THE ECONOMIC PERFORMANCE OF FOREIGN CONTROLLED FIRMS IN ITALY: A COMPARISON BETWEEN INDUSTRIAL AND FINANCIAL INVESTORS

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Abstract. It is well known from the theoretical and applied economic literature on industrial economics and international business that foreign control positively affects the economic performance of enterprises. This is motivated by the presence of a technological and managerial advantage that the multinational enterprise possesses, as an industrial investor, over domestic companies. On the other hand, the distinction between foreign direct investments and portfolio investments is consolidated both in official statistics and applied analysis as a factor that that discriminates between industrial from financial investment.
The growing relevance of foreign direct investments finalised to the control of resident companies and led by international financial investors, such as international investment funds and other types of institutional investors, calls into question this traditional approach, since this type of investor, although making acquisitions or greenfield investments with a majority stake, is classified as a financial and not an industrial operator. As a result, the presence of a positive effect on economic performance of companies under the control of an international investment is not yet clearly defined in the literature.
The aim of this work is to empirically test the presence of this effect – statistical significance, magnitude and direction – by using an innovative micro-level dataset in order to support further empirical and theoretical analyses in this field. In particular, the micro-level dataset is derived from the survey on foreign-controlled companies in Italy carried out by Istat, with respect to which financial investors are identified as a subset of foreign investors by manual profiling. The statistical model used is regression with robust estimators applied to this cross-section of micro data.

1. Introduction

Inward Foreign Direct Investments (Inward FDI) aimed at acquiring the control of resident companies led by international financial investors (IFI), such as international investment funds and other type of institutional financial investors, represent a fast-growing trend in Italy as in many other advanced countries. This phenomenon, of significant interest for policy makers, is however still little investigated by the empirical and theoretical literature.

The aim of this paper is twofold. Firstly, it aims to split foreign affiliates resident in Italy operating in manufacture and with at least 100 persons employed between

international industrial investments (III) and international financial investments (IFI) based on the profiling of Ultimate controlling institutional unit (UCI) characteristics of the foreign MNE. Secondly, it empirically tests the presence and magnitude of a statistically significant effect of different types of company governance, including IFI as a subset of foreign affiliates (FA), on enterprise economic performance with a regression model that controls for other business characteristics. The empirical analysis refers to the census of manufacturing firms with at least 100 person employed operating in Italy in 2022.

The paper is organized as follows. Section 2 conducts a short review of the relevant economic literature that refers to the scientific streams of industrial economics and international business. Section 3 introduces the international statistical standards currently adopted to classify FDIs and MNEs, and it also discusses the criteria that can be used to identify IFI from III. Section 4 illustrates the key characteristics of the dataset used for the empirical analysis, the list of variables and the statistical model. Section 5 reports and analyses the main results obtained from the application of the model to empirical data. Section 6 highlights the main conclusions, with particular regard to policy implications and the identification of future research areas.

2. Review of the relevant economic literature

The literature on multinational enterprises has attributed, since its origins (Hymer, 1970; Dunning, 1980), a positive effect of foreign control on the economic performance of the controlled firms, usually defined as foreign affiliates (FA) (Criscuolo, 2005). This positive effect is motivated by the technological superiority or in any case by the organizational capacity of the foreign parent company and by its interest in transferring its knowledge to the subsidiary in order to better compete with other domestic companies. The empirical literature has also confirmed the presence of a positive effect of foreign control on the performance of firms, in some cases also extending to the national supply chain (Frenda and Kané, 2025). More recently, the analysis of this positive effect on corporate performance has also been extended to domestically controlled multinationals to the extent that they operate globally and follow strategies similar to foreign MNEs (Grasseni, 2010).

International Financial Investments (IFI) aimed at acquiring control of a domestic resident company or to establish a new company (greenfield investment) have so far received a limited attention in the theoretical and empirical literature on MNEs. Some relevant exceptions can be found in the work of scholars such as Bloom *et al.* (2015), Davis *et al.* (2014), Kaplan and Strömberg (2009) and Lerner *et al*. (2011). In particular, Bloom *et al.* (2015) emphasise and empirically test the positive role of

private equities in boosting TFP in target firms. In a similar vein, Davis *et al.* (2014) show the positive effect on employment and productivity of private equity buyouts, while Lerner *et al.* (2011) investigate the long terms effects on investments and innovation.

IFI finalised to foreign control of resident companies embrace a large and heterogeneous set of financial actors, such as international investment funds and other types of institutional financial investors, namely pension funds, insurance companies, mutual funds, hedge funds, and sovereign wealth funds.

