Migration and Outbound Tourism: Evidence From Italy

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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 Italian 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 motives and visiting friends and relatives, but not for holiday trips.

Keywords: Migration, Outbound Tourism, Dynamic Panel Data, GMM, Italy.

INTRODUCTION

Over the last decades, the literature on trade and factor mobility has shown increasing interest on the relationship between migration and tourism. The works of Jackson (1990), King (1994), Williams & Hall (2002) and Boyne *et al.* (2002) have been some of the first attempts to provide a theory of a positive nexus between the two phenomena. In particular, Williams & 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 motivating 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 other than their 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 & Piras, 2013). Similarly, immigrants can influence outbound tourism flows for the general class of tourists by encouraging departures of other 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. Figure 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 (Figure 1a) are pushed from the foreign-born people residing in A and pulled from A-born population living in the n countries. Conversely, inbound tourism flows (Figure 1b) are pulled from foreign-born people residing in A and pushed from A-born population living in the n countries.

[Figure 1]

The concepts outlined above have only partially been confirmed by the existing empirical literature. In particular, three aspects are worth 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 country, researchers normally focus on either the pushing effect or the pulling effect of migration. Moreover, only exceptionally, the diaspora is considered as determinant of the tourists' decision making process. It turns out that, as far as it is known, the two-fold influence of migration (Cf. Figure 1) on the main categories of the tourism demand has been never 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 cause a serious bias in 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 giving accent to the role of migration stocks at both origin and destination. At

this purpose, the analysis concentrates on the case of 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, the tourism-migration link has never been studied for this country. 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 et al. (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, migration does not appear among the determinants of the tourism flows considered in their analysis.

The empirical investigation proposed in this paper concerns Italian outbound trips directed to 65 countries, which represent the 93% of total outbound tourism during the period 2005-2011. Tourist trips are disaggregated by purpose of visit and the migration stock variables are measured at both origin and destination, by the number of foreign-born immigrants residing in Italy and by the number of Italian citizens residing abroad, respectively. 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. This is very important because for the first time an empirical investigation provides meaningful and comparable estimates for these two variables. 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 concentrates 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 & Dwyer (2009), Tadesse & White (2012), Leitão & Shahbaz (2012), Seetaram (2012a; 2012b); Genç (2013) and Massidda & Piras (2013)

Seetaram & Dwyer (2009) and Seetaram (2012a; 2012b) find strong support for a positive link between the stock of foreign-born people living in Australia and tourism flows. In particular, Seetaram & 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 & 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 & 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 the inbound tourism. Finally, Massidda & Piras (2013) find a positive relationship between regional migrants stocks and domestic tourism demand in Italy. To date, this is the only study that investigates on the issue at a sub-national level.

There is, then, another part of the literature that, besides the 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 et al. (2005), Dwyer et al. (2010), Gheasi et al. (2011) and Law et al. (2013) are worth to be mentioned.

Prescott et al. (2005) analyze the impact of the stock of foreign-born people living in Canada on both VFR and three NON-VFR tourism 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 disaggregated level they find that the segment of the tourism demand showing the highest sensitivity to migration shocks is not VFR, but vacation. However, these results might be biased for two reasons. First the econometric model does not incorporate the dynamic structure of tourism demand. Second the empirical analysis is carried out by a pooled OLS instead of a more appropriate panel data technique. Thus, 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 equals 0.59, whereas for VFR and NON-VFR 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 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 tourist category. 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. The investigation delivers positive coefficients for both variables with respect to the aggregated tourism flows and trips motivated by holiday purposes, which is the only category considered. Therefore, the VFR component of the 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 in a single point in time, namely 2000. This means that the empirical findings must be interpreted with caution and that, as they 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 a general 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). As reported in Figure 2, the European countries are among the main destinations of the outbound Italian tourism. In particular, France represents the preferred destination throughout the period considered, whilst there is rivalry between Germany and Spain for the second and the third position, with Germany in the lead up until 2010 when it is overtaken by Spain. Switzerland competes with Austria for the fourth and the fifth place, whereas UK, USA and Greece range between the sixth and the 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.

[Figure 2]

With regard to the main purpose of visit, Figure 3 shows that holiday represents more than half (52.4%) of the 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 the 94.5% of total outbound tourism flows.

[Figure 3]

Italian Citizens residing Abroad and Foreign Citizens residing in Italy.

Between unification (1861) and the late nineteen seventies, Italy experienced two massive migration waves. The first, which lasted until the first half of the nineteen fifties, was characterized by intense emigration flows headed primarily to South America 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 other European countries, to North America and to South America (Del Boca & Venturini, 2005). These continuous flows fostered the formation and growth of important local communities in the host countries which in turn gave rise to important linkages 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 the tourists' destination choice.

