Migration and outbound tourism: Evidence from Italy

Ivan Etzo *, Carla Massidda 1, Romano Piras 2

University of Cagliari, Italy

ARTICLE INFO

Article history:
Received 28 May 2013
Revised 31 March 2014
Accepted 10 July 2014
Available online 13 August 2014

Coordinating Editor: E. Smeral

Keywords:
Migration
Outbound tourism
Dynamic panel data
GMM
Italy

ABSTRACT

This paper investigates the impact of migration on Italian outbound tourism trips disaggregated by purpose of visit. A dynamic panel data analysis is carried out on a sample of 65 countries over the period 2005–2011. To disentangle pushing and pulling effects, the migration variables are defined at both the origin and the destination of tourism flows. We also control for the Italian real GDP per capita, relative prices and distance. The results show that the stock of Italians residing abroad has a positive impact on outbound tourism for all purposes. Conversely, the stock of foreign-born citizens residing in Italy appears to push Italian outbound tourism for business purposes, for visiting friends and relatives, but not for holiday trips.

Introduction

Over recent decades, the literature on trade and factor mobility has shown an increased interest on the relationship between migration and tourism. The works of Jackson (1990), King (1994), Williams and Hall (2002) and Boyne, Carswell, and Hall (2002) were some of the first attempts to provide a theory of the positive nexus between the two phenomena. In particular, Williams and Hall (2002) state that the link between tourism and migration can respond to three different mechanisms: the first is a causal relationship running from tourism to migration for both labor and consumption, known as...
the tourism-led-migration hypothesis; the second mechanism inverts this causation and, therefore, implies that migration leads tourism (MLT) by stimulating trips to visit friends and relatives (VFR), the third is a reinforcing mechanism that accounts for a bi-directional causal link between the two phenomena. From this framework, therefore, migration turns out to be one of the main prerequisites for VFR trips, both inbound and outbound. Not only do migrants travel back to their home country, but they also trigger VFR visits that otherwise would not have occurred.

In the footsteps of this initial works, recent studies have advocated an extensive interpretation of the MLT hypothesis where the connection between tourism and migration goes beyond the VFR channel. Accordingly, immigrants can increase a destination’s attractiveness for the general class of tourists beyond friends and relatives, simply because they enrich a destination’s cultural life by providing a wider array of consumption possibilities. They also motivate compatriots’ visits for ethnic reunion and/or they retain business links with their country of origin, so stimulating business trips (Cf., inter al., Seetaram, 2012a; Massidda and Piras, 2014). Similarly, immigrants can influence outbound tourism flows for the general class of tourists by encouraging departures of others residing in their host countries. Thus, from the perspective of the host country, immigrants act as a pulling factor for tourist arrivals (inbound), and as a pushing factor for tourist departures (outbound), whether or not VFR is the main motivating force.

A direct implication of this scenario is that, for countries characterized by bilateral migration flows, the influence of migration on both inbound and outbound tourist flows is two-fold. Fig. 1 helps to elucidate this point by taking the perspective of a generic country A, which receives immigrants from n countries and sends emigrants to each of these countries. Therefore, with respect to A, outbound tourism flows (Fig. 1a) are pushed from foreign-born people residing in A and pulled from the A-born population living in the n countries. Conversely, inbound tourism flows (Fig. 1b) are pulled from foreign-born people residing in A and pushed from A-born population living in the n countries.

The concepts outlined above have only partially been confirmed by the existing empirical literature. In particular, three aspects are worthy of further investigation. First, while there has been increasing evidence of a general link between migration and tourism, there are few studies which have looked at NON-VFR tourism and have demonstrated the plausibility of the extended interpretation of the MLT hypothesis. Second, when analyzing the tourism-migration nexus with respect to a specific

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**Fig. 1.** Conceptual map for the tourism-migration nexus.
country, researchers normally focus on either the pushing effect or the pulling effect of migration. Moreover, only exceptionally, the diaspora is considered as a determinant in the tourists’ decision-making process. It turns out that, as far as it is known, the two-fold influence of migration (Cf. Fig. 1) on the main segments of tourism demand has never been assessed. Last but not least, the econometric approach often disregards the panel structure of the data and the dynamic behavior of tourism demand which might bias the estimates (Cf. Morley, 1998).

The aim of this study is to provide additional empirical support for the extensive interpretation of the MLT hypothesis by emphasizing the role of migration stocks at both origin and destination. For this purpose, the analysis concentrates on Italian outbound tourism. This choice relies on two main motivations. Firstly, throughout its history, Italy has been an important source of international migration and, during the last decades, it has also become a country of immigration. In spite of that, its tourism-migration link has never been studied. Secondly, although Italy ranks eighth amongst the top spending countries, with 29 US$ billion expenditures and a market share of 2.8%, there is a lack of empirical research on the determinants of Italian outbound tourism. A noteworthy exception is Cortés-Jiménez, Durbarry, and Pulina (2009) who apply an almost ideal demand system approach to estimate the responsiveness of Italian tourism demand with respect to France, Germany, Spain and UK. However, they do not include migration as a determinant of tourism.