Each of these foreign institutional investors may have different motivations and objectives in terms of the nature, duration, and strategic value of the investment. For example, in the case of international investment funds, the presence of professional management that aims to diversify investments in different industrial sectors with a medium-long term perspective will certainly have a different focus and investment management perspective compared to hedge funds which notoriously have a more speculative and short-term perspective.

On the other hand, when comparing international financial and industrial international investments, it is necessary to take into account that global financial investors could direct their investments to the best companies, and therefore those that presented the best performance before the M&A operation. This latter effect is called "cherry picking" by the international business literature (Aitken and Harrison, 1999). Consequently, the comparison of the performance of foreign subsidiaries between IFIs and IIIs should be conducted with a long-term horizon to verify the effect of the different economic and financial management after an appropriate period of time from the acquisition or establishment of the new investment.

3. International statistical standards to classify FDIs and MNEs

IIF are a specific type of multinational enterprise that operate in the financial sector. According to the Bank of Italy, an IIF is a collective investment scheme that invests in financial instruments of various types, issued by entities belonging to different countries, including non-European ones. These funds can invest in shares, bonds, money market instruments and other assets, seeking to exploit the opportunities offered by different global markets and industrially diversified investments. IIF are managed by professionals, who analyze the markets and select the most promising investment opportunities looking for higher return potential in the short-medium terms. Therefore, their investment strategy is assumed to be speculative rather than industrial.

The statistical classification of multinational enterprises in official statistics refers to two different domains. The first is represented by the Balance of payments

statistics (BOP) in which the operations of multinational enterprises are captured within the statistics on foreign direct investments (Inward and Outward FDI) as a subset of international movement of capital flows. The second domain refers to business structural statistics with particular attention to the statistics on the activities of multinational companies (FATS statistics). These two domains, although they are progressively convergent, reflect different concepts and definitions of particular interest for the purposes of this paper.

In the statistical domain of balance of payments, it is usual to distinguish portfolio investment from foreign direct investment (FDI) in the classification and analysis of a country international capital flows. FDIs are investments made to acquire a lasting interest in a company (direct investment enterprise) that operates in a country other than that in which the investor is resident. In particular, FDIs are considered to reflect an investor's industrial strategy and to generate technological transfer. In contrast, portfolio investments are purchases of financial securities (shares, bonds) of a foreign company, made by financial operators without the intention of acquiring effective control over the management of the company but with the exclusive goals to generate financial returns, often through portfolio diversification. They are generally short or medium-term investments.

International statistical standards, which are defined to guarantee international comparability but also to make the compilation of official statistics feasible especially when it is based on large numbers of economic operators, refers to the composition of company since they do not explicitly consider the type of investor and the purposes of the investment. In particular, foreign direct investments are distinguish from portfolio investments only when the share of participation in a company shares is equal or higher of the 10% threshold.

A good starting point to distinguish IFI from III as two specific sub-sets of FA operating in Italy is to start from an in-depth analysis of the characteristics of the final foreign investor (UCI). The information on the county of location and as well as on the company name of the UCI is collected by ISTAT in the context of the survey on FA resident in Italy carried out within the domain of FATS statistics. The process of analysis of UCI is usually called profiling in official statistics and it is finalized to classify each company with respect to statistical variables of interest through an in-depth analysis of all available documentation, both of public origin and acquirable through company websites.

As described in more detail in the next section, the empirical analysis focuses upon 4,780 "large" companies, of which 1,188 are FA. These FA are under the control of 884 foreign MNEs each of which corresponds to a UCI. The profiling activity was carried out by considering not only the name of the corporation at the top of the group and its economic activities, but also considering the company documentation in doubtful cases, as for example in the case where it is necessary to

distinguish between financial holdings at the head of industrial groups or IFI. The result of this carefully performed analysis has led to the identification of 86 FA under the control of IFI[1].

4. Data and statistical model

The dataset consists of a cross-sectional sample of 4,780 companies, representing the entire population of manufacturing enterprises with 100 or more employees operating in Italy in the year 2022. This comprehensive coverage ensures that the analysis reflects the structural characteristics and economic performance of large manufacturing firms within the country.

