 2=only one of them is citizen; 3=neither parents are citizens. *urban* is equal to 1 if the respondent lives in a big city, 2 if she lives in a suburb, in a small city or in a town, 3 if she lives in the country. *social class* is coded as follows: 1=lower class, 2=working class, 3=upper working class/lower middle class, 4=middle class, 5=upper middle class, 6=upper class. *trade union* is equal to 1 if the individual is member of a trade union, 0 otherwise. *party preferences* assumes values between 1 and 5 according as the vote intention is: far left, centre left, centre, right, far right. *religion* ranges from 1 to 5 according to the low or high attendance of religious services.

imm culture is a variable with value=0 if respondent don't agree with the following statement: "Immigrants improve society by bringing in new ideas and cultures"; value=1 otherwise.

imm crime is equal to 0 if the respondent thinks that immigrants increase crime rates, 1 otherwise.

Table 5: Labor Force Participants and Non-Labor Force Participants

Dependent variable	1		2		3		4	
	Pro Immigration Opinion Dummy							
	in	out	in	out	in	out	in	out
age	0.0006*	-0.0010***	0.0006*	-0.0010***	0.0006	-0.0012***	0.0003	-0.0005
	(2.1234)	(-3.3505)	(2.0918)	(-3.3181)	(1.9555)	(-3.3613)	(1.4330)	(-1.8639)
gender	0.0133**	0.0307***	0.0116**	0.0302***	0.0140**	0.0460***	0.0126**	0.0186*
	(3.2243)	(3.3802)	(3.0176)	(3.3493)	(2.7643)	(4.9847)	(3.2802)	(2.2725)
parents_citizenship	0.0455***	0.0339***	0.0451***	0.0341***	0.0442***	0.0297***	0.0179***	0.0110*
	(9.1924)	(6.0659)	(9.4605)	(6.0470)	(7.5561)	(5.0266)	(4.1005)	(2.4857)
educyrs	0.0015***	0.0005**	-0.0044*	-0.0007	-0.0047**	-0.0011	-0.0029*	-0.0011
	(5.5143)	(2.8459)	(-2.4096)	(-0.4094)	(-2.7661)	(-0.4182)	(-2.4905)	(-0.7667)
log_realincome	0.0072***	0.0050	-0.0097**	-0.0031	-0.0125*	-0.006	-0.0252*	-0.0022
	(3.8192)	(1.7719)	(-3.2202)	(-0.4196)	(-2.0167)	(-0.4082)	(-2.0897)	(-0.3851)
educ_gdp			0.0003*	-0.0000	0.0003*	-0.0001	0.0002*	-0.0001
			(2.0295)	(-0.0943)	(2.3093)	(-0.3110)	(2.1992)	(-0.6134)
income_gdp			-0.0020***	-0.0010				
			(-5.1618)	(-1.2610)				
party_pref					-0.0299***	-0.0319***		
					(-4.6944)	(-5.8915)		
religion					0.0042	0.0071**		
					(1.3293)	(3.0473)		
immig_crime							0.0550***	0.0480***
							(5.6602)	(5.3811)
immig_culture							0.0654***	0.0552***
							(8.0331)	(7.6741)
immig_economy							0.0734***	0.0623***
							(13.4779)	(6.6168)
immig_jobs							0.0515***	0.0429***
							(8.7480)	(4.1034)
observations	12664.00	5863.00	12664.00	5863.00	8838.00	4099.00	11738.00	5090.00
r2_p	0.10	0.13	0.11	0.13	0.11	0.15	0.23	0.27

The sample includes only citizens of the country where they are interviewed. All regressions control for country fixed effects. The table shows the marginal effects, with (in brackets) the z statistics values. The standard errors are adjusted for clustering on country, in order to allow for intragroup correlation.

Table 6: Labor Force Participants and Non-Labor Force Participants

Dependent variable	1		2		3	
	Pro Illegal Immigration Opinion Dummy					
	in	out	in	out	in	out
age	-0.0006*	-0.0007**	-0.0006*	-0.0006	-0.0006*	-0.0003
	(-2.4187)	(-2.8219)	(-2.0248)	(-1.7072)	(-2.1631)	(-1.0592)
gender	-0.0105	-0.0141*	-0.0084	-0.0056	-0.0036	-0.0118*
	(-1.7620)	(-2.2314)	(-1.0919)	(-0.6442)	(-0.5665)	(-2.1488)
parents_citizenship	0.0139*	0.0120	0.0112	0.0028	-0.0019	-0.0019
	(1.9961)	(1.9214)	(1.1522)	(0.3745)	(-0.3127)	(-0.3774)
educyrs	0.0007*	0.0003	0.0008*	0.0004	0.0001	0.0001
	(2.1768)	(1.4337)	(2.1913)	(1.6211)	(0.3108)	(0.6845)
log_realincome	-0.0001	0.0044*	0.0015	0.0037*	-0.0012	0.0035*
	(-0.0520)	(2.0102)	(0.6867)	(2.3438)	(-0.6776)	(2.1182)
party_pref			-0.0443***	-0.0268***		
			(-9.0641)	(-4.4585)		
religion			-0.0028	0.0045		
			(-0.8638)	(1.0343)		
immig_crime					0.0953***	0.0963***
					(6.9337)	(9.2003)
immig_culture					0.0381***	0.0227**
					(3.9314)	(3.1569)
immig_economy					0.0328***	0.0276***
					(4.6422)	(3.6957)
immig_jobs					0.0450***	0.0345***
					(6.0629)	(4.1841)
observations	13439.00	6080.00	9288.00	4246.00	12367.00	5278.00
r2_p	0.07	0.08	0.11	0.09	0.16	0.16

The sample includes only citizens of the country where they are interviewed. All regressions control for country fixed effects. The table shows the marginal effects, with (in brackets) the z statistics values. The standard errors are adjusted for clustering on country, in order to allow for intragroup correlation.

4 Permanent and Temporary Immigration and the Host Country: Integration, Consumption and Welfare.

Abstract

This paper deals with the relationship between integration, migrants' consumption and natives' welfare. I develop a dynamic model where immigrants have to choose to stay in the destination country permanently or to return to the country of origin at the beginning of period 2. I show how integration is one of the main determinants of migrants' consumption: the more immigrants are integrated, the more their utility of consumption increases. If the optimal level of consumption for permanent migrants is higher than the one of temporary migrants, and if the natives are the owners of production, then Government will implement policies aimed to increase integration. As a result, permanence of migrants will be longer and their optimal level of consumption increases.