Annual data on the stock of Italians living abroad are collected by the Ministry of Interior through the Registry of Italian citizens Residing Abroad (AIRE). 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. Figure 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 (see Figure 2).

[Figure 4]

Immigration flows started to increase rapidly during the seventies when Italy became an attractive host country. The Italian National Institute of Statistic (ISTAT) provides annual data on the number of foreign born people residing in Italy and not holding the Italian citizenship. These immigrants were 140 thousand in 1970, 2.4 million in 2005, and 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 & Migrantes, 2012).

It is finally interesting to look at the distribution of the top twenty sending countries (Figure 5). The first sending country is Romania, which, on average, represents the 17% of the total foreign born immigrants residing in Italy. During the sample period, Romanians represent also 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 have been the major communities during the previous decades. It is worth to note 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).

[Figure 5]

ESTIMATING THE MIGRATION TOURISM NEXUS

The present study proposes an empirical investigation of the role of migration in the 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 group includes only trips for visiting friends and relatives (VFR), the third group is total trips minus VFR (NON-VFR), the fourth group comprises only business trips (BUSINESS) and the last group includes only holiday trips (HOLIDAY).

Separating tourism demand by purpose of visit allows testing for the extensive interpretation of the MLT hypothesis versus a more restrictive version which considers only the effect of migration on VFR. Furthermore, disaggregated data has the advantage of capturing possible heterogeneities in tourists' behavior (Cortés-Jiménez & Blake, 2011).

This analysis uses a panel of 65 countries, which overall represents more than the 93% of total outbound tourism trips over the period 2005-2011. The panel dataset, therefore, comprises 455 observations (N=65 and T=7). The following tourism demand function is proposed:

$$Y_{i,t} = f\left(Y_{i,t-1}, M\_ita_{i,t}, M\_for_{i,t}, P_{i,t}, GDP_t, FARE_{i,t}, D_i, D_t\right), \tag{1}$$

where, $Y_{i,t}$ is the number of Italian outbound tourist trips to destination i at time t, and $Y_{i,t-1}$ 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 regressors (Morley, 1998; Garín-Muñoz, 2006). $M\_ita_{i,t}$ is the stock of Italian citizens residing in destination i, whilst $M\_for_{i,t}$ is the stock of the country i's citizens residing in Italy. They capture the pulling and the pushing effect of migration on tourism, respectively. $P_{i,t}$ is the price competitiveness index based on purchasing power parity (PPP), which is computed as follows:

$$P_{i,t} = \frac{P_{i,t}^{PPP}}{P_{ITA,t}^{PPP}} = \frac{GDP_{i,t}/GDP_{i,t}^{PPP}}{GDP_{ITA,t}/GDP_{ITA,t}^{PPP}}, \tag{2}$$

where $P_{i,t}^{PPP}$ is the price level of country i and is equal to the GDP per capita in exchange rate US\$ relative to GDP per capita in PPP US\$. In order to obtain a price competitiveness index relative to the

country of origin, the price level of each destination country is divided by $P_{ITA,t}^{PPP}$, that is the corresponding price level computed for Italy. A value of $P_{i,t}$ lower (higher) than one for country i indicates that the destination i is cheaper (more expensive) than Italy. Compared to other alternative measures like, for example, the real exchange rate, the one in (2) has the advantage to control for price competitiveness between different destinations, which is of fundamental importance when the analysis includes many countries. GDP_t is the 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 either a normal or a luxury "good". $FARE_{i,t}$ should measure the monetary cost to reach the destination. However, due to difficulties in collecting accurate data, especially for a large panel of destinations, transportation costs can be conveniently proxied by the distance between origin and destination. It is worth pointing out that physical distance has also the advantage of accounting for other factors which might influence the tourists' destination choice, such as the preferred mode of transport, time availability, preferences for different cultures, and long distance trip aversion (McKercher et al., 2008). Finally, D_i and D_t are country and temporal dummies controlling for either common temporal effects or idiosyncratic country effects.

