TRANSNATIONAL SOCIAL CAPITAL AND FDI:
EVIDENCE FROM ITALIAN ASSOCIATIONS WORLDWIDE

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This paper studies the influence of a country's transnational social capital - defined as the shared customary values and beliefs of emigrant communities - on its external transactions. It uses Italy's emigrant associations abroad as a proxy of transnational social capital and measures its effects on Italy's bilateral FDI. Our results are that the associative activity of emigrants, which partly dates far back into the past, positively and strongly affects the Italian bilateral FDI, especially concerning the countries hosting the older associations and the FDI into Italy.

Keywords: Social Capital, Diaspora, FDI, Italy
JEL classification: F21, F22, Z1

1. INTRODUCTION

Since the second half of the 19th century and until the beginning of the 1970s, a large number of Italians left the country to live permanently abroad. Gabaccia (2000) estimates the number of people of Italian nationality living outside Italy to roughly equalize the number of those living into the country. Because of the magnitude of the phenomenon and of the lively and enduring links of emigrant communities, Italians abroad compose one the most important diasporas in modern history.

A manifestation of the strength of the diaspora is the associative activity of its members. Italian associations abroad are numerous and spread across several countries, some are very old and date their existence to the late 19th century, others have been founded during the 20th and 21th centuries. The more prominent ones count on a huge number of associates. Prevalently, associates are of Italian descent but also natives of the

resident countries.

The reasons for the existence of associations have changed through time. Early ones provided welfare and financial assistance to emigrants, organized leisure and social events for their members and, in some cases, run Italian-language schools and hospitals. For most emigrants, they played a crucial role in reproducing the social life, identity and values of their home country. Business associations and Chambers of Commerce were also founded alongside by most Italian communities (Foerster, 1919; Gabaccia, 2000; Bugiardini, 2002).

The associative activity reinforced the existing ties between emigrants and the home country, and created new ones. The interactions with Italy, which initially had an informal character, with the passage of time became more and more formal and institutional. In particular, emigrants obtained their associations to be officially recognized, and in some cases, subsidized by the Italian government. A consequence of this is that, since the 1970s, the Italian Foreign Ministry keeps a register of the Italian associations abroad, which makes their existence traceable and comparable across locations and through time.

More significantly, through their associations emigrants have influenced the institutions and norms of the home country that especially concern the diaspora. While during the times of mass migration, the Italian government signed bilateral agreements with the main countries of settlement that aimed at protecting the rights of emigrants in the countries of settlement, later it emanated norms that facilitated their return and that of their offspring to the home country. The diplomas and certificates of the main countries of residence were officially recognized and, above all, the Italian law of citizenship was modified - during the early 20th century - so as to include emigrants and their progeny - without a limit number of generations - among the nation's citizens. Ultimately, since 2001, Italians residing permanently abroad hold the right to vote in Italy's general elections and to have their representatives in Parliament (Gabaccia, 2000; Murat, Pistoresi and Rinaldi, 2009).

Portes, Escobar and Radford (2007) find similar forms of associative activity while studying immigrant populations residing in the United States. Their results point at different stages of development of both the propensity to form associations among different immigrant populations and of their ties with the countries of origin. More generally, associations abroad can be seen as organized structures in networks of interactions among migrants with their home countries. These interactions, generated by the shared customary values and beliefs of emigrant communities, compose a transnational social capital.

Social capital has been defined in a variety of ways (for a review, Quibria, 2003). Guiso, Sapienza and Zingales (2008) define it as "those shared customary beliefs and values that ethnic, religious and social groups transmit from generation to generation and enable their members to act together more effectively to pursue shared objectives". We are interested in the social capital of a country that stretches outside its frontiers. Hence, transnational social capital is the shared customary values and beliefs of emigrant

communities. The latter "enable members to act together more effectively", which implies, in economic terms, that they lower the costs of economic transactions (Putnam, 1993). Consistently, it can be expected that a nation's transnational social capital positively influences its international exchanges.