JEL Classification: E21; F22; J22; J61

Keywords:permanent migration, temporary migration, consumption, integration.

4.1 Introduction

During the last decade, it was estimated in 1,4 million per year the number of immigrants necessary to face up to demographic decline and to labor market rigidities in European Union[18]. The large excess in labor supply, coming from countries characterized by demographic expansion and unemployment, is an ideal resource for countries affected by population ageing and growing shortages in several segments of the labor market. Nevertheless in all developed countries the number of immigrants has increased so much that it seems to have reached the absorption capacity and the limit of tolerance of citizens. This is why immigration issue is daily at center of public debate in the Western world.

In the last years many efforts have been made in order to find solutions and arrangements. Such conflicts interest mostly the new immigration countries, such as Italy, Ireland and Spain, where the requirements of labor market clash with public concerns; on the contrary, traditional or post-colonial immigration countries (U.S., Canada or Germany), used to cohabiting with a large foreign population, are now facing the integration problem. In the last years many Western governments implemented integration policies to encourage the learning of the host country's language, professional training and education and to give immigrants the right to work and to political participation. In many cases an amnesty was granted to the unauthorized population: in 1986 United States regularized over 2.5 million clandestine workers in the course of the Immigration Reform Control Act (IRCA); since 1981, France, Belgium, Greece, Italy, Luxembourg, Portugal, Spain and the UK have regularised nearly 4 million immigrants through over 20 regularisation programs. All these policies aimed at assimilating the immigrants already in the country, from an economic, political and social point of view and offered them a medium or long term permit[19].

A large body of literature focuses on the costs and benefits of immigration, from the host country's point of view. To this end, many authors analyzed the effects of *temporary* migration compared to the effects of *permanent* migration, concentrating on issues related to labor market and on the role of capital flows. It's often neglected that immigrants also consume goods and services, bring capital to the host country, bring family members, spend work effort and engage in various other activities that have direct and indirect influence on the excess demand for labour. In these respects, their choices are different, depending on

[18] 300 thousands only in Italy and 200 thousand in Germany (Hönekopp, 1997)

[19] Permanent residence in U.S., France, Portugal and Belgium; long term work and residence in Italy, Spain and Greece (Levinson, 2005)

their probability of return to the country of origin.

Consumption is a crucial element of the assimilation process of immigrants in the host country[20]. If the immigrants' pattern of consumption appears to be more similar to that of the native population, the willingness of local population to accept them is likely to increase. Immigrants' consumption behaviour can be different depending on the time spent in the host country. Immigrants with longer permanence in the destination country are more integrated than immigrants with shorter permanence, because they are more likely to adopt a consumption behaviour similar to the natives. Closeness of native population, exposure to commercial advertising, change of tastes and in propensity to consume, integration in labor market and expectation of permanently staying in the destination country, are possible explanations of this phenomenon.

This paper explores the possibility that immigration policy may affect the assimilation of immigrants and hence natives' sentiments towards them. I focus on consumption behaviour as a signal for assimilation[21]. If distribution of consumption differs among immigrants for some reasons, the social planner will adopt some policies to keep a part of them from coming back to home. In particular, if immigrants are integrated, their utility from consumption is higher, even if they suffer since the pattern of consumption is more similar to the natives than to their peers. If immigrants are *not* integrated, they will have a disutility from a consumption behaviour that is very different from the ideal one. In the first case immigrants will choose to stay permanently in the destination country, in the second case they will choose to come back to home at the beginning of period 2. Since permanent migrants spend all their income in the destination country, contributing to stimulate demand and increasing the welfare of the citizens, the social planner implements integration policies in order to reduce the migrants' disutility arising from the effort spent to be assimilated. Thus, different immigration policies lead to a different composition of the immigrants' population.

[20] In Sociology, the terms *assimilation* and *integration* are different (Schaeffer, 1995). *Assimilation* means a strong identification with the host culture, customs and 'values', coupled with a firm conformity to the norms, values, and codes of conduct; *integration* means that immigrants find a role in this society and requires acceptance of a country's laws, codes and rights, regardless of whether they adopt the culture of the host country. Assimilation implies integration, but not vice versa. Here the two terms are very similar; the difference is that the policies implemented by Government aim at integration, making assimilation easier.

[21] I suppose that immigrants are identical in their saving behaviour; as a consequence, there are no remittances. This hypothesis, however strong it is, allows me to isolate consumption as a tool at Government's disposal, in order to make the presence of immigrants profitable for citizens.

So far, to my knowledge, literature emphasized the role of labor market as a link between immigration policies and migrants' assimilation. Here, I look at the relationship between immigration policy, assimilation, consumption and welfare state: the social planner can implement an integration policy that, encouraging the assimilation of migrants, affects their pattern of consumption and increases the natives' welfare. This could be seen as a further prove that, under some condition, immigration can be welfare-improving for destination countries.

The rest of the paper is organized as follows. Section 2 briefly reviews the recent literature on this issue. In Section 3 the immigrant's problem is presented, while in Section 4 I show how the Government policies affect the results. Finally, Section 5 concludes.

4.2 Literature

Even if immigrants have the same qualifications and utility function as the native-born, and the probability of involuntary return is zero, they face different conditions and incentives. One of the purposes of our model is to explore the effects of the costs of migration on immigrants' decisions. I focus on the non-monetary costs of migration, such as the effort from assimilation and the adaption to new patterns of consumption.

With respect to the effort from assimilation, recently Constant, Gataullina and Zimmermann (2009) proposed the *ethnosizer*, that measures the intensity of a migrant's ethnic identity, using information on language, culture, societal interaction, history of migration, and ethnic self identification. Thus they can classify immigrants into four states: integration, assimilation, separation and marginalization. Results based on the German Socio-economic Panel for 2001 show that, for example, young migrants are assimilated or integrated the most. Moreover, religion is important: Muslims, Catholics, and other Christians do not integrate, but assimilate well in comparison to non-religious individuals. Immigrants with a college degree or higher education in the home country separate less than those with no education. Finally, ex-Yugoslavs assimilate more than Greeks, Spaniards and Italians.

Barigozzi and Speciale (2009), using Italian data, analyze the distribution of consumption expenditure of documented and undocumented immigrants, showing that the distribution of consumption of immigrants with higher permanence

in the host country, first-order stochastically dominates immigrants with lower permanence and that all these distributions are first-order stochastically dominated by the ones of natives with similar characteristics. It suggests that the process of assimilation in terms of consumption for both documented and undocumented immigrants in Italy is slow.