In order to carry out the empirical analysis, an econometric model corresponding to equation (1) has been specified as follows, with all continuous variables expressed in log form:

$$y_{i,t,k} = \beta_0 + \beta_1 y_{i,t-1,k} + \beta_2 m\_ita_{i,t} + \beta_3 m\_for_{i,t} + \beta_4 p_{i,t} + \beta_5 gdp_t + \beta_6 dist_i + \beta_7 CONT_i +$$
$$\beta_8 CRT_i + \beta_9 (p_{i,t} \times CRT_i) + \gamma_t + \mu_i + \varepsilon_{i,t} \tag{3}$$

where the index k ($k = 1, …, 5$) denotes the five groups of tourists considered in the analysis, $\varepsilon_{i,t}$ is the stochastic error term and μ_i are the country fixed effects which control 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. The time fixed effect γ_t are included to control for common year-specific effects, such as the positive trend of international departures and the general variation in transportation costs and leisure time. The dummy variable $CONT_i$ takes on the value 1 if the destination country shares a border with Italy and 0 otherwise. The dummy CRT_i takes on the value 1 if the country is at least as developed as Italy (in terms of real GDP per capita) and the value 0 otherwise. The inclusion of this dummy is necessary in order to test for possible interactions between price and development levels. In fact, it is well known that price level and economic development are positively correlated with each other, though they have opposite impact on tourism flows, ceteris paribus. The interaction term ($p_{i,t} \times CRT_i$), thus, has been included in order to allow for differences in the effect of prices between countries which are less developed than Italy (i.e., the origin country) and countries which are at least as developed as Italy. The hypothesis being tested is that Italian tourists might be discouraged by higher values of relative price only if the destinations are at least as developed as Italy. On the contrary, when the choice involves destinations which are less developed than Italy they might take the relative price as an indicator for differences in quality services. The estimated coefficient β_9 will help to assess whether these differences do exist and their magnitude across the different groups of tourists.

Turning the attention to the choice of an appropriate panel estimator for equation (3), the presence of the lagged dependent variable amongst regressors discourages the use of the traditional panel data estimators, that is the fixed effects 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 & Bover, 1995; Blundell & Bond, 1998). This estimation technique, in fact, corrects the dynamic endogeneity caused by the correlation between the past realization of the dependent variable and the error term. Moreover, this estimator accommodates situations with fixed effects and autocorrelation between individuals, and it is particularly suitable for estimating panel data models with large units observed over a short-time periods (Roodman, 2009).

The data selected for this study come from several sources, which limits to 2005-2011 the analysis time span that can be covered keeping the widest number of destinations. This is of particular importance when migration is measured both at destination and at origin, because the group of countries sending foreign born 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 (2010).

The number of Italian citizens residing abroad ($M\_ita_{i,t}$) is taken from the Registry of Italian citizens Residing Abroad (AIRE), 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.

Data on the stock of foreign immigrants residing in Italy ($M\_for_{i,t}$) 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 & Zignago (2011). Finally, all data used to compute $P_{i,t}$ and real *GDP* per capita have been taken from the World Bank Databank. Table 1 summarizes data descriptions and sources.

[Table 1]

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

[Table 2]

STUDY FINDINGS

Empirical findings are reported in Table 3. In general terms, the tests conducted on the system GMM estimator give evidence of reliable estimates. In particular, the serial correlation tests (Arellano & 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 the 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.

The first result to be noted is that the variable $m\_ita_{i,t}$, which indicates the stock of Italian migrants abroad, is statistically significant for all five groups of tourists. Thus, the pulling effect of Italian communities abroad on outbound tourism does not involve only the VFR trips. 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), whereas VFR and BUSINESS follow with estimated coefficients equal to 0.142 and 0.115, respectively. The link between the stock of Italian citizens residing abroad and outbound tourism is found also for the generic class of NON-VFR trips. In this respect, it is interesting to observe that the elasticity estimated for the latter is lower than those found for both HOLIDAY and BUSINESS, which together represent the

greater part of the NON-VFR trips. This is a clear signal that empirical investigation based on aggregate flows might provide misleading results.

As highlighted in the review of the literature, only Gheasi et al. (2011) and Law et al. (2013) consider the diaspora among the determinants of outbound tourism. Moreover, these works propose a disaggregated setting which is very different from the one presented in this study: Gheasi et al. (2011) focus only on VFR, while Law et al. (2013) consider only holiday tourism. It turns out that the present study is the first to provide empirical evidence of the link between the diaspora and outbound business tourism. It means that the business links retained by Italians abroad with their compatriots contribute to stimulate the tourism market. This link could also be a consequence of the impact of migration on trade (Cf. Lin, 2011).