The empirical investigation proposed in this paper concerns tourism flows directed to 65 countries representing 93% of total outbound tourism during the period 2005–2011. Tourist trips are disaggregated by purpose of visit and the two migration variables are measured by the number of foreign-born immigrants residing in Italy and by the number of Italian citizens residing abroad. Therefore, the proposed framework is suitable for capturing distinct pulling and pushing migration-related forces operating bilaterally and involving different tourist types. The analysis is performed within a dynamic tourism demand framework where, besides migration stocks, other determinants are the lagged dependent variable, Italian real GDP per capita, relative prices and distance. The panel estimator is the one step system GMM which turns out to be particularly suitable for the present study.

All in all, the contribution of this paper is threefold. First, from a general perspective this study represents the first attempt to demonstrate the tourism-migration link in a fully disaggregated setting with data on migration stocks both at home and abroad. Second, it concentrates on Italy, a country for which studies on the relationship between tourism and migration are missing and, more generally, empirical studies on outbound tourism are virtually absent. Thirdly, the empirical analysis is carried out within a dynamic panel data model using the system GMM estimator which provides consistent and unbiased estimates.

**Review of the empirical literature on migration and tourism flows**

The link between tourism and migration is at the core of a growing empirical literature. The majority of the studies concentrate on aggregated data and, therefore, they are only able to investigate the role of migration for the tourism market as a whole. Within this strand of literature, interesting recent works are Seetaram and Dwyer (2009), Tadesse and White (2012), Leitão and Shahbaz (2012), Seetaram (2012a, 2012b), Genç (2013) and Massidda and Piras (2014).

Seetaram and Dwyer (2009) and Seetaram (2012a,b) find strong support for a positive link between the stock of foreign-born people living in Australia and tourism flows. In particular, Seetaram and Dwyer (2009) and Seetaram (2012a) concentrate on inbound tourism demand, whereas Seetaram (2012b) focuses on outbound tourist flows. The existence of the tourism-migration nexus is also demonstrated for the USA by Tadesse and White (2012) who find a positive impact of the stock of foreign-born people living in the USA on the number of total arrivals. Leitão and Shahbaz (2012) find that an increase in the stock of foreign-born people living in Portugal fosters inbound tourism flows, both in the short- and the long-run. Genç (2013) provides empirical evidence on the pulling effect of the stock of foreign-born people living in New Zealand with respect to inbound tourism. Finally, Massidda and Piras (2014) find a positive relationship between regional migrants stocks and domestic tourism demand in Italy.
There is, then, another part of the literature that, besides aggregated flows, also looks at the role of migration for one or more tourist categories by using data disaggregated by purpose of visit. The works of Prescott, Wilton, Dadayli, and Dickson (2005), Dwyer, Forsyth, King, and Seetaram (2010), Gheasi, Nijkamp, and Rietveld (2011) and Law, Genç, and Bryant (2013) are worth a mention.

Prescott et al. (2005) analyze the impact of the stock of foreign-born people living in Canada on both VFR and three NON-VFR tourist categories, namely vacation, work and education. They use a cross section of 22 OECD countries. The dependent variable of all regressions is either arrivals or person-nights spent in Canada. At aggregate level, they estimate an average elasticity of 0.16 for arrivals and 0.3 for nights. At a disaggregated level, they find that the segment of tourism demand showing the highest sensitivity to migration shocks is not VFR, but vacation. However, neither the persistency of tourism flows nor the presence of unobserved fixed effects are controlled for.

Only VFR and NON-VFR tourism are compared in the work of Dwyer et al. (2010) for the case of the outbound and inbound Australian tourism. They estimate two cross sections for 1991 and 2006 and provide evidence for the influence of the stock of foreign-born people living in Australia on tourism flows. The estimated elasticities vary greatly across specifications and years. Focusing on 2006, for total arrivals the reported elasticity is 0.59, whereas for VFR and NON-VFR it is 0.66 and 0.56, respectively. As for departures, estimated elasticities are about 0.7 for the three groups of tourists considered (total, VFR, NON-VFR). Accordingly, departures seem to respond more strongly than arrivals to migration.

Gheasi et al. (2011) estimate separate models for inbound and outbound tourism flows between United Kingdom and various OECD countries (24 for the inbound flows, 18 for outbound flows). For inbound tourism, they consider the stocks in UK of overseas-born people, whereas for outbound tourism they consider the stocks of UK-born people living abroad. Besides total tourist flows, they focus only on VFR tourism, thus overlooking any other tourists group. They find a positive relation between the stock of migrants and tourism flows.

