

CRISIS IN THE COUNTRIES OF ORIGIN AND ILLEGAL IMMIGRATION INTO ITALY

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(October 2002)

[Preliminary version]

ABSTRACT

This paper contributes to the empirical literature on individual and household decisions to emigrate from a developing country to more advanced economies. It highlights the role of the variables that operate as both push factors and pull factors, focusing in particular on economic, financial and political crises as determinants of migratory flows to Italy (to Europe) in the last decade.

Used for this purpose is the Ministry of the Interior database on immigration into Italy over the past ten years, with particular regard to illegal immigrants intercepted by the authorities. The data on immigration are supplemented with information – drawn from various international statistical sources – relative to the political, economic and financial risk of the countries in which migratory flows originate. The analysis examines, pull factors remaining equal, whether and to what extent crises in the countries of origin amplify the migration push factors. Econometric analysis confirms that the push factors activated by crises have had a statistically and quantitatively significant role in determining the amount of illegal immigration intercepted in Italy during the past decade.

The results of the analysis have clear (international) economic policy implications: the costs of intervening with peace-making operations and/or development aid during severe economic and/or political crises in the countries of origin should be weighed according to their ability to limit socially undesirable mass migrations towards the European Union.

Acknowledgements

This paper draws in part on Chiuri and Ferri (2001b). We are grateful to officials at the Immigration and Border Police Service of the Italian Ministry of Interiors not only for making data available to us but also for providing information essential for our analysis. We wish to thank Fabrizio Barca, Marco Committeri, Riccardo Faini, Paolo Signorini and Alessandra Venturini for their comments on a previous draft of this paper. The usual disclaimer applies.

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1. Introduction

During the 1990s, Italy, once the “land of voyagers, saints and emigrants”, became the main gateway into the European Union (EU) for illegal immigrants. Recent statistics published by Eurostat show that 38% of the 54,428 illegal immigrants apprehended in the European Community during the third quarter of 1999 had entered through Italy, followed by France (23%) and Spain (18%). As the EU defines its policies on immigration – seeking to strike a balance between the needs of an ageing population no longer willing to accept unskilled work and the challenge of unification – increasing numbers of illegal immigrants enter Europe from poorer countries. But little is known about this phenomenon: there is only scant information available on legal immigrants and almost none at all about illegal ones.

The literature generally divides the factors determining immigration into two main groups: ‘pull’ (or demand-side) factors and ‘push’ (or supply-side) factors. Among the former, the recent literature has stressed institutional features and policies implemented in the host country, as well as other factors which determine the costs and expected benefits of immigration. Among these are the presence of social networks and the regulation of the labour market, which if too rigid may foster the growth of the black-market economy. Among push factors, the literature since Harris and Todaro’s (1970) study has emphasised wage differentials between the host country and the home country. However, in the specific case of illegal immigration into Europe, political and financial crises, social conflict and famine in the countries of origin may be of major importance.

The aim of this paper is to establish whether and to what extent the economic, financial and political crises that have hit the countries of the Mediterranean and the Balkans area have intensified migratory flows into Europe via Italy. These crises are factors additional to those that have always determined immigration. Specifically, the paper analyses the trend over time and by country of origin of illegal immigration as approximated by the number of expulsion orders issued by the Italian authorities, which in 2000 amounted to 130,791. It examines illegal immigrants rather than legal ones for two reasons: firstly because the majority of immigrants entering Italy are only in transit towards destinations in other EU countries; secondly because consideration of illegal

rather than legal immigrants purges the analysis of the distortions that would otherwise arise from the amnesties granted in the past decade. Analysis is conducted of the period 1990-2000, which comprises various crises that have erupted in the Mediterranean basin (e.g. in the area inhabited by the Kurdish people) and in the Balkans (e.g. conflicts in the former Yugoslavia or the crises in Albania).

The results obtained confirm that crises in home countries significantly amplify illegal immigration into (or through) Italy. Our econometric estimates show that crises gives rise to a quantitatively significant increase in the proportion of illegal immigrants entering Italy from a country in crisis. For example, when a country moves from what the ICRG Risk Rating System (see below) rates as a situation of 'moderate risk' to one of 'very high risk', as Albania did in 1990-92, the proportion should increase by around two percentage points. In other words, examination of the expulsion orders issued in 2000 shows that a crisis of that type in Albania might increase the number of illegal Albanian immigrants by around 3000 units per year; a number which may in fact be much larger given that only some of the illegal immigrants entering Italy are apprehended.

Our results therefore suggest future policy directions in both Italy and Europe. Specifically, by comparing the economic consequences of interventionist policy (which may check mass immigration before it begins) and a non-interventionist one, our analysis highlights the implicit effects of the various policy choices available to the European Union should further crises occur in neighbouring countries.

2. The determinants of illegal immigration: a survey of the literature

By definition, an immigrant is illegal if s/he contravenes the law by entering a country or remaining within it after expiry of his/her visa, and if s/he does not possess the status of political refugee. Because of its very nature, therefore, the magnitude of the phenomenon in the European Union cannot be accurately estimated. Nevertheless, the International Centre for Migration Policy Development has calculated the annual flow of illegal immigrants into Europe at around half a million; a number which, if confirmed by other sources, would be higher than that of legal immigrants.

As Zimmerman (1994) shows, migratory flows can be distinguished into various historical phases according to their intensity. At the turn of the last century, for example, migrations from Europe to the American continent (both South and North) were an important part of the globalization of that period: in 1913 around 4% of the populations of Canada and Argentina came from Europe. Between the 1950s and the early 1970s, migration continued apace, but mainly within Europe: 7%, 8% and 6% respectively of Belgium, France and Germany's labour forces consisted of foreign workers.

Zimmerman (1994) further evidences that the data on migration display a sharp reversal of trend from the mid-1970s onwards, with a steep decline in flows. The fall-off in migration was mainly due to changes in national laws, which became much less tolerant than in previous decades. The oil crisis of 1973 and increased unemployment are only two causes that have changed attitudes towards immigration in the Western economies, with the tightening of rules on admission.

Yet the income gaps between the South and North of the world have not narrowed, although the costs of transport and information have considerably diminished. The 'traditional' incentives for migration from South to North (and subsequently from East to West) have not lost their force. Consequently, migration has constantly increased and, given that it is now legally restricted, makes ever greater recourse to unlawful means of entry.

