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The causal effect of trade on migration: Evidence from countries of the Euro-Mediterranean partnership

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HIGHLIGHTS

- We investigate the causal relationship of bilateral exports on bilateral migration.
- We use flows from Mediterranean Third Countries to the European Union countries.
- We use a gravitational model over the period 1970-2000 using both OLS and 2SLS.
- We use tariffs and bilateral exchange rate volatility as instruments for exports.
- Free trade is not an effective policy to mitigate migration in the short run.

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ABSTRACT

In the attempt to reduce migration pressure, since 1995, the European Union has been planning to establish a free trade area with developing countries bordering the Mediterranean Sea. The process is still ongoing. Our paper tests whether it is likely to be an effective policy. We estimate a gravitational model of bilateral migrations on bilateral exports from the Mediterranean Third Countries (South) to the European Union (North) over the period 1970–2000, using different specifications. We find, in line with most of the literature, a significantly positive correlation (called "complementarity") between exports and migrations from the South to the North. Then we go one step further, trying to solve the potential endogeneity problem using average trade tariffs and bilateral exchange rate volatility as instruments for trade. Based on the OLS as well as the 2SLS results, liberalizing trade in the area of the Euro-Mediterranean partnership does not seem to be an effective policy to mitigate the migration flows, at least in the short run.

1. Introduction

The relationship between international trade and migration has been long debated, especially for its policy implications.

The use of trade policy to deal with the migration problem has been considered by both the European Union and the United States policy makers. Their view is that opening their markets to exports from countries in the South reduces the pressure to migrate. In particular, Presidents Carlos Salinas and George H. W. Bush argued that the North American Free Trade Agreement (NAFTA) would have helped Mexico to export more goods and less people, while the EU countries hope, more or less explicitly, that migration flows from the South Mediterranean shore to the North will decrease as a consequence of the beneficial impact of trade liberalization on employment and living standards in the sending countries (Garson, 1998). These statements are based on the view that trade liberalization would have increased the level of exports from the Southern countries increasing labor demand and wages in the same countries, therefore decreasing migration from these countries.

Zimmermann (1995) suggests that stagnating and aging populations like those of the European Union tend to attract migrants, while young and large populations, like those of North Africa, tend to be more prone to move. In Fig. 1 we plot the population trends in each of the European country that we consider in our analysis. The population growth has been very low, on average 14%, between 1970 and 2010. Since we use the official data on migration and do not have information on the illegal migrants, such numbers represent lower bounds. All the Third Mediterranean Countries (TMCs) show larger increasing trends

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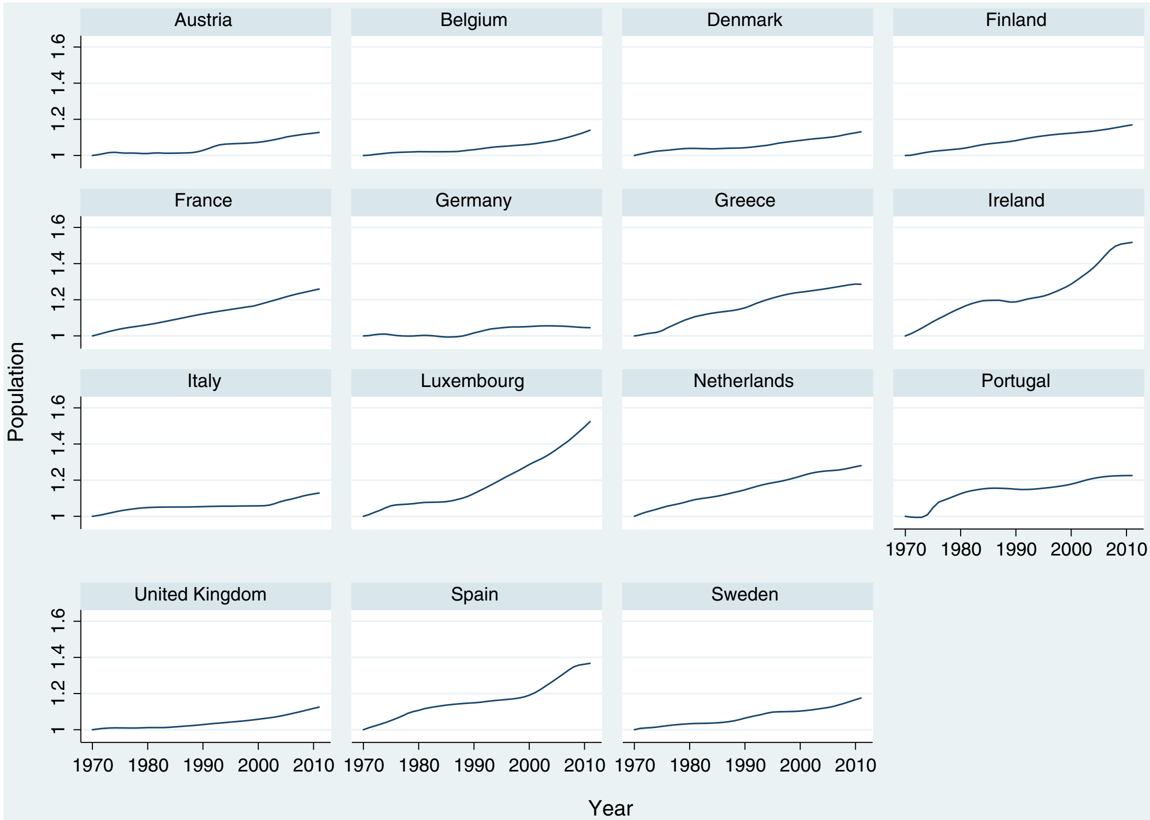