A common feature shared by all the aforementioned works regards the use of the migration variable. Despite the fact that all the examined countries are characterized by important bilateral migration flows, none of them analyze the double impact of migration on tourism. An exception to this approach is proposed by Law et al. (2013). These authors consider two migration variables: the stock of foreign-born individuals living in New Zealand and the stock of New Zealanders living overseas. This investigation delivers positive coefficients for both variables with respect to the aggregated tourism flows and trips motivated by holiday purposes, the only category considered. Therefore, the VFR component of tourism demand is totally overlooked. However, the diaspora variable is a very poor proxy for the true number of New Zealanders abroad. As a matter of fact, they take into account the number of New Zealanders abroad at a single point in time, namely 2000. This means that the empirical findings must be interpreted with caution and that, as the authors correctly uphold, the estimated elasticities are not directly comparable with the coefficients of the migration variable representing the stock of foreign-born individuals living in New Zealand. According to their estimates, a 10% increase of immigrants in New Zealand leads to an increase in holiday arrivals of about 2.2% and an increase of total arrivals of 1.7%. As for departures, their estimated elasticities suggest an increase of total tourism flows of 2.7% and an increase of holiday flows of 4.2%.

Summing up, while there is substantial evidence of the generally positive influence of migration on tourism, the empirical literature lacks comprehensive studies using disaggregated data. A proper investigation focusing on different groups of tourists and assessing the double impact of migration, in fact, is likely to provide additional insights into the complex nexus between migration and tourism.

An overview of Italian outbound tourism and migration (2005–2011)

Outbound tourism flows, composition and principal directions

According to UNWTO (2012) statistics, international tourist arrivals worldwide have grown from 25 million to 983 million in about 60 years (1950–2011). Italy represents one of the major source markets, ranking 8th both in terms of number of trips and expenditure (UNWTO, 2012).
Over the period 2005–2011, the number of outbound tourism trips has grown by 17.8%, from 23.4 to 27.6 million (own calculation based on data from the Bank of Italy, 2013). As reported in Fig. 2, the European countries are amongst the main destinations for outbound Italian tourism. In particular, France is the preferred destination throughout the period considered, and there is rivalry between Germany and Spain for the second and the third positions, with Germany in the lead up until 2010 when it is overtaken by Spain. Switzerland competes with Austria for the fourth and the fifth places, whereas UK, USA and Greece range between sixth and eighth positions. Croatia, Netherland, Egypt and Czech Republic follow with similar performances. In this scenario, China ranks only twelfth, though the interest of Italian tourists for this destination is growing steadily. Finally, Brazil lies at the bottom of the list.

With regard to the main purpose of visit, Fig. 3 shows that holidays represent more than half (52.4%) of total outbound tourist trips, followed by business (28.6%) and VFR (13.5%), respectively. Note that, overall, holiday, business and VFR trips cover up to 94.5% of total outbound tourism flows.

**Italian citizens residing abroad and foreign citizens residing in Italy**

Between national unification (1861) and the late nineteen seventies of the last century, Italy experienced two massive migration waves. The first, which lasted until the first half of the nineteen fifties, was characterized by intense emigration flows heading primarily to South and North America. The second, of a slightly lower intensity, occurred in the second half of the fifties and lasted till the beginning of the seventies. In this case, the vast majority of migrants moved to the rest of Europe (mostly to Germany, France, Switzerland, UK, Luxembourg and Belgium). At the end of the nineteen seventies, the emigration rates started to decline rapidly and, for the first time, returning migration outnumbered emigration. At the same time, Italy became an attractive host country, especially for immigrants coming from less developed countries.

During the period of mass migration one Italian out of four (i.e., more than 25 million) moved to another European country, to North and to South America (Del Boca and Venturini, 2005). These continuous flows fostered the formation of important local communities in the host country which, in turn, gave rise to important links with Italy. Therefore, it is not unreasonable to assume that both the size and the distribution of Italian communities abroad exert a strong influence on tourists’ destination choice.

Annual data on the stock of Italians living abroad are collected by the Ministry of the Interior through the Registry of Italian citizens Residing Abroad (AIRE, 2013). During the period 2005–2011,
this stock grew from 3.5 million in 2005 to 4.2 million in 2011, reaching the 7% of the total Italian population. Fig. 4 shows the top twenty host countries. It is interesting to note that half of these countries (i.e. France, Germany, Spain, Switzerland, Austria, UK, USA, Netherland, Belgium and Brazil) are also among the top 20 destinations for outbound tourism, as shown in Fig. 2.

Immigration flows started to increase rapidly during the seventies when Italy became an attractive host country. The Italian National Institute of Statistics (ISTAT) provides annual data on the number of foreign born people residing in Italy and not holding Italian citizenship. These immigrants numbered 140 thousand in 1970, 2.4 million in 2005, then almost doubled during the period 2005–2011,
reaching 4.5 million in 2011. However, if foreign-born people with Italian citizenship are included, by 2011 the total number of immigrants rose to 5 million (Caritas and Migrantes, 2012).

Finally, it is interesting to look at the distribution of the top twenty sending countries (Fig. 5). The first is Romania which, on average, represents 17% of total foreign born immigrants residing in Italy. During the sample period, Romanians represent the fastest growing community with an annual average growth rate of 59.8%. In 2008, that is one year after its accession to the European Union (January 2007), Romania overtook Albania and Morocco, which had been the largest immigrant communities during the previous decades. It is worth noting that six out of twenty countries are among the top 20 countries in terms of outbound tourism trips (i.e., Germany, Egypt, Romania, Tunisia, Poland and Morocco).

