

**THE DETERMINANTS OF FDI INFLOWS IN EUROPE:
THE ROLE OF THE INSTITUTIONAL CONTEXT
AND ITALY'S RELATIVE POSITION**

by

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Abstract

Worldwide Foreign Direct Investment (FDI) flows have showed an impressive upward trend over the past two decades, which prompted the expansion of international production and the economies' globalisation process. Developed countries were both the main sources and destinations of those flows: in 1999 they accounted for 92 % of global outflows and 74 % of global inflows.

In 1999, the EU area was the world's main outward investor and inward host area for FDI. Among European countries, Italy has lagged behind in the internationalisation process. Insofar as FDI inflows contribute to the country's accumulation process, the situation is worrying.

The present paper tries to analyse Italy's relative disadvantage, by focusing on FDI location determinants. An empirical analysis is performed to define FDI inflows determinants common to a narrow group of (most representative) industrialised countries. Then, on the basis of the empirical results, Italy's endowment of factors affecting FDI is compared to the one of other major European countries included in the sample.

The results of empirical estimates reinforce the evidence stemming from the descriptive analysis: Italy's appeal as FDI host country is poor compared to other major European countries. In fact comparing the FDI determinants' endowments of the European countries, Italy ranks low for competitiveness in terms of employers' social security contributions, Government interference with the market and R&D expenditure.

In order to reduce this gap, Italy should improve its location-specific advantages. These determinants are in fact the only factors the host Governments can directly influence. Thus, a suitable policy might improve a country's FDI attractiveness by creating a more FDI-friendly institutional context.

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*ISAE, Rome. The opinions expressed in the paper are merely the Authors' own and in no way involve the ISAE's responsibility.

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Introduction

World-wide Foreign Direct Investment (FDI) flows have showed an impressive upward trend over the past two decades, which prompted the expansion of international production and the economies' globalisation process. Developed countries were the main sources and destinations of those flows: in 1999 they accounted for 92 % of global outflows and 74 % of global inflows.

In 1999, the EU area was the world's main outward investor and inward host area for FDI. Among European countries, Italy has lagged behind in the internationalisation process. Insofar as FDI inflows contribute to the country's accumulation (and growth) process, the situation is worrying¹.

The present paper tries to analyse Italy's relative disadvantage, by focusing on FDI location determinants. An empirical analysis is performed to define FDI inflows determinants common to a narrow group of (most representative) industrialised countries. Then, on the basis of the empirical results, Italy's endowment of factors affecting FDI is compared to that of the other major European countries included in the sample.

The paper is organised as follows. Section 1 presents an analysis of FDI trends in main industrialised countries/area over the past 15 years, with a particular attention to Italian relative position among European countries. Section 2 presents a brief survey of theoretical literature on FDI determinants; the model specification and the results of empirical analysis follows in Section 3. Section 4 focuses on the Italian endowment of FDI determinants in comparison with other main industrialised countries; concluding remarks are presented in Section 5.

1. FDI trends in the main industrialised countries: some stylised facts

A comparison across the three main industrialised countries/area, i.e. USA, EU, Japan, highlights that since the end of the eighty, the EU has been the world's main outward investor and inward host area for FDI (Graph 1 and 2). It is followed from USA which, in any case, in terms of outflows, starting from 1990, has recorded substantially less FDI. Japan, which in 1999 ranked eighth as FDI investor among industrialised countries, has lagged behind in terms of inflows.

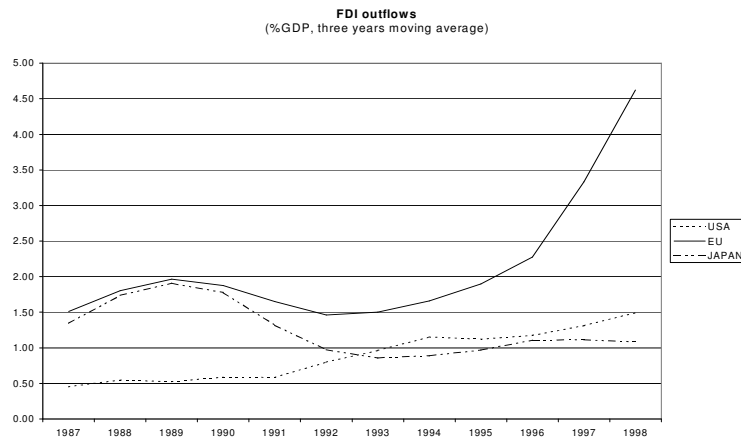
Over the past 15 years, the EU has reported substantially higher FDI outflows than inflows (i.e. it is a major FDI net exporter)². As host area (which is the main feature analysed in this paper), the EU countries recorded their all-time high in FDI inflows during the completion of the single

¹ In 1998 according to UNCTAD [39], in EU countries the FDI' inward stock was on average 15.3% of gross fixed capital formation. In Italy it was only 1.4%.

² See UNCTAD [39].