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. In the disaggregated analysis, the elasticities raise and the scenario diverges among groups. Moreover, it appears different than the picture previously drawn for the variable $m\_ita_{i,t}$. More in details, VFR turns out as the group with the highest estimated elasticity (0.231), while the coefficient estimated for HOLIDAY is not statistically significant. The link between the stock of foreign immigrants in Italy and outbound tourism is also found for NON-VFR trips. These outcomes clearly suggest that analyzing each category of tourist demand separately is fundamental to draw reliable conclusions. Furthermore, the results are only partially comparable with the empirical literature. In fact, only three studies analyze the relationship between outbound tourism and the stock of immigrants, namely Dwyer et al. (2010), Seetaram (2012b) and Law et al. (2013). Only Dwyer et al. (2010) and Law et al. (2013), analyze different segments of tourism demand. However, the disaggregations used are very different from the one proposed in the present study: Dwyer et al. (2010) analyze only two groups, that is VFR and NON-VFR trips; Law et al. (2013) consider only holiday trips. Therefore it is possible to conclude that the present contribution is the first to provide empirical support to the link between outbound business tourism and the stock of foreign-born immigrants.

All in all, the estimates of the model in equation (3) 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. When comparing the impacts of the two migrant communities across groups, it does not emerge a clear-cut picture. VFR shows a higher reaction with respect to $m\_for_{i,t}$, whereas HOLIDAY and NON-VFR seem to show greater reaction with respect to $m\_ita_{i,t}$. The group of trips took for business purposes exhibits very similar elasticities for the two migration variables.

Further interesting results emerge from the estimates of the other covariates. The outcomes for the lagged dependent variable show that past destination choices explain a remarkable proportion of present outbound tourist trips: an increase of 10% in past outbound trips will lead to an increase of 8.1% in current trips to a specific destination. This result is slightly higher than that reported by Seetaram (2012b) for total departures (about 0.7). The habit-persistence and word-of-mouth effects weaken when the different groups of tourists are considered separately. In fact, columns 2 and 4 of Table 3 show that the estimated elasticity is 0.530 for VFR and 0.543 for holiday trips, whilst for BUSINESS and for NON-VFR trips it equals 0.597 and 0.730, respectively. Overall, strong statistical significance of the lagged dependent variable coefficients confirms both the need and the appropriateness of the dynamic specification in modeling outbound tourism demand.

As explained in the previous section, the responsiveness of tourism trips to relative prices involves both $p_{i,t}$ and the interaction term between $p_{i,t}$ and the dummy CRT_i. The estimated coefficient for $p_{i,t}$, in fact, indicates the effect of the price competitiveness index when the dummy CRT_i is equal to zero. In other words, it tells whether and how outbound tourism flows is related to variations in $p_{i,t}$ in countries which are less developed than Italy. Conversely the effect of $p_{i,t}$ for countries which are at least developed as Italy is obtained summing the coefficient of $p_{i,t}$ and the one estimated for the interaction term. The F-test is used to determine whether both β_4 and β_5 in equation (3) are statistically different from zero. As a result, only holiday trips do not respond at all to variations in

relative prices. With regards to the other groups, the price competitiveness index behaves as expected for the developed countries, that is, its effect on tourism trips is always negative and statistically significant. On the contrary, if only the less developed countries are considered, the effect of changes in $p_{i,t}$ turns positive or not statistically significant. This is the case for VFR and BUSINESS, whilst for the overall sample the t-statistics is barely significant. A possible explanation for these results is that for VFR and business trips the price competitiveness index act as a development index, thus tourists take high price levels as a signal of the better quality services. It is not surprising that HOLIDAY is the only segment not responding to price level. In many less developed countries, in fact, tourism is concentrated in the tourist enclaves, which are not integrated with the local economy (Tilman, 1994).

As expected, and in line with the greater part of the extant empirical literature, per capita *GDP* has a positive impact on total outbound tourism trips. Interestingly, however, at disaggregated level the scenario changes and GDP impacts only on NON-VFR and holiday trips. Apparently, the fact that VFR tourists often have the opportunity to save money for accommodation and other travel items makes them less dependent from annual changes in GDP per capita. As for the business trips, they are motivated by the profitability of the ongoing business opportunities and the travel costs are suppose to be covered by the corresponding revenues. Moreover, it seems that reduction in total costs is pursued by economizing on the cost per trip rather than by reducing the number of trips (Aguilera, 2008). Looking at the point estimates, the estimated elasticities imply that outbound Italian tourism is a luxury good. A 10% increase in *GDP* per capita leads to an increase of total trips of more than 23%. Such an effect rises to about 88% for holiday trips, indicating that holiday tourists are very sensitive to income fluctuations.

The coefficient estimates for distance are statistically significant with the expected negative signs in all five estimated models. More in details, long distance destinations appear to have a remarkable negative impact on the number of VFR trips, whose elasticity (-0.38) is almost twice than the one estimated for holiday trips (-0.222), and more than 1.5 times higher than the one estimated for business trips (-0.239). Some factors related to distance, such as transportation cost, duration, language and culture differences, are likely to have stronger (negative) effects on VFR tourism in comparison with the other groups. In particular for those VFR trips related to special events, the closer the migrants live to Italy the higher will be the number of visits they receive from friends and relatives. Overall, the results provide empirical support to the literature suggesting the existence of a relationship between distance and tourist behavior (Cf. inter alia McKercher et al., 2008).