**Estimating the migration tourism nexus**

The present study proposes an empirical investigation of the role of migration in the context of Italian outbound tourism. In particular, the aim is to analyze the double impact of migration, at both origin and destination, on five groups of tourists differentiated by purpose of visit. The first group is total outbound tourism trips (TOT), the second includes only trips for visiting friends and relatives (VFR), the third is total trips minus VFR (NON-VFR), the fourth group comprises business trips (BUSINESS) and the last group includes holiday trips (HOLIDAY). Separating tourism demand by purpose of visit enables the extensive interpretation of the MLT hypothesis versus a more restrictive version, which considers only the effect of migration on VFR, to be tested. Furthermore, disaggregated data has the advantage of capturing possible heterogeneities in tourists’ behavior (Cortés-Jiménez and Blake, 2011).

The analysis is performed within a theoretical tourism demand framework where, besides migration stocks, the other covariates have been chosen, following the existing literature; tourism demand modeling is a well established area of research. As outlined in recent surveys (Cf., inter al., Song, Dwyer, Li, and Cao, 2012; Song, Li, Witt, and Fei, 2010), demand studies typically focus on economic factors such as income and prices, but depending on the research question, other determinants such as population, distance, habit persistence, marketing expenditure and one-off events are also considered. In addition, dummy variables are often introduced to capture other economic, socio-linguistic, geographic, environmental and cultural factors.

**Fig. 5.** Average number of foreigners residing in Italy during the period 2005-2011 ordered by the top 20 sending countries (source: ISTAT, 2011).
Therefore, in line with the traditional approach, in this paper the following tourism demand function is proposed:

\[ Y_{it} = f(Y_{t-1}, M_{ita}, M_{for}, P_{it}, GDP_{i}, DIST_{i}, CONT_{i}, CRT_{i}) \]  

where, \( Y_{it} \) is the number of Italian outbound tourist trips to destination \( i \) at time \( t \), and \( Y_{t-1} \) is the lagged dependent variable which controls for the habit-formation and the word-of-mouth effects. In addition, it avoids a possible overestimation of the effect of other explanatory variables (Morley, 1998; Garín-Muñoz, 2006). \( M_{ita} \) is the stock of Italian citizens residing in destination \( i \) at time \( t \), whilst \( M_{for} \) is the stock of the country \( i \)’s citizens residing in Italy at time \( t \). They capture the pulling and the pushing effect of migration on tourism, respectively. \( P_{it} \) is the variable capturing the price competitiveness. As outlined in Forsyth and Dwyer (2009) and Dwyer and Forsyth (2011), there exists a range of tourism price competitiveness indicators that have been developed and used in the empirical literature of tourist demand modeling. As they say “all have their advantages and disadvantages” (Forsyth and Dwyer, 2009, p. 78) and the choice of the indicator to be used depends “on the exact question at hand, different indicators are suitable for different purposes” (Forsyth and Dwyer, 2009, p. 88). The most frequently used indicator is the ratio of the consumer price indices between receiving and origin countries adjusted by the bilateral exchange rate, namely the real exchange rate which, however, has the main disadvantage of capturing only changes in price levels, but not the price level itself (Dwyer and Forsyth, 2011). As a result, it cannot be used to capture price competitiveness between destinations. Conversely, comparisons between receiving countries can be pursued by a price competitive index computed for each category of tourist expenditure in terms of Purchasing Power Parity (PPP) adjusted for exchange rates. Though being a very accurate measure for the purpose at hand, constructing such an indicator requires detailed tourism expenditure data, which are not available for all the 64 destinations countries in this analysis. A valid alternative is to compute the price competitiveness index \( P_{it}^{PPP} \) as the ratio of purchasing power parity conversion factor to official exchange rate, which is equivalent to GDP per capita in current US$, \( GDP_{it} \), divided by GDP per capita in PPP US$, \( GDP_{PPP} \). By construction, this index allows for comparisons between destinations, but it does not allow for comparisons between receiving countries and Italy. For this purpose, the price competitiveness index of each destination country is divided by the corresponding price competitiveness index for Italy, namely \( P_{ITA}^{PPP} \), and a relative price competitive index is defined as follows:

\[ P_{it} = \frac{P_{it}^{PPP}}{P_{ITA}^{PPP}} = \frac{GDP_{it}/GDP_{PPP}}{GDP_{ITA}/GDP_{PPP}} \]

A value of \( P_{it} \) lower (higher) than one for country \( i \) indicates that the destination \( i \) is cheaper (more expensive) than Italy. At the same time, for country \( i \) the lower the index, the higher the competitiveness with respect to substitute destinations. \( GDP_{i} \) is annual Italian real GDP per capita, it serves to estimate the responsiveness of outbound tourism to income variations and, in particular, to determine whether tourism behaves as a normal or as a luxury “good”. \( DIST_{i} \) is a proxy used to measure all travel costs needed to reach the destination and it is given by the kilometric distance between Rome and the most important city within the destination country. It is worth pointing out that physical distance has also the advantage of accounting for other factors which might influence tourist destination choice, such as the preferred mode of transport, time availability, preferences for different cultures, and long distance trip aversion (McKercher, Chan, and Lam, 2008). The dummy \( CONT_{i} \) equals one if the destination country shares a border with Italy and zero otherwise, and it is introduced to capture the ease of travel to a neighboring country compared to a remote one. Finally, \( CRT_{i} \) is another dummy variable which takes on the value of one if real GDP per capita in the destination country is equal to or higher than Italian’s real GDP per capita and zero otherwise, and it serves to capture differences in tourism trips between these two groups of destinations.