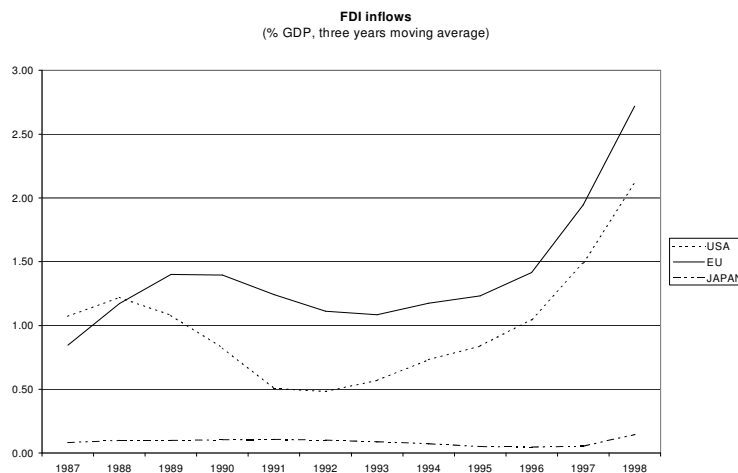
market programme. International investors anticipated market integration, as proved by the EU share of world FDI inflows peaking at 50% in 1991. The effects of the single market programme on FDI have been tapering off since 1993. In contrast to the internal market programme, data available so far suggest that the launching of the single currency has had little anticipated effect on FDI inflows and it is probably too soon to assess which may be the future effects of euro on FDI flows³.

Graph.1



Source: OECD[29], UNCTAD[39], Datastream.

Graph.2



Source: OECD[29], UNCTAD[39], Datastream.

In the lapse of time 1986-1999, EU countries had different FDI performances. Countries which performed better in terms of FDI (inflows and outflows as a percentage both of GDP or/and

³ See UNCTAD [37]

of gross fixed investments) were The Netherlands and the United Kingdom. The ones which performed worse were Germany and Italy.

In the period 1986-1993, Italy on average ranked ninth on the basis of FDI inflows and outflows magnitude. In 1999, Italy ranked fifteenth (inflows) and seventeenth (outflows) respectively, thus showing a worsening in its FDI performance.

Graph 3



Sources: OECD [29], UNCTAD[39], European Commission[13].

The degree of trade openness and productive internationalisation analysis can shed some lights on the FDI evolution and the internationalisation propensities by FDI of main industrialised countries (graph 3)⁴.

Considering the 1986-1999 period, on average, in all the countries/areas examined there was an increase both in trade openness and productive internationalisation⁵ confirming the growing integration process among countries.

⁴ The degree of productive internationalisation is defined as the sum of FDI inflows and FDI outflows divided by GDP; the degree of trade openness as the sum of exports and imports divided by GDP.

⁵ It has to be underlined that the analysis does not imply a positive correlation between trade and FDI but it assess only that both trade flows and FDI flows increased during the period in exam. For a survey of empirical papers on “trade and

Graph 2 highlights an increasing propensity, in the selected countries, for FDI as a tool to develop the internationalisation of the economy. Among European countries, as above mentioned, emerge the strong FDI performances of The Netherlands, with an increase of 17.2 percentage points of the degree of productive internalisation, and United Kingdom (15.4) and the poor ones of Germany (2.4) and Italy (0.3).

Other elements which helps in deepening the analysis of FDI trends may be drawn from specialisation indexes, i.e. synthetic measures able to assess the distribution by country/area of FDI inflows (Tab.1).

Tab.1
Specialisation indexes by country/area of destination*
(averages)

| | 1986-91 | | | 1992-98 | | |
|-------------------|-----------------------------|------|-------|---------|------|-------|
| | Country/area of destination | | | | | |
| Investing country | USA | EU | JAPAN | USA | EU | JAPAN |
| ITALY | 0.84 | 2.48 | 0.73 | 0.28 | 2.05 | 0.87 |
| FRANCE | 0.82 | 1.31 | 0.15 | 0.89 | 1.11 | 0.43 |
| GERMANY | 0.87 | 1.43 | 1.24 | 0.64 | 1.64 | 1.43 |
| UNITED KINGDOM | 1.10 | 1.03 | 0.94 | 0.87 | 1.55 | 0.88 |
| THE NETHERLANDS | 0.98 | 1.27 | 0.86 | 0.96 | 1.55 | 0.75 |
| USA | | 2.16 | 6.17 | | 2.26 | 2.75 |
| JAPAN | 1.33 | 0.69 | | 1.24 | 0.78 | |

* $(F_{i,j}/F_{i,OECD})/(F_{OECD,j}/F_{OECD,OECD})$, $F_{i,j}$ = FDI outflows from country/area i to country/area j.

Index values higher than one mean that country i is investing in a certain country/area in a relatively more intense fashion than the average of OECD countries (and vice versa).

Tab.2
Specialisation indexes for ITALY**
(averages)

| Investing country | 1986-91 | 1992-98 |
|-------------------|---------|---------|
| FRANCE | 2.29 | 2.23 |
| GERMANY | 1.86 | 1.38 |
| UNITED KINGDOM | 0.92 | 0.56 |
| THE NETHERLANDS | 0.40 | 0.45 |
| USA | 1.65 | 2.16 |
| JAPAN | 0.15 | 0.14 |

** $(F_{i,Italy}/F_{i,OECD})/(F_{OECD,Italy}/F_{OECD,OECD})$

Source: OECD [29].

In particular, comparing the sub-periods 1986-91 and 1992-98, Italy reduced its share of FDI outflows towards the EU and USA increasing its share towards Japan, Germany increased its FDI share towards the EU and Japan and decreased its share towards USA. The United Kingdom and

FDI: complements or substitute?" see Markusen J.R., Venables A.J., Konan D.E., Zhang K.H. [24] and Mori A., Rolli V. [26].

The Netherlands increased their FDI shares towards EU and decreased the quota towards USA and Japan.

It should be noted that all the main industrialised countries have increased their specialisation towards the EU area during the pre-EMU period, with the only exception of Italy and France(whose indexes remain, however, well above unity).