The results for the dummy *CONT$_i$* show that only VFR trips are positively affected by the territorial contiguity between Italy and the destination countries. To conclude, the dummy *CRT$_i$* is never statistically significant but this is not an important result because it only means that there are no differences in tourism trips between countries which are less developed than Italy and the others when the price competitiveness index is equal to zero. Obviously $p_{i,t}$ is never equal to zero, however, *CRT$_i$* must be included because it appears in the interaction term.

[Table 3]

CONCLUSION

Contrary to the view that the migration-tourism link regards only 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, as yet there are few studies that analyze the non-VFR sources of tourism demand.

Moreover, the existing empirical literature suffers from some drawbacks. The most relevant are the potential misspecification of many of the proposed tourism demand models and the poor econometric techniques applied, which often make the reported estimates potentially biased or not consistent. Furthermore, the double impact of migration at both origin and destination is virtually disregarded.

This paper aims to provide deeper insights into the extended MLT hypothesis by studying the Italian outbound tourism demand during the period 2005-2011. A dynamic panel data analysis has been applied on tourist trips disaggregated by purpose of visit and migration impact have 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. In more details, 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 and 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 numbers of Italian communities, such as France, Argentine, Spain and Germany. These countries should devise their tourism policies by taking explicitly 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 yearly. According to the elasticity estimated in this study, a 10% increase in the stock of Italians living in France, will lead to an increase of total Italian outbound tourism of 34,062 units yearly. Taking into account that per capita tourism expenditure of Italian tourists in France in 2011 is 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 sensibly improved through the implementation of effective policies supporting the migration networks.

Also providers of goods and services in Italy, as well as in destination countries, might be interested to the empirical evidence generated by this paper. As a matter of fact, 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 the chance to entrepreneurs to implement new investment and marketing strategies aimed at improving their market shares. Moreover, information of the migration-tourism link can be useful in order to create new collaborative opportunities between Italian entrepreneurs and foreign firms.

At disaggregated level, the results identify different profiles for the different groups of tourists considered in the analysis. The 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 tourists 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, VFR trips are discouraged by long distances 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, while 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.

With regard to business trips, they 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, whereas reacts 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 tackle also inbound tourism and, possibly, should also compare the response of alternative measures of tourism demand, such as expenditure and nights, to migration stocks.