The dataset is constructed by integrating multiple official statistical sources provided by ISTAT (Italian National Institute of Statistics), including:

- Inward FATS Statistics: This source provides detailed information on foreign affiliates operating in Italy, offering insights into the internationalization of production and the role of foreign-controlled enterprises in the Italian economy (Istat, 2024).
- SBS Frame: A harmonized system that combines administrative and statistical data to produce detailed economic accounts for enterprises. It serves as a foundational framework for structural business statistics in Italy. Material and immaterial assets were also integrated from administrative data.
- Group Register: A statistical register that tracks enterprise groups operating in Italy, enabling the identification of corporate structures, ownership links, and group-level dynamics within the business sector.

The variables considered in the statistical model are of three different types:

- Dependent variable
- Explanatory variables
- Control variables

The dependent variable, labelled as PROD, represents the target of the analysis and is measured as the log of apparent labour productivity (value added over number of persons employed).

Explanatory variables are identified as a set of dummy variables that detect different types of enterprise governance as shown in table 1.

[1] The names of the ultimate controlling shareholders of foreign affiliates resident in Italy cannot be disclosed to protect statistical confidentiality. However, the analysis conducted identified international equity funds as the predominant type, with some evidence from sovereign sources. Other types of foreign institutional investors, however, appear to be entirely residual or absent.

Table 1 - *Manufacturing companies with 100 or more employees operating in Italy by type of enterprise governance, year 2022.*

Variable name	Description of the governance type	Number of enterprises
IE	Independent enterprises	638
DG	Domestic groups	842
ITMNE	Italian multinational enterprises	2,112
III	International industrial investments as a subset of Foreign affiliate resident in Italy	1,102
IFI	International financial investments as a subset of Foreign affiliate resident in Italy	86
Total		4,780

Sources: Inward Fats, Register Group..

In particular, III and IFI are two dummy variables that identify , respectively, foreign affiliates operating in Italy under the control of international industrial investors and international financial investors following the methodology defined in the previous section.

The large majority of Italian manufacturing firms with at least 100 person employed is either under the control of Italian MNEs (44.2%) or foreign affiliates under III (23,1%). Foreign affiliates under IFI control account only for 86 companies (1,8%). The rest of the companies is either independent (13,3%) or belongs to domestic national group (17,6%).

Different types of enterprise governance exhibit a similar degree of concentration by industry, with the limited exception of International Investment Funds that appear to be more concentrated in Food processing (table 2).

Control variables are identified from the literature to take into account differences in productivity level across firms related to factors other than the type of enterprise governance. These include:

- company size, labelled as SIZE, is measured as the log of the number of person employed in the company[2]
- industry effect, labelled as EA, is measured as a set of 24 dummy variables running from code NACE 10 to code NACE 33
- Stock of Material assets, labelled as MA, is measured by the log of the Monetary value of material assets reported in the company balance sheet
- Stock of Immaterial assets, labelled as IA, is measured by the log of the Monetary value of immaterial assets reported in the company balance sheet.

[2] The log transformation is applied to all continuous variables in order to mitigate heteroscedasticity problems. “Apparent” labour productivity is measured in terms of person employed rather than hours worked since this latter variable is not available in the microlevel data survey databases.

Table 2 – *Number of manufacturing enterprises by industry and type of governance. Top 10 industries ranked by numerber of IFF(share in % over the total number of companies), year 2022.*

Industry (nace 2 digit)	Type of governace					Total
	IE	DG	ITMNEs	III	IFI	
10 Manufacture of food product	16.5	12.9	7.4	4.5	18.6	9.1
25 Manufacture of fabricated metal products	18.5	16.6	10.5	6.4	10.5	11.7
28 Manufacture of machinery and equipment	9.4	10.6	23.7	21.3	10.5	18.7
21 Manufacture of basic pharmaceutical products and preparations	0.6	2.1	2.3	5.1	9.3	2.8
17 Manufatcure of papar and paper products	3.4	4.3	1.9	2.4	8.1	2.7
32 Other manufacturing	0.9	1.8	2.2	4.0	7.0	2.5
13 Manufature of textiles	2.8	3.2	2.8	1.1	4.7	2.5
14 Manufatcure of waering apparel	2.7	2.4	4.0	1.3	4.7	2.9
20 Manufacture of chemicals and chemical procucts	1.9	2.7	4.6	8.7	4.7	4.9
22 Manifacture of rubber and plastic products	7.1	6.2	6.5	7.4	4.7	6.7
Share of top 10 industries over the total	**63.8**	**62.8**	**66.0**	**62.2**	**82.6**	**64.5.**

Sources: Inward Fats, Register Group, SBS Frame.