On the other hand, various investing countries have decreased their FDI specialisation vis-à-vis Italy⁶, with the only exception of United States (from 1.7 to 2.2) and the Netherlands (whose index has remained at particularly low levels; Tab.2)

Hence, in the case of Italy, from the descriptive analysis a lack of FDI attractiveness emerges at least for investments coming from European countries. The analysis shows also that not only Italy is less attractive than its main European partners but its ability to attract foreign investments seems to have been decreasing over the past decade.

2. The FDI determinants: a brief survey of the literature on FDI

It is worth stressing that this paper focuses on FDI inflows determinants in a panel of European countries. Thus, we are mainly concerned with theories explaining FDI among industrialised countries⁷.

It is widely agreed that multinational companies (MNCs) engage in FDI when three sets of determining factors simultaneously emerge: notably the presence of: i) ownership-specific competitive advantages, ii) location advantages in the host countries and iii) better trade benefits in intra-firm as against arm's-length relationship between investor and recipient (internalisation advantage). This theoretical approach, introduced by Dunning [9, 10], is known as the OLI (*Ownership, Location, Internalisation*) framework.

Compared to the neoclassical FDI theory, this “eclectic approach” emphasises the MNCs' behaviour. Apart from possible exchange rate variation risks, when they produce abroad, MNCs do bear additional costs, such as communication fees, higher personnel costs, information costs on local tax laws and regulations, and so on. Whenever the OLI advantages outweigh the above-listed costs, FDI should arise.

⁶It should also be noted that some European countries such as Luxembourg and Switzerland (not explicitly mentioned in the tables) have increased their relative share of direct investments in Italy in recent years, mainly in the financial sector. The overall importance of this latter sector in Italy's FDI inflows has increased. See statistical Appendix “Relazione annuale della Banca d'Italia”, 1999.

⁷ For a complete review of the literature until the end of the seventies, see Agarwal J.P. [1]. For a classification of FDI determinants by host country, see UNCTAD [37], Chapter IV. A review of econometric studies on determinants is also contained in UN [36]. A survey of recent research on theory of multinational enterprise is in Markusen [20]

Ownership advantages pertain to products or production processes which other firms do not have access to, such as patents, or intangible elements, such as reputation for quality or brand names. Location advantages pertain to the host country's quality of business environment, such as low factor prices or customer access, together with relatively low trade barriers or transport costs making FDI more profitable than exporting. Finally, internalisation advantages derive from the firm's interest in maintaining its knowledge assets internal. This may happen for several reasons. For instance, markets for assets or production inputs (technology, knowledge, management) may involve significant transaction costs or time-lags. Or else, a firm might be interested in retaining its exclusive right on assets (i.e. knowledge) which permits to hold significant competitive advantages (i.e. monopoly rents).

Starting from the OLI theoretical framework, the "new FDI theory" mainly refers to the ownership and location advantage, including MNC's in general equilibrium models. It should be stressed that, while the OLI framework is rather a normative theory, derived from the observation of the MNC's behaviour in the localisation decision planning, the "new FDI theory" seems to be heuristically more adequate to an analysis in a theoretical model framework.

In early literature (Helpman E. [16], Helpman E. and Krugman P. [17]) the presence of MNCs in a foreign country was explained in terms of differences in relative factor endowments among countries. Transport costs being null, the location of MNCs abroad is determined by the differences in endowments. The main shortcoming of this approach is that it seems suitable to explain "vertical" FDI (when firms locate different stages of production in different countries by taking advantage of differences in factor costs), but it cannot explain "horizontal" FDI (when firms locate similar types of production activities). The latter phenomenon has been observed among industrialised countries during the past few years. Thus, it seems that this approach cannot fully explain recent FDI trends⁸.

This conclusion leads us to a more recent literature, whose starting point (Brainard S.L. [3]) is that multinational activities are driven by trade-offs between "proximity" and "concentration" advantages, rather than by differences in factor endowments.

The proximity advantage stems from firm-level economies of scale, whereby any type of "knowledge capital" (like R&D activity) is transferable to the affiliates and allows MNCs to be closer to the foreign market. The concentration advantage derives from traditional plant-level economies of scale, which make it more profitable to concentrate production in one location and supply foreign markets by exports. Whenever the proximity advantage outweighs the concentration

⁸ Markusen and Maskus [22], give strong empirical support to the predominance of horizontal model.

advantage, FDI flows arise. It is more likely to happen the higher are intangible assets relative to the fixed costs of opening up an affiliate, and the higher are transport costs.

This model seems more suitable to explain horizontal FDI flows (i.e. FDI among industrialised countries). Markusen in several different works contributes to the theory endogenising multinational firms in general-equilibrium trade models and offering predictions about the relationship between affiliate production and parent-country and host-country characteristics. In particular, the knowledge-capital approach to the multinational enterprise identifies motives for both horizontal and vertical multinational activity and predicts how affiliate should be related to variables such as country sizes and relative-endowment differences.

Vertical multinationals dominate when countries are very different in relative factor endowments; horizontal multinationals dominate when countries are similar in size and in relative endowments and trade costs are moderate to high. Investment liberalisation can lead to an increase in the volume of trade and produces a strong tendency toward factor-price equalisation: direct investment can be a complement to trade in both a volume of trade sense and in a welfare sense⁹. For a relatively skilled-labour-scarce economy, trade and investments are complements in the sense that direct investment provides such a country with crucial inputs (knowledge-intensive producer services) without which the country cannot effectively exploit its abundant factors in certain industries¹⁰.

