Evaluating Business Incentives Through DEA. An Analysis on Capitalia Firm Data

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Abstract

In this paper, we analyse the impact of business incentives on the technical efficiency of Italian manufacturing firms. Using DEA allows a novel treatment of the omitted-variable and sample-selection bias. Through DEA one carries out direct comparisons between similar observations akin to those carried out in non-parametric matching analysis. The selection bias can be treated by conditioning these comparisons on the variables ruling the distribution of state aid. We separately utilise four Capitalia surveys, in order to test whether policy effectiveness has changed during the 1990s. Moreover we consider separately the effects of the three main kinds of state aid to manufacturing (soft loans, grants, and tax rebates). The results indicate that state aid had a negative impact on technical efficiency. However, this impact mostly relates to soft loans, and looses significance in the late 1990s.

Keywords

Business incentives, Policy evaluation, Technical efficiency, DEA.

1. Introduction[1]

State support for business in Italy has been traditionally centred on financial incentives. Recent years however have also witnessed a growth in fiscal incentives for investment and R&D. In spite of these institutional changes and the policy importance of the subject (suffice it to say that 70% of the National Operative Programme 2000-2006 has been allotted for business incentives to small and medium enterprises), impact evaluation has been far less abundant here than in the field of labour market policies.

As is well emphasised in the surveys of Heckman et al. (1999) and of Blundell and Costa-Dias (2000), the crucial element in impact evaluation is the specification of the counterfactual hypothesis, that is what would have been done by subsidised firms in the absence of intervention. The fundamental problems in this respect are the omitted variable bias (linked to the difficulty of measuring the effects of intervention separately from other factors) and the selection bias (linked to the fact that subsidised firms are selected not randomly but on the basis of some criteria, and can then have some characteristics that impair their comparison with non-subsidised firms). The solution to these problems requires, beside the adoption of appropriate empirical procedures (not always utilised in the existing studies), the utilisation of data-sets containing

[1] Skilful research assistance by Giuseppe Lubrano Lavadera is gratefully acknowledged.

sufficiently rich information on firm characteristics. In this respect the surveys promoted by Capitalia (formerly Mediocredito Centrale) are of particular interest because they contain, especially for small and medium firms, information not otherwise available in Italian data-bases.

In order to better understand how these data can be utilised to improve the empirical evidence that already exists in Italy, it is useful to briefly reappraise the main justifications of these policy interventions, as well as their potential problems (Carlucci and Pellegrini, 2001). The motivation of public intervention relies on two different types of market failure. In the first case, some types of market imperfection (particularly in the credit and capital markets) prevent a correct assessment of economic projects and imply an unduly low level of investment. In the second case, the existence of non-appropriable externalities in investment, R&D, or similar projects requires public intervention in favour of these activities. In both cases, state aid can incur problems of low net impact (one can subsidise projects that would have been carried out by firms even in the absence of business incentives) and of efficiency (if there are market imperfections, one could erroneously subsidise projects that the market would have correctly rejected; in the case of externalities the increase in social efficiency could be lower than the decrease in private efficiency).

The production of (correct) empirical evidence on the net impact of a policy follows naturally from the solution of the aforementioned problems of specifying the counterfactual hypothesis. On the other hand, a correct appraisal of the efficiency effects probably requires a more innovative research effort, centring on the computation and utilisation of performance measures based on the so-called frontier analysis of efficiency (see for instance Fried et al., 1993; Cooper et al., 2000). Indeed, a typical feature of the existing Italian evidence is that positive effects of financial incentives on investments (and employment) are accompanied by insignificant (or even negative) effects on firm profitability, as measured by balance-sheet indicators (typically the ROI). Yet, such results are consistent with rather different scenarios as far as private and social efficiency are concerned. They could follow from (i) a rise in capital per worker in the presence of decreasing marginal product, without any significant impact on technical progress or efficiency;

(ii) a rise in capital per worker accompanied not only by technical progress embodied in the new capital goods, but also by a reduction of technical and/or allocative efficiency.

In either case it is fundamentally important to be able to evaluate separately the changes in the potential determinants of profitability (capital-deepening, technical progress, variations in efficiency), as well as to assess their sources. In fact the distinction between the concepts of technical and allocative efficiency (see on this the works gathered in Fried et al., 1993, or the discussions contained in Mazzotta, 1999; Destefanis, 2000) not only allows some conclusions on the outcome of state aid, but also the detailed analysis of its consequences for firm behaviour.