The statistical model that defines the relationship between the dependent variable and the independent variables is specified as a linear regression. Model 1 and model 2 both consider the full set of explanatory dummy variables, while model 1 differs from model 2 in terms of control variables (MA and IA variables are considered only in model 2):

Model 1

$$PROD_i = \beta_0 + \beta_1 SIZE_i + \beta_2 IFI_i + \beta_3 III_i + \beta_4 ITMNE_i + \beta_5 DM_i + \sum_{J=1}^{24} \delta_j EA_{ij} + \varepsilon_i \quad (1)$$

Model 2

$$PROD_i = \beta_0 + \beta_1 SIZE_i + \beta_2 MA_i + \beta_3 IA_i + \beta_4 IFI_i + \beta_5 III_i + \beta_6 ITMNE_i + \beta_7 DM_i + \sum_{J=1}^{24} \delta_j EA_{ij} + \varepsilon_i \quad (2)$$

where the suffix i represents the i-th company and j identifies the j-th industry.

In matrix terms, ε, a vector related to the random variable, must satisfy the following assumptions, expressed in matrix notation:

$$E(\varepsilon) = 0 \quad (3)$$

$$Var(\varepsilon) = E(\varepsilon\varepsilon') = \sigma^2 I_n \quad (4)$$

In particular, assumption 4 implies both homoscedasticity and uncorrelation of the causal variables. In order to cope with heteroskedasticity and correlation problems, robust estimators are adopted in the model.

Moving from the target population to regression models 1 and 2, the loss of coverage in terms of number of enterprises is very limited and well balanced by enterprise governance types (table 3).

Table 3. *Companies included in target population, model 1 and model 2 by type of enterprise governance (number of units).*

Governance	Target population	Model 1	Model 2	Coverage mod.1 in % over the target population	Coverage mod.2 in % over the target population
IE	638	634	600	99,4	94,0
DP	842	835	805	99,2	95,6
ITMNEs	2,112	2,099	2,020	99,4	95,6
III s	1,102	1,092	1,033	99,1	93,7
IFI	86	85	82	98,8	95,3
Total	4,780	4,745	4,540	99,3	95,0

5. Empirical results

The specification of Model 1 includes all governance dummy variables, and only enterprise size and industry dummy variables as control variables. All estimated parameters with robust standard errors are statistically significant and the regression explained 68% of the total variability (R-squared) (Table 4).

The parameters of control variables exhibit the expected sign, thus confirming that the size of the firm has a positive effect on its productivity level and that part of

the variability in productivity level across firms depends on the sectoral component. Considering independent firms as the baseline of the model, more complex governance models have a positive effect on the level of productivity of firms. in particular, the positive effect is amplified when moving from domestic business groups to multinational companies. Quite interestingly, IFI exhibits the highest positive effect on firms' productivity.

Table 4. *Regression models with robust standard errors.*

Variables	**Apparent labour productivity (PROD)**	
	Model 1	Model 2
SIZE	1.060***	0.888***
	(0.013)	(0.019)
MA		0.125***
		(0.012)
IA		0.020***
		(0.003)
IFI	0.385***	0.264***
	(0.067)	(0.071)
III	0.260***	0.201***
	(0.029)	(0.026)
ITMNE	0.285***	0.170***
	(0.024)	(0.021)
DG	0.166***	0.099***
	(0.028)	(0.025)
CONS (a)	0.835***	-0.179
	(0.076)	(0.119)
Number of obs	4,745	4,540
F (30, 4509)	345,50	395,77
Prob > F	0,0000	0,0000
R-squared	0,6802	0,7271
Root MSE	0,53251	0,48345

(a) NACE code 33 for variable EA and the IE dummy variable were excluded to prevent multicollinearity. Industry level dummy variables are not included in in this table for reason of synthesis.
*SE reported in brackets,*** p<0.01, ** p<0.05, * p<0.1.*

Moving from model 1 to model 2, all estimated parameters included in the model are statistically significant and the regression explained 73% of the total variability

(R-squared). The parameters of control variables that are shared with model 1 confirm the expected sign, while the new control variables, MA and IA, show a positive impact on firm productivity. The parameters of the governance dummy variables decrease slightly but they still are all positive and increase in magnitude moving from domestic groups, Italian MNEs and III. IFI confirms to have the stronger positive impact on productivity. Hower, these results should be interpreted with caution, given that endogeneity between control variables and productivity levels has not been addressed in this paper and that, furthermore, additional control variables that better characterize firms' performance profiles, such as export propensity and research and development intensity, could lead to a more accurate estimation of the model.