Although the literature on the subject continues to grow, the motives for emigration, and the effects of the presence of immigrants in the host country, have still to be explained. Moreover, empirical research on these aspects has concentrated on immigration into the United States (especially illegal immigration from Mexico). This is probably because the United States have historically been the main receiver of immigrants, attracted to that country by high wages. Yet European immigration differs from that of the USA for various reasons (see Coppel, Dumont and Visco, 2001): net flows into the EU grew during the 1980s, peaking in the 1990s owing to wars and ethnic conflicts. These specific historical events, together with tighter controls at European borders, have reduced the flow of legal immigrants and increased the flow of illegal ones. Therefore, for historical and geo-political reasons, immigrants into the EU have demographic characteristics and expectations that differ substantially from those of

immigrants into the United States. Moreover, to a certain extent European immigration may be temporary in nature.

Little is known about these phenomena, and further and more refined research is required before conclusions pertinent to policies on immigration into the EU can be drawn. The shortage of empirical studies is certainly due to the lack of comparative data on immigration, especially illegal. This is a shortcoming that this paper seeks to remedy. More specifically, mindful of the lack of satisfactory empirical surveys, it analyses the socio-economic determinants of recent immigration flows into Europe.

Any summary of the main results obtained by the theoretical and applied literature on immigration must necessarily refer to the pioneer work by Harris and Todaro (1970). In their model, the decision to emigrate is caused by wage differences in three distinct labour markets: a competitive agricultural market, an urban market with a wage rate above the equilibrium level, and an informal urban sector which guarantees a subsistence-level income to the unemployed resident in the area.¹

Although the wage rigidity hypothesis is to some extent plausible, especially with reference to Europe, Harris and Todaro's explanation of immigration movements solely in terms of wage differences is too simplistic. More recent studies (see Lucas and Stark, 1985; Rosenzweig, 1988; Rosenzweig and Stark, 1989; Borjas, 1994) have documented and interpreted the importance of close economic interactions between immigrants and their communities of origin. For altruistic reasons or through implicit contracts, families finance immigration, as a way to diversify income risks, by supplying family labour in various productive sectors in the country and abroad.

Moreover, emigrant workers usually select their final destinations on the basis of relationships formed in their countries of origin, given that social networks reduce the initial costs of job seeking and improve the prospects of evading the underground economy.

There are, moreover, factors which are not strictly economic – for instance language, cultural and geographical contiguity, historical and colonial links – which condition the decision to emigrate and the choice of destination country.

On the demand side, the advanced countries of Europe suffer from a shortage of unskilled labour in the tertiary sector and in branches subject to international

competition (tradable goods). They also lack seasonal labour in agriculture. Moreover, information asymmetries regarding immigrant workers may be wider than for domestic ones. If so, scant information about the productivity of foreign workers may induce employers to fix wages at the level of the group's average productivity. This has considerable incentive effects and triggers a selection mechanism which works to the advantage of unskilled workers.

Together with the factors discussed above, the choice of illegal immigration is also conditioned by the risks of being apprehended and thereby see all the expenditure to immigrate prove fruitless (see Hanson and Spilimbergo, 1999a and 1999b).

3. Migratory flows into Italy: an empirical analysis

3.1. Description of the approach and the data

We follow the theoretical and applied literature (see Hanson and Spilimbergo, 1999a) based on the life cycle model by using V_{ot} to denote the current value of future earnings in the home country and V_{it} the future value in the destination country, Europe in our case. If P_t is the probability of being apprehended on Italian territory, using a constant discount rate ρ and fixing as w_{ot} the wage forgone in period t if the worker emigrates, sustaining a transport and emigration cost C_t , s/he will decide to emigrate if the following condition holds:

$$w_{ot} + \frac{1}{1+\rho} V_{ot+1} < \frac{1}{1+\rho} P_t V_{ot+1} + \frac{1}{1+\rho} (1-P_t) V_{it+1} - C_t \quad [1]$$

if, that is, the current value of the future earnings expected in the destination country exceeds the current value of future earnings expected in the home country, the latter assessed with account also taken of the level of socio-political, economic and financial risk in the home country.

Therefore, migratory flows into Italy, approximated by the number of illegal immigrants apprehended in a year on Italian territory, depend on the variables included

¹ Faini and Venturini (1993) document the importance of wage differentials in explaining migrations from the South to the North of the Mediterranean.

in [1] and on the intensity of controls, L_t . These may vary in the period considered because of changes made to immigration law and indirectly also determine the variable P_t . It is therefore possible to obtain a reduced form equation of [1] which represents the number of apprehensions made in a year, F_t :

$$F_t = F_t(w_{ot}, V_{ot+1}, V_{It+1}, C_t, L_t) \quad [2]$$

To examine each of the determinants mentioned above, we used the Ministry of the Interior database. This contains time series of the flows of illegal immigrants into Italy distinguished by country of origin and approximated by the number of expulsion orders issued in the years 1990-2000.² The total number of expulsion orders issued in each year was calculated as the sum of the illegal immigrants: (i) refused entry at the border; (ii) refused entry by the police authorities; (iii) expelled with escort; (iv) readmitted by countries with which Italy has a readmission agreement; (v) expelled by the judicial authorities; (vi) expelled on injunction (see Appendix 1 for a detailed description).

We also compared the flows of illegal immigrants into Italy against various international socio-economic and political indicators for the countries of origin. We considered the following: (i) a proxy for expected future earnings based on net per-capita national income as reported by World Bank's World Development Indicators of the; (ii) a measure of the political, economic and financial risk in the country of origin as rated by international statistical sources (see Appendix 2 for a description of the ICRG indicator); (iii) geographical distance from Italy as a proxy for the costs of migration; (iv) the legal immigrants resident in Italy at the beginning of period and reported in the ISTAT annual (2000) by country of provenance, as an approximation of the pre-existence of social networks: this, as said, reduces job search costs and increases the expected level of future earnings; (v) a dummy for 1998, the year of enactment of the Napolitano-Turco law which modified expulsion procedures, thereby potentially distorting the time series of expulsions. Once the control variables for push and pull

² We would stress that the indicator used is only an approximation of the actual inflow of illegal immigrants. On the one hand, it is an under-approximation because only a proportion of illegal immigrants are effectively intercepted and expelled; on the other, the indicator may give rise to over-estimation of the phenomenon if, as sometimes happens, an expulsion order is not enforced: in this case, the same illegal immigrant may have been the recipient of more than one expulsion order.

factors had been introduced, our empirical analysis assessed whether and to what extent crises in countries of origin increase the number of expulsion orders issued and, as a consequence, the migratory flows from a specific country.