To carry out the estimates, the econometric model corresponding to equation (1) has been specified as follows, with all continuous variables expressed in logarithmic form and lowercase letters:

\[ y_{it} = \beta_0 + \beta_1 y_{t-1} + \beta_2 m_{ita} + \beta_3 m_{for} + \beta_4 p_{it} + \beta_5 \text{gdp}_{i} + \beta_6 \text{dist}_{i} + \beta_7 \text{CONT}_{i} + \beta_8 \text{CRT}_{i} + \beta_9 (p_{it} \times \text{CRT}_{i}) + \gamma_{t} + \mu_{i} + \epsilon_{it} \]
where the index \( k (k = 1, \ldots, 5) \) denotes the five groups of tourists considered in the analysis, \( \varepsilon_{i,t} \) is the stochastic error term while \( \gamma_i \) and \( \mu_i \) are, respectively, time and country fixed effects. The former is included to control for year-specific effects common to all destinations, such as the positive trend of international departures and the general variation in transportation costs and leisure time. The latter controls for unobserved—time invariant—country factors, such as the general endowment of tourist attractions, tourism-related infrastructures (e.g. roads, highways, airports), general climate characteristics and pollution. Equation (3) takes also into account the term \((p_{i,t} \times CRT_i)\) meant to capture interaction effects between the dummy \( CRT_i \) and \( p_{i,t} \). The inclusion of an interaction term is a common practice in econometrics to test for heterogeneous slopes across units (Wooldridge, 2012). In this study, it has been included in order to allow for differences in the effect of price depending on the development level of the destination country. It is worth underlining the fact that a possible drawback of any price variable applied to a large panel of destination countries is that, besides a negative price-effect, it might also capture a positive quality-effect. The latter might be explained by the fact that the price level is positively correlated with the level of economic development. In panels where the units are heterogeneous with respect to the level of development, the two effects may offset each to zero. The interaction term serves to disentangle these two possibly counterbalancing outcomes. The idea under study is that the negative price-effect holds for Italian tourists only when they consider destinations which, in terms of GDP per capita, are at least as developed as Italy. On the contrary, when the choice involves destinations with a lower GDP per capita, the relative prices index might act as an indicator of service quality. Accordingly, \( \beta_4 \) measures the effect of the relative price competitiveness index for the less developed countries than Italy when the dummy \( CRT_i \) equals zero, whereas \( \beta_4 + \beta_9 \) measures the impact of the relative price competitiveness index for countries more developed than Italy, when the dummy \( CRT_i \) equals one.

Turning to the choice of an appropriate panel estimator for equation (3), the presence of a lagged dependent variable amongst regressors discourages the use of traditional panel data estimators, that is, fixed and random effects models, both of which would deliver biased and inconsistent outcomes (Hsiao, 2003). Conversely, the one step system GMM estimator turns out to be particularly suitable for the present analysis (Arellano and Bond, 1995; Blundell and Bond, 1998) as this technique corrects the dynamic endogeneity caused by correlation between the past realization of the dependent variable and the error term. Moreover, this estimator accommodates situations with fixed effects and

### Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Explanatory Notes</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTi,t</td>
<td>Number of tourism trips from Italy to a destination country</td>
<td>Bank of Italy, 2013</td>
</tr>
<tr>
<td>VFRi,t</td>
<td>Number of tourism trips from Italy to a destination country whose main purpose is VFR</td>
<td>Bank of Italy, 2013</td>
</tr>
<tr>
<td>NON-VFRi,t</td>
<td>Number of tourism trips from Italy to a destination country whose main purpose is not VFR</td>
<td>Bank of Italy, 2013</td>
</tr>
<tr>
<td>BUSINESSi,t</td>
<td>Number of tourism trips from Italy to a destination country whose main purpose is business</td>
<td>Bank of Italy, 2013</td>
</tr>
<tr>
<td>HOLIDAYi,t</td>
<td>Number of tourism trips from Italy to a destination country whose main purpose is holiday</td>
<td>Bank of Italy, 2013</td>
</tr>
<tr>
<td>M_Ita,t</td>
<td>Stock of Italians residing abroad</td>
<td>AIRE, 2013</td>
</tr>
<tr>
<td>M_for,t</td>
<td>Stock of foreign immigrants residing in Italy</td>
<td>ISTAT, 2011</td>
</tr>
<tr>
<td>Pi,t</td>
<td>Price competitiveness index</td>
<td>Own calculation based on World Bank (2013)</td>
</tr>
<tr>
<td>GDPi,PPR</td>
<td>GDP per capita (current US$)</td>
<td>World Bank (2013)</td>
</tr>
<tr>
<td>DISTi</td>
<td>Geo distance between the two most important cities/agglomeration</td>
<td>Mayer and Zignago (2011)</td>
</tr>
<tr>
<td>CONTi</td>
<td>Dummy variable indicating whether Italy and the destination country are contiguous</td>
<td>Mayer and Zignago (2011)</td>
</tr>
<tr>
<td>CRTi</td>
<td>Dummy variable taking on value 1 if the destination country has at least the same GDP per capita than Italy and 0 otherwise</td>
<td>Own calculation based on World Bank (2013)</td>
</tr>
</tbody>
</table>
autocorrelation between individuals, and it is particularly suitable for estimating panel data models with large units observed over short time periods (Roodman, 2009).