In Markusen and Maskus [23] there are implications from the theory as to how production for local sales versus production for export sales relates to country characteristics and then subjects these hypothesis to empirical estimation. Local (host country) market size is more important for production for local sales than for production for export sales. Host country skilled labour scarcity is important for export production relative to production for local sales. Investment and trade cost barriers in the host country affect production for export more negatively than production for local sales.

3. An empirical analysis of FDI determinants

The present paper compares FDI attractiveness across industrialised countries to explain differences in geographical distribution of investment flows.

From the models discussed above, the best theoretical framework for this target seems to be a model *à-la*-Markusen, within which several FDI-relevant variables may be tested: market size and

⁹ See Markusen J.R., Venables A., Konan D.E., Zhang K.H. [24]

¹⁰ See Markusen[23]

per capita income, market growth, geographical distance and factor endowments. The latter should however be considered in a broader sense: i.e. not only including prices or natural resources differences, but also comprising “institutional” characteristics and policy framework differences (economic, political and social stability, privatisation and trade policies, investment incentives, tax policy).

Recalling the OLI framework, we could also consider these characteristics within the localisation advantage (if they increase foreign investments), together with the presence of physical infrastructures and skilled labour or technological assets embodied in geographical clusters: these kinds of determinants are the only factors that can be directly influenced by Governments¹¹.

3.1. Hypotheses

To explain the gaps in FDI performances across different countries the following hypotheses are put forth:

- A positive relationship between FDI inflows and Government investments (as a proxy of the infrastructure), an higher number of researchers (as a proxy of the skilled labour force), a larger R&D expenditure (as a proxy of the technical progress), the absence of Government interference on the market (as a proxy of deregulation)¹².

Technology and innovation have become critical to competitiveness allowing for quick changes in response to demand variations. FDI and technology flows, combined with deregulation and privatisation, have improved firms’ access to markets for goods and services and to immobile factors of production. A growing number of firms is therefore developing a portfolio of locational assets to complement their own competitive strengths when they engage in FDI. Complementary to these important determinants are the availability of skilled labour supply (i.e. researchers) and adequate physical infrastructures which can improve productivity at firm level.

¹¹ Governments can only influence indirectly the other two variables (ownership and localisation), for example through the promotion of cross-border partnership in R&D or reducing the imperfect nature of technology markets and thus affecting transaction costs, the degree of competition and other elements of ownership and internalisation choices. See UNCTAD [38]. The importance of Government institutions in affecting investments and economic growth is highlight in Dunning J. H. and Narula R. [11], in which some country-studies are reported. See also Brunetti A. and Weder B. [6]. Mauro P. [25] identifies the channels trough which corruption and other institutional factors affect economic growth. Shlitzer G. and Zaghini A. [35] investigate the role played by taxation of FDI flows in determining their location among the major European countries.

¹² All the variables refer to the host country.

- A negative relationship among FDI inflows and higher statutory corporate tax rate, higher relative labour cost, higher employers' social contributions and a higher number of hours lost for strikes (as a proxy of stability of the business environment).

The institutional framework of “potential” host countries is becoming relatively more important with liberalisation and globalisation determining firms' locational decisions. A heavier fiscal burden (tax rate, labour cost, social contributions) in the potential host country would discourage FDI inflows to that country. Foreign investors assess a country's investment climate also in terms of business-friendly environment. Political instability, crimes, strikes discourage FDI flows.

- No priors on the effects of the freedom to trade (i.e. tariffs) on FDI inflows. There is a huge literature on substitutability or complementarity between FDI and trade. There is not a generally accepted approach to this issue. If, on the one side, tariffs would be expected to encourage the substitution of production for exports (i.e. a positive correlation between FDI inflows and tariffs), on the other side, FDI inflows are considered positively correlated with a higher degree of openness of the economy (i.e. a negative correlation between FDI inflows and tariffs).

3.2 Model specification and description of variables

As already stated, the main objective of this paper is to identify and compare the factors determining the location selection process of multinational enterprises. For this purpose we use data concerning a set of industrialised countries¹³: five host European countries (Italy, France, Germany, The Netherlands and the United Kingdom) and seven investor countries (the five host countries plus the United States and Japan)¹⁴.

The starting point of model specification process is the “gravity model”, in which the variables explaining FDI inflows are country size, distance and tariff¹⁵.

Developed in the 1960s to explain bilateral trade flows¹⁶, these kind of models have been able to describe the key developments in trade relationships during the past years: the tendency for

¹³ The lack of data on some countries limits our analysis to the listed countries.

¹⁴ It should be noted that MNE activities are measured in a less than perfect fashion by the FDI data reported in balance of payments statistics. As a result of different data collection systems (i.e., banking records for Italy, enterprise survey for USA and UK, mixed system for France, Germany and the Netherlands, administrative sources for Japan), large bilateral asymmetries are often observed in FDI stock and flow data. A relevant cause of discrepancy is represented by the failure to measure the 'reinvested earnings' component of FDI. This component does not entail any cross-border transfers of funds, and cannot therefore be measured through traditional banking records (such as those used for compiling the Italian balance of payments, at least for the period considered). See OECD [35].

¹⁵ It recalls gravitational model from physics. In the gravitational theory, the attraction among bodies is directly proportional to the masses product and inversely proportional to the squared of distance. Bilateral trade flows in these models are positive influenced by the global dimension of the markets of host and investor country, the size of the host

countries enjoying high income per head to trade more intensively with similar developed countries (intra-industry trade)¹⁷.