Fig. 1. Population trends in the EU countries in 1970–2010.

in population. With a few exceptions, migration flows are also trending upwards.[1] (See Fig. 2.)

This evidence suggests that migrations to Europe will keep on being a major concern in the next few decades. For this reason the EU has shown an increasing interest in the Mediterranean region and has tried to create an interregional framework of cooperation that could contribute to prevent the Mediterranean to be a conflicting frontier. In 1995 the European Union signed the Barcelona Declaration that is the founding act of a partnership between the European Union and twelve countries in the Southern Mediterranean (now re-launched with the Union for the Mediterranean) to help the economic development of the Third Mediterranean Countries, especially through trade liberalization, in an attempt to reduce migratory flows from such areas. This paper is going to test whether this policy is likely to be effective in reducing migrations in the short run. We use bilateral exports and migration flows from the 12 South Mediterranean countries (Morocco, Algeria, Tunisia, Egypt, Israel, Jordan, Palestinian Territories, Lebanon, Syria, Turkey, Cyprus and Malta) to the 15 European Union ones (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom) that signed the Euro-Mediterranean partnership over the period 1970–2000 (Fig. 3). In our paper we refer to the EU countries as “North”, while to the others as “South”.

[1] The reasons for these exceptions (Algeria, Libya and Malta) are different. In 1973 the Algerian government, after the large migration wave to France in the previous decades, and thanks to its natural resources (oil and gas), decided to prohibit out-migration, which was considered a form of post-colonialism. For the next three decades migration was just driven by French family reunification schemes (Di Bartolomeo et al., 2010). Libya has recorded more immigration than emigration flows, thanks, again, to its natural resources and the lack of internal labor supply, that attracted people from Arab countries (Di Bartolomeo et al., 2011). Malta experienced a terrific emigration from 1945 to 1979 due to over-population and unemployment, while in the following decades became a country of destination of migration flows (Plowman, 2010).

Quite surprisingly there are no studies that consider the relationship between trade and migration looking at all the countries of the Euro-Mediterranean partnership, which represents the EU's first comprehensive policy for the region and one of its most ambitious and innovative foreign policy initiatives.

Furthermore, the empirical studies on this topic, that we are going to mention later in the literature review, disregard the potential reverse causality between trade and migrations. We go further trying to identify the causal effect of trade on migration. To this aim we use an instrumental variable approach exploiting information on factors that are likely to influence the relationship between Southern exporting firms and Northern importing firms without directly influencing migration. These factors are the trade tariffs in the destination countries and the exchange rate volatility between pairs of exporting and importing countries.

As a first preliminary evidence of the relationship between trade and migration, Fig. 4 shows that over the 1970 to 2000 period the correlation between the log-migration (over population) and log-export (over GDP) from the Southern Mediterranean countries to the EU is undoubtedly positive. But in this figure we are not controlling for several confounding factors, observable and unobservable ones, that might bias the results toward finding a positive elasticity. For example, Southern Mediterranean countries that are closer to Europe might, because of that, export more and have more migrants. This means that it is certainly important to control for the distance between countries to partial out the effect of trade on migration.

All the OLS results show an elasticity between trade and migration of around 40%. When using average trade tariffs and bilateral exchange rate volatility as instruments for trade the results of the instrumental variable are larger, but we cannot reject the hypothesis that they are the same. Trade does not reduce migration, at least in the short run. The paper is structured as follows: in Section 2 we present the literature review, in Section 3 the empirical strategy, while we show and discuss the results in Section 4. In Section 5 we identify the causality by using an