3.2. Descriptive evidence

The total number of expulsion orders issued to illegal immigrants in Italy increased markedly between 1990 and 1994 (from 10,000 to 57,000), stabilized in 1995, fell in 1996-97 (to 35,000 and 49,000), almost doubled in 1998 (91,000), and then rose sharply again, reaching a peak of 131,000 in 2000 (Fig. 1). Of course, as Hanson and Spilimbergo (1999b) also point out, the share of illegal immigrants intercepted depends on the stringency of border enforcement – that is, the amount of resources (police and judicial) allocated for the purpose by the authorities – but it also depends on the effectiveness of the legal framework. Hence, the number of expulsion orders increased sharply in 1998, which was the year when the new law on immigration was enacted, just as the decrease in expulsion orders in the previous two years was probably due to uncertainty about what changes would be made to the legal framework and because the greatest amnesty took place in 1996.

Analysis of the main motives for migration cannot base itself solely on temporal trends in the aggregate series. It must also examine the cross-sectional dimension of the data, or in other words, the home countries of intercepted illegal immigrants. Our empirical analysis therefore considered 118 countries,³ all those for which (a) details were available from the Ministry of the Interior database and (b) the data were systematically different from 0 for the majority of the years between 1990 and 2000.

³ Namely Afghanistan, Albania, Algeria, Angola, Arab Emirates, Argentina, Bahamas, Bahrein, Bangladesh, Benin, Belarus, Bolivia, Bosnia-Herzegovina, Botswana, Brazil, Bulgaria, Burkina-Fasu, Burma, Cameroon, Chile, China, Colombia, Congo, Costa Rica, Croatia, C.I.S./Russia, Cuba, Cyprus, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Estonia, Ethiopia, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Israel-Palestine, Ivory Coast, Jamaica, Jordan, Kazakistan, Kenya, Kuwait, Latvia, Lebanon, Liberia, Libya, Lithuania, Macedonia, Madagascar, Malawi, Malaysia, Mali, Malta, Mauritania, Mauritius, Morocco, Mexico, Mozambique, Namibia, New Guinea, Nicaragua, Niger, Nigeria, North Korea, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Ruanda, Senegal, Sierra Leone, Singapore, Syria, Slovak Republic, Slovenia, Saudi Arabia, Somalia, South Africa, South Korea, Sri Lanka, Sudan, Surinam, Thailand, Taiwan, Tanzania, Togo, Trinidad-Tobago, Tunisia, Turkey, Ukraine, Uganda, Uruguay, Venezuela, Yugoslavia, Vietnam, Yemen, Zaire, Zambia, Zimbabwe.

Table 1 concentrates on the first 15 countries of origin (in terms of quantitative importance) of immigration into Italy between 1990 and 2000. It shows the averages and, in brackets, the standard deviations of the main variables used in the empirical analysis. The home country with the highest number of illegal immigrants is Albania, which has an annual average value of 11,800 units, followed by Morocco (6,600), Yugoslavia and Romania (3,600), and Tunisia (2,400). The highest average number of legal immigrants come from Morocco (73,500), followed by Albania (44,200), Tunisia (36,500) and Yugoslavia (31,000).

The statistics on legal and illegal immigration can be efficaciously combined by calculating the ratio between the numbers of illegal and legal immigrants for each country of origin. These ratios are given in Figure 2 for the main countries of origin. This measure normalizes the number of illegal immigrants to the amount of legal immigration into Italy. Which means that events with a major triggering effect on emigration in the countries of origin should give rise increases in the illegal/legal ratio. However, this measure has a drawback deriving from the transitory nature of immigration through Italy: normalization performed with the number of legal immigrants present in the country does not work if the illegal immigrants are only in transit towards final destinations in other European countries(see Chiuri and Ferri, 2001a). The distortion is particularly evident in the case of the two national groups with the highest ratios: immigrants from Iraq and Turkey. The majority of these are Kurdish migrants heading for Germany, in which country very large numbers of their co-nationals reside.

The effect of possible distortions due to amnesties and changes to immigration law can be attenuated by considering the *share* of illegal immigrants by country of origin (see Figure 3). Two countries had the highest shares during the 1990s: Morocco from 1990 to 1994 (with values between 18.6% and 23.9%) and Albania between 1995 and 2000 (with shares varying from 20.5% in 1995 to 33.7% in 1998). During the period considered, the share of illegal immigrants grew in the case not only of Albania but also Romania, while it displayed a seesaw pattern for Yugoslavia and a U-shaped one for Morocco and Tunisia (see again Figure 3).

But the aim of our research was to establish whether and to what extent the various pull and push factors are influential. Accordingly, we then considered the

numbers of illegal immigrants (as shown in Figure 1) and sought to determine their statistical relations with what ‘a priori’ are the three main factors (apart from differences in per-capita incomes): (i) distance from Italy, which approximates the cost of migration; (ii) political-economic-financial crises in the country of origin; (iii) the extent to which there are social networks of co-nationals (legally resident immigrants) in Italy.

Figure 4 provides preliminary confirmation that there is a negative relation (expressed by the downward slope of the fitted line) between the (logarithm of the) distance of the country of origin from Italy and (logarithm of the) number of illegal immigrants from that country. We shall see below that a gravity model widely used in the literature on international trade is also confirmed as regards illegal immigration.

Figure 5 instead considers the relation between the risk rating of the country of origin and the flow of illegal immigrants therefrom. More specifically, a country’s risk is measured every year by the ICRG index (in logarithmic scale) described in Appendix 2. The trend of the fitted line shows that the higher the rating (i.e. the more stable a country from a political, economic and financial point of view), the lower the flows of illegal immigrants into Italy. Figure 6 instead considers the relation between a negative change in the country of origin’s rating and the percentage change in the number of illegal immigrants. In order to construct Figure 5, we selected all major crisis episodes: that is, ones in which a country’s rating decreased by at least 5% from one year to the next. For those years and the countries of origin, the figure shows the decrease in rating in absolute value since the previous year (vertical axis) and the percentage change on the previous year in the number of illegal immigrants entering Italy (horizontal axis). Once again, the steeper the fall in the rating (i.e. the more severe the crisis), the greater the increase in illegal immigration.

Finally, Figure 7 relates the (logarithm of the) number of illegal immigrants (horizontal axis) to the number of legal immigrants (vertical axis). The data given are the averages between 1995 and 2000, years for which more numerous statistics on legal immigration into Italy are available. The figure shows a positive relation between the extent of the social network of co-nationals from the home country and the number of illegal immigrants from that country.

Obviously, though they are indicative, the figures just described are only evidence that there are correlations between each of the variables considered and the number of illegal immigrants. It was therefore necessary to subject this preliminary evidence to multivariate econometric analysis, since only this could provide solid support for our working hypotheses. The results of this analysis are set out in the next section.