We estimated different gravity type models but they resulted not completely satisfactory in explaining FDI inflows towards European countries. The gravity type models accounts mainly for macroeconomics and “geographical” variables. We preserved a bilateral structure typical of gravity models but we included in the equation, next to traditional gravity type variables, “structural” variables (i.e. proxies of infrastructures, technology and human capital) and “institutional” variables (i.e. proxies of fiscal conditions, Government's influence, political instability). According to our priors (i.e. OLI theory), in fact, the relative advantage for an enterprise to invest abroad rather than at home depends not only on macroeconomic and geographical conditions but also on structural and institutional ones.

The “institutional” equation estimated follows:

$$(Fdiin_{ijt}/Y_{it})=b_0+b_1(Y_{pcit}/Y_{pcjt})+b_2(Invgov_{it})+b_3(Tarif_{it})+b_4(Taxy_{it}-Taxy_{jt})+b_5(Lcrel_{it})+ b_6(Gov_{it})+ b_7(Nres_{it}-Nres_{jt})+b_8(Gerdy_{it}(-3)-Gerdy_{jt}(-3))+b_9(Sceyr_{it}-Sceyr_{jt})+ b_{10}(Strike_{it}-Strike_{jt})$$

where i is the host country, j the investor and t the year. $Fdiin$ are bilateral inflows in million dollars divided by the host country's GDP¹⁸. Ypc is the *per capita* GDP of the host country divided by the *per capita* GDP of the investor country, $Invgov$ are Government investments as a percentage of GDP as a proxy of the infrastructure; $Tarif$ is a competitiveness indicator as a proxy of the freedom to trade; $Taxy$ is the statutory corporate tax rate as a percentage of GDP; $Lcrel$ is a competitiveness indicator as a proxy of the labour cost; Gov is a competitiveness indicator as a proxy of Government's influence on the market; $Nres$ is the number of researchers per 1,000 labour force units; $Gerdy$ is the gross expenditure in R&D as a percentage of GDP; $Sceyer$ refers to the employers' social contributions as a percentage of GDP, $Strike$ is the number of hours lost for strikes per 1,000 workers as a proxy of political instability.

Variables $Taxy$, $Nres$, $Gerdy$, $Sceyer$ and $Strike$ are considered in comparison to the investor country's corresponding variables. $Gerdy$ is taken as a variable with a three-period lag, since we assume a three-period lag between the R&D expenditure and the granting of patents or innovations in general.

market and its growth potentiality; the geographical distance between host and investor country, a proxy of transport costs, have instead a negative impact on trade flows.

¹⁶ See Linnemann [21]

¹⁷ For the estimate of the bilateral FDI flows by a gravity equation, see Di Mauro F. [10], Brenton P., Di Mauro F. [6], Brenton P., Di Mauro F., Lucke M. [7], Eaton J., Tamura A. [14].

¹⁸ We could not use the Log which would have allowed easy inference on elasticities, since the series have some negative figures.

The sample covers the period 1987-97, thus providing 263 observations in a balanced panel data regression. We use figures for annual bilateral FDI inflows at country level, taken from OECD [22]¹⁹.

3.3. Results

The estimate's results of the "institutional" equation is showed in table 3, which report the parameter estimates, standard errors and conventional tests results.

All explanatory variables included in the final specification are significant at conventional levels (1% and 5%). Overall, the coefficients are in accordance to our priors.

The test for data poolability and the Hausman test for fixed v. random effects indicate that using a panel data methodology with fixed effects is appropriate.

The introduction of fixed effects allows to highlight the importance of investor and host countries' characteristic that are not controlled for by the variables included in the specification tested: these peculiarities are embodied in constant term coefficients, that are all significant.

The results show a positive relation between FDI inflows and the ratio of *per capita* GDP of both host and investor countries. Direct investments arise when the host country's *per capita* GDP is larger than the investor's one. According to this result, the FDI between industrialised countries seem to be driven by market-seeking motives, as predicted by the "new FDI theory"²⁰.

Results show that "institutional variables" play an important role. There is, in fact, evidence of positive effects on FDI inflows of Government investments and of the absence of State interference in the market. For some of the above determinants, differences between host and investor countries are significant. An increase in the employers' social security contributions and taxes on corporate income in the host country compared to the investor country generates a decrease in FDI inflows. The employers' social contributions are the labour cost components which appear relevant for FDI inflows, as long as net hourly manufacturing wages are not very different between the European countries considered in our analysis.

There is also evidence of a negative relationship between FDI inflows and working hours lost for strikes, a proxy of the business environment (taken as the difference between the host and the investor country).

¹⁹ For further details on data utilised in the analysis, see the Data Appendix. The lack of sectoral data on FDI bilateral flows limits our analysis at aggregate level.

²⁰ Di Mauro F. [8] uses the levels of *per capita* GDP of the host and home countries to capture the effect of factor endowments: the wider do they diverge, the more FDI arise between countries. We simply use it as a proxy of a country's wealth and selling potential on the market.