This paper uses emigrant associations abroad as a proxy of transnational social capital to empirically investigate their impact on Italy's bilateral foreign direct investments (FDI). The literature on migrant networks typically measures the effects of stocks of immigrants - of different ethnicities - residing in a country on the bilateral economic exchanges with their home countries, finding in several cases the aggregate effects to be positive (for a review, Wagner, Head and Ries, 2002; on migrant links and FDI, among others, Tong, 2005; Gao 2003; Buch, Kleinert and Toubal, 2006). From a different perspective, Rauch and Trindade (2002) measure the impact of the Chinese diaspora on China's bilateral FDI, but they also use stocks of migrants as a proxy of the diaspora. This paper departs from of this literature in two ways. Firstly, it uses a more accurate proxy of the networking activity of migrants, or, more precisely, of their transnational social capital. While stocks are sets of individuals, which may or may not interact among them, associations are a specific measure of their interactions. Secondly, as in Rauch and Trindade, we focus on a diaspora rather than on immigrants of different ethnicities in a country, but using a measure of their social capital. Our main results are that the effects of the Italian associations on Italy's bilateral FDI are positive and significant, especially concerning the countries of historical emigration and the inward FDI.

The paper is structured as follows. After this Introduction, Section 2 outlines the main concepts and measurement problems. Section 3 describes the econometric specification utilized to assess the impact of Italian associations abroad on Italy's bilateral FDI. Section 4 presents the results of the econometric exercise and, Section 5 concludes. Appendix 1 controls for the relations between Italian associations abroad and the general propensity of host nations to form associations. Finally, Appendix 2 provides details on data and sources.

2.   CONCEPTS AND MEASUREMENT PROBLEMS

The definition of social capital adopted by Guiso, Sapienza and Zingales (2008), as "those shared customary beliefs and values that ethnic, religious and social groups transmit from generation to generation and enable their members to act together more effectively to pursue shared objectives", belongs to a line of research that identifies social capital with culture and aims to measure the influence of the latter on the economy (among others, Fernandez and Fogli, 2009; Algan and Cahuc, 2007; Tabellini, 2010).

A problem of all research on social capital is that it should be defined and measured independently of the phenomena that it is supposed to affect, as, in this case, the

economy. Different proxies of social capital have been used since the seminal study of Putnam (1993) - the propensity of individuals to form associations, blood donation, rate of voting in political tournaments and others - without fully avoiding the above difficulty. The approach based on social capital as culture has instead adopted a more indirect procedure, which follows two main routes. One is called the "epidemiological", or "movers" approach, by which the cultural beliefs and norms transmitted by emigrants to their descents are independent from the origin country's economy's and institutions and, hence, can be used to instrument the "true" cultural values of the home country (Fernandez and Fogli, 2009; Algan and Cahuc, 2007). The other is the "historical approach", which uses proxies of culture or of institutions dating far enough into the past to be safely considered independent of current conditions, and use these to control for the current effects of culture or of institutions on the economy (Tabellini, 2010; Guiso, Sapienza and Zingales, 2008).

By using emigrant associations as a proxy of transnational social capital, this paper meets both the above conditions. Not only the associative activity of Italian emigrants has been largely unaffected by the conditions of the Italian economy, but, as mentioned in the introduction, the diaspora itself has been able to influence some Italian institutions. Also, a consistent share of associations date their existence to the first half of the 20th century or even, in some cases, to the late 19th century, which makes them unlikely to be affected by the recent developments of the Italian economy. Differently from the cultural approach, we are instead interested in the social capital of the diaspora by itself and not as an indirect indicator of the cultural values of the home country and, also, we investigate its effects on the external transactions of the home country, rather than on its internal economy.