Epstein (2010) develops a model where migrants must choose a level of social traits and consumption of ethnic goods. As the consumption level of ethnic goods increases, the migrants become ever more different from local population and are less assimilated. Less assimilation affects the reaction of local population to the migrants and the willingness of local population to accept them. In this way, wages and unemployment are affected as well.

Bauer, Lofstrom and Zimmermann (2000) analyze the possibility that immigration policy may affect the labor market assimilation of immigrants and, as a result, natives' sentiments towards immigrants. They find that natives in countries that receive predominantly refugee migrants are relatively more concerned with immigrations impact on social issues than with the employment effects. Natives in countries with mostly economic migrants are relatively more concerned about loosing jobs to immigrants. However, the results also suggest that natives may view immigration more favorably if immigrants are selected according to the needs of the labor markets. Similarly to Bauer, Lofstrom and Zimmermann (2000), I allow the Government to selectivly choose which types of migrants accept and keep permanently.

In this paper I prove that immigrants' consumption behaviour may differ depending on the permanence in the host country. Conceptually, there are several possible explanations. The first one refers to savings and remittances. Indeed, several studies demonstrated that permanent migrants remit on average a smaller proportion of their income compared to temporary migrants, mainly because they are more likely to bring their families along to the host country. Large remittance flows are sometimes seen as having a negative effect on the welfare of the host country. Moreover, for any level of earnings in the host country, the consumption patterns of temporary and permanent immigrants are also likely to differ. Apart from the issue of remittances, temporary migrants can be expected to save a larger fraction of their income than permanent immigrants[22]. Trying to smooth consumption over time, they take into account the expected decrease in their income after the return to the source country,

[22] see Djajić, 1989

because of the wage differential. As a consequence, temporary foreign workers will spend a smaller proportion of their host-country income when compared with their permanent counterparts, even if both of them are accompanied by family in the host country. Moreover, in choosing their optimal consumption, temporary immigrants will also take into account international differences in the price levels. Having the possibility of intertemporally substituting inexpensive source-country consumption for the costly host-country consumption, they will again choose to consume in the host country a smaller proportion of their current income when compared with permanent immigrants. Because of these two reasons, temporary migrants consume less than permanent migrants do.

This thesis is confirmed by the empirical evidence. Galor and Stark (1990) use an overlapping generations model to argue, for example, that the re-migration probability of immigrants in the host country increases the saving propensity of immigrants.

Using data for Germany, Merkle and Zimmermann (1992) find that remigration plans represent an important determinant of remittances. Based on these results, they conclude that temporary migrants hold savings mainly in their home country.

Dustmann (1997) develops a model in which immigrants' duration abroad and savings are jointly determined. He demonstrates that immigrants may accumulate more precautionary savings than comparable natives if they face greater income risk on the labor market of the host country.

Bauer and Sinning (2005), utilizing household level data drawn from the German Socio-Economic Panel (GSOEP) for the years 1996-2003, analyze the saving behaviour of temporary and permanent migrants in West Germany, finding that temporary migrants save significantly more than permanent migrants and natives as soon as remittances are treated as savings.

Another possible explanation is related to that branch of literature that analyze peer-groups effects, or "keeping up with the Joneses" as a potential determinant for intertemporal consumption choice. Maurer and Meier (2008) focus on the existence of a relationship between an individual's current consumption and that of her peers. Charles, Hurst, and Roussanov (2007) find that consumption externalities have an important role in explaining divergent patterns of consumption expenditures across races as well.

Thus, the regularization programs described above could be well justified[23].

[23] Many other authors discuss empirically this subject, analyzing the effects on sending countries or on destination countries. See, as recent examples: Pinger (2009), Bettin et al.

They could be seen as a tool of Government for stimulating demand, even by paying a cost in terms of competition on the labor market. But easy obtaining of a permit to stay could be not sufficient. Immmigrants may prefer to come back to the country of origin, because of the difficult integration process. In order to facilitate the civil and cultural assimilation, besides the "legal" one, Governments are implementing integration policies jointly with migration policies.

4.3 The model

We consider a small open economy where the total labor force is composed of two types of agents: immigrants and citizens. They live only two periods and consume all their income in each period. There is no illegal immigration, all immigrants are unskilled and work as employees. The natives are the employers and there is no unemployment[24]. We assume that immigrants are already in the host country, so they have already solved the migration problem, and they don't remit because, for example, the whole family has moved abroad with the head of the household. Hence they have to choose if they stay in the destination country permanently or return to the country of origin at the beginning of period 2[25]. For this purpose, they take account of the non-monetary costs of migration, including the adaption to new consumption patterns, the effort spent to integrate, the loss of location specific human capital, the stress of being in a foreign country, the impossibility to enjoy the same rights as natives. All these costs reduce the utility of consumption differently, depending on whether migrant is permanent (P) or temporary (T). Immigrants are identical to natives in that their utility function has the same form: it is increasing and concave in consumption; it has an increasing and convex disutility of labor; finally, the utility of period 2 is weighted with an intertemporal discount factor β. In the immigrants' utility function we add the costs of migration.

(2009)

[24] We might assume that native population is divided into two groups: skilled workers (the employers) and unskilled workers. The basic issue doesn't change, because in partial equilibrium the migrants' consumption choices have no effects on the unskilled local workers.

[25] The probability of involuntary return is zero.

4.3.1 Permanent Migrants' Problem

Following Djajic and Milbourne (1988), we account for the non-monetary costs of migration by assuming that they reduce the utility of consumption.

The optimization problem for a *permanent* migrant is:

$$u_i^P = \sqrt{c_{i1}^P \gamma(e_{i1}^P)} - \frac{(l_{i1}^P)^2}{2} - \theta_i e_{i1}^P + \beta \left[\sqrt{c_{i2}^P \gamma(e_{i1}^P e_{i2}^P)} - \frac{(l_{i2}^P)^2}{2} - \theta_i e_{i2}^P \right] \quad (31)$$

Where:

c_{it}^P is the consumption of the permanent migrant i in the period t;

l_{it}^P is the labor supply of the permanent migrant i in the period t;

β is the intertemporal discpunt factor; I assume it's the same for both migrants and citizens.

e= effort spent to be assimilated;

θ= continuous of types that identifies permanent and temporary migrants: a high θ means that migrant is unfriendly to natives and very attached to his own identity. It tells us how much the effort of assimilation is a burden for a migrant. So, $\theta_i e_{it}$ is the "disutility of effort " of the agent i in the period t;

γ = assimilation to the consumption pattern of the destination country. It's a discount factor of the utility from consumption, arising from consuming goods that are different from the desired ones and far from the origin country. In particular: $0 < \gamma \leq 1$, such that the difference between migrants and natives reduces or disappears if $\gamma \to 1$. On the other side, low value of γ means a large cultural and social distance between migrants and natives. Moreover γ is a function of e_i: $\gamma = \gamma(e_i)$, with $\gamma_e > 0$ and $\gamma_{ee} < 0$.

