

PRELIMINARY INVESTIGATION OF THE DETERMINANTS OF FDI DISTRIBUTION IN ITALY

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Abstract. The debate on the structural competitiveness of national and local productive systems has lately paid relevant attention to the territorial distribution of Foreign Direct Investment (FDI), since it can be perceived as an indicator of economic openness and integration in the world market. With regard to this, it can be observed that Italy has a strong potential for attracting investment, but the inward flow of FDI is very small with respect to what happens in other countries. This study analyses the factors determining this kind of mismatch with the aim of identifying appropriate policy suggestions to improve the strategies to attract foreign investors to Italy and, particularly, to its southern regions.

Keywords: Foreign Direct Investment (FDI); International Business; International Market Integration.

1. Introduction

Over the last few years, the debate on the structural competitiveness of national and local production systems has focused its attention on the territorial allocation of Foreign Direct Investment (FDI). This is because the distribution of the FDI flow is perceived not only as an indicator of openness and integration of the economy of the recipient country in the world market, but also as an indicator of systemic vitality (Paniccia 2002). In the analysis carried out, the anomaly of Italy is systematically highlighted. Theoretically, the country has a high potential for attracting FDI, and its level could be much higher than the inflow actually recorded. This discrepancy offers some room for reflection on the reasons why such an unfavourable situation takes place and how to identify appropriate policies to attract investment from foreign firms. Various recent studies have highlighted that one of the main aspects characterizing this situation is represented by the image of Italy as perceived from abroad (Basile et al. 2005; Basile et al. 2004). The country is seen as a single entity, although there are remarkable differences between its macro-areas and regions, which character-

The existence of a single administrative organization, together with a homogeneous set of laws and rules, considerably affect the quality of those factors (e.g. the structure and weight of the fiscal system, the efficiency and effectiveness of public administration, the functioning of the labour market, the innovation capacity and flexibility of the production system), which are among the main aspects considered by a foreign investor during his evaluation decision process. In Italy, it is possible to verify an inhomogeneous distribution of the FDI inflow, reflecting pretty well the dualistic feature of the country economy and its regional differences. Having said this, it seems appropriate to investigate the reasons for such a diverse regional distribution of FDI in Italy, with the aim of trying to identify the structural and institutional aspects affecting the capacity of regions to attract FDI. With this in mind, the paper is organised as follows. Firstly, a literature review of the most recent studies on the features of the Italian inflow of FDI is carried out. Secondly, a descriptive analysis of the Italian inflow of FDI is reported. This will help us to identify possible factors of correlation between the dynamic of the Italian inflow of FDI and

ize the evident dualism between its north and south.

some features of the Italian production systems. From the results of this analysis, some indicators representing the described dynamics are chosen and used for our empirical task. Hence, an econometric model is estimated and its results commented. Finally, some conclusions are drawn.

2. A brief literature overview of Italian inflow of FDI

The most recent studies on the allocation of multinational firms in Italy show the weakness of the Italian production system in attracting foreign entrepreneurs. These studies can be distinguished into two categories: those analysing the Italian dynamics of FDI within the international context and those observing the FDI distribution within the country. The first category highlights the importance of institutional factors and constraints. More specifically, they talk about the existence of a "country effect", which would discourage foreign entrepreneurs from coming to and investing in Italy (Mariotti and Mutinelli 2002, 2004a, b; Bronzini 2004a,b; Committeri 2004; Mariotti et al. 2006). More specifically, some of these studies are based on information gathered from questionnaires. The others are based on database analysis through the application of econometric techniques. In general, the studies based on the questionnaires highlight how, in forming their investment decisions, firms pay a great deal of attention to norms and regulations as well as the administrative aspects of countries. With regard to these, Italian law on bankruptcy and the inefficiency of the Italian red tape could be a discouraging factor for investors and a contribution to worsen the environmental context. Because of this, a negative image of Italy exists. Those studies based on econometric applications consider the FDI flow arriving in the European regions and examine its distribution in the light of data proxy of the attractiveness of the various destinations. With specific regard to Italy, once again a "country effect", which affects the investment decisions of foreign firms - particularly of Americans - appears evident. The institutional features of the country related to the perceived political instability, the inefficiency of the red tape, and the regulation level of markets - although only for certain aspects - would represent a contribution to enforce the negative perception foreign investors have of Italy and its economic system.