The present paper aims to use the data from the Capitalia surveys to evaluate the empirical validity of these considerations. Its three key features are (i) the utilisation of non-parametric analysis (DEA) in measuring the technical efficiency of firms, which arguably allows a novel treatment of the problems of omitted variable and selection bias, (ii) the utilisation of all four waves of the Capitalia database, (iii) the care devoted to assess the impact of various kinds of financial (soft loans, grants) and fiscal incentives. The rest of the paper is organised as follows: in the second section we present the institutional framework, in the third section we evaluate the literature, in the fourth section we illustrate the empirical approach, in the fifth section we present and assess strength and weaknesses of our database, in the sixth section we describe the empirical set-up, as well as the main results. The seventh section concludes.

2. *Business incentives in Italy. The institutional framework*

The case of Italy is particularly interesting for the analysis of business incentives. Especially since the inception of the Cassa per il Mezzogiorno[2] in the second post-war period, various kinds of

[2] The Mezzogiorno area includes the following regions: Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia and Sardegna. Recent descriptive evid-

incentives have been implemented, with an emphasis on financial incentives. This variety also relates to the duration of incentives (short-tem, long-term or permanent) and to the targeted variables (employment, investment, R&D or, more generally, innovation). There are three main kinds of business incentives in Italian manufacturing: interest rate subsidies, capital grants and tax credits (or rebates). The latter begun to matter seriously only from 1995 onwards. In our empirical analysis we will deal with the following subsidies.

The Sabatini Act, granting interest rate subsidies for the purchase of capital goods. The regions, according to current regulations, can also provide to firms a capital grant (the so-called "new Sabatini Act"). This act is of particular interest inasmuch as it is often held responsible (alongside the Act 64/1986, now abrogated, but documented in the questionnaires) for the overcapitalisation of small and medium firms, especially in the Mezzogiorno (Prosperetti and Varetto, 1991; Giannola and Del Monte, 1997).

The Act 488/1992, providing capital grants as incentives to investment programmes in depressed areas. The interest of this act is clear, as it has recently represented in Italy the main policy instrument in favour of investments (Ministero dell'Industria, 2000a).

The Act 317/1991, through which firms can choose between a tax reduction and a capital grant in order to finance investment expenditures. The incentive conditions are particularly favourable for firms of smaller size or situated in depressed areas.

Elements of particular interest both in the 488/1992 and in the 317/1991 Acts are that they have been proclaimed and implemented throughout the period covered by the Capitalia Surveys. This makes it possible in principle to compare the behaviour of a subset of firms before and after the subsidy.

The Act 46/1982, awarding subsidised loans or interest rate subsidies to firms carrying out R&D programmes. This act is the main policy instrument in favour of R&D expenditures in Italy.

Most of these subsidies are restricted to small-medium firms, some to Southern firms. The subsidy provision generally depends on area and size, sometimes also on the existence of a consorti-

ence about these regions can be found in D'Acunto et al. (2004) and in Destefanis et al. (2004).

um. The Act 488/1992 (implemented in 1994) possibly represents a discontinuity, in as much as subsidies were granted after a careful scrutiny of the perspective project.

3. *Evaluating business incentives. The state of the art*

As already said, business incentives rely on two different types of market failure. Some types of market imperfection (particularly in the credit and capital markets) may prevent a correct assessment of economic projects and imply an unduly low level of investment. Otherwise, the existence of non-appropriable externalities in investment, R&D, or similar projects requires public intervention in favour of these activities.[3] In any case, incentives can incur problems of low net impact and of efficiency. In this section we want to illustrate the existing Italian evidence on these points.

A first group of studies focuses on Act 44 (investment subsidies for young entrepreneurs). Mazzotta (1999) appraises Act 44 through a stochastic frontier analysis on a sample of manufacturing firms. She finds that subsidised firms are less efficient than non-subsidised ones. However, differences are not very significant within traditional manufacturing. Battistin et al. (2001), testing a learning-by-doing model, find that the efficiency (measured in terms of survival through a duration analysis) of subsidised firms increases only as long they are receiving aid. Bondonio and Martini (2001) evaluate the impact of investment subsidies for young entrepreneurs through an event history analysis. They find that the young age of the entrepreneur has a strongly negative impact on firm survival. However, subsidised firms tend to survive more than non-subsidised ones. Also Del Monte and Scalera (2001) measure efficiency in terms of survival. However, they relate differences in this variable to the kind of finance provided to firms, either private or subsidised. Applying a maximum likelihood technique they ob-

[3] Recent evidence about the existence of these market failures in the Mezzogiorno is discussed in Biagioli et al. (1999) and in Destefanis and Sena (2005).

tain two main results: no difference between the two classes of finance, but a greater risk failure for larger investment projects.