The budget constraints are:

$$s.t. \qquad \begin{array}{l} c_{i1}^P = l_{i1}^P w \\ c_{i2}^P = l_{i2}^P w \end{array} \quad (32)$$

The wage rate is assumed to be the same in both periods: $w_1 = w_2 = w$. The reason is that we set the probability of involuntary return equal to zero, in order to isolate the effects of reduced utility of consumption[26].

By substituting the constraint into the objective function, we have:

[26] On the contrary, we should assume, in the second period, an expected wage rate lower than in the first period.

$$u_i^P = \sqrt{l_{i1}^P w \gamma(e_{i1}^P)} - \frac{(l_{i1}^P)^2}{2} - \theta_i e_{i1}^P + \beta \left[\sqrt{l_{i2}^P w \gamma(e_{i1}^P e_{i2}^P)} - \frac{(l_{i2}^P)^2}{2} - \theta_i e_{i2}^P \right] \quad (33)$$

By maximizing with respect to l_{i1}^P and l_{i2}^P, we obtain the optimal labor supply in each period:

$$\underset{l_{i1}^P}{max}\, u_i^P \quad : \quad \frac{1}{2} \frac{\sqrt{w\gamma(e_{i1}^P)}}{\sqrt{l_{i1}^P}} - l_{i1}^P = 0 \quad \Longrightarrow \quad (l_{i1}^P)^3 = w\gamma(e_{i1}^P)\frac{1}{4} \quad (34)$$

$$\underset{l_{i2}^P}{max}\, u_i^P \quad : \quad \frac{\beta}{2} \frac{\sqrt{w\gamma(e_{i1}^P e_{i2}^P)}}{\sqrt{l_{i2}^P}} - \beta l_{i2}^P = 0 \quad \Longrightarrow \quad (l_{i2}^P)^3 = w\gamma(e_{i1}^P e_{i2}^P)\frac{1}{4} \quad (35)$$

The optimal labor supply is a function of the wage rate and of the degree of assimilation: the more I enjoy the consumption, the more I work. The difference in labor supply depends on the assimilation progress between the first and the second period.

From the maximization with respect to e:

$$\underset{e_{i1}^P}{max}\, u_i^P \quad : \quad \frac{1}{2} \frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}} \frac{\partial \gamma(e_{i1}^P)}{\partial e_{i1}^P} - \theta_i + \frac{\beta}{2} \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P} = 0 \quad \Longrightarrow$$

$$\Longrightarrow \quad \frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}} \frac{\partial \gamma(e_{i1}^P)}{\partial e_{i1}^P} + \beta \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P} = 2\theta_i \quad (36)$$

$$\underset{e_{i2}^P}{max}\, u_i^P \quad : \quad \frac{\beta}{2} \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i2}^P} - \beta\theta_i = 0 \quad \Longrightarrow$$

$$\Longrightarrow \quad \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i2}^P} = 2\theta_i \quad (37)$$

By comparing equations (6) and (7), we obtain:

$$\frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}} \frac{\partial \gamma(e_{i1}^P)}{\partial e_{i1}^P} + \beta \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P} \quad = \quad \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}} \frac{\partial \gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i2}^P} \quad (38)$$

$$\frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}}\frac{\partial\gamma(e_{i1}^P)}{\partial e_{i1}^P} = \frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}}\left[\beta\frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P} - \frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i2}^P}\right] \tag{39}$$

The left-hand side of the equation is positive. The first term of the right-hand side is positive, as well. As a consequence, the last term is positive, too. This implies that, supposing $\beta = 1$ for simplicity, $\frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i2}^P} > \frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P}$ and, finally, that $e_{i2}^{P\star} < e_{i1}^{P\star}$, because of the concavity of $\gamma(e)$.

Lemma 1*: From the permanent migrant 's point of view, at the optimum, the effort spent to be assimilated in the first period is higher than in the second period.*

4.3.2 Temporary Migrants' Problem

The optimization problem for a *temporary* migrant is:

$$u_i^T = \sqrt{c_{i1}^T\gamma(e_{i1}^T)} - \frac{(l_{i1}^T)^2}{2} - \theta_i e_{i1}^T + \beta u_2^{T\star} \tag{40}$$

where $\beta u_2^{T\star}$ is the utility maximized by the *temporary* migrant in the home country in period 2.

$$s.t. \qquad c_{i1}^T = l_{i1}^T w \tag{41}$$

$$u_i^T = \sqrt{l_{i1}^T w\gamma(e_{i1}^T)} - \frac{(l_{i1}^T)^2}{2} - \theta_i e_{i1}^T + \beta u_2^{T\star} \tag{42}$$

$$\underset{l_{i1}^T}{max\ u_i^T} \quad : \quad \frac{1}{2}\frac{\sqrt{w\gamma(e_{i1}^T)}}{\sqrt{l_{i1}^T}} - l_{i1}^T = 0 \quad \Longrightarrow \quad (l_{i1}^T)^3 = w\gamma(e_{i1}^T)\frac{1}{4} \tag{43}$$

$$\underset{e_{i2}^T}{max\ u_i^T} \quad : \quad \frac{\sqrt{l_{i1}^T w}}{\sqrt{\gamma(e_{i1}^T)}}\frac{\partial\gamma(e_{i1}^T)}{\partial e_{i1}^T} = 2\theta_i \tag{44}$$

Lemma 2: *The optimal effort for a temporary migrant is smaller than the optimal effort for a permanent migrant in both periods:* $\forall t = 1, 2 \ : \ e_{it}^{T\star} < e_{it}^{P\star}$

Proof: In the second period it's obvious, because $e_{i2}^T = 0$.