3.3. Results of the econometric estimates

The (logarithm of the) number of illegal immigrants by country of origin was used as the dependent variable for the econometric estimates. The explanatory variables were the three main push and pull factors examined.

The distance from Italy was also converted into logarithmic form and, as said, approximated the cost of migration. Distance was considered, as well as the measures of the population and per capita income in the country of origin. These three explanatory variables constitute a traditional gravity model used to explain international trade between pairs of countries (see Venturini 2002 for a survey of the literature). The same approach could be used in our analysis to explain the movement of illegal immigrants. The population of the country of origin is an important scale variable which describes the degree of demographic mass. Per-capita income instead denotes the degree of economic mass (as well as being a factor conventionally cited in explanation of emigration when it differs from the level in the destination country). The last three variables related to two further elements important for the analysis. The ICRG index measures the effect of crises, and in order to evaluate non-linearity in that effect it was interacted with a dichotomous variable (D_{crisis})⁴ which denotes a fall in the rating below the threshold of a very high risk. The third variable, the number of immigrants present in Italy (in the previous year) approximated the network effect. The results of the econometric analysis are summarized in Table 2.

The data on the number of illegal immigrants refer to 118 countries, and for the years from 1990 to 2000. However, the large size of the estimate sample is reduced by the more scarce availability of data for the other variables. In particular, the number of illegal immigrants in Italy, distinguished by country of origin, is only available for some

countries and systematically only since 1995. The dataset of the World Bank (World Development Indicator) has a quantity of missing data also as regards per-capita income. It will be seen from the penultimate row of Table 2 that the number of observations varied between 386 and 269 according to the type of specification adopted. The bottom row of Table 2 shows the R^2 , which are somewhat high for estimates combining the temporal and spatial dimensions.

The estimation was performed for various specifications shown by the columns in Table 2. The pooled ordinary least squares method (OLS) was initially used, and then correction was made for the presence of observed heterogeneity by country of origin through a random effect. Although the estimate with random effect was confirmed by the tests, we show the pooled estimate as well, in order to highlight the robustness of some of our conclusions.

Independently of the specification and the estimation method employed, some variables exert a significant effect (at 95% likelihood) on our dependent variable. Distance always has an (expected) negative effect: an increase in distance increases the costs of emigration. The population of the country of origin has an unequivocally positive effect: the larger the population of the country of origin, the higher the number of its illegal immigrants in Italy. Finally, the network effect, approximated by the number of legal immigrants in the previous year, is highly significant and greater than 0.5 (sometimes close to 1 in the OLS estimation, which indicates that a 1% increase in the number of legal immigrants corresponds to nearly 1% increase in the number of illegal immigrants from the same country in the next year.

Somewhat surprisingly, the coefficient of per-capita income is never significant, although it carries the expected (negative) sign. This may be because the effect of per-capita income operates indirectly through the population variable and the ICRG index (which takes into account the GDP level, see Appendix 2).

The financial, economic and political crises denoted by a negative change in the ICRG index almost always significantly influence illegal immigration in Italy, and with the expected sign. The sign of this variable (also transformed into a logarithm) is always significantly negative in the OLS estimate, and it is significant in two of the four specifications estimated with the random effect included. In the absence of significance

⁴ The *Dcrisis* variable assumes value 1 if the annual indicator of political, economic and financial risks

in specifications 5 and 7 of Table 2, however, when correction is made for the heterogeneity of the countries of origin, specifications 6 and 8 display a considerable and consistent effect between the specifications of the ‘crisis’ effect: a 1% decrease in the ICRG index produces a more than 1.8% increase in illegal immigration; and in the case in which this decrease indicates entry into the range of very high risk values, the overall impact gives rise to a 1.94% increase in immigration from that country.

Finally, added into the estimate was a dummy variable for 1998, which was the year in which changes were made to immigration law. These changes may have induced numerous illegal immigrants to legalize their situations. At the same time the tightening of border controls may have discouraged the entry of new illegal immigrants (at least in that year). In effect, the ‘1998 dummy’ is significant in all the specifications adopted and with the expected negative sign.

Conclusions

To what extent do crises in countries of origin intensify migration from the poor countries to the rich ones? This paper has sought to provide a preliminary answer to this question by analysing, for the last decade, the determinants of migration by illegal immigrants subject to expulsion orders in Italy, the country which has become the main gateway for illegal entrants into the European Union.

In analysing the phenomenon, besides crisis factors, we have considered other indicators representing the costs and expected benefits of emigration. We have focused on illegal immigrants because as the regulation of the flows of legal immigrants grow increasingly restrictive, illegality has become the principal recourse for migrants seeking to enter the EU. Moreover, the granting of frequent amnesties and the changes made to immigration law make interpretation of the data on legal immigrants difficult.

The main findings of our analysis confirm that crises in the countries of origin significantly increase influxes of illegal immigrants into (and through) Italy. The econometric estimates show that this effect gives rise to a sizeable quantitative increase in the number of illegal immigrants originating from a country in crisis. For example,

falls between 0 and 49.5; zero in all other cases.

when the ICRG indicator falls by twenty percentage points, as it did in the case of Albania in 1997, there is a fully 38% increase in the number of illegal immigrants! That is to say, on the basis of the expulsion orders issued in 2000 for Albania alone, the crisis in that country increased the number of illegal immigrants from that country by around 11,700 units per year; a number which may be largely underestimated, in fact, given that only a minor proportion of the illegal immigrants entering Italy are intercepted.

Our findings therefore provides indications for future policy-making in both Italy and Europe. They can be used to disentangle the effects implicit in the various policy choices that the European Union and, more in general, the international organizations may make when faced with further crises. They allow to compare the economic consequences of an interventionist policy (which may stop mass migrations at source with large-scale aid) and a non-interventionist policy which allows the push factors activated by crises to generate such mass migrations.

On the other hand, the political and economic scope of intervention in the form of economic and financial aid is restricted by the risk of moral hazard in the economic policies adopted by the countries of origin. The challenge of the years to come will be to strike an appropriate balance between active intervention in situations of economic crisis which discourages mass emigration, on the one hand, and closely conditioned interventionism which limits the effects of moral hazard on the other.

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Appendix 1

The measures on the basis of which we approximated the number of illegal immigrants in Italy were the following:

Refused entry at the border: foreigners turned away at the border due to their non-fulfilment of the requirements prescribed by law (23.6% in 2000);

Refused entry by the police (since 1998): foreigners who have entered Italian territory by evading border controls and have been apprehended on entry or shortly afterwards (8.7% in 2000);

Expelled under escort (11.5% in 2000), including:

- foreigners expelled for reasons of public order or public security by order of the Ministry of the Interior;
- foreigners expelled by order of the Prefect because (a) they have unlawfully remained on Italian territory beyond the term set by the injunction (see below); (b) they are deemed a threat to public safety and morality because suspected of belonging to Mafia-style organizations, and when the Prefect decides that there is a significant likelihood that they will not comply with an injunction; (c) they have entered Italian territory by evading border controls and have not been ejected by the Police because they do not possess a valid identity document and the Prefect decides that there is a significant likelihood that they will not comply with an injunction.