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Figures and tables

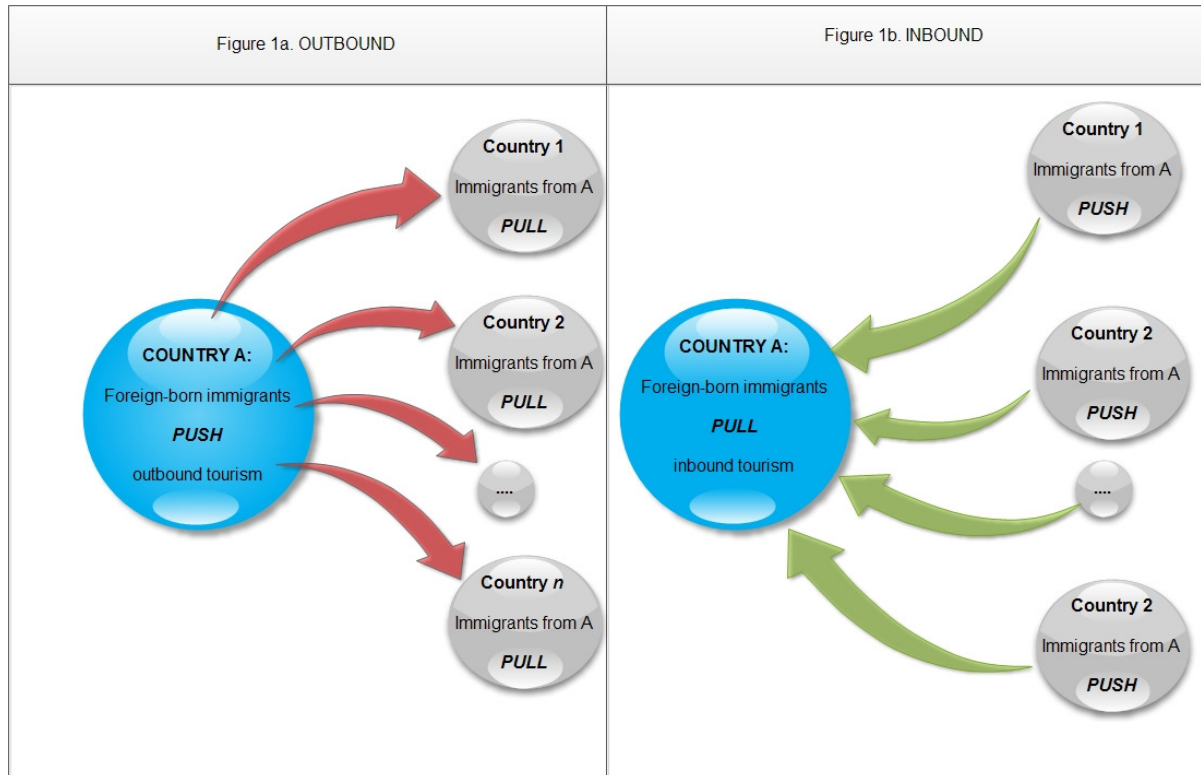Figure 1a. OUTBOUND

Figure 1b. INBOUND

Figure 1. Conceptual map for the tourism-migration nexus
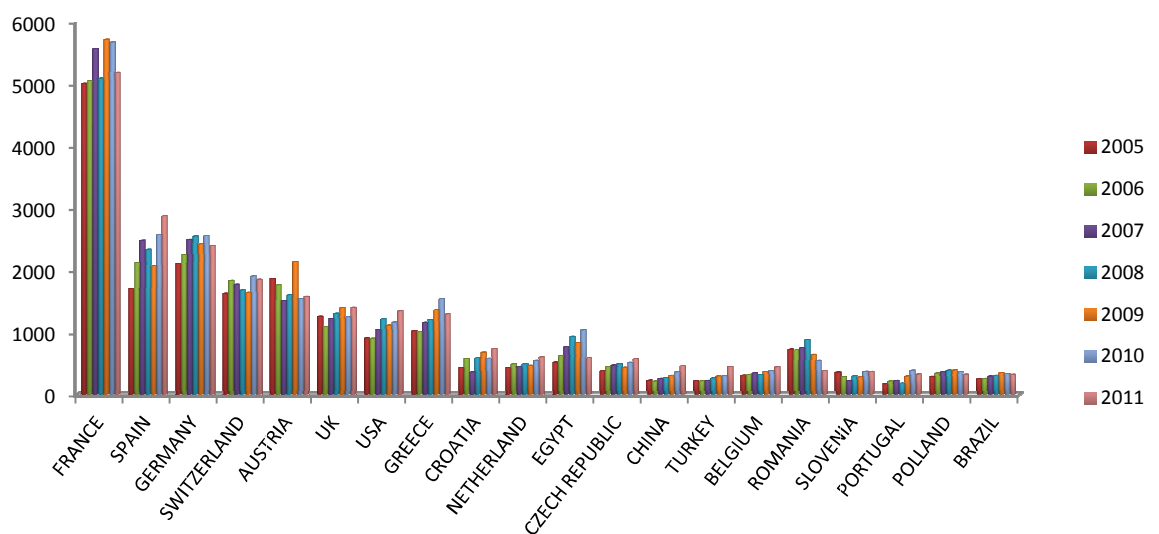
Figure 2. Outbound tourism flows by year for the top 20 destinations (unit: thousands; source: calculation based on data from the Bank of Italy)
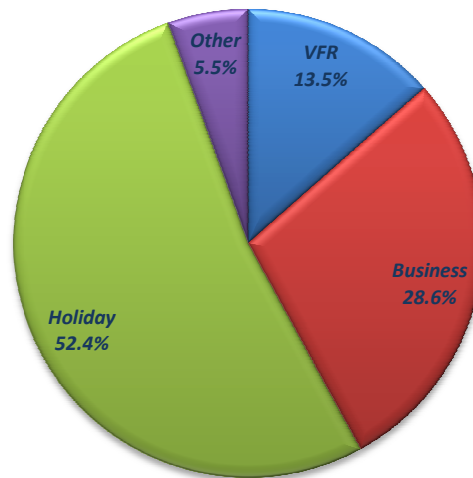
Average (2005-2011)