In the first period, let us compare equation (6) and equation (14):

$$\frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}}\frac{\partial\gamma(e_{i1}^P)}{\partial e_{i1}^P}+\beta\frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}}\frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P}=2\theta_i$$

$$\frac{\sqrt{l_{i1}^T w}}{\sqrt{\gamma(e_{i1}^T)}}\frac{\partial\gamma(e_{i1}^T)}{\partial e_{i1}^T}=2\theta_i$$

$$\frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}}\frac{\partial\gamma(e_{i1}^P)}{\partial e_{i1}^P}+\beta\frac{\sqrt{l_{i2}^P w}}{\sqrt{\gamma(e_{i1}^P e_{i2}^P)}}\frac{\partial\gamma(e_{i1}^P e_{i2}^P)}{\partial e_{i1}^P}=\frac{\sqrt{l_{i1}^T w}}{\sqrt{\gamma(e_{i1}^T)}}\frac{\partial\gamma(e_{i1}^T)}{\partial e_{i1}^T}$$

Since the second term of the left-hand side is positive, the first term of the left-hand side has to be smaller than the right-hand side necessarily:

$$\frac{\sqrt{l_{i1}^T w}}{\sqrt{\gamma(e_{i1}^T)}}\frac{\partial\gamma(e_{i1}^T)}{\partial e_{i1}^T}>\frac{\sqrt{l_{i1}^P w}}{\sqrt{\gamma(e_{i1}^P)}}\frac{\partial\gamma(e_{i1}^P)}{\partial e_{i1}^P}$$

By dividing both sides by the second term and substituting $\frac{\partial\gamma(e_{i1}^T)}{\partial e_{i1}^T}=\gamma_e^T$ and $\frac{\partial\gamma(e_{i1}^P)}{\partial e_{i1}^P}=\gamma_e^P$ we obtain:

$$\frac{\sqrt{l_{i1}^T w}}{\sqrt{l_{i1}^P w}}\frac{\sqrt{\gamma(e_{i1}^P)}}{\sqrt{\gamma(e_{i1}^T)}}\frac{\gamma_e^T}{\gamma_e^P}>1$$

$$\frac{\sqrt{l_{i1}^T w}}{\sqrt{l_{i1}^P w}}>\frac{\sqrt{\gamma(e_{i1}^T)}}{\sqrt{\gamma(e_{i1}^P)}}\frac{\gamma_e^P}{\gamma_e^T}$$

Now we can substitute l_{i1}^T and l_{i1}^P with the optimal values, as in (4) and in (13), and semplify:

$$\frac{\left[\gamma(e_{i1}^T)\right]^{\frac{1}{6}}}{\left[\gamma(e_{i1}^P)\right]^{\frac{1}{6}}}>\frac{\left[\gamma(e_{i1}^T)\right]^{\frac{1}{2}}}{\left[\gamma(e_{i1}^P)\right]^{\frac{1}{2}}}\frac{\gamma_e^P}{\gamma_e^T}$$

By dividing both sides by the same term:

$$1>\frac{\left[\gamma(e_{i1}^T)\right]^{\frac{1}{3}}}{\left[\gamma(e_{i1}^P)\right]^{\frac{1}{3}}}\frac{\gamma_e^P}{\gamma_e^T}\quad\Longrightarrow\quad 1>\frac{\gamma(e_{i1}^T)}{\gamma(e_{i1}^P)}\left(\frac{\gamma_e^P}{\gamma_e^T}\right)^3$$

Since $\gamma(e)$ is increasing and concave, the only condition that assures this result is $e_{i1}^T<e_{i1}^P$. In fact if $e_{i1}^T>e_{i1}^P$, each term on the right-hand side would be bigger than 1.

Lemma 3*: In the first period, the optimal level of labor for a permanent migrant is larger than for a temporary migrant:* $l_{i1}^{P\star} > l_{i1}^{T\star}$

Proof: From equations (4) and (13) we know that:

$$(l_{i1}^{P})^3 = w\gamma(e_{i1}^{P})\frac{1}{4}$$

$$(l_{i1}^{T})^3 = w\gamma(e_{i1}^{T})\frac{1}{4}$$

From Lemma 2 we found that $e_{it}^{T\star} < e_{it}^{P\star}$. As a consequence: $\gamma(e_{it}^{P\star}) > \gamma(e_{it}^{T\star})$ and then: $l_{i1}^{P\star} > l_{i1}^{T\star}$

Lemma 4*: In the first period, the optimal consumption of permanent migrants is larger than that of temporary migrants:* $c_{i1}^{P\star} > c_{i1}^{T\star}$.

Proof: Given a constant $\bar{w}$, this is an obvious consequence of Lemma 2 and the budget constraints (2) and (11).

4.3.3 The optimal choice for a migrant

A migrant is indifferent between permanent and temporary migration if:

$$u_i^{P\star} = u_i^{T\star}$$

$$\sqrt{l_{i1}^{P\star} w\gamma(e_{i1}^{P\star})} - \frac{(l_{i1}^{P\star})^2}{2} - \theta_i e_{i1}^{P\star} + \beta\left[\sqrt{l_{i2}^{P\star} w\gamma(e_{i1}^{P\star} e_{i2}^{P\star})} - \frac{(l_{i2}^{P\star})^2}{2} - \theta_i e_{i2}^{P\star}\right] =$$

$$= \sqrt{l_{i1}^{T\star} w\gamma(e_{i1}^{T\star})} - \frac{(l_{i1}^{T\star})^2}{2} - \theta_i e_{i1}^{T\star} + \beta u_2^{T\star} \tag{45}$$

$$-\theta_i e_{i1}^{P\star} - \beta\theta_i e_{i2}^{P\star} + \theta_i e_{i1}^{T\star} = \sqrt{l_{i1}^{T\star} w\gamma(e_{i1}^{T\star})} - \frac{(l_{i1}^{T\star})^2}{2} + \beta u_2^{T\star} - \sqrt{l_{i1}^{P\star} w\gamma(e_{i1}^{P\star})} + \frac{(l_{i1}^{P\star})^2}{2} -$$

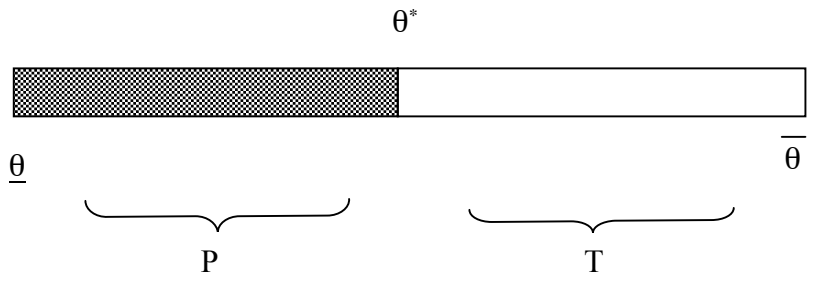
$$\beta\left[\sqrt{l_{i2}^{P\star} w\gamma(e_{i1}^{P\star} e_{i2}^{P\star})} - \frac{(l_{i2}^{P\star})^2}{2}\right] \tag{46}$$

$$\theta_i(e_{i1}^{P\star}+\beta e_{i2}^{P\star}-e_{i1}^{T\star}) = \sqrt{l_{i1}^{P\star} w\gamma(e_{i1}^{P\star})}-\frac{(l_{i1}^{P\star})^2}{2}+\beta\left[\sqrt{l_{i2}^{P\star} w\gamma(e_{i1}^{P\star} e_{i2}^{P\star})}-\frac{(l_{i2}^{P\star})^2}{2}\right]-$$

$$-\sqrt{l_{i1}^{T\star} w\gamma(e_{i1}^{T\star})}+\frac{(l_{i1}^{T\star})^2}{2}-\beta u_2^{T\star} \tag{47}$$