Readmitted by a country under a readmission agreement: foreigners returned to their country of origin or provenance under a specific readmission agreement (6.5% in 2000);

Expelled by the judicial authorities: foreigners expelled by order of the judicial authorities (0.3% in 2000) because they have (i) been convicted of offences and are deemed socially dangerous; (ii) sentenced to a term of imprisonment for not more than two years which the judge has substituted with an expulsion order;

Expelled on injunction (49.5% in 2000): foreigners expelled with an injunction to leave Italian territory within 15 days issued by the Prefect because: (i) they have remained on Italian territory without applying for a stay permit within the period prescribed, or if the stay permit has been revoked or annulled or has lapsed for more than 60 days with no application made for its renewal; (ii) they have entered Italian territory by evading border controls but are in possession of a valid identity document and/or if the Prefect does not decide that there is a significant likelihood that the foreigner will not comply with the injunction; deemed dangerous to public security and public morality being suspected of belonging to Mafia-style organizations and when the Prefect does not decide that there is a significant likelihood that the foreigner will not comply with the injunction.

Appendix 2

The Risk Indicators Used⁵

The ICRG Risk Rating system assigns a numerical value to a predefined group of risk components, according to a pre-set scale of values and for a large number of countries, the aim being to allow for comparability among country risk levels. Each scale is defined by awarding the highest value to the lowest risk, and the lowest value to the highest risk.

The index used in this paper is a composite indicator of political, financial and economic risk. The indicator of political risk makes up 50% of the composite indicator, while the indicators of financial and economic risk each account for 25% of it.

The scale of values is as follows:

Very high risk	00.0 to 49.5
High risk	50.0 to 59.5
Moderate risk	60.0 to 69.5
Low risk	70.0 to 79.5
Very low risk	80.0 to 100.

The *political risk* indicator is an average of various indicators of political stability. These indicators include political stability in the strict sense (measured by assessing government unity, legislative strength and popular support), socio-economic conditions (e.g. unemployment and the poverty level), the investment profile (measured by delays in payment and expropriations), internal and external conflicts (civil wars, terrorism, civil disorder, external pressure, cross-border conflict), corruption, the presence of the military in politics, the involvement of religion in politics, 'law and order', ethnic tensions, democracy (alternating democracy, autarchy, the *de facto* or *de jure* presence of only a one-party state), the quality of the bureaucracy.

The *economic risk* indicator is derived from an assessment based on per-capita GDP, the growth of real GDP, the annual inflation rate, and the balance of payments as a percentage of GDP.

The *financial risk* indicator is based on foreign debt as a percentage of GDP, the foreign debt as a percentage of exports, net international liquidity, exchange rate stability.

⁵ In the case of 9 out of the 118 countries considered, for which ratings are not calculated by ICRG, we imputed ratings calculated according to the following formulas : (i) Afghanistan=(Iran+Pakistan)/2; (ii) Rep. of Benin=(Niger+Nigeria+Togo)/3 ; (iii) Bosnia-Herzegovina=(Croatia+Yugoslavia)/2 ; (iv) Eritrea= (Ethiopia+Somalia)/2; (v) Macedonia= (Albania+ Yugoslavia)/2 ; (vi) Mauritania=(Algeria+Mali +Morocco+Senegal)/4; (vii) Mauritius= (Madagascar+Mozambique)/2; (viii) Ruanda=(Tanzania +Zaire)/2 .

Figure 1

Expulsion orders issued to illegal immigrants in Italy 1990-2000 (thousands)

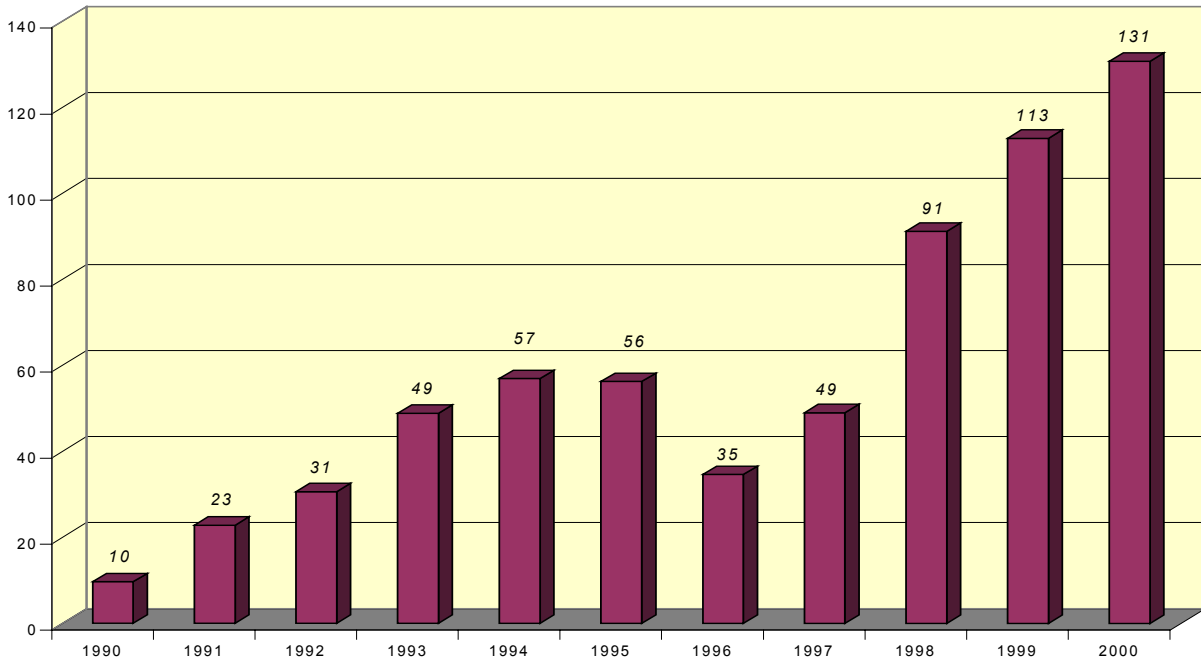


Figure 2

Ratios between illegal and legal immigrants (average values 1990-2000)