While, therefore, our approach can be considered exempted from the problems of circularity and endogeneity of several studies on social capital, it can be, however, subject to another kind of difficulty. The associative activity of migrants, for example, could be related to the resident countries' propensity to form associations, and hence customs, rather than to their own culture. In this case, if Italy's FDI were correlated with the partner countries' culture and associative activity, any positive correlation between emigrant associations and the bilateral FDI with the home country could be spurious. To control this possibility, we empirically measure the relation between the associative activity of emigrants and that of the countries of residence. The latter is measured by using a proxy built with data from the World Values Survey.[1] Table A1 in Appendix shows that there is no significant correlation between the presence of emigrant

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[1] On that purpose we used the *Integrated Questionnaire* of the *World Values Survey 1981-2004*. A country's overall propensity to form associations could in turn be influenced by the presence of Italian communities there and by their propensity to create associations. However, as Italian immigrants are a minor share of the population of all partner countries (except rare exceptions), we can presume this influence to be nil.

associations abroad and the propensity to form associations in the residence countries. This undermines the possibility of the above mentioned spurious correlation. As a consequence, we can reasonably take our variable concerning the stocks of Italian associations abroad as a satisfactory proxy of the transnational social capital of the Italian diaspora,[2] and proceed to measure its effects on the bilateral FDI with the home country econometrically.

3. DATA AND ECONOMETRIC SPECIFICATION

In this section we assess the interactions between the transnational social capital of the Italian diaspora and Italy's bilateral FDI. To this purpose we estimate (OLS) an econometric model in which we use the number of Italian associations abroad as a proxy of transnational social capital. Following the literature on social capital (Putnam, 1993), and on international networks (Tong, 2005; Gao 2003; Buch, Kleinert and Toubal, 2006) the latter is expected to facilitate the international transactions with the home country, and hence boost bilateral FDI.

More specifically, we use a panel ranging from 1990 to 2005 that includes the stocks of the bilateral (inward and outward) FDI of Italy with 51 partner countries,[3] the stocks of Italian associations abroad and other control variables. Official statistics are not available on stocks and flows of Italy's FDI during the first half of the XX century. Only in the year 1947, the *Ufficio Italiano Cambi* (Bureau of Currency Exchange, Bank of Italy) started to collect data about the inflows and outflows of foreign capitals, but these figures are scarcely reliable. A lack of distinction between direct and portfolio investments, debts and loans, makes it virtually impossible to detect an even approximate trend in FDI, at least up to the 1970s (Colli, 2010). Only since 1990, comparable data at the international level for both flows and stocks of FDI have been provided by OECD and UNCTAD. Hence, the database we use for testing our panel spans from 1990 to 2005.

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[2] The fact that the social capital is a major determinant of the propensity of Italian emigrants to form ethnic associations is supported by a comparison with other diasporas, such as the Indians and the Chinese. In fact, in the presence of the same host country's institutional framework (i.e., the United States), the Indians and the Chinese rely much more on informal networks and show a much lower propensity to set up associations than the Italians. See also Portes, Escobar and Radford (2007).

[3] Albania, Algeria, Argentina, Australia, Austria, BLEU* (Belgium and Luxembourg), Brazil, Bulgaria, Canada, Chile, China, South Korea, Croatia, Denmark*, Egypt, France*, Germany*, Japan, Greece*, Hungary, India, Indonesia, Iran, Ireland*, Israel, Libya, Malaysia, Morocco, Mexico, Norway, Netherlands*, Philippines, Poland, Portugal*, Rep. Czech, Rep. South Africa, Romania, Russia, Singapore, Slovakia, Slovenia, Spain*, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, UK*, USA, Venezuela. (*: members of the European Union in 1990, which define the dummy EU.)

We have been able, however, to collect data on associations existing before 1990; in particular, regarding associations in 1970. As already mentioned, the Italian Foreign Ministry started in 1970 to carry out the first comprehensive survey of Italian associations abroad. Since then, the data have been periodically updated until 2007.[4] As the early Ministerial surveys have been criticized for failing to tabulate several associations (Bernasconi, 1993), we have built a comprehensive dataset of the Italian associations abroad in 1970 by adding to the statistics edited in 1972 the associations that did not appear in that publication but that were included in the 2007 Ministerial survey as founded prior to 1971.