Tab. 3
"Institutional model" estimates' results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--------------------|--------------------|--------------------|--------------|
| <i>Per capita</i> GDP ($Y_{pc_{it}}/Y_{pc_{jt}}$) | 0.051 | 0.015 | 3.39 | 0.001 |
| Public investments ($Inv_{gov_{it}}$) | 0.014 | 0.007 | 2.11 | 0.040 |
| Absence of interference of Government in the market (Gov_{it}) | 0.034 | 0.011 | 3.01 | 0.029 |
| Freedom to trade ($Tarif_{it}$) | -0.151 | 0.017 | -8.67 | 0.000 |
| Working hours lost for strikes ($Strike_{it}-Strike_{jt}$) | -5.65E-05 | 1.92E-05 | -2.94 | 0.036 |
| Employers' social contributions ($Sceyr_{it}-Sceyr_{jt}$) | -0.012 | 0.002 | -4.81 | 0.000 |
| Labour cost ($Lcrel_{it}$) | -0.001 | 0.000 | -4.22 | 0.000 |
| Number of researchers ($Nres_{it}-Nres_{jt}$) | 0.017 | 0.005 | 3.59 | 0.000 |
| Corporate tax rate ($Taxy_{it}-Taxy_{jt}$) | -0.008 | 0.002 | -3.74 | 0.000 |
| R&D expenditure ($Gerdy_{it}(-3)-Gerdy_{jt}(-3)$) | 0.042 | 0.016 | 2.61 | 0.009 |
| Fixed effects | | | | |
| _ITAGER—C | 1.304 | 0.1915 | 6.811 | 0.000 |
| _ITAFRA—C | 1.269 | 0.1891 | 6.709 | 0.000 |
| _ITAUSA—C | 1.394 | 0.1958 | 7.120 | 0.000 |
| _ITAOLA—C | 1.280 | 0.1894 | 6.760 | 0.000 |
| _ITAUK—C | 1.291 | 0.1895 | 6.814 | 0.000 |
| _ITAJAP—C | 1.345 | 0.1993 | 6.747 | 0.000 |
| _FRAGER—C | 1.267 | 0.1871 | 6.774 | 0.000 |
| _FRAITA—C | 1.074 | 0.1839 | 5.840 | 0.000 |
| _FRAUSA—C | 1.329 | 0.1922 | 6.916 | 0.000 |
| _FRAOLA—C | 1.233 | 0.1858 | 6.663 | 0.000 |
| _FRAUK—C | 1.295 | 0.1955 | 6.626 | 0.000 |
| _FRAJAP—C | 1.280 | 0.1956 | 6.546 | 0.000 |
| _GERFRA—C | 1.029 | 0.1865 | 5.520 | 0.000 |
| _GERITA—C | 0.899 | 0.1866 | 4.818 | 0.000 |
| _GERUSA—C | 1.069 | 0.1929 | 5.835 | 0.000 |
| _GEROLA—C | 1.071 | 0.1880 | 5.691 | 0.000 |
| _GERUK—C | 1.171 | 0.1883 | 5.691 | 0.000 |
| _GERJAP—C | 1.207 | 0.1961 | 5.969 | 0.000 |
| _UKFRA—C | 1.255 | 0.1943 | 6.210 | 0.000 |
| _UKITA—C | 0.938 | 0.1888 | 4.971 | 0.000 |
| _UKUSA—C | 1.788 | 0.3935 | 4.545 | 0.000 |
| _UKOLA—C | 1.433 | 0.2039 | 7.029 | 0.000 |
| _UKGER—C | 1.236 | 0.1927 | 6.413 | 0.000 |
| _UKJAP—C | 1.373 | 0.2047 | 6.708 | 0.000 |
| _OLAFRA—C | 1.175 | 0.1938 | 6.064 | 0.000 |
| _OLAITA—C | 1.252 | 0.2585 | 4.844 | 0.000 |
| _OLAUSA—C | 1.381 | 0.2528 | 5.463 | 0.000 |
| _OLAGER—C | 1.172 | 0.1860 | 6.302 | 0.000 |
| _OLAUK—C | 1.523 | 0.3525 | 4.321 | 0.000 |
| _OLAJAP—C | 1.327 | 0.1941 | 6.839 | 0.000 |
| Weighted Statistics | | | | |
| R-squared | 0.50 | Mean dependent var | 0.14 | |
| Adjusted R-squared | 0.41 | S.D. dependent var | 0.15 | |
| S.E. of regression | 0.11 | Sum squared resid | 2.88 | |
| F-statistic | 24.21 | Durbin-Watson stat | 1.88 | |
| Prob(F-statistic) | 0.0000 | Hausman test | χ^2 5,55; | p value 0,6 |

With regard to the presence of tariff and non-tariff barriers, our results show a negative relationship to FDI inflows: in our analysis a substitution effect between FDI and trade prevails. It

should be stressed that, even though such a substitution relationship emerges at aggregate level, sectorial analysis might not confirm that result.

Some indications about Italy's competitive position can be drawn from the analysis of constant terms. The highest values for Italy's coefficients are those relative to FDI coming from the USA and Japan; the specification above seems to explain better the FDI inflows from European countries. Also considering France Germany and UK as host markets, coefficients concerning investments from the USA and Japan generally show higher values than those concerning FDI inflows from others European countries.

Among non-included determinants, the distance between investor and host country might explain the higher value; in the case of inflows from the USA to the UK, cultural and linguistic ties should play an important role²¹.

Then, to evaluate the existence of specific host country characteristics²², we perform an exercise introducing four dummy variables relative to each single host country, excluding the UK which is considered as benchmark²³.

Dummy coefficients for Italy and Germany are significant and negative compared to the country chosen as benchmark. Conforming that, country-specific peculiarities negatively influencing FDI towards those countries do exist.

At least in the case of Italy, this result could be explained by the presence of negative externalities (lack of infrastructures, crime diffusion, inefficient legal and administrative structures, over-bureaucracy) not included in the analysis due to the lack of empirical measures.

This exercise confirms the low Italian appeal as host country for FDI compared to other major European countries²⁴.