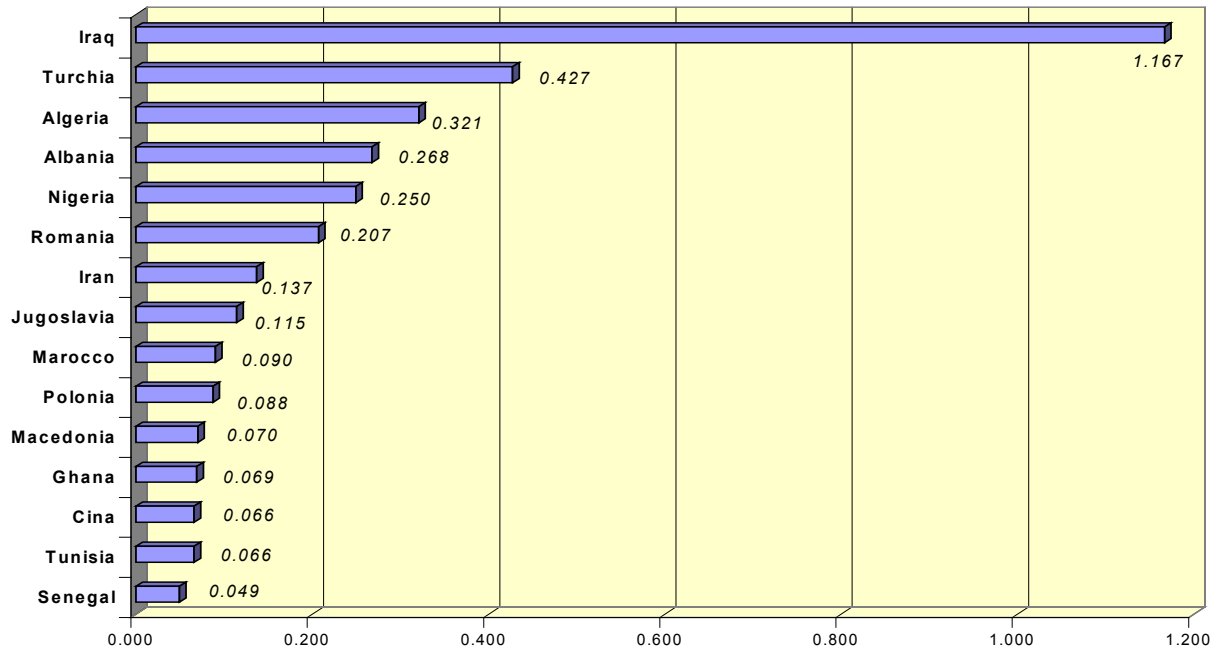


Figure 3
Trend in the shares of illegal immigrants

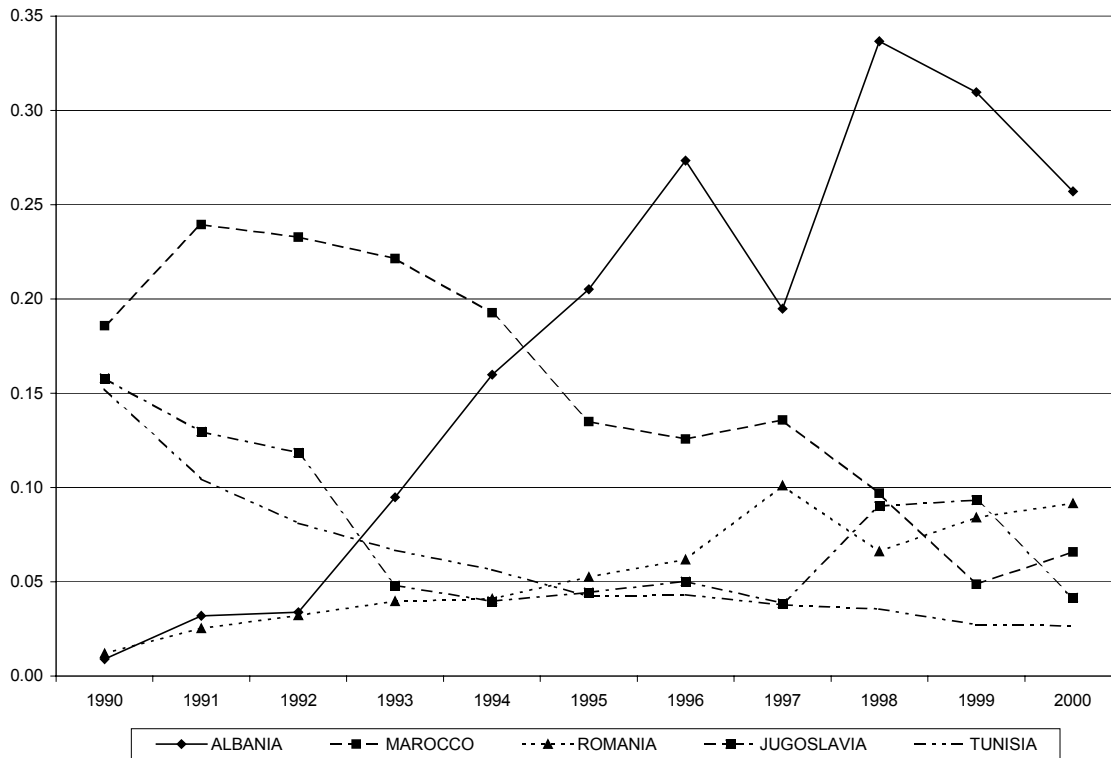


Figure 4
Relation between the inflow of illegal immigrants and distance of the country of origin (both in logarithmic scale); averages 1990-2000