The latter category underlines the important role played by the structural aspects of firms. As limiting factors, they often recall the size of the Italian firms (which are generally too small to represent an incentive for a foreign entrepreneur to mergers and acquisitions) and aspects related to the organisation of local production systems (which have the form of industrial districts). Although this organisational form can be an incentive to the cooperation of economic agents in an area, it makes the entrance and integration of external agents not belonging to the area difficult. Another aspect often recalled in the studies of the latter category refers to the delay in development of the regions of southern Italy (the so-called Italian Mezzogiorno) highlighting alongside the existence of institutional factors the presence of relevant structural constraints, which operate as main obstacles to the entrance of foreign firms and new production initiatives (Nicoletti 2002; Mariotti and Mutinelli 2003, 2004a, b; Mariotti and Piscittello 1994). With specific regard to the Italian districts reality, some of these studies examine the relationship between the agglomeration effect and the FDI distribution while distinguishing between the effect of sectorial specific agglomeration and the externalities deriving from sectorial diversification. The empirical results of these studies support the hypothesis related to the existence of MAR (Multivariable Autoregressive) externalities. This means that FDI goes to those areas where a major sectorial specialisation exists. Hence, in attracting FDI, the existence of districts - that is the existence of a certain "district degree" - does not seem significant. For other aspects, FDI attraction is relevantly influenced by the existence of factors such as those related to the territorial structural endowment and the existence of a wide variety of goods and services for firms. In conclusion, from what is reported in these studies, it is thought that to attract foreign investors a more important role is played by the territorial concentration of firms belonging to the same production sector. The advantages deriving from the concentration of firms among which forward and backward linkages exist appears less relevant.

3. The territorial distribution of the Italian inflow of FDI

An explanation of why, among European and other industrialized countries, Italy is placed at the very bottom of the ranking related to the ratio between the FDI flow and GDP can be identified with its inhomogeneous territorial distribution of FDI (Bronzini 2004a, b). Table 1 and Fig. 1, which were elaborated on data from the Italian Office for the exchange rate (UIC), show how between 1999 and 2005 almost all the FDI flow – measured in terms of average flows recorded during the considered period – arriving in Italy was allocated to the North (80%) and more specifically to the following regions: Lombardia (55%), Piemonte (14%), Toscana (9.1%) and Lazio (8.1%). Only a very small quota of FDI arrived in the regions of the Italian Mezzogiorno (1%).

Moving onto analysing the dynamic of this distribution between 1999 and 2005, again on the basis of our computation on UIC data, it is possible to see that the regions of Northern Italy have experienced a significant increase in the inward flow of FDI from 80.3% to 89% (Table 2 and Fig. 2). Instead, over the same period, the FDI inflow has decreased in the central regions from 18.1% to 10.3%. A decrease can also be observed in the Southern regions where the FDI inflow has moved from 1.65% to 0.65%.

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Regions	Value of FDI	%	Regions	Value of FDI	%
Piemonte	7.446.697.43	14.38	Marche	94.936.86	0.27
Valle d'Aosta	14.332.86	0.06	Lazio	3.806.528.86	8.86
Lombardia	32.626.712.57	55.26	Abruzzo	52.557.86	0.13
Liguria	278.159.57	0.71	Molise	30.820.29	0.05
Trentino Alto Adige	205.450.00	0.44	Campania	171.618.14	0.38
Veneto	3.234.147.88	5.98	Puglia	45.416.57	0.10
Friuli Venezia Giulia	82.213.38	0.33	Basilicata	30.930.00	0.03
Emilia Romagna	1.718.885.88	2.96	Calabria	8.515.14	0.02
Toscana	3.890.939.14	9.09	Sicilia	27.480.43	0.09
Umbria	482.585.43	0.58	Sardegna	81.875.57	0.27