The left-hand side of equation (18) is the difference between permanent and temporary migrants in terms of disutility from effort. The right-hand side is the difference in terms of utility.

It allows us to find the discriminating value of θ.



4.4 Immigrant Integration Policy

The citizens' utility function is the profit function:

$$\pi = f(l_1) - wl_1 + \beta\left[f(l_2) - wl_2\right] \tag{48}$$

Since in t=1 $c_P > c_T$, the Government, maximizing the welfare of domestic citizens, in the first period implements an incentive policy in order to encourage

permanent migration. The immigrant integration policy I is totally financed by taxing π in period 1 with a tax rate r. Thus, the employers' profit function is:

$$\pi = [f(l_1) - wl_1](1 - r) + \beta [f(l_2) - wl_2] \tag{49}$$

From the migrant point of view, I causes a positive effect that reduces the disutility from effort $\theta_i e_1$. Let us call ϕ the benefit from I, with $\phi = \phi(I)$, $\phi_I > 0$ and $\phi_{II} < 0$. From equation (15) we have:

$$\sqrt{l_{i1}^{P\star} w\gamma(e_{i1}^{P\star})} - \frac{(l_{i1}^{P\star})^2}{2} - \theta_i [1 - \phi(I)] e_{i1}^{P\star} + \beta \left[\sqrt{l_{i2}^{P\star} w\gamma(e_{i1}^{P\star} e_{i2}^{P\star})} - \frac{(l_{i2}^{P\star})^2}{2} - \theta_i [1 - \phi(I)] e_{i2}^{P\star} \right] =$$

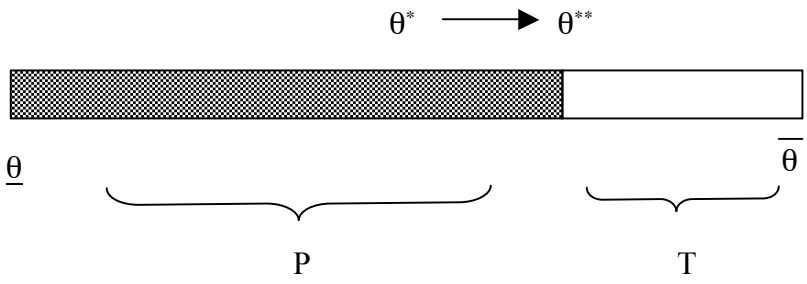
$$= \sqrt{l_{i1}^{T\star} w\gamma(e_{i1}^{T\star})} - \frac{(l_{i1}^{T\star})^2}{2} - \theta_i [1 - \phi(I)] e_{i1}^{T\star} + \beta u_2^{T\star} \tag{50}$$

$$\theta_i [1 - \phi(I)] e_{i1}^{P\star} + \beta\theta_i [1 - \phi(I)] e_{i2}^{P\star} - \theta_i [1 - \phi(I)] e_{i1}^{T\star} =$$

$$\sqrt{l_{i1}^{P\star} w\gamma(e_{i1}^{P\star})} - \frac{(l_{i1}^{P\star})^2}{2} + \beta \left[\sqrt{l_{i2}^{P\star} w\gamma(e_{i1}^{P\star} e_{i2}^{P\star})} - \frac{(l_{i2}^{P\star})^2}{2} \right] - \sqrt{l_{i1}^{T\star} w\gamma(e_{i1}^{T\star})} + \frac{(l_{i1}^{T\star})^2}{2} - \beta u_2^{T\star} \tag{51}$$

For both permanent and temporary migrants the incentive policy reduces the disutility from effort in both periods. The effect on θ^* is positive:

$$\frac{\partial\theta^\star}{\partial I} = \frac{\phi_I}{[\phi(I)]^2} \frac{u_i^{P\star} - u_i^{T\star}}{e_{i1}^{P*} + e_{i2}^{P*} - e_{i1}^{T*}} \quad > 0 \tag{52}$$



The social planner maximizes the welfare of domestic citizens in order to set the optimal integration policy, taking into account the social cost related to the presence of immigrants in the second period. This cost is $B(I)$, with $B(0) = 0$, $B_I > 0$ and $B_{II} < 0$. The maximization problem is:

$$\max_{I} \quad G = \sqrt{(1-r)\Pi_1(I)} + \beta\sqrt{\Pi_2(I)} - \beta B(I) \tag{53}$$

$$s.t \qquad r\Pi_1 = I \tag{54}$$

Which is the effect of a change in I on the social welfare function?

$$\frac{dG}{dI} \quad = \frac{1}{2}\frac{\sqrt{1-r}}{\sqrt{\Pi_1}}\frac{\partial \Pi_1}{\partial I}dI + \frac{\beta}{2}\frac{1}{\sqrt{\Pi_2}}\frac{\partial \Pi_2}{\partial I}dI - \beta\frac{\partial B_2}{\partial I}dI \tag{55}$$

Since $B(I)$ is increasing and convex, the social planner implements the policy I if:

$$\frac{1}{2}\frac{\sqrt{1-r}}{\sqrt{\Pi_1}}\frac{\partial \Pi_1}{\partial I}dI + \frac{\beta}{2}\frac{1}{\sqrt{\Pi_2}}\frac{\partial \Pi_2}{\partial I}dI \geq \beta\frac{\partial B}{\partial I}dI \tag{56}$$

that is, the social marginal benefit is not smaller than the social marginal cost.

To calculate $\frac{\partial \Pi_1}{\partial I}$ and $\frac{\partial \Pi_2}{\partial I}$ we must consider several factors. In the second period the variation of profit is caused only by the enlarged population: θ

moves from $\theta^{\star}$to $\theta^{\star\star}$and an increased number of migrant decides to stay in the destination country, instead of returning back to the country of origin, and to consume c_{i2}^{P}. This produces a rise of consumption and, as a result, profit increases, net of the larger cost of production.