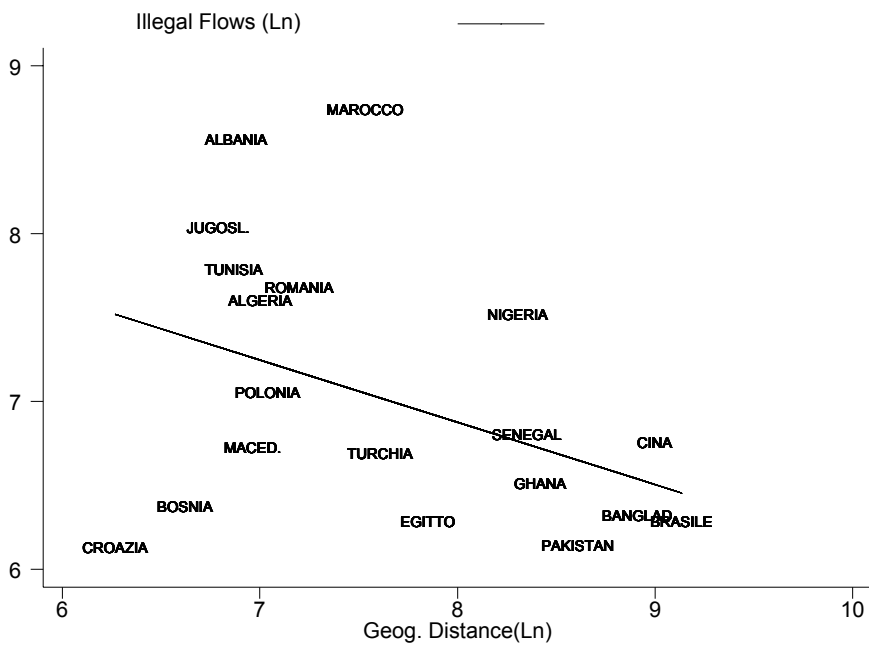


Figure 5
Relation between the ICRG indexes and the flow in illegal immigrants
(both in logarithmic scale): averages 1990-2000

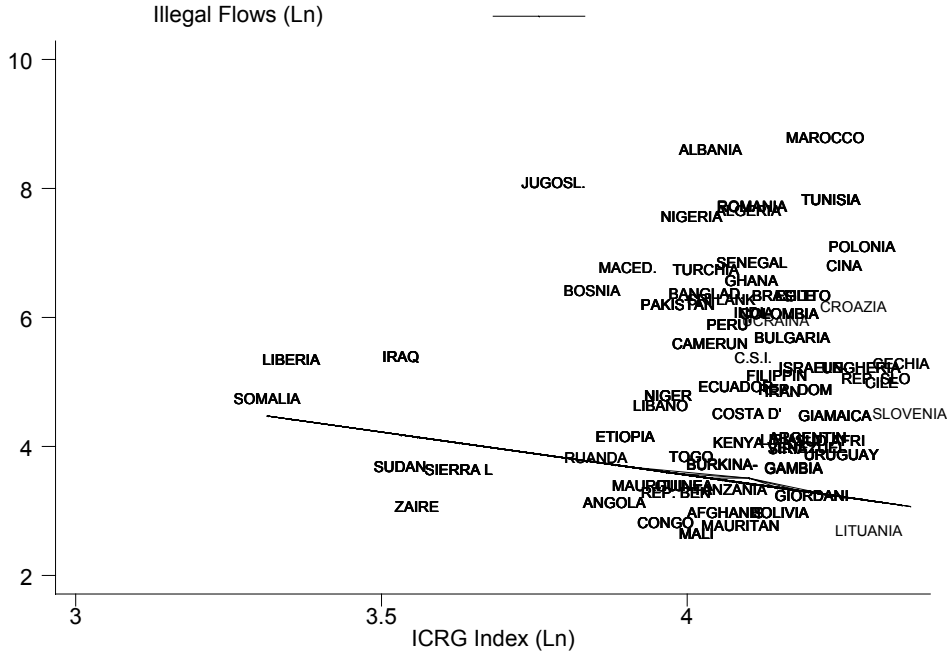


Figure 6
Flow of illegal immigrants in function of crises (fall in the rating)

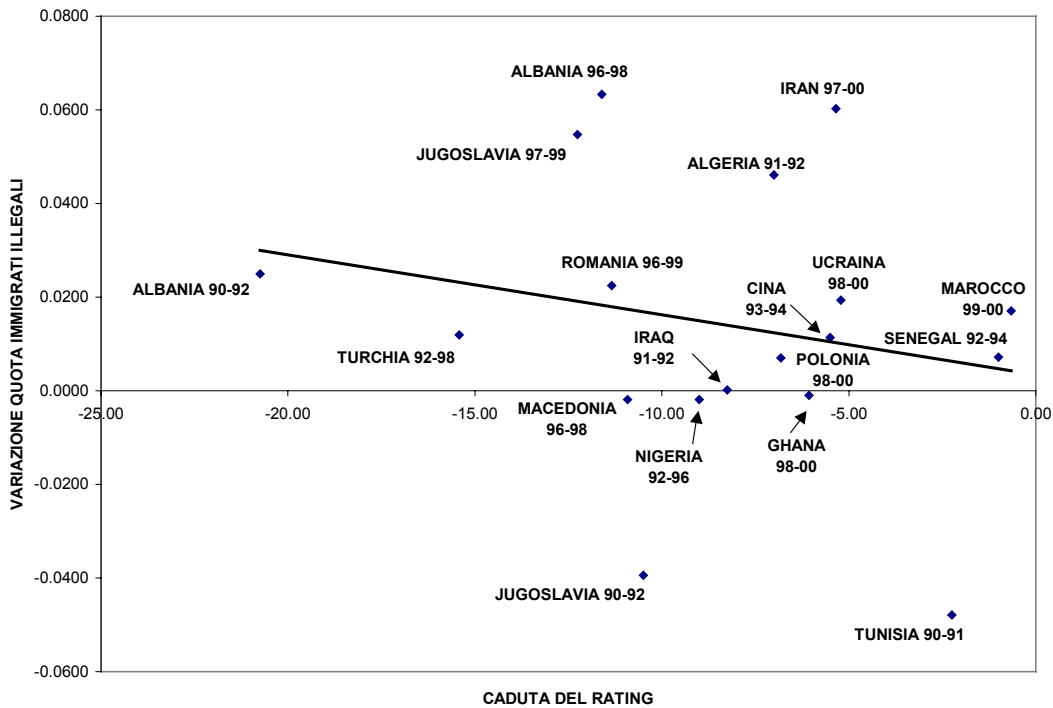


Figure 7

Relation between the number of illegal immigrants and the number of legal immigrants from the same country of origin (both in logarithmic scale): averages 1990-2000