Another group of studies refers to the state support for firms in the Mezzogiorno and other depressed areas, focusing on the employment impact of the Act 488/1992 (Pellegrini, 1999; Ministero dell'Industria, 2000a; Carlucci and Pellegrini, 2003). These studies find that this Act had a positive and significant impact on employment. On the other hand, Bondonio (2002) finds that the employment impact of state support in depressed areas of the North has been rather weak. A related group of studies concerns itself more generally with the effects of various types of incentives on the real and financial characteristics of firms (Lodde et al., 1993; Bagella and Becchetti, 1998; Bagella et al., 2004). A typical result appearing throughout several of these studies is that positive effects of financial incentives on investments (and employment) are accompanied by insignificant (or even negative) effects on firm profitability, typically measured by balance-sheet indicators. In Ministero dell'Industria (2000b) the effects of R&D incentives are considered, finding a positive impact of state aid on capital accumulation and productivity, but not on sales.

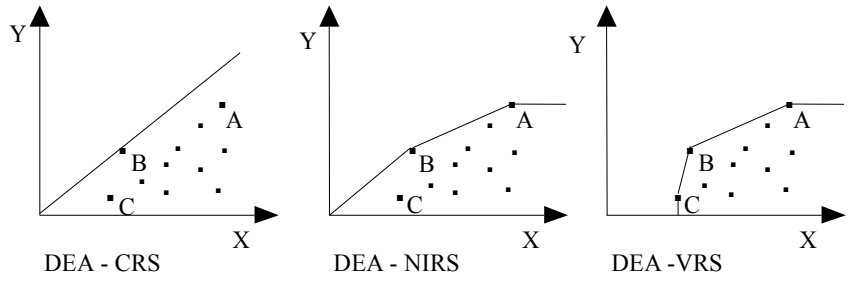
Bagella et al. (2004) is perhaps the study most akin to the present work. They analyse over three Capitalia surveys (5th, 6th and 7th) the probability of being subsidised, and estimate, conditional to that probability, the impact of investment subsidies. They find that this impact gathers strength over time, also because of the introduction of the Act 488/1992 with its new eligibility criteria. Finally they apply a stochastic frontier analysis (imposing constant returns to scale) to data from the 7th survey only, finding that soft loans push firms away from the frontier while export subsidies affect technical efficiency positively.

4. The evaluation of business incentives through DEA

On of the key features of the present paper is the utilisation of DEA, a non-parametric frontier technique (Cooper et al., 2000). In our opinion, non-parametric frontier analysis has significant analogies with the procedures of non-parametric matching that recently have aroused much interest in the policy evaluation literature (Martini et al., 2003). Below, we shall shortly describe the main tenets of DEA. This description will also show how the adoption of non-parametric frontier analysis is potentially conducive to the production of qualitatively novel empirical evidence on business incentives.

Non-parametric frontier methods require an extremely limited number of hypotheses on production. The technical efficiency of a producer is assessed on the basis of a production set constructed by applying linear programming techniques. No hypothesis is made on the existence of a functional relation between inputs and outputs. In DEA, the reference frontier is identified by constructing a convex envelope around the production set, using linear programming procedures incorporating the hypotheses of free input- and output-disposal and convexity.[4] In Figure 4.1 we provide some examples of DEA frontiers obtained respectively under the assumptions of constant returns (DEA-CRS), non-increasing returns (DEA-NIRS) and variable returns (DEA-VRS) to scale.

Figure 4.1 – Some DEA Production Frontiers



[4] The hypothesis of convexity is however far from harmless. A critical evaluation of it can be found in Destefanis and Storti (2002).