4. Italy's competitive position

The econometric results show that the set of variables selected by our analysis are able to explain an important share of the variability across countries and over time. To highlight the competitive position of Italy in terms of FDI attractiveness, it is worth comparing Italy's endowment of these factors with the ones of the other industrialised countries.

²¹ A number of authors have investigated the role of language in international economic ties; de Menil G. [7] estimates the language effect as a determinant of FDI bilateral flows in the long run.

²² For example, a dummy variable for Italy assumes value "1" when bilateral flows go to Italy, "0" otherwise.

²³ The introduction of host country specific dummies excludes fixed effects (we don't have (n-1) bilateral constant term for each host countries, but only a common constant term).

Average data for the period 1986-97 show that Italy exhibits a relative disadvantage, that is, it suffers from a lack of attractiveness in terms of FDI flows.

After Japan, Italy shows the highest level of statutory corporate tax rate among the countries considered. In France, Germany and the United States it is remarkably lower.

With regard to labour costs, Germany has on average the highest hourly wage, while Italian wages are in line with France and the United Kingdom and lower than those of The Netherlands, the United States and Japan. However, in terms of employers' social contributions, the situation is very different. Italy has the heaviest employers' social contributions in Europe, second only to France, and the average contribution level is considerably higher than that of other European countries.

With regard to tariffs and barriers, the average level is similar to that of all the countries considered in the panel.

State interference with the market is particularly high in Italy (but less than in France and The Netherlands), where exist more Government regulations and a heavier presence of the public sector than in any other industrialised country.

Tab. 4
Competitiveness indicators*
(1986-1997 averages)

| | Government interference with the market** | Tariffs and barriers** | Statutory corporate tax rates*** | Employers' social contributions (as a % of GDP) | R&D expenditure (as a % of GDP) | Number of researchers per 1,000 labour force units | Public investments (as a % of GDP) | Hourly wage |
|------------------------|---|------------------------|----------------------------------|---|---------------------------------|--|------------------------------------|-------------|
| ITALY | 4.9 | 8.4 | 3.8 | 9.1 | 1.1 | 3.1 | 3.2 | 10.9 |
| FRANCE | 4.7 | 8.4 | 2.2 | 11.7 | 2.3 | 5.3 | 2.4 | 11.0 |
| GERMANY | 5.5 | 8.5 | 1.7 | 7.4 | 2.6 | 5.9 | 2.9 | 17.8 |
| UK | 5.9 | 7.8 | 3.6 | 3.5 | 2.1 | 4.8 | 2.1 | 10.5 |
| THE NETHERLANDS | 4.7 | 8.6 | 3.5 | 3.8 | 2.1 | 4.4 | 1.9 | 14.3 |
| USA | 6.8 | 7.9 | 2.4 | 3.7 | 2.6 | 7.3 | 1.9 | 12.4 |
| JAPAN | 7.7 | 5.5 | 5.6 | 4.8 | 2.9 | 9,2 ¹ | 6,6 ² | 13.9 |

*For data sources see Data appendix.

**The indicators can take up values from 1 to 10. Higher values correspond to higher freedom (less State presence on the market, less tariffs and barriers).

*** Tax revenues as a % of GDP.

¹1986-93.

²1986-95.

Italy also has a wide gap in R&D expenditure. As a percentage of GDP, Italy invests in R&D half the amount allocated by the other countries. In particular, Germany, the United States and

²⁴ It has to be underlined that data used in the estimates for Italy are from Italian Balance of payments statistics and fail to measure the 'reinvested earnings' component of FDI. This can lead to a systematic underestimate of Italian FDI inflows.

Japan spend more than 2.5% of GDP, while Italy doesn't even reach 1.1%. Italy is lagging behind also in terms of human capital.

The number of researchers as a percentage of the labour force is lower than that of other industrialised countries; this may discourage FDI flows.

Last but not least, Italy enjoys the highest (second only to Japan) average level of public investments, which should proxy the infrastructure endowment. However, their lack of efficiency could bias the indicator's effectiveness. In Italy a high level of public investments may be consistent with inadequate infrastructure endowment.

It is interesting that these indications are in line with the opinions of foreign entrepreneurs.

In particular, according to the survey carried out by World Economic Forum [40], there are negative evaluations regarding Italy's infrastructure endowment and the public expenditure allocated for it. Opinions are particularly negative with regard to the efficiency and extension of transports, the resources devoted to R&D, the quality of scientific training and statutory corporate tax rates.

Also opinions on the level of bureaucracy (bureaucratic ties in Italy are considered too many and too time-consuming), on public officials' competence, on the presence of crime causing a non business-friendly environment, are negative.

Finally, the empirical results of both our research and of international business surveys point the same weaknesses in term of Italy's FDI attractiveness.

In Italy there are more factors discouraging localisation decisions of MNCs and less available FDI determinants than in the other major European countries.

5. Summary and conclusions

The descriptive analysis in Section I highlights the followings problems:

- Over the past 15 years, FDI mainly concerned the industrialised economies. Europe has been the area with the largest share of world FDI inflows and outflows;
- The single market completion seems to have had prompting effects on the FDI localisation in Europe (at least for major EU countries), either from outside Europe (other industrialised areas), or within Europe itself.
- Among the main industrialised countries, Italy is the least attractive in terms of FDI flows, together with Germany. Furthermore, its attractiveness has been decreasing over time, at least for European investors. It has to be underlined that Italy's comparatively poor performance might be partly explained by the fact that reinvested earnings are not included in the Italian data (at least for

the examined period²⁵); such component is normally included in the FDI statistics pertaining to other main OECD countries.