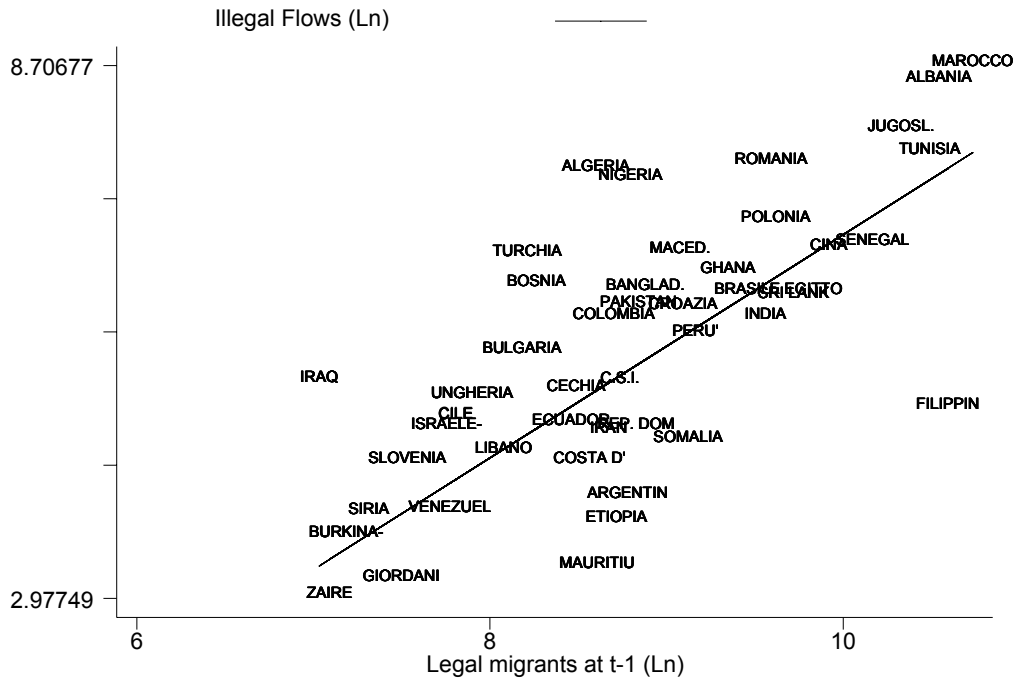


Table 1
Data description

The table shows the averages and, in brackets, the standard deviations of the principal variables used in our empirical analysis of the first 15 countries of origin of immigrants into Italy from 1990 to 2000. The averages and standard deviations of the numbers of illegal immigrants and the relative quotas have been obtained from the Ministry of the Interior database, while those relative to legal immigrants resident in Italy have been taken from ISTAT statistics (2000).

	Albania	Algeria	China
No. Illegals	11827,00 (11611,00)	2235 (1124,39)	1512,64 (1423,34)
Share Illegals	0,17 (0,12)	0,05 (0,02)	0,02 (0,01)
Geog. Distance.	972,58	1099,2	8076,1
ICRG index	56,1 (7,03)	55,61 (2,61)	70,21 (5,68)
No. Legals	44159,00 (26,75)	6961,33 (4782,03)	22840 (12019,87)
	Ghana	Iran	Iraq
No. Illegals	815,18 (478,95)	801,82 (2171,80)	1374,00 (1862,10)
Share Illegals	0,02 (0,01)	0,008 (0,018)	0,02 (0,02)
Geog. Distance.	4532,1	3682,60	3280,7
ICRG Index	60,80 (2,74)	63,53 (8,54)	32,85 (7,05)
No. Legals	11800,73 (2968,07)	5847,18 (365,20)	1176,91 (393,78)
	Yugoslavia	Macedonia	Morocco
No. Illegals	3551,73 (2527,57)	819,09 (853,61)	6640,09 (2649,40)
Share illegals	0,08 (0,04)	0,01 (0,01)	0,15 (0,07)
Geog. Distance.	888,27	1057,3	1864,6
ICRG Index	43,67 (6,16)	49,89 (5,91)	68,11 (6,21)
No. Legals	31009,91 (5665,53)	11640,75 (5657,97)	73526,36 (48850,81)
	Nigeria	Poland	Romania
No. Illegals	1921,27 (851,25)	1396,18 (738,07)	3625,18 (3492,85)
Share illegals	0,04 (0,03)	0,03 (0,01)	0,06 (0,03)
Geog. Distance.	4045,4	1143,6	1337,5
ICRG Index	54,89 (3,15)	72,52 (7,98)	59,96 (4,92)
No. Legals	7699,30 (4462,90)	15951,09 (5810,28)	17489,09 (10943,45)
	Senegal	Tunisia	Turkey
No. Illegals	1286,64 (1067,99)	2412,27 (660,03)	1611,46 (1730,53)
Share illegals	0,03 (0,02)	0,06 (0,04)	0,03 (0,02)
Geog. Distance.	4233,9	963,38	2018,8
ICRG Index	59,87 (3,06)	68,59 (5,61)	56,95 (7,05)
No. Legals	26061,64 (1781,63)	36532,18 (6307,97)	3769,73 (924,99)
	Ukraine		
No. Illegals	816,91 (1284,36)		
Share illegals	0,01 (0,01)		
Geog. Distance.	1672,3		
ICRG Index	61,34 (3,55)		
No. Legals	-		

Table 2
The push and pull factors of mass migration to Italy: the econometric analysis

Method	<i>Dependent var.: (Ln) Number Illegal</i>							
	OLS				Panel with random effects			
	1	2	3	4	5	6	7	8
<i>Esplan. variables</i>								
Constant	10,010	21,167	9,716	20,552	6,997	15,710	6,176	13,716
<i>Std.err.</i>	2,173	2,631	2,170	2,717	2,157	2,954	2,150	2,920
(Ln) Distance	-1,063	-1,033	-1,064	-1,036	-1,053	-1,025	-1,057	-1,024
<i>Std.err.</i>	0,072	0,081	0,071	0,079	0,158	0,157	0,155	0,158
(Ln) Population	0,306	0,320	0,302	0,313	0,367	0,333	0,350	0,318
<i>Std.err.</i>	0,043	0,047	0,042	0,045	0,104	0,108	0,102	0,106
(Ln) Per capita Income		-0,080		-0,078		-0,048		-0,043
<i>std.err.</i>		0,073		0,071		0,137		0,106
(Ln) ICRG	-1,066	-4,136	-1,001	-3,989	0,254	-2,156	0,391	-1,820
<i>std.err.</i>	0,325	0,632	0,455	0,631	0,387	0,613	0,387	0,602
Dcrisis ×(Ln) ICRG	-0,034	-0,277	-0,029	-0,267	0,081	-0,145	0,092	<i>-0,122</i>
<i>std.err.</i>	0,084	0,098	0,085	0,098	0,057	0,071	0,057	0,069
(Ln) Legals(t-1)	0,895	0,978	0,905	0,993	0,584	0,758	0,624	0,832
<i>std.err.</i>	0,068	0,060	0,069	0,059	0,080	0,095	0,080	0,095
Dummy 1998			-0,432	-0,477			-0,387	-0,451
<i>std.err.</i>			0,170	0,139			0,131	0,112
Number obs.	386	269	386	269	386	269	386	269
R²	0,600	0,707	0,605	0,716	0,562	0,690	0,567	0,699

Note:

Bold=significant at 95%

Italics =significant at 90%

Normal=not significant at 90% and 95%