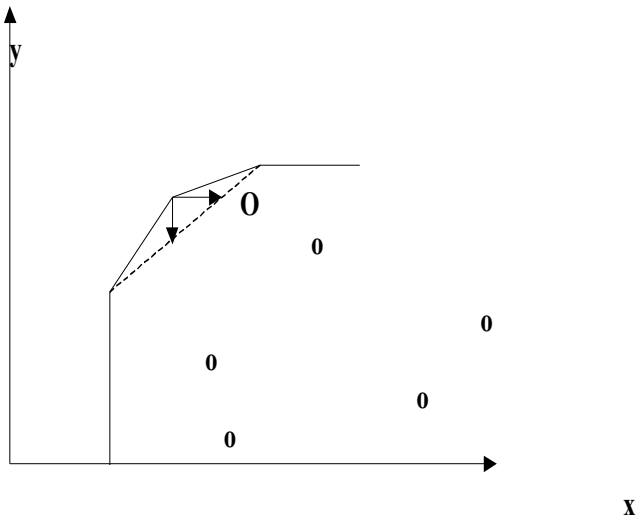
In order to compute the technical inefficiency of the observations, we must decide about the metrics (radial, additive, …) and the orientation (input, output) of measurement. Usually, a radial metrics (Farrell, 1957) is taken. Then, supposing with no loss of generality that efficiency scores are output-oriented, technical efficiency is equal to the radial expansion required by the output of an inefficient unit in order to reach the frontier. A technically efficient observation (and which therefore stands on the reference frontier) will naturally obtain an efficiency score equal to one.

Beside the advantage of making no hypothesis on the functional form of the input-output relationship, non-parametric techniques do not suffer from endogeneity bias. The same frontier is singled out, irrespectively of the input- or output-orientation of the analysis. Furthermore, it is *not* true, as is still commonly maintained, that statistical inference cannot be carried out within DEA (Banker, 1996). Subsequently, inferential statements can be made about the returns-to-scale assumptions, the inputs and outputs excluded from the production set, or (for instance) the impact on efficiency of business incentives.

What is however true is that stochastic noise cannot be straightforwardly modelled within non-parametric methods. A consequence of this is that DEA is very sensitive to the presence of outliers. The latter are particularly relevant if they are situated on the frontier of the production set. In order to ascertain their existence, we compute for all efficient observations the so-called super-efficiency scores – indicating the maximum radial contraction consistent with the observation remaining efficient (see Figure 4.2). Super-efficiency scores greater than 2.5-3 are likely to be associated with an outlier. In this case one must decide whether the efficiency scores must be recalculated excluding such an observation from the production set. In taking this decision it is useful to consider Tørgensen' rho (Tørgersen et al., 1996) which measures the importance of a reference unit for the efficiency potential of the inefficient units. A high (>0.10-0.15) value of the rho indicates that an efficient observation is important as a benchmark for other observations. Hence a combination of high super-efficiency scores

and rho's singles out outliers that should be excluded from the production set.

Figure 4.2 – Evaluating Super-efficiency



But why could DEA be a novel solution to the problems of omitted variable and selection bias? DEA puts on the production frontier some existing producers and carries out direct comparisons between their convex combinations and the producers they dominate. These comparisons include producers with similar input-output mixes, and are closely related to the evaluation techniques based on non-parametric matching. In a sense, DEA successfully faces what is called the problem of common support in the non-parametric matching literature (see Figures 4.3.a-b).

Figure 4.3.a – Policy Evaluation: The Regression Framework (a)

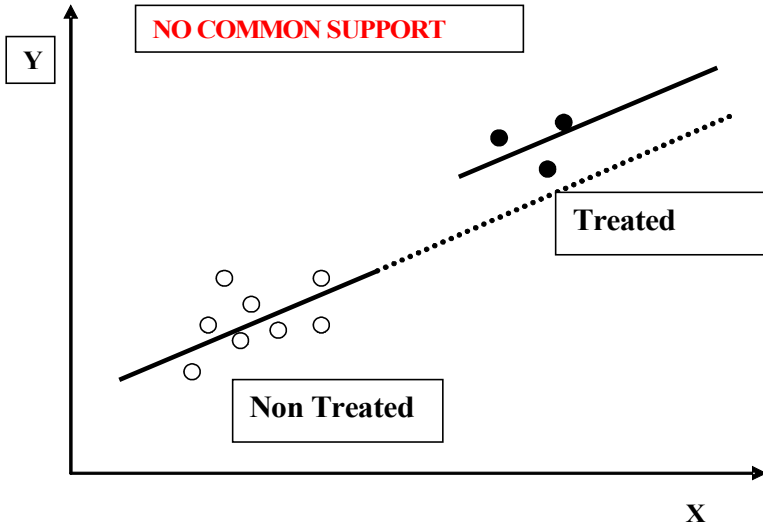