Remembering that (from iv) $c_{i1}^{P\star} > c_{i1}^{T\star}$, in the first period the profit rises because a share of population that consumed $c_{i1}^{T\star}$ before I, now is consuming $c_{i1}^{P\star}$. In fact, all types θ_i belonging to the interval $[\theta^{\star}, \theta^{\star\star}]$ were temporary when $I = 0$, but choose to be permanent when I is implemented, thus increasing their consumption. But the increased consumption is different for each $\theta_i \in [\theta^{\star}, \theta^{\star\star}]$ and the size of that interval depends on I. This is valid also for the labor supply. As a consequence, the variation of profit is the sum of the changes in consumption for each additional θ_i, weighted for the size of I, net of the changes in labor supply. But the number of additional θ is endogenous, because $\theta^{\star\star}$ depends on I.

What happens to those migrants that, before I, were already permanent? And what to those that, after I, remain temporary? If the social planner introduce an integration policy, do they change their optimal choices?

The total effect is equal to:

$$\int_{\underline{\theta}}^{\theta^{\star}} (c_{i1}^{P\star\star} - c_{i1}^{P\star}) + \beta(c_{i2}^{P\star\star} - c_{i2}^{\star}) \, d\theta \; - \int_{\underline{\theta}}^{\theta^{\star}} w(l_{i1}^{P\star\star} - l_{i1}^{P\star}) + \beta w(l_{i2}^{P\star\star} - l_{i2}^{P\star}) \, d\theta \quad +$$

$$+ \int_{\theta^{\star}}^{\theta^{\star\star}(I)} (c_{i1}^{P\star\star} - c_{i1}^{T\star}) + \beta c_{i2}^{P\star\star} \, d\theta \; - \int_{\theta^{\star}}^{\theta^{\star\star}(I)} w(l_{i1}^{P\star\star} - l_{i1}^{T\star}) + \beta w l_{i2}^{P\star\star} \, d\theta +$$

$$+ \int_{\theta^{\star\star}(I)}^{\bar{\theta}} (c_{i1}^{T\star\star} - c_{i1}^{T\star}) \, d\theta \; - \int_{\theta^{\star\star}(I)}^{\bar{\theta}} w(l_{i1}^{T\star\star} - l_{i1}^{T\star}) \, d\theta \tag{57}$$

Where the first two terms are the changes in profits related to $\theta_i \in [\underline{\theta}, \theta^{\star}]$, that is to migrants that, before I, were already permanent and, after I, re-optimize their consumption; the third and the fourth terms refer to those migrants that before I were temporary and after I become permanent; finally, the last two terms are related to variations in profits driven by those migrants that, before I, were already temporary and after I remain temporary.

4.5 Conclusions

With regard to recent spreading of nationalistic theses in European Union, a heated debate arose about the question: do migrants not want to integrate or should they not be integrated? The basis idea is that integration only works when it's reciprocal: we don't just need someone who wants to be integrated but also someone who wants to integrate others.

The economic literature on permanent and temporary migration dealt mainly with issues such as remittances and savings. When the issue of integration was treated, it was linked to wages and earnings, labor force participation and education. So far, few works focused on the consumption side and on the relationship between consumption, integration and natives' welfare. I show that this relationship can be seen as a further tool at Government's disposal, in order to make the presence of immigrants profitable for citizens.

This paper deals with the relationship between integration, migrants' consumption and natives' welfare. The problem faced by Government is how to improve the citizens' welfare, once immigrant population have entered the country. If all immigrants have the same savings behaviour, the Government can choose to provide incentives for consumption. Since immigrants are different from natives because of cultural, religious and social aspects, they have a lower utility from consumption, if they are constrained to consume goods that are very different from the desired one. The utility from consumption increase if immigrants become similar to natives, that is, if immigrants become more assimilated.

If integration is among the main determinants of migrants' consumption, then the Government will implement policies aimed to increase integration. As a result, the permanence of migrants will be longer.

I develop a dynamic model where immigrants have to choose if to stay in the destination country permanently or return to the country of origin at the beginning of period 2. The non-monetary costs of migration (such as the adaption to new consumption patterns, the effort spent to integrate, the loss of location specific human capital, the stress of being in a foreign country, the impossibility to enjoy the same rights as natives) reduce the utility of consumption differently, depending on whether migrant is permanent or temporary. I find that, at the optimum, a permanent migrant spends more effort to be assimilated in the first period than in the second period and that the optimal effort for a permanent migrant is higher than the optimal effort of a temporary migrant. This is valid also with respect to both the optimal level of labor supply and the optimal level

of consumption.

Then I suppose that the Government in host country implements an incentive policy that encourage permanent migration. This policy reduces the migrants' disutility from effort in both periods and, as a consequence, the number of immigrants that choose to stay increases. Natives' welfare increases as well, because in the first period a larger part of migrant population adopts the permanent migrants' pattern of consumption and in the second period a larger number of migrants prefers to stay and to consume here.

References

[1] Barigozzi, Matteo and Speciale, Biagio, 2009. "Immigrant's Legal Status, Permanence in the Destination Country and the Distribution of Consumption Expenditure", Ecares Working Papers 2009-019.

[2] Bauer, Thomas K. and Sinning, Mathias, 2005. "The Savings Behavior of Temporary and Permanent Migrants in Germany", IZA Discussion Paper No. 1632, June.

[3] Bettin, Giulia & Lucchetti, Riccardo & Zazzaro, Alberto, 2009. "Income, Consumption and Remittances: Evidence from Immigrants to Australia", MoFiR working paper n° 34

[4] Bisin, A. and T. Verdier, 2000. "Beyond the Melting Pot: Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits", Quarterly Journal of Economics, August, 955-988.

[5] Bond, Eric W. & Chen, Tain-Jy, 1987. "The welfare effects of illegal immigration", Journal of International Economics, Elsevier, vol. 23(3-4), pages 315-328, November.

[6] Borjas, G.J., 2000. "Ethnic Enclaves and Assimilation", Swedish Economyc Policy Review, No. 7, pages 89-122.

[7] Charles, Kerwin Kofi, Hurst, Erik and Roussanov, Nikolai, 2009. "Conspicuous consumption and race", The Quarterly Journal of Economics, vol. 124(2), pages 425-467, May. .