**Data Sources and Descriptive Statistics**

The empirical analysis uses a panel of 65 countries representing more than 93% of total outbound tourism trips over the period 2005–2011 (N = 65 and T = 7). The data comes from several sources so, in order to keep the widest number of destinations, the analysis time span is limited to 2005–2011. This is of particular importance when migration is measured both at destination and at origin, because the group of countries sending immigrants to Italy differs substantially from the group of countries hosting Italian immigrants.

The number of tourist trips is drawn from the Bank of Italy’s annual sample survey on international tourism entitled “Indagine sul turismo internazionale dell’Italia”. The survey follows the international methodological standards, including the United Nations International Recommendations for Tourism Statistics (UNWTO, 2010).

The number of Italian citizens residing abroad ($M_{ita,t}$) is taken from the Registry of Italian citizens Residing Abroad (AIRE, 2013), established in 1990 by the Interior Ministry. It collects information on Italian citizens who registered their residence abroad for a period longer than one year.

### Table 2: Descriptive statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Observations</th>
</tr>
</thead>
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<tr>
<td><strong>TOT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>overall</td>
<td>399259</td>
<td>804291</td>
<td>3245</td>
<td>5689355</td>
<td>N = 455</td>
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<tr>
<td>between</td>
<td>804933</td>
<td>7305</td>
<td>5285271</td>
<td>n = 65</td>
<td></td>
</tr>
<tr>
<td>within</td>
<td>86777</td>
<td>−209042</td>
<td>973063</td>
<td>T = 7</td>
<td></td>
</tr>
<tr>
<td><strong>VFR</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>overall</td>
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<td>126643</td>
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<td>807086</td>
<td>N = 455</td>
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<td>490</td>
<td>701432</td>
<td>n = 65</td>
<td></td>
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<tr>
<td>within</td>
<td>21899</td>
<td>−92261</td>
<td>219254</td>
<td>T = 7</td>
<td></td>
</tr>
<tr>
<td><strong>NON-VFR</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>overall</td>
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<td>699062</td>
<td>2582</td>
<td>4882268</td>
<td>N = 455</td>
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<td>4583839</td>
<td>n = 65</td>
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<tr>
<td>within</td>
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<td>−189202</td>
<td>871423</td>
<td>T = 7</td>
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<td><strong>HOLIDAY</strong></td>
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<td>overall</td>
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Data on the stock of foreign immigrants residing in Italy ($M_{fori,t}$) is taken from ISTAT databank. The main drawback of this data is that it does not account for those foreigners who have acquired Italian citizenship, nor does it account for second-generation immigrants.

Data on distance, calculated as the number of kilometers between the most populated city in Italy (Rome) and the one in the destination country, is taken from Mayer and Zignago (2011). Finally, all data used to compute $P_{it}$ and real GDP per capita have been taken from the World Bank Databank (World Bank, 2013). Table 1 summarizes data descriptions and sources.

The descriptive statistics for the (untransformed) variables used in the present analysis are reported in Table 2.

### Empirical results and study findings

#### Empirical results

The empirical results delivered by the present study are reported in Table 3. In general terms, the model performances can be considered highly satisfactory. On the one hand, the tests conducted on the system GMM estimator give evidence of reliable estimates. In particular, the serial correlation tests...
(Arellano and Bond, 1991), indicated as A-Bond AR (1, 2), show that the residuals in differences are autocorrelated of order 1, but there is no second order autocorrelation. Accordingly, consistent estimates are obtained by using subsequent lags of the dependent variable. Moreover, the Hansen (1982) test of over identification does not reject the null for joint validity of the instruments. On the other hand, the significance levels of the estimated coefficients gives evidence of suitably chosen explicative variables.