Table 1. Average FDI flow in the Italian regions between 1999 and 2005



Fig. 1. Average FDI flow in the Italian regions between 1999 and 2005

Table 2.	FDI inflow	per macro-area	between	1999 and 2005
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Areas	reas North-West		North-East		Centre		Mezzogiorno	
Years	FDI amount	%	FDI amount	%	FDI amount	%	FDI amount	%
1999	5.284.402	67.4	1.007.848	12.9	1.417.931	18.1	129.041	1.7
2000	18.217.732	62.3	2.751.759	9.4	7.606.898	26.0	669.581.0	2.3
2001	20.094.782	64.9	2.293.292	7.4	8.323.499	26.9	257.308.0	0.8
2002	20.437.159	67.5	3.254.426	10.8	6.344.973	21.0	231.685.0	0.8
2003	37.904.503	70.4	6.256.964	11.6	9.278.910	17.2	366.665.0	0.7
2004	76.156.379	78.1	8.871.441	9.1	11.823.682	12.1	650.435.0	0.7
2005	104.466.360	82.2	8.618.406	6.8	13.129.039	10.3	839.783.0	0.7



Fig. 2. FDI inflow per macro-area between 1999 and 2005

Apart from this analysis, based on the presentation of data at macro-area level, the polarisation of FDI in a few territorial areas is even more evident if the trend of the Italian inflow is analysed on the basis of regional data. By following this analysis approach and by focusing on the information at 2005 only, our computation on UIC data highlights that about 67% of the total FDI inflow was allocated in Lombardia and another 15% in Piemonte. So, in 2005 Lombardia and Piemonte were the destinations of about 81% of the total Italian inflow of FDI. Another 16% of the total inflow was allocated in four regions: Lazio (5.9%), Veneto (4.2%), Toscana (3.4%) and Emilia Romagna (2.4%). The remaining part of the FDI inflow (3%) was allocated to the rest of the Italian territory (Table 3).

Having said this, it is possible to observe and confirm that the Italian inflow of FDI is concentrated in a few areas and particularly in those traditionally characterized by the highest presence of foreign firms¹. Broadly speaking, these dynamics could be explained by factors related to the theory of *agglomeration economies* (Bronzini 2002, 2004a, b). In this sense there would be an incentive for foreign firms to localize their activities and investment in territorial contexts where other investment exists. In fact, this would be a market sig-

Table 3. Regional distribution of the Italian inflow of FDI between 1999 and 2005 (in terms of percentage)

Regions	1999, %	2000, %	2001, %	2002, %	2003, %	2004, %	2005, %	'99/'05 average
Piemonte	11.274	20.823	12.872	16.567	14.564	9.702	14.841	14.38
Valle d'Aosta	0.209	0.046	0.049	0.115	0.021	0.005	0.003	0.06
Lombardia	54.721	41.084	51.486	48.874	55.596	68.145	66.890	55.26
Liguria	1.205	0.338	0.479	1.965	0.264	0.255	0.488	0.71
Trentino Alto Adige	0.579	0.223	0.431	0.696	0.671	0.322	0.158	0.44
Veneto	7.440	5.207	3.103	7.609	9.045	5.304	4.166	5.98
Friuli Venezia Giulia	1.030	0.248	0.317	0.350	0.200	0.038	0.094	0.33
Emilia Romagna	3.808	3.731	3.555	2.097	1.713	3.435	2.365	2.96
Toscana	1.168	11.137	19.815	17.653	4.922	5.528	3.440	9.09
Umbria	0.063	0.046	0.434	0.067	1.062	1.489	0.931	0.58
Marche	0.335	0.788	0.247	0.233	0.084	0.157	0.049	0.27
Lazio	16.522	14.039	6.381	3.010	11.177	4.953	5.914	8.86
Abruzzo	0.246	0.123	0.100	0.134	0.101	0.119	0.056	0.13
Molise	0.143	0.002	0.001	0.002	0.012	0.138	0.048	0.05
Campania	0.621	0.292	0.507	0.319	0.414	0.293	0.240	0.38
Puglia	0.107	0.263	0.059	0.117	0.018	0.050	0.095	0.10
Basilicata	0.007	0.006	0.003	0.030	0.013	0.009	0.149	0.03
Calabria	0.036	0.029	0.038	0.025	0.016	0.012	0.007	0.02
Sicilia	0.345	0.088	0.058	0.026	0.059	0.028	0.043	0.09
Sardegna	0.142	1.485	0.066	0.112	0.047	0.019	0.023	0.27
Italia	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

¹ With information gathered from the database REPRINT of the Politecnico di Milano and ICE it is possible to observe the regional distribution of corporations having foreign participation in their capital. The regions of Lombardia (51.8%), Piemonte (9.5%), Emilia Romagna (7.9%) and Veneto (6.0%) are those which are seen to be the main attractors.

nal indicating the presence of, for example, specialized workers and suppliers of input factors, good financial intermediary services, useful communication, scientific and technological services as well as the existence of material and immaterial infrastructure (Markusen 2002; Istituto Guglielmo Tagliacarne 2001; Pelegrin 2003; Reganati 2003).

4. The empirical analysis

From what has been referred in the previous sections of this work, it is now our intention to provide an empirical framework of analysis to understand which factors play a determining role in the localization of FDI in the Italian regions. In this section we present and estimate a model which may help us to explain – on the basis of what we have considered so far and similarly to what has been done in another work (Pazienza *et al.* 2005) – the relationship between the regional distribution of the Italian inflow of FDI and a set of variables considered as proxy for some institutional and structural factors characterizing the context of Italian regions. Entering straight into the details, the estimated equation is log-linear and has the following form:

 $nIDE_{it} = \gamma_i \pm \beta_1 (\text{DimMerc})_{it} \pm \beta_2 (\text{ULDip})_{it} \pm \beta_3 (\text{IndEcon})_{it} \pm \beta_4 (\text{CapacExport})_{it} \pm \beta_9 (\text{IrrDistrAcqua})_{it} \pm \beta_{10} (\text{InterrServEnel})_{it} \pm \beta_{18} (\text{AddR} \otimes S)_{it} \pm \beta_{19} (\text{TraffMercFFSS})_{it} \pm \beta_{20} (\text{TraffMercStrada})_{it} \pm \beta_{21} (\text{TraffAereo})_{it} \pm \beta_5 (\text{CapacInnov})_{it} \pm \beta_6 (\text{CapacSvilServImp})_{it} \pm \beta_7 (\text{CapacSvilServSoc})_{it} \pm \beta_8 (\text{LegalCoesSoc})_{it} \pm \beta_{11} (\text{SpPubbR} \otimes S)_{it} \pm \beta_{12} (\text{SpImprR} \otimes S)_{it} \pm \beta_{13} (\text{IntensBrev})_{it} \pm \beta_{14} (\text{IncidCertAmb})_{it} \pm \beta_{15} (\text{IndMicrocrim})_{it} \pm \beta_{16} (\text{DiffInternetFam})_{it} \pm \beta_{17} (\text{LureeScienTecnol})_{it} \pm \beta_{22} (\text{IntAtt})_{it} \pm \beta_{23} (\text{SpBanc})_{it} \pm \beta_{24} (\text{DepBanc})_{it} \pm \beta_{25} (\text{ImpBanc})_{it} \pm \beta_{26} (\text{IntensCredit})_{it} \pm \varepsilon_{it}.$

where $i = 1 \dots 20$ represents the 20 Italian regions and $t = 1999 \dots 2003$ the considered years for our analysis. Furthermore, β is the coefficient of the estimated variables, γ – the constant term, ε – the error term. Table 4 offers a synthetical description of the variables used in the equation above, for which all data are gathered on a regional basis and all monetary data are considered at constant prices of 1995.

As has already been mentioned, the model is built on the basis of spatial and temporal data. For this reason, it is estimated through the panel data technique. Hence, OLS, FEM and REM are generated and it is possible to observe how the OLS model shows the highest statistical significance. Since the OLS can be an estimator which can result correct but inefficient, the model is reanalysed by using the FGLS estimator, which generates more efficient results (Gujarati 1995; Hausman and Kuersteiner 2004; Woolridge 2000). To comment on the achieved results reported in the following table (Table 5) and firstly focusing on the structural variables considered in this analysis, it is possible to observe the high statistical significance of all those variables representing the systemic vitality and openness.

More specifically, a positive relationship with a p-value = 0.000 can be observed between the FDI inflow and the DimMerc variable. This would confirm that the major flow of FDI goes to those areas characterized by a larger regional market. In addition, a positive and significant (p-value 0.000) relationship can be found between the FDI inflow and the IndEcon variable, confirming that those regions characterized by higher levels of economic independency are those which receive the highest amount of FDI. Highly significant is also the positive relationship between the inflow of FDI and the export capacity of the considered regions, this represented by the variable *CapacExport*. Significant with a p-value = 0.000, but with a negative sign is the relationship between the FDI inflow and the weight of the public administration represented by the proxy ULdip. The relationship between the FDI inflow and the AddR&S is positive and significant at the p-value = 0.009. This would suggest that the major flow of FDI goes to those regions where the number of workers in the R&D sector is higher. No statistical significance is found in relation to the variables IrrDistrAcqua and InterrServEnel, respectively associated to irregularities in the water and energy distribution. No significance is found in the variables associated with the road and air transport systems TraffMerStrada and TraffAereo. Nevertheless, a certain degree of statistical significance (p-value = 0.190) is observed between the FDI inflow and the variable associated with the rail transport *TraffMercFFSS*. This would support the view that FDI goes to those areas where the railway infrastructure is more efficient.

With regard to the institutional variables considered in our analysis, some contradictory evidence is observable. A significant (p-value = 0.050) and negative relationship exists between the FDI inflow and the *CapacInnov* variable². In addition, a strongly significant (p-value = 0.000) and negative relationship is found between the FDI inflow and the *IntensBrev* variable, which measures the regional intensity of industrial licenses and patents.

² In contrast to what is generally referred to in theory and also in some empirical studies, this would mean that a higher innovation capacity does not necessarily imply the existence of a higher capacity to attract FDI.

		Table 4. Specification of the variables considered in the model	
	Variable	Description	Source
	Ln IDE (dep. var.)	Natural logarithm of the net inflow of FDI.	UIC
	DimMerc	Ratio between GDP and population.	ISTAT
	IndEcon	Ratio between the net import-export (in mln. €) and GDP.	ISTAT
	CapacExport	Ratio between total export and GDP per times 100.	ISTAT
	ULDip	Ratio between the amount of public employees (in the public administration and defence, in the sector of compulsory social welfare, in the education and health services sector, in other social and individual public services) and the population.	ISTAT
Structural variables	AddR&S	Ratio between the amount of people working in the Research and Development (R&D) (units expressed in terms of full time equivalent) and the yearly average of the residents.	ISTAT
uctural	IrrDistrAcqua	Ratio between the number of families who denounce irregularities in water distribution and the total number of families living in the region (in %).	ISTAT
Str	InterrServEnel	Frequency of long disruption in the electricity distribution (average number per user).	ISTAT
	TraffMercFFSS	Tons of goods entered and exit via railway over the yearly average of residents.	ISTAT
	TraffMercStrada	Tons (in .000) of goods entered and exit through road transport over the yearly average of resident people.	ISTAT
	TraffAereo	Number of air passengers entered and exit over the yearly average of resident population.	ISTAT
	CapacInnov	Ratio between R&D intra muros expenditure (in .000 \in), that is the expenditure made by public administration, universities, no-profit private institutions, public and private enterprises) over GDP.	ISTAT
	SpPubbR&S	Ratio between R&D intra muros expenditure (in .000 \in) made by public administration over GDP.	ISTAT
	SpImprR&S	Ratio between the total R&D expenditure of public and private enterprises (in .000 \in) over GDP.	ISTAT
	IntensBrev	Number of licences recorded per year over the yearly average of residents.	ISTAT
	CapacSvilServImp	Number of workers in the "real estate and enterprises" sector over the total number of workers in the "services to sale" sector.	ISTAT
S	LaureeScienTecnol	Number of bachelors awarded in science and technological sciences over the total population between 20 and 29 years old.	ISTAT
iable	DiffInternetFam	Number of families having access to the Internet over the total number of families.	ISTAT
Institutional variables	IncidCertAmb	Number of the sites environmentally certified with ISO over the total number of sites variously certified.	ISTAT
utio	IntAtt	Active interest rate.	Bankitalia
ıstitı	SpBanc	Number of bank offices over the amount of resident population.	Bankitalia
Ir	DepBanc	Amount of bank deposits over the amount of resident population.	Bankitalia
	ImpBanc	Amount of bank investment over the amount of resident population.	Bankitalia
	IntensCredit	Distribution per area and per activity sector of bank investment made by families involved in production activities and companies over GDP.	Bankitalia
	CapacSvilServSoc	Ratio between the amount of people aged 14 years old and older who have taken part in meetings organised and worked for association involved in voluntary work and service, pro ecology, pro defence of civil rights, pro peace, over the total population aged 14 years old and older	ISTAT
	LegalCoesSoc	Ratio between the number of violent crimes over the yearly average of resident population.	ISTAT
	IndMicrocrim	Ratio between the number of micro-crimes over the yearly average of resident population.	ISTAT