[8] Constant, Amelie F., Gataullina, Liliya and Zimmermann, Klaus F., 2009, "Ethnosizing immigrants" Journal of Economic Behavior & Organization 69 (2009) 274–287

[9] Djajic, Slobodan, 1985. "Illegal Aliens, Unemployment and Immigration Policy", Working Papers 591, Queen's University, Department of Economics.

[10] Djajic, Slobodan, 1989. "Migrants in a Guest-Worker System," Journal of Development Economics No. 31, pages 327-339.

[11] Djajic, S. and Milbourne, R., 1988. "A General Equilibrium Model of Guest-Worker Migration: The Source Country Perspective," Journal of International Economics 25 (1988), 335-351.

[12] Dustmann, Christian, 1997. "Return migration, uncertainty and precautionary savings", Journal of Development Economics 52(2), 295-316.

[13] Dustmann, Christian and Mestres, Josep, forthcoming. "Remittances and Temporary Migration".

[14] Epstein, Gil S., forthcoming. "Legal and Illegal Migrants, Ethnicity and the Welfare State".

[15] Facchini, Giovanni & Mayda, Anna Maria & Prachi, Mishra, 2007. "Do Interest Groups Affect Immigration?", IZA Discussion Papers 3183, Institute for the Study of Labor (IZA).

[16] Galor, Oded, and Stark, Oded, 1990. "Migrants' Savings, the Probability of Return Migration and Migrants' Performance," International Economic Review 31 (1990), 463-467.

[17] Hanson, Gordon H. & Spilimbergo, Antonio, 2001. "Political economy, sectoral shocks, and border enforcement," Canadian Journal of Economics, Canadian Economics Association, vol. 34(3), pages 612-638, August.

[18] Hönekopp E.,1997, "Labour migration to Germany from central and Eastern Europe – Old and New Trends", IAB Labour Market, 1-25.

[19] Levinson, Amanda, 2005. "Why Countries Continue to Consider Regularization", article for Migration Policy Institute, September.

[20] Maurer, Jurgen, and Meier, André, 2008. "Smooth it Like the "Joneses?" Estimating Peer-Group Effect in Intertemporal Consumption Choice", Mea 167-2008.

[21] Merkle, L., and K.F. Zimmermann, 1992. ‘‘Savings, remittances, and return migration’’, Economics Letters, 38(1): 77–81.

[22] Pinger, Pia, 2009. "Come Back or Stay? Spend Here or There? Return and Remittances: The Case of Moldova", International Migration Vol. 48 (5).

[23] Schaeffer, Peter V., 1995. "The Work Effort and the Consumption of Immigrants as a Function of Their Assimilation", International Economic Review, Vol. 36 No. 3, pages 625-642.

[24] Wildasin, D., 2004. ”Economic integration and the welfare state, in Social Union, Migration and the Constitution: Integration at Risk”, CES-ifo Forum, Autumn Vol. 5, No. 3, 19-26.

[25] Woodland, Alan D. & Yoshida, Chisato, 2006. "Risk preference, immigration policy and illegal immigration," Journal of Development Economics, vol. 81(2), pages 500-513, December.

5 Concluding Remarks

International migration is one of the most relevant causes for concern in both advanced and developing countries. At present, it's a crucial factor of economic, social and political changes in most countries, exacerbating some problems and offering solutions to others.

I focus on immigrants' integration issue, finding the conditions under which immigration can be welfare-improving for both immigrants and natives.

In the first chapter I examined an economy where a labor union represents unskilled workers and a number of legal and illegal immigrants are present, showing that it's true that labor unions oppose unskilled migration and benefit from a strict enforcement policy but, once undocumented immigrants have entered the country, the unions can find the legalization of illegals in its interest. Thus, if the union is powerful enough, it can benefit from a previously harmful circumstance.

An amnesty produces effects that are opposite to those obtained with the enforcement policy. Both policies affect positively the union's utility, but in a different way and magnitude. Stricter enforcement has no effects on union membership and a positive effect on regular workers' wage. On the contrary, an amnesty has a positive effect on the membership and, consequently, on the union's power and the local workers' wage, but it reduces the legal workers' wage in the non-union sector. This holds at least in the short-run, when the labor demand function is inelastic enough.

As a result, labor unions encourage the enforcement policy, but when the number of illegal immigrants becomes very high, they prefer an amnesty, in order to increase their own utility by incorporating a huge labor force.

The framework used here is amenable to various extensions. In this model I don't contemplate an active role of the employers. They benefit neither from enforcement policy nor from amnesties, because of the increasing costs. But if they are able to bargain on the enforcement policy or on the timing of amnesties, the results could be considerably different. This is even more true if we allow for capital mobility across countries.

In the second chapter, I investigate the economic and non-economic determinants of individual attitudes towards illegal immigration and towards overall immigration. Economic theory suggests that high-skill countries are more likely to accept unskilled immigration, and *viceversa* for low-skill countries. Since illegal immigrants are hired in low-skilled and low-paid jobs, they can be considered

as unskilled native workers' competitors and, as a result, unskilled workers are more likely to oppose them. If this is the case, I expect that the labor market effects play a key role only partially when I consider individual preferences towards illegal immigrants. I find that the labor market channel and the welfare channel are both relevant, but they have stronger impact on attitudes when the overall immigration is involved. When people think about illegal immigrants these effects lose their relevance, confirming that only a part of population see them as competitors. Non-economic variables are also found to be significantly correlated with immigration preferences. They are stronger in illegal immigration case.

It could be interesting to repeat this analysis using more recent data, to investigate how the current economic crisis has affected the natives' perception of legal and illegal immigration.

The last chapter deals with the relationship between integration, migrants' consumption and natives' welfare. The problem faced by Government is how to improve the citizens' welfare, once immigrant population have entered the country. If all immigrants have the same savings behaviour, the Government can choose to provide incentives for consumption. Since immigrants are different from natives because of cultural, religious and social aspects, they have a lower utility from consumption, if they are constrained to consume goods that are very different from the desired one. The utility from consumption increase if immigrants become similar to natives, that is, if immigrants become more assimilated.

If integration is among the most relevant determinants of migrants' consumption, then the Government will implement policies aimed to increase integration. As a result, the permanence of migrants will be longer. The natives' welfare increases as well, because in the first period a larger part of migrant population adopts the permanent migrants' pattern of consumption and in the second period a larger number of migrants prefers to stay and to consume here.

Probably, this issue merits further attention. First, illegal immigrants could have a relevant role in the process of immigrants assimilation. Second, a realistic assumption is that migrants' wage is endogeneous and depends on assimilation effort: this could be a further incentive to integration, even if it would increase the cost of production.