Figure 3. Average composition of outbound tourism flows by main purpose for the period 2005-2011 (source: calculation based on data from the Bank of Italy).
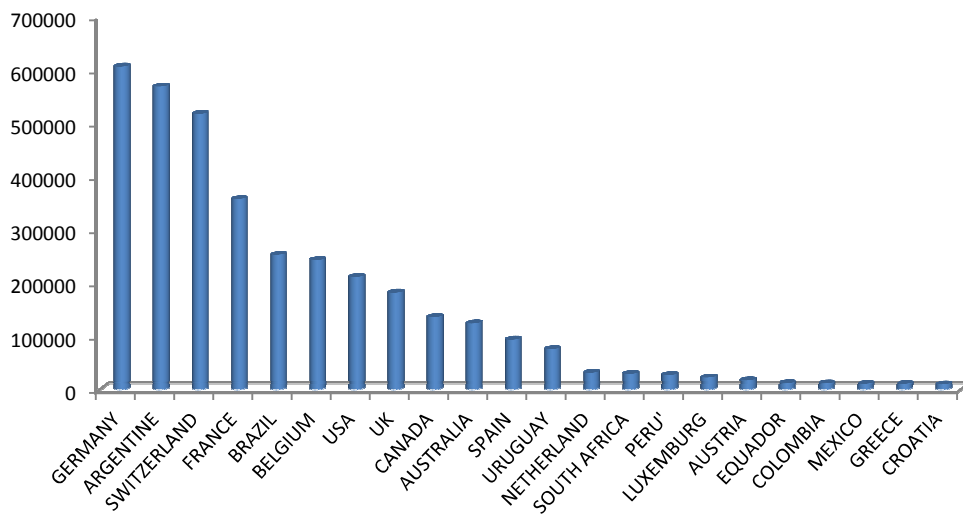

Figure 4. Number of Italian citizens residing abroad for the top 20 host countries (mean over the period 2005-2011, source: AIRE)
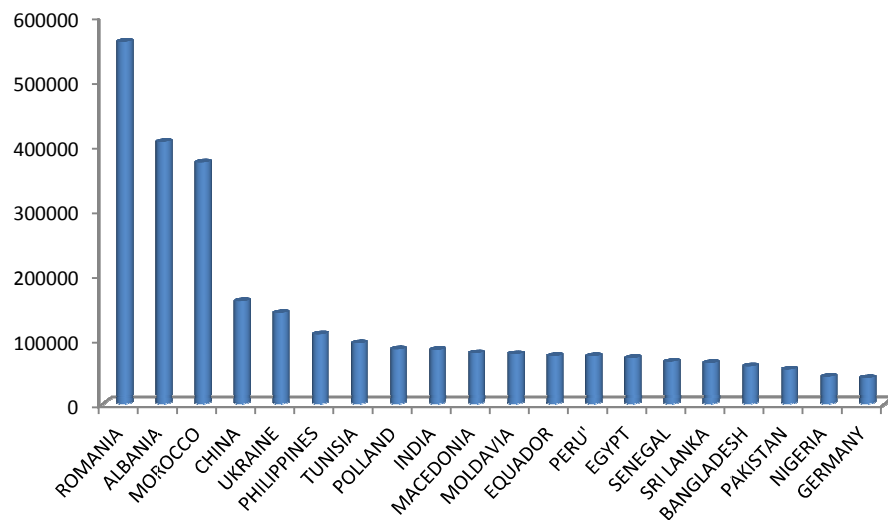
Figure 5. Average number of foreigners residing in Italy during the period 2005-2011 ordered by the top 20 sending countries (source: ISTAT)

Table 1. Definition of Data Variables

Variable	Explanatory Notes	source
TOT	Number of tourism trips from Italy to a destination country.	Bank of Italy
VFR	Number of tourism trips from Italy to a destination country whose main purpose is VFR.	Bank of Italy
$NON-VFR$	Number of tourism trips from Italy to a destination country whose main purpose is not VFR.	Bank of Italy
$BUSINESS$	Number of tourism trips from Italy to a destination country whose main purpose is business.	Bank of Italy
$HOLIDAY$	Number of tourism trips from Italy to a destination country whose main purpose is holiday.	Bank of Italy
M_ita	Stock of Italians residing abroad.	AIRE
M_for	Stock of foreign immigrants residing in Italy.	ISTAT
P	Price competitiveness index.	World Bank
GDP	Real GDP per capita (constant 2005 US$).	World Bank
$DIST$	Geo distance between the two most important cities/agglomeration.	Mayer & Zignago
$CONT$	Dummy variable indicating whether Italy and the destination country are contiguous.	Mayer & Zignago
CRT	Dummy variable takin on value 1 if the destination country has at least the same GDP per capita than Italy and 0 otheriwise.	Own calculation