The first result to be noted is that the coefficient of $m_{ita_{i,t}}$ (i.e., the stock of Italian migrants abroad) is statistically significant for all five groups of tourists. At aggregate level, the estimated elasticity is 0.064 (column 1), which implies that a 10% increase in the stock of Italian migrants in the $i$-th country raises total Italian outbound tourism trips to that country by 0.64%. After disaggregating, the estimated pulling effect exerted by Italian communities abroad increases for all groups. The highest elasticity is obtained for HOLIDAY (0.194). As for the effect exerted by the stock of foreign born immigrants residing in Italy ($m_{for_{i,t}}$), the column 1 of Table 3 reports an estimated elasticity of 0.049 for overall tourist trips. Again, after disaggregating, elasticities rise and the scenario diverges among groups. In more detail, VFR turns out to be the group on which $m_{for_{i,t}}$ exerts the highest estimated impact (0.231), while the coefficient estimated for HOLIDAY is not statistically significant.

Looking at the other covariates, the results are as follows. The lagged dependent variable always reports a statistically significant coefficient with the expected sign and reliable magnitude. At the aggregate level, an increase of 10% in past outbound trips will lead to an increase of 8.1% in current trips to a specific destination. As shown in columns 2 and 4 of Table 3, the estimated coefficient decreases when the different groups of tourists are considered separately.

As for the role of the relative price competitiveness index, as explained in the previous Section, the interpretation of the results requires joint consideration of $p_{i,t}$ and the interaction term ($p_{i,t} \times CTR_{i}$). More in detail, since for the less developed countries $CTR_{i} = 0$, the effect of changes in $p_{i,t}$ is captured by $\beta_{d}$. It shows a positive effect at aggregate level and for the groups of VFR and BUSINESS trips, whereas the estimated elasticity is neither statistically significant for NON-VFR, nor for HOLIDAY. Conversely, for countries at least as developed as Italy $CTR_{i} = 1$ and, as shown in the Table, the estimated elasticity measured by $\beta_{d} + \beta_{0}$ is always negative, as expected. In this case, an F-test, reported at the bottom of the Table, is applied to check whether both coefficients equal zero, against the alternative that at least one of them is different from zero. Accordingly, only holiday trips do not respond to variations in relative prices, but for other groups, the price competitiveness index reports a negative and statistically significant coefficient.

Turning one’s attention to per capita GDP$_{t}$, as expected, and in line with the greater part of the extant empirical literature, estimated coefficients, when statistically significant, report a positive sign. This happens for total flows, for NON-VFRs and for holiday trips. Looking at the point estimates, a 10% increase in per capita GDP$_{t}$ leads to an increase of total trips of more than 23%. Such an effect rises to about 88% for holiday trips.

The coefficient estimates for $dist_{t}$ are all statistically significant and with the expected (negative) signs. In more detail, long distance destinations appear to have a remarkable negative impact, especially on the number of VFR trips that report the highest elasticity ($-0.38$).

To conclude, as for the dummy CONT$_{i}$ aimed at capturing the contiguity between Italy and the destination countries, only VFR trips report a positively and statistically significant coefficient, whereas the dummy CRT$_{i}$, when considered alone is never statistically significant. However, note that, in order for the econometric model to be correctly specified, it must always be included (Wooldridge, 2012).

Study findings

The evidence provided by the present study contributes to the literature in several directions. Above all, the results are of particular relevance with regard to the two migratory variables. The estimates of equation (3), in fact, give evidence of a two-fold positive influence of migration on Italian outbound tourism trips: the pushing effect of foreign born immigrants residing in Italy and the pulling effect of the Italian communities abroad. In general, this double influence acts at both aggregated and disaggregated level and it is magnified when total trips are disaggregated into VFR, HOLIDAY and BUSINESS. These outcomes clearly suggest that the influence of migration on outbound tourism
does not involve VFRs alone and that analyzing each group of tourist demand separately can help researchers to draw valuable information. Moreover, as far as it is known, it is the first time that BUSINESS trips appear in an empirical study focusing on the tourism-migration link. It is also worth pointing out that, when pulling and pushing forces are compared with respect to the different tourist groups, it emerges that VFR shows the highest reaction to $m_{fori,t}$, whereas HOLIDAY is the group with the highest estimated elasticity with respect to $m_{itali,t}$. As for HOLIDAY, no relationship is found with respect to $m_{fori,t}$.

Turning one’s attention to the role of the other covariates, estimated responsiveness to relative prices deserves special interest. In particular, with regard to destinations that are less developed than Italy, it seems that Italian tourists take high price levels as a signal of quality, and therefore respond positively to an increase in relative prices. After disaggregating, this result holds true solely for VFR and BUSINESS trips. In this scenario, it is not surprising that HOLIDAY is the only segment that does not react to relative prices: in many less developed countries, in fact, tourism is concentrated mainly in tourist enclaves, which are not integrated with the local economy (Tilman, 1994). The result for developed countries is more in line with the standard hypotheses of a negative impact of relative prices on tourism trips for which the negative price effect is confirmed for all except for HOLIDAY tourists.

Finally, few comments regarding the role of per capita GDP, the lagged dependent variable and distance. Looking at the magnitude of the point estimates, the elasticities for income are always higher than one, which implies that outbound Italian tourism behaves as a luxury good. As for the lagged dependent variable, the outcomes suggest that habit-persistence and word-of-mouth effects captured by this variable play an important role in explaining outbound tourism for Italy. This, in turn, confirms both the need and the appropriateness of the dynamic specification in modeling outbound tourism demand. The result for distance, besides supporting previous literature, gives new interesting information on the VFR group. It seems that, after controlling for the other covariates, VFR tourists are particularly affected by transportation cost, which is the main factor related to distance.