Furthermore, as anticipated in the literature review, the presence of a largely positive and statistically significant effect of the presence of the international financial investor on foreign affiliate productivity may lead to two quite different types of economic interpretation.

In the first case, it could simply be due to a greater ability of international financial investors to pre-select the most productive and profitable companies (cherry-picking effect), without, however, providing a specific contribution after the acquisition. In the second case, it is assumed that the international financial investor possesses the managerial capacity and strategic motivation to invest in the controlled company as part of a concrete and effective industrial strategy. This type of investor is more common in international private equity funds, which appear to characterize the majority of foreign control investments in Italy from foreign institutional investors. A distinction between these two motivations is currently not possible based on the results of the analysis conducted.

6. Conclusions

This paper aims to contribute to both the empirical and theoretical literature on the impact on firm productivity generated by foreign control, focusing on the increasing relevance of international financial investors (IFI).

Based on a unique micro level dataset, the empirical analysis shows that IFI exploit a statistically significant, large magnitude positive effect on firm productivity level, in line with foreign and domestic industrial multinational enterprises. This quite surprisingly result can be explained in two different ways. On the one hand, it can be a simple effect of a priori selection of the best companies that is made by international investors. This effect is called Cherry picking by the relevant literature. On the other hand, the financial managers of IFI could also be less oriented to short terms financial returns than expected. In particular, seeking for medium-long terms

returns of their investments, they could also have adopted a more industrial approach, by exploiting for instance technological synergies across controlled companies included in their portfolio.

The empirical results obtained from this analysis certainly deserve further study with regard to the following issues:

- a more detailed classification and analysis of international foreign investors. In particular, it would be interesting to consider separately different types of international financial investors which can be characterised by different objectives and duration of the foreign control investment and therefore show substantially different behaviours with respect to the strategic and industrial nature of the investment itself
- to the for the relevance of the cherry picking effect by analysing the performance of the company before the acquisition and after a minimum of 5 years after the acquisition
- to introduce appropriate solutions to mitigate endogeneity concerns about the correlation between key explanatory variables and productivity.

It would be also useful to refine of the estimation methodologies and to include additional variables, such as export orientation and R&D intensity in the model in order to further explore the potential causes underlying the positive effect found for IFI on firms' productivity.

References

AITKEN B., A. E. HARRISON. 1999. Do domestic firms benefit from direct foreign investment?. *American Economic Review*, Vol. 89, No. 3, pp. 605-18.

BLOOM N., SADUN R., VAN REENEN, J. 2015. Do private equity-owned firms have better management practices? *American Economic Review*, Vol. 105, No. 5, pp. 442–446.

CRISCUOLO C. 2005. The Contribution of Foreign Affilliates to Productivity Growth: Evidence from OECD Countries. OECD Science, Technology and Industry Working Papers, No. 2005/08, OECD Publishing, Paris, https://doi.org/10.1787/534235088410.

DAVIS S. J., HALTIWANGER J., HANDLEY K., JARMIN R., LERNER J., MIRANDA J. 2014. Private equity, jobs, and productivity. *NBER Working Paper* No. 17399.

DUNNING J.H. 1980. Towards an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies.* Vol. 11, pp. 9-31.

FRENDA A. KANÉ A. 2025. An investigation of foreign affiliates and supply chain productivity in the European Union industrial sectors. *Supply Chain Analytics*, Vol. 9.

KAPLAN S. N., STRÖMBERG P. 2009. Leveraged buyouts and private equity. *Journal of Economic Perspectives*, Vol. 23, No. 1, pp. 121–146.

HYMER S. 1970. The efficiency (contradictions) of multinational corporation. *American Economic Review*. Vol. 60, No. 2.

ISTAT. 2024. Struttura e competitività delle imprese multinazionali - Anno 2022, https://www.istat.it/comunicato-stampa/struttura-e-competitivita-delle-imprese-multinazionali-anno-2022/.

LERNER J., SORENSEN M., STRÖMBERG P. 2011. Private equity and long-run investment: The case of innovation. *Journal of Finance*, Vol. 66, No. 2, pp. 445–477.

OECD. 2025, *OECD Benchmark Definition of Foreign Direct Investment (Fifth Edition)*, OECD Publishing, Paris, https://www.oecd.org/en/publications/oecd-benchmark-definition-of-foreign-direct-investment-fifth-edition_7f05c0a3-en.html

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