Our econometric specification is based on the following augmented gravity model of trade:[5]

$$Y_{it} = \alpha_0 + \alpha_1 GDP_{it} + \alpha_2 PCGDP_{it} + \alpha_3 ITGDP_t + \alpha_4 OPEN_{it} + \alpha_5 DIST_i$$
$$+ \alpha_6 CH_i + \alpha_7 GOV_i + \alpha_8 EU + \alpha_9 ASSOC_i + u_{it},$$

$$(1)$$

where $i = 1,...,51$ (foreign countries) and $t = 1990,...,2005$ for the pooled estimation. Y_{it} represents the stock of FDI from country i in Italy at time t (inward FDI) and Italy's FDI to foreign country i at time t (outward FDI). The partner countries' GDP (i.e., GDP_{it}) is meant to capture the extension or "demand" potential of their markets, while their per-capita GDP, $PCGDP_{it}$, is a proxy for those economies' productivity, or relative endowments of factors. Italy's GDP (i.e., $ITGDP_t$) represents the dimension of the Italian economy. Higher levels of GDP in the partner countries' and Italy's economies are expected to positively affect FDI. The expected coefficient of the per-capita GDP depends on the "vertical" or "horizontal" character of investments. Horizontal FDI are made by firms to sell abroad the same goods sold at home, hence a higher per-capita GDP will attract more FDI, while vertical FDI follow a cost-saving strategy, and will flow to labour-abundant or specialized-factors countries. In this case the expected coefficient is negative (Barba Navaretti and Venables, 2004; Markusen, 2002). $OPEN_{it}$ is the share of exports plus imports on country i's GDP at time t. It is a measure of the commercial openness of countries. In principle, FDI and trade can be complements or substitutes, hence no a-priory assumptions are made on the coefficient

[4] The statistics of Italian associations abroad was updated in 1974, 1980, 1985, 1995, 2000 and 2007 (Colucci, 2001; Ministero degli Affari Esteri, 2007).

[5] A basic gravity model in international economics predicts bilateral trade, investment, and migration flows among countries in the world on the base of economic sizes (usually proxied by various measurements of GDP) and distance between them. In empirical research, basic gravity models are usually augmented by adding other economic, institutional and social variables. For a recent review of gravity models, see Anderson (2010). On the determinants of FDI, see also Mohamed and Sidiropoulos (2010) and Torrisi (1985).

of this variable. $DIST_i$ is the distance between country i's capital city and Rome (km), which captures the role of proximity in affecting investment decisions and other investment costs that increase with distance. The expected sign is negative. GOV_i is an index of the quality of institutions and governance, which we have derived from Kaufmann, Kraay and Zoido-Lobaton (1999). This index's values are a positive function of civil liberties, political rights, independence of the media, political stability, quality of bureaucracy, supply of public services, effectiveness and predictability of judiciary institutions and enforceability of contracts, and a negative function of regulatory burdens on foreign trade and business development and corruption.

Similar cultural customs and norms between countries may positively affect their international transactions. As a proxy of culture, we include a variable on religion, CH_i, which denotes the share of people of Christian religion, including the Orthodox, in the overall population of country i. A positive coefficient is expected on this variable. A common market and institutional similarity role is captured by the dummy EU, that equals to 1 if a country is a member of the European Union in 1990 (EU) and equals to 0 if not. This variable captures Italy's different propensities to invest (or receive investment) into (or from) the EU area. We expect positive coefficients for GOV, CH and EU.