Table 2. Descriptive statistics

Variable		Mean	Std. Dev.	Min	Max	Observations	
TOT	overall	399259	804291	3245	5689355	N =	455
	between		804933	7305	5285271	n =	65
	within		86777	-209042	973063	T =	7
VFR	overall	54456	126643	12	807086	N =	455
	between		125568	490	701432	n =	65
	within		21899	-92261	219254	T =	7
NON-VFR	overall	344803	699062	2582	4882268	N =	455
	between		699628	4244	4583839	n =	65
	within		75347	-189202	871423	T =	7
HOLIDAY	overall	211588	457592	0	3266821	N =	455
	between		456195	464	3000811	n =	65
	within		63460	-251817	726437	T =	7
BUSINESS	overall	115327	241986	660	1444237	N =	455
	between		242309	2534	1336353	n =	65
	within		24887	-157568	238503	T =	7
M_ita	overall	55853	132762	32	664387	N =	455
	between		133149	59	605867	n =	65
	within		11464	-60720	151912	T =	7
M_for	overall	48047	105414	163	968576	N =	455
	between		96753	183	559762	n =	65
	within		43297	-511243	456860	T =	7
P	overall	0.758	0.322	0.269	1.626	N =	455
	between		0.318	0.362	1.477	n =	65
	within		0.066	0.51	1.034	T =	7
GDP	overall	26770	9508	0	31263	N =	455
	between		0	26770	26770	n =	65
	within		9508	0	31263	T =	7
DIST	overall	4082	3949	492	16333	N =	455
	between		3975	492	16333	n =	65
	within		0	4082	4082	T =	7
CONT	overall	0.062	0.241	0	1	N =	455
	between		0.242	0	1	n =	65
	within		0	0.062	0.062	T =	7
CRT	overall	0.279	0.449	0	1	N =	455
	between		0.45	0	1	n =	65
	within		0.043	0.136	1.136	T =	7

Table 3. Estimation results

Variable	TOT		VFR		NON-VFR		HOLIDAY		BUSINESS	
	- 1 -		- 2 -		- 3 -		- 4 -		- 5 -	
$y_{i,\,t-1}$	**0.807**	***	**0.53**	***	**0.73**	***	**0.543**	***	**0.597**	***
t-stat	16.1		6.3		13.59		3.7		10.51	
$m\_ita_{i,\,t}$	**0.064**	***	**0.142**	***	**0.096**	***	**0.194**	***	**0.115**	***
t-stat	2.99		3.95		3.63		2.93		4.6	
$m\_for_{i,\,t}$	**0.049**	**	**0.231**	***	**0.055**	**	**0.069**		**0.119**	***
t-stat	2.29		4.11		2.06		0.97		3.35	
$p_{i,\,t}$	**0.29**	*	**0.575**	**	**0.372**		**1.175**		**0.476**	*
t-stat	1.69		2.36		1.48		1.38		1.84	
gdp_t	**2.334**	**	**3.639**		**1.8**	*	**8.835**	**	**1.334**	
t-stat	2.59		1.48		1.85		2.19		1.27	
CRT_i	**-0.093**		**-0.055**		**-0.117**		**-0.57**		**0.126**	
t-stat	-1.06		-0.4		-0.93		-1.41		0.9	
$(p_{i,\,t} \times CRT_i)$	**-0.565**	**	**-1.043**	***	**-0.788**	**	**-1.691**	*	**-1.05**	***
t-stat	-2.55		-3.16		-2.51		-1.84		-3.03	
$dist_i$	**-0.118**	**	**-0.381**	***	**-0.164**	***	**-0.222**	**	**-0.239**	***
t-stat	-2.32		-3.84		-2.95		-2.32		-3.18	
$CONT_i$	**0.103**		**0.392**	***	**0.152**		**0.411**		**0.104**	
t-stat	1.23		2.82		1.25		1.16		0.62	
Diagnostic tests										
A-Bond AR(1)	-3.46		-4.09		-3.9		-1.87		-4.34	
p-value	[0.001]		[0.000]		[0.000]		[0.062]		[0.000]	
A-Bond AR(2)	0.25		-0.44		0.68		-0.84		-0.1	
p-value	[0.803]		[0.662]		[0.497]		[0.400]		[0.923]	
Hansen test	18.82		27.06		23.43		31.35		20.48	
p-value	[0.596]		[0.169]		[0.321]		[0.068]		[0.491]	
F-test (Ho: $\beta_4 = \beta_9 = 0$)	3.30		5.06		3.72		2.01		4.71	
p-value	[0.043]		[0.009]		[0.029]		[0.142]		[0.012]	

Note: total observations 455, number of instruments 36. The one step system GMM estimator has been applied using the xtabond2 command in Stata (Roodman, 2009). The lag of the dependent variable is treated as endogenous. Time dummies, not reported in the table, have been added in all regressions. t-values, based on standard errors consistent in the presence of any pattern of heteroskedasticity and autocorrelation within panels, are reported below the estimated coefficients. Stars denote p-values as follows: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.