**Conclusion**

Contrary to the view that the migration-tourism link applies only to VFR tourism, a recent strand of literature extends this nexus to other market segments, such as HOLIDAY and BUSINESS. This issue deserves further empirical investigation since, if confirmed, it would have important implications for both researchers, policy makers and practitioners. Above all, it would imply that the economic impact of tourism flows generated by migrant communities is much higher than commonly thought. In spite of that, there are few studies that analyze the non-VFR sources of tourism demand.

This paper aims to provide deeper insights into the extended MLT hypothesis by studying the Italian outbound tourism demand for the period 2005–2011. A dynamic panel data analysis has been applied to tourist trips disaggregated by purpose of visit, and migration impact has been measured at both origin and destination. Along with migration, other determinants considered in the analysis are the lagged dependent variable, income, relative prices and distance.

The results provide strong empirical evidence for the hypothesis under study; the pulling effect of Italian communities abroad is confirmed for all the different groups of tourists. A slightly different outcome emerges for the role of foreign-born immigrants residing in Italy, as this variable pushes both total trips, VFR and BUSINESS, but not holiday trips.

As previously anticipated, these results bear important policy implications. They are relevant, in particular, for policy makers operating in those countries that record large Italian communities, such as France, Argentina, Spain and Germany. These countries should devise their tourism policies by taking into account the dependence of Italian tourism demand on the stock of migrants. France, for example, during the 2005–2011 time period, has recorded, on average, 5,322,123 Italian tourists per year. According to the elasticity estimated in this study, a 10% increase in the stock of Italians living in France, will lead to a yearly increase of total Italian outbound tourism of 34,062 units. As per capita tourism expenditure of Italian tourists in France in 2011 was 390 Euros, roughly 13,285,906 Euros would be the increase in total expenditure of Italian tourists in France generated by the higher migration stock. The present study suggests that these numbers could be significantly improved through the implementation of effective policies to support migration networks.
Also providers of goods and services in Italy, as well as in destination countries, might be interested in the empirical evidence generated by this paper. When travelling abroad, tourists buy a bundle of goods and services, such as travel agency services, transport facilities and airline tickets. Many of these purchases are done domestically, others abroad. Therefore, the tourism-migration link gives entrepreneurs an opportunity to implement new investment and marketing strategies aimed at improving their market shares. Moreover, knowledge of the migration-tourism link can be useful in order to create new collaborative opportunities between Italian entrepreneurs and foreign firms.

At a disaggregated level, the results identify different profiles for the different groups of tourists considered in the analysis. VFR tourists respond to migration at both origin and destination, although the pushing effect of foreign born immigrants in Italy is stronger than the pulling effect of Italians abroad. Interestingly, this type of tourist does not respond to annual variation in GDP per capita but is negatively affected by higher relative prices when traveling to countries which are at least as developed as Italy. Moreover, long distances discourage VFR trips more than the other groups of tourists.

The profile is different for HOLIDAY. In this case, the stock of Italian migrants residing abroad exerts a significant pulling effect, whilst the number of foreign born immigrants residing in Italy does not have any impact. A second difference, with respect to VFR, is the role of both GDP and relative prices. Holiday tourism is confirmed to be a luxury good, whilst it is not affected by relative prices. Finally, despite the negative impact of distance, holiday tourism shows a lower elasticity with respect to both VFR and business tourism.

As for business trips, these are strictly linked to migration stocks at both origin and destination, and the pulling effect of Italians abroad is very similar to the pushing effect of foreigners in Italy. Overall, these results support the idea that both communities of migrants keep strong business links with their respective countries of origin. With this respect, business trips are likely to be a side effect of the positive impact of migration on trade. Like VFR this segment is not sensitive to variation in GDP per capita, but it does react to variation in relative prices.

Future research should follow three main directions. First, more empirical research is needed to extend these results to other countries that, like Italy, are characterized by considerable flows of both immigrants and emigrants and thus have large stocks of foreigners at home and of expatriates abroad. Second, the conceptual research may be useful to reveal important dynamics that are neither analyzed empirically, nor from a theoretical point of view, and that involves concepts such as networks, ethnicity, and social mobility. Third, further empirical research should also tackle inbound tourism and, possibly, should also compare the response of alternative measures of tourism demand, such as expenditure and nights, to migration stocks.

Acknowledgments

The authors gratefully acknowledge Sardinia Regional Government for the financial support (P.O.R. Sardegna F.S.E. Operational Programme of the Autonomous Region of Sardinia, European Social Fund 2007–2013 – Axis IV Human Resources, Objective I.3, Line of Activity I.3.1 “Avviso di chiamata per il finanziamento di Assegni di Ricerca. The authors are also indebted to three anonymous referees for their valuable comments.

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