Our variable of interest, associations, is meant to capture the stock of transnational social capital accumulated by the diaspora. As it should facilitate transactions and bilateral FDI with the home country, the expected relation is positive. To check for changes over time of the estimated coefficients of our variables of interest, we run two cross-sections regressions, respectively for $t = 1990$ and $t = 2005$. For the cross-section regarding 2005 we consider the contemporary stock of associations of 2005: $ASSOC_{i2005}$. The data on the latter are drawn from the latest Ministerial survey on Italian associations abroad (Ministero degli Affari Esteri, 2007). As data on the stock of associations in 1990 are not available we use our pre-determined variable, concerning associations in 1970, $ASSOC_{i1970}$. The latter can shed light on the impact of the social capital accumulated by the diaspora until 1970 on the subsequent evolution - starting two decades later - of the bilateral FDI with the home country.

Variables are in natural logs except for the dummy variables, CH, GOV and EU. Details and sources of variables are provided in Table A2 in Appendix.

As social capital is a cultural variable, it is supposed to change over time more slowly than economic events. The associations existing in 1970 were the result of their own past history which, most likely, is independent of the economic international exchanges of the home country, especially of those that occurred subsequently, during the period 1990-2005. As already said, several associations had been created during the first half of the 20th century, some during the late 19th century. Moreover, the fall of the Berlin wall in 1989 and the consequent opening to trade of the ex-communist economies has affected the world economy and, presumably, Italy's FDI, but cannot have influenced the stock of associations existing up to 1970.

4.   RESULTS

Tables 1 and 2 present the estimation results (OLS) for Italy's inward and outward FDI respectively. In all the specifications, the explanatory power of the regressions (goodness of fit) is very high: in the inward FDI regressions, the adjusted R^2 ranges from 0.73 to 0.77, while in the outward FDI equations it varies from 0.74 to 0.80.

As stated above, the gravity model outlines the determinants of international investment decisions. GDP and per-capita GDP of the partner countries, Italy's GDP, the degree of openness of the economy have both cross sectional and time series heterogeneity, while $DIST_i$, GOV_i, CH_i, $ASSOC_i$ only change across countries i, but not over time. These latter variables work as country-specific dummies. Instead, $ITGDP_t$ changes only across time and works as a time specific dummy. To avoid multicollinearity with these variables, we do not use *fixed effects* in the pooled estimation. All the statistically significant variables (i.e., partner countries' and Italy's GDP, openness, distance, Italian associations and EU) have the expected signs. The dimension of their effect on FDI (in and out) is quite stable across specifications. Higher partner countries' and Italy's GDP, i.e., higher "demand" potential, boost international investment. The degree of openness positively influences the investment decisions suggesting that FDI and trade are complements and not substitutes. Distance always has a negative effect, confirming that there are investment costs that increase with distance. The proximity and historical common market area (EU dummy) plays a positive role on investment decisions, while the quality of institutions (GOV), cultural and religion similarity (CH), do not influence the propensity to invest.

Results on the variables of interest, migrants' associations, confirm our expectations: both sets of associations, those existing in 1970 and in those of 2005, promote the exchanges of FDI with the home country. In the pooled regressions (columns 1 and 2), the effect of the associations existing in 1970 on the inward FDI equals 0.41 (optimal pooled regression, Table 1, column 2):[6] a 1% increase in the stock of Italian associations abroad (logs) increases the FDI in Italy by 0.41%. Even higher are the effects of the associations of 1970 on the outward FDI: 0.55 (optimal pooled regression, Table 2, column 2). In this latter case a 1% increase in the stock of Italian associations increases the home country's investments abroad by 0.55%. These results give further support to our hypothesis that the associative activity of a diaspora is a good proxy of a transnational social capital, which boosts bilateral FDI with the origin country. We now

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[6] The optimal pooled regression is chosen by using the adjusted R^2, the Akaike Information Criterion (AIC), the Schwarz Criterium (BIC) and finally Hannan and Quinn Criterium (HQC). These balance the goodness of fit or the likelihood on the one hand and parsimony on the other. This balancing is necessary because the addition of extra variables to a model cannot reduce the degree of fit or likelihood and is very likely to increase it somewhat even if the additional variables are not truly relevant. See Stock and Watson (2007).

check for changes in the effect of $ASSOC_{i1970}$ on FDI over time. Specifically, we estimate cross-section regressions regarding the FDI in the years 1990 and 2005.

Table 1. Determinants of the FDI into Italy from Other Countries

					Dependent variable: Inward FDI
	Pooled Regressions		Cross-Section Regressions		
Regressors	(1) FDI 1990-2005	(2)[#] FDI 1990-2005	(3) FDI 1990	(4) FDI 2005	(5) FDI 2005
Constant	-15.41	-15.58	-13.34	-2.34	-2.91
	(-3.60)***	(-3.61)***	(-2.52)**	(-0.711)	(-0.94)
Foreign GDP: GDP_{it} (logs)	1.08	1.10	1.47	0.89	0.95
	(4.47)***	(4.18)***	(3.30)***	(3.66)***	(3.89)***
Italian GDP: $ITGDP_t$ (logs)	1.33	1.61	Omitted for collinearity	Omitted for collinearity	Omitted for collinearity
	(1.86)*	(2.85)***			
Foreign per capita GDP: $PCGDP_{it}$ (logs)	0.81	0.61	0.82	0.40	0.45
	(1.99)**	(2.84)***	(3.00)***	(1.87)*	(1.93)*
Degree of openness: $OPEN_{it}$ (logs)	0.71	0.63	1.34	0.48	0.33
	(1.45)	(1.32)	(1.69)	(0.99)	(0.63)
Distance: $DIST_i$ (logs)	-0.85	-0.86	-0.52	-0.57	-0.52
	(-2.46)**	(-2.39)**	(-1.21)	(-1.80)*	(-1.72)*
Share of Christians: CH_i	-0.05				
	(-0.063)				
Governance: GOV_i	-0.38				
	(-0.59)				
Dummy: EU	0.84	0.74	0.22	1.51	1.49
	(1.51)	(1.35)	(0.24)	(2.39)**	(2.16)**
Italian associations, 1970: $ASSOC_{i1970}$ (logs)	**0.42**	**0.41**	**0.32**	**0.40**	
	(3.75)*	**(3.36)***	**(1.75)***	**(3.55)***	
Italian associations, 2005: $ASSOC_{i2005}$ (logs)					**0.33**
					(3.15)*
R^2-adjusted	0.76	0.77	0.73	0.75	0.75
AIC	2135	2135			
BIC	2178	2170			
HQC	2152	2149			
N. Observations	550	550	38	46	49

Notes: *** 1%, ** 5%, * 10% significance level. The t-value in parenthesis is based on the White's heteroskedasticity robust standard errors. AIC, BIC and HQC are *information criteria* for model selection. The optimal pooled regression [#] minimises these information criteria and maximizes the adjusted R^2.

Table 2. Determinants of the Italian FDI into Other Countries

Dependent variable: Outward FDI

Regressors	Pooled Regressions		Cross-Section Regressions		
	(1) FDI 1990-2005	(2)[#] FDI 1990-2005	(3) FDI 1990	(4) FDI 2005	(5) FDI 2005
Constant	-8.97	-8.88	-3.52	4.19	4.59
	(-4.00)***	(-4.01)***	(-0.80)	(2.79)***	(3.27)***
Foreign GDP: GDP_{it} (logs)	0.97	0.96	0.93	0.74	0.81
	(6.19)***	(8.28)***	(4.023)***	(6.76)***	(6.81)***
Italian GDP: $ITGDP_t$ (logs)	1.25	1.32	Omitted for collinearity	Omitted for collinearity	Omitted for collinearity
	(3.93)***	(4.88)***			
Foreign per capita GDP: $PCGDP_{it}$ (logs)	0.05 (0.20)				
Degree of openness: $OPEN_{it}$ (logs)	1.10	1.07	0.97	0.65	0.54
	(4.29)***	(4.30)***	(1.80)*	(2.85)***	(2.19)**
Distance: $DIST_i$ (logs)	-0.65	-0.65	-0.25	-0.67	-0.70
	(-4.04)***	(-4.56)***	(-0.83)	(-5.04)***	(-5.98)***
Share of Christians: CH_i	0.14 (0.27)				
Governance: GOV_i	-0.71	-0.6	-0.75	-0.19	-0.15
	(-2.35)**	(-3.34)***	(-1.90)*	(-0.89)	(-0.72)
Dummy: EU	0.78	0.82	1.36	1.06	0.91
	(2.16)**	(2.52)**	(2.29)**	(2.86)***	(2.08)**
Italian associations, 1970: $ASSOC_{i1970}$ (logs)	**0.47**	**0.55**	**0.76**	**0.39**	
	(7.22)*	**(8.32)***	**(6.81)***	**(5.68)***	
Italian associations, 2005: $ASSOC_{i2005}$ (logs)					**0.32**
					(4.63)*
R^2-adjusted	0.76	0.76	0.74	0.80	0.79
AIC	1673	1670			
BIC	1716	1704			
HQC	1690	1683			
N. Observations	528	528	38	46	50

Notes: *** 1%, ** 5%, * 10% significance level. The t-value in parenthesis is based on the White's heteroskedasticity robust standard errors. AIC, BIC and HQC are *information criteria* for model selection. The optimal pooled regression [#] minimises these information criteria and maximizes the adjusted R^2.

For the inward FDI (Table 1), the effect of associations $ASSOC_{i1970}$ on investment decisions does not change substantially over time: the estimated elasticity ranges from 0.32 in the 1990 (Model 3) to 0.40 in the 2005, (Model 4). The stable role of the social capital on inward FDI is also confirmed by the estimated effect of $ASSOC_{i2005}$ on FDI, which is 0.33 (Model 5).

For the outward FDI (Table 2), the elasticity ranges from 0.76 to 0.39 when

$ASSOC_{i1970}$ is considered (Model 3 and 4, respectively), while it is 0.32 when $ASSOC_{i2005}$ is used (Model 5). This outcome suggests a diminishing impact of the country's transnational social capital (proxied by the past and current stock of associations) trough time on its investments abroad.

The results of this investigation on time variations confirm that the effect of associations on FDI are always positive and statistically significant. The interpretation of these findings can, however, be only tentative. The lower coefficient of the 2005 associations relatively to those of 1970 seems to indicate that the group of the "historic" and long lived associations, located in the traditional countries of emigration, exerts a stronger effect on the home country's investments abroad. This makes sense if the changes intervened in the world markets after the fall of the Berlin Wall are considered: new opportunities of international investment have opened for the developed economies, among which Italy, while the investments in the opposite direction, from the emerging markets to the rich countries, are still concentrated in a very small group of economies, which includes Italy only marginally. While these new market opportunities abroad have attracted Italian investors, the boost supplied by the existence of a transnational social capital there has been lower than in the traditional markets, simply because the presence of Italian nationals in the East hemisphere is scarce and their associative activity is weaker.

5. CONCLUSION

This paper shows that the transnational social capital of an important diaspora, that of Italians abroad, has a positive, strong and significant effect on the home country's bilateral FDI. It measures the nation's worldwide social capital with the stock of emigrant associations abroad existing in 1970 and in 2005. This approach departs from both the literature on social capital, which tries to measure the effects of the latter on a country's economy - with the problems of circularity that it may imply - and from that on migrant networks, which uses as a proxy of networks the stocks of immigrants, rather than their proper networking activity. In our case, associations identify an organized activity of emigrants, based on clear links among themselves and with the home country.

Consistently with the base hypotheses of social capital and networks theory, this transnational social capital facilitates the international transactions of the home country with the countries hosting the emigrant associations; in particular, it boosts the bilateral foreign direct investments. In our results, a one percentage point increase in the presence of associations abroad increases the stocks of bilateral FDI in measures ranging from 0.32 to 0.76%, in all cases at a one percent significance level.

The impact of this external social capital changes, and partially fades, over time, especially as regards the home country's investments abroad. The associations existing in 1970 tend to have stronger effects than the group including the more recent ones, of 2005. This applies especially to the Italian investments abroad, while those in Italy are

influenced by the emigrant associations in a fairly constant way. This may be explained by a partial shift during the last decades of the direction of Italian investments abroad towards the Eastern hemisphere, while the major investors in Italy still are the Western economies, where the older associations of emigrants are located.

This paper policy implications are that developing countries with an important number of emigrants abroad should adopt policies aimed at strengthening their ties with the diaspora. These should include an institutional support of the associative activity of emigrants and may comprehend inclusive citizenship laws. Initially, associations linked to the home country will mostly provide emigrants with protection against adversities, but with the passage of time they may become vehicles of bilateral economic interactions and, in particular, of foreign investments.

APPENDIX

Table A1.   Italian Associations Abroad vs Overall Propensity of Countries
to Form Associations

	Dependent variable: Italian Associations Abroad (2005)	
	Model 1	Model 2
Overall propensity of host countries to form associations (logs)	0.37 (0.81)	0.13 (0.28)
Foreign GDP: GDP_{it} (logs)		0.93 (5.39)***
Distance: $DIST_i$ (logs)		0.17 (0.42)
Constant	3.8 (4.10)***	-3.24 (-1.24)
R^2-adjusted	0.023	0.338
Observations	30	30

Notes: *** 1%, ** 5%, * 10% significance level. The t-value in parenthesis is based on the White's heteroskedasticity robust standard errors. The *Overall propensity of host countries to form associations* is calculated by using the *Integrated Questionnaire* of the *World Values Survey 1981-2004*; it is the mean of the average responses to the following questions: A066 - Do you belong to education, arts, music, cultural organization? A074 - Do you belong to sports, cultural, communal association? A079 - Do you belong to other groups? A080 - Do you belong to any voluntary organization or activity of those listed? (The complete WWS list includes a large number of different types of associations and voluntary organizations.)

Table A2.   Data and Sources

Data	Source
Degree of openess: (export+import) / GDP	Center for International Development at Harvard University, CID data sets.
Italian associations abroad (stocks)	Ministero degli Affari Esteri, *Associazioni italiane all'estero*, Rome, s.e., 1972; Ministero degli Affari Esteri, *Associazioni italiane all'estero*, CD-Rom, Rome, 2007
Partner countries' GDP and per capita GDP: current prices, U.S. million dollars	*World Economic Outlook*, IMF Available on www.imf.org
Italy's GDP: current prices, U.S million dollars	*World Economic Outlook*, IMF Available on www.imf.org
Foreign direct investment inward and outward (stocks): current prices, U.S. million dollars	OECD International Direct Investment Statistics - International Direct Investment by country Vol. 2005 release 01 and UNCTAD WID Country Profiles and National Statistics
Distance	The great circle distance in km between capital cities, which is available on http://www.wcrl.ars.usda.gov/cec/java/lat-long.htm .
Religion: % of Christians (Roman Catholics, Greek Catholics, Protestants, Anglicans, Lutherans, Orthodox and other Christians) on Population (1990-2004 average)	*The World Factbook*, Central Intelligence Agency
Governance indexes (1990-2004 average)	Kaufmann, D., Kraay, A., and Zoido-Lobatòn, P., (1999) "Governance Matters", *Policy Research Working Paper 2196*, Washington, The World Bank.
Overall propensity of countries to form associations	*Integrated Questionnaire* of the *World Values Survey 1981-2004*: www.worldvaluessurvey.org

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