Table 4. Specification of the variables considered in the mode	1
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Dependent variables	Est. coeff.		Dependent variables	Est. coeff.
Constant	-10.15076 (2.054887)		CapacInnov	-13.88425** (6.50224)
DimMerc	955.1703* (117.8043)		SpPubbR&S	Dropped due to collinearity
IndEcon	0.2006235* (0.0338456)		SpImprR&S	12.26904** (6.333535)
CapacExport	0.1970943* (0.0296732)		IntensBrev	-0.0274991* (0.0039632)
ULDip	-91.34937* (23.63522)		CapacSvilServImp	0.132524* (0.0519676)
AddR&S	0.7234726* (0.2766977)		LaureeScienTecnol	0.0955357** (0.048258)
IrrDistrAcqua	-0.0031769 (0.0137889)	 riables	DiffInternetFam	0.0264139** (0.0124298)
InterrServEnel	0.1148999 (0.0829011)	nal va	IncidCertAmb	-0.096745* (0.0376448)
TraffMercFFSS	0.0026618°° (0.0020315)		IntAtt	0.4173885* (0.075992)
TraffMercStrada	-0.0061477 (0.0152605)	lns	SpBanc	-14366.77* (2444.295)
TraffAereo	-0.0004938 (0.0017206)		DepBanc	246.1124* (96.61755)
			ImpBanc	-430.0379* (101.6396)
			IntensCredit	-0.0142698 (0.0177521)
			CapacSvilServSoc	0.0362152 (0.0330571)
			LegalCoesSoc	0.0127218 (0.0249217)
			IndMicrocrim	0.0618193* (0.0193068)

Table 5. Estimation results of the FGLS model (dep. var.: ln IDE)

R² – Adjusted R² – N. of observation 100 N. of observed groups 20

a) significant levels: * < 0.01, ** < 0.05, $\circ < 0.10$; $\circ \circ < 0.20$ b) standard errors in parenthesis.

A significant (p-value = 0.053) and positive relationship is observed, instead, between the FDI inflow and the variable represented by the amount of expenditure made by enterprises in R&D.

With regard to other aspects, the relevance of technological development and qualification of human capital in attracting FDI is confirmed. In fact, two positive relationships are found between the FDI inflow and the variables represented by *LaureeScienTecnol* and *DiffInternetFam*, whose statistical significance in terms of p-value is 0.048 and 0.034 respectively. Another significant (p-value = 0.011) and positive relationship is observed between the FDI inflow and the *CapacSvilServImp* variable to mean that FDI is concentrated in those regions which are able to supply services to firms. Non-relevant are found the two variables *CapacSvilServSoc* and *LegalCoesSoc*. A contradiction seems to exist in the relationship between the FDI inflow and *IndMicrocrim* that is the variable measuring the micro-criminality level. Between these two aspects a significant (p-value = 0.001) and positive relationship is found to mean that the FDI inward flow is concentrated in those regions where the presence of microcriminal phenomenon is higher. Negatively significant (p-value = 0.10) is found the relationship between the FDI inflow and the environmental certification represented by the variable *IncidCertAmb*.

With regard to those aspects related to the functioning of the bank and credit system, it is observed that a significant (p-value = 0.000) and positive relationship exists between the FDI inflow and the IntAtt, that is a variable representing the active interest rates applied in the various regions. Positively (p-value = 0.011) significant is also the relationship between the FDI inflow and the amount of bank savings represented by the variable DepBanc. For other aspects, the bank offices' ramification does not seem to positively affect the attraction of FDI. In fact, the relationship between the FDI inflow and the variable SpBanc (which indicates the number of bank offices in each region) is negatively significant (p-value = 0.000). Also, it does not seem that the FDI inflow is positively conditioned by the amount of investment made by the banks in the region represented by the variable Impbanc, whose correlation is significantly (p-value = 0.000) negative with the FDI inflow. Lastly, no evidence of correlation is found between the FDI inflow and the indicator of credit intensity represented by the variable IntensCredit.

5. Conclusions

The analysis of the territorial distribution of the Italian inflow of FDI, both at macro-area and regional levels, has highlighted how investment from abroad tends to be concentrated in a few and very circumscribed areas of the country. These correspond to those traditionally characterized by a lengthy and strengthened presence of industrial activities, where - together with a high concentration of firms in general - it is also possible to observe a major presence of companies quoted on the stock exchange and foreign firms. The evident polarization of the FDI flow in favour of the strong areas reflects not only the historical growth imbalance between the north and the south of Italy, but also the existence of further gaps even stronger than those typically linked to the variegated articulation of the Italian productive system (SVIMEZ 2006). The reasons to explain why FDI is localized in those areas with a major concentration of medium and big enterprises and innovation services, may be prevailingly found in the different structural features characterizing the various models of industrialization existing in the Italian productive context (Traù 2005).

As also shown in our empirical analysis, foreign enterpreneurs pay a great deal of attention to some specific types of external economies in determining their investment decisions. Although some institutional factors seem to play an important role, these external economies are basically linked to structural aspects such as the existence of a dense concentration of enterprises (agglomeration effect) and the possibility of achieving some advantages deriving from the presence of either big or leader firms in their operative sector. The existence of such conditions, in fact, would allow better strategic agreements aimed at both the implemention of innovation and the conquest of new market quotas.

The implications of political and industrial economics arising from the analysis carried out in this work can be firstly related to the need for enforcing the production structure of Italy, especially in the southern area, whose regions are characterized by a development lag. To pursue this aim it would seem important to implement both fiscal and labour reforms. The latter should be welcomed to allow firms to reach a size and organisation level which would be more functional in an internationally competitive context. At the same time, it would seem relevant to improve the traditional base of facilities and infrastructures and the R&D sector by favouring any useful connection between base or pure research - which is often carried out by the public system - with the need for the private sector to make it operational through applied research. Another relevant aspect is related to ameliorating the efficiency of the public administration sector. This would empower the action of the market forces through the implementation of policies aiming to increase the competition level within the system and eliminate those difficulties which at present discourage the inward flow of FDI.

References

Basile, R.; Benfratello, L.; Castellani, D. 2005. Attracting foreign direct investments in Europe: Are Italian regions doomed? *Rivista di politica economica* [Economic Policy Review] 1/2: 319–354.

Basile, R.; Castellani, D.; Zanfei, A. 2004. La localizzazione delle imprese multinazionali in Europa: il ruolo delle politiche dell'UE e le peculiarità dell'Italia [The Location of MNEs in Europe: the Role of the EU Policies and the Italian features], *L'industria* [The Industry] 3: 571–596.

Bronzini, R. 2002. Economie di agglomerazione e investimenti diretti esteri nelle regioni italiane [Agglomeration Economies and Foreign Direct Investment in the Italian Regions], in *The XXIII Conference of the Italian Association of Regional Science, Reggio Calabria, Italy 10-12 October.* Bronzini, R. 2004a, Distretti industriali, economie di ag-

Bronzini, R. 2004a. Distretti industriali, economie di agglomerazione e investimenti esteri in Italia [Industrial Districts, Agglomeration Economies and Foreign Investment in Italy], in *Economie locali, modelli di agglomerazione e aperture internazionale* [Local Economies and Models of Aggregation and International openness], Bank of Italy, Roma.

Bronzini, R. 2004b. Foreign direct investment and agglomeration: evidence from Italy, in *Temi di discussione – Servizio Studi Banca d'Italia* [Discussion Paper of the Research Centre of the Bank of Italy]. No. 526.

Committeri, M. 2004. Investire in Italia? Risultati di una recente indagine empirica [Investing in Italy? Results From a Recent Empirical Investigation], in *Temi di discussione – Servizio Studi Banca d'Italia* [Discussion Paper of the Research Centre of the Bank of Italy] No. 491.

Gujarati, D. N. 1995. *Basic Econometrics*. New York: Mc-Graw-Hill Inc.

Hausman, J.; Kuersteiner, G. 2004. *Difference in Difference Meets Generalized Least Squares: Higher Order Properties of Hypothesis Tests*. Working paper, MIT, Department of Economics, Cambridge, USA.

Istituto Guglielmo Tagliacarne. 2001. *La dotazione di infrastrutture nelle province italiane 1997–2000* [The Infrastructure Endowment in the Italian Provinces]. Roma: Unioncamere.

Mariotti, S.; Mutinelli, M. 2002. La internazionalizzazione della produzione: un confronto tra Italia e i principali Paesi industrializzati [The Internationalization of Production: A Comparison between Italy and other Industrialised Countries], in Galli, G. and Paganetto, L. (Eds.). *La competitività dell'Italia: ricerca del Centro Studi Confindustria* [The Competitiveness of Italy: A Study of Confindustria Research Centre]. *Le imprese* [The Enterprises], Milano.

Mariotti, S.; Mutinelli, M. 2003. L'internazionalizzazione passiva dei distretti italiani [The Passive Internationalization of the Italian Districts], *Economia e Politica Industriale* [Industrial Economics and Policy] 119: 7–19.

Mariotti, S.; Mutinelli, M. 2004a. La internazionalizzazione attiva dei distretti italiani [The Active Internationalization of the Italian Districts], *Economia e Politica Industriale* [Industrial Economics and Policy] 123: 32–41.

Mariotti, S.; Mutinelli, M. 2004b. Small Multinational Group in the Italian District: Interpretations and Empirical Evidence from the Mechanical Engineering Industry, in Cainelli, G. and Zoboli, R. (Eds.). *The Evolution of Industrial Districts. Changing Governance, Innovation and Internatinalization of Capitalism In Italy.* Heidelberg: Physica-Verlag. Mariotti, S.; Mutinelli, M.; Piscitello, L. 2006. Eterogeneità e internazionalizzazione produttiva dei distretti industriali italiani [Heterogeneity and Production Internationalization of the Italian Districts], *L'industria* [The Industry] 1: 173–202.

Mariotti, S.; Piscitello, L. 1994. Le determinanti dei differenziali di attrazione degli investimenti diretti esteri in Italia [Determinants and Atraction Differencials of Foreign Direct Investment in Italy], *L'industria* [The Industry] 2: 31–43.

Markusen, J.R. 2002. *Multinational Firms and the Theory of International Trade*. Cambridge: MIT Press.

Nicoletti, G. 2002. Institutions, Economic Structure and Performance: Is Italy Doomed? in *ISAE Annual Report "Monitoring Italy*",129–97.

Paniccia, I. 2002. *Industrial Districts: Evolution and Competitiveness in Italian Firms*. Edward Elgar, Cheltenham, UK Northampton, MA.

Pazienza, P.; Reganati, F.; Vecchione, V. 2005. La localizzazione delle multinazionali nelle regioni italiane: variabili economiche e istituzionali [The Localization of MNEs in the Italian Regions: Economic and Institutional Variables], in Lopes, A.; Lorizio, M.; Reganati, F. (Eds.). *Istituzioni e imprese nello sviluppo locale* [Institutions and Firms in Local Development]. Roma: Carocci, 71–99.

Pelegrín, A. 2003. *Regional Distribution of Foreign Manufacturing Investment in Spain. Do Agglomeration economies matter?* Working Paper of the Economic Insitute of Barcelona, 6.

Reganati, F. 2003. *L'impresa multinazionale: teorie, determinati ed effetti* [The Multinational Enterprise: Theories, Determinants and Effects]. CEDAM, Padova.

SVIMEZ. 2006. *Rapporto 2006 sull'economia del Mezzogiorno* [2006 Report on the Southern Italy Economy]. Mulino, Bologna.

Trau', F. 2005. Due modelli di industrializzazione: la specializzazione produttiva dell'industria italiana lungo l'arco del Novecento [Two Models of Industrialization: the Production Specialization of the Italian Industry Across '900], *L'industria* [The Industry] 1: 45–59.

Woolridge, J. M. 2000. *Introductory Econometrics: A Modern Approach*. 2nd Edition, South-Western College Publishing, Ohio, USA.