- The econometric analysis performed in the second part of the paper is aimed at finding FDI determinants common to a narrow set of European countries. Results of our analysis show a positive correlation between FDI inflows and the ratio of per capita GDP of host and investor countries, as expected: FDI flows among these countries seem to be driven by market-seeking motives, as predicted by the “new FDI theory”.

Tests performed on the “gravity model” specification suggest that such a model does not explain a satisfactory proportion of FDI distribution variance. Our analysis highlights the relevance of externalities in the FDI location decision in industrialised countries. In particular, the institutional context (i.e. political and social stability, fiscal policy and statutory corporate tax rates, Government propensity to enhance investments in physical infrastructures, R&D, human capital, technological innovation) stands out as an important factor of attraction for FDI. There is evidence of a positive correlation between FDI inflows, Government investments and less market regulations on the part of Government; there is also evidence that FDI inflows are negatively correlated with social contributions, statutory corporate tax rates and working hours lost for strikes. The relative labour cost in the host country is also important to determine FDI inflows. For some of the above-listed determinants, differences prevailing among host and home countries are significant.

In order to explain the bilateral flows between countries included in our sample, the presence of peculiarities of investor and host countries, embodied in constant terms’ coefficients of the estimate, is crucial. As host markets, Italy and Germany exhibit both country-specific peculiarities that negatively influence FDI inflows compared to the UK, i.e. the country chosen as benchmark. For the Italian case, this result might be explained by negative externalities (lack of physical infrastructures, crime, the not efficient legal and administrative structures, over-bureaucracy); some of data on externalities are not included in the analysis owing to the lack of empirical measure. Foreign entrepreneurs' opinions - periodically surveyed by international organisations - confirm the existence and role of these negative peculiarities.

These results confirm the evidence stemming from the descriptive analysis: Italy’s appeal as FDI host country is poor comparing to other major industrialised countries. Thus comparing the FDI determinants' endowments of the European countries, Italy ranks low in terms of employers' social security contributions, Government interference with the market and R&D expenditure.

²⁵ Starting from January 1999, following the introduction of the reinvested earnings, the Italian definition of FDI is fully consistent with the requirements of OECD and IMF.

In order to reduce this gap, Italy should improve its location-specific advantages. These determinants are in fact the only factors the host Governments can influence directly. Thus, a suitable policy might improve a country's FDI attractiveness by creating a more FDI-friendly institutional context.

In particular, “good practises” in order to attract foreign activities could be:

- i) the reduction in domestic tax burden, the introduction and/or implementation of FDI specific fiscal measures (i.e. bilateral and multilateral treaties, partial exemption or credit schemes, etc.);
- ii) the implementation of R&D activities and the promotion of technical innovations via a larger and more efficient use of financial resources and more tight relationships in this direction among Government, enterprises, universities and research institutions;
- iii) the reduction in labour costs and in particular social contributions costs and the implementation of vocational training and educational activities in order to implement of high skilled labour force;
- iv) the implementation of infrastructure via a more efficient use of financial resources by Government and the broader inclusion of private investors in the sector.

DATA APPENDIX

Data sources and descriptions

| Variables | Description | Source |
|---------------------------------|--|--|
| Dependent variable | | |
| $Fdiin_{ijt}/Y_{it}$ | Bilateral FDI flows in current million U.S. dollars divided by the GDP of the host country in million U.S. dollars | [29] OECD (1999), <i>International Direct Investment Statistics Yearbook</i> . |
| Regressors | | |
| Ypc_{it}/Ypc_{jt} | Host country's <i>per capita</i> GDP in U.S. dollars divided by investor country's <i>per capita</i> GDP in U.S. dollars | [18] IMF (1999), <i>International Financial Statistics</i> . |
| $Taxy_{it}-Taxy_{jt}$ | Statutory corporate earning taxes divided by GDP, difference between host and investor countries. | [29] OECD (1999), <i>Revenue Statistics</i> . |
| $Tarif_{it}$ | Competitiveness indicator of the freedom to trade. Index of absence of tariff and non-tariff barriers. It can range from 0 to 10 | [15] The Fraser Institute (2000), <i>The Economic Freedom of the World</i> . |
| $Invgov_{it}$ | Public investments as a percentage of GDP | [2] Banca d'Italia (1999), <i>Bolletino Statistico</i> . |
| $Lcrel_{it}$ | Relative labour cost (compared to the average of all OECD countries) | [33] OECD (1999), <i>Economic Outlook</i> . |
| Gov_{it} | Index of absence of market interference on the part of Government. It can range from 0 to 10 | [15] The Fraser Institute (2000), <i>The Economic Freedom of the World</i> . |
| $Nres_{it}-Nres_{jt}$ | Number of researches per 1,000 labour force units; difference between host and investor countries | [32] OECD (1999), Main Science and Technology Indicators. |
| $Gerdy_{it}(-3)-Gerdy_{jt}(-3)$ | Gross national R&D expenditure as a percentage of GDP, difference between host and investor countries, three-year lagged variables | [32] OECD (1999), Main Science and Technology Indicators. |
| $Sceyr_{it}-Sceyr_{jt}$ | Total national employers' social contributions expenditure as a percentage of GDP; difference between host and investor countries. | [30] OECD (1999), <i>Revenue Statistics</i> . |
| $Strike_{it}-Strike_{jt}$ | Working hours lost for strikes per 1,000 workers; difference between host and investor countries. | [14] Eurostat (1999), <i>New Cronos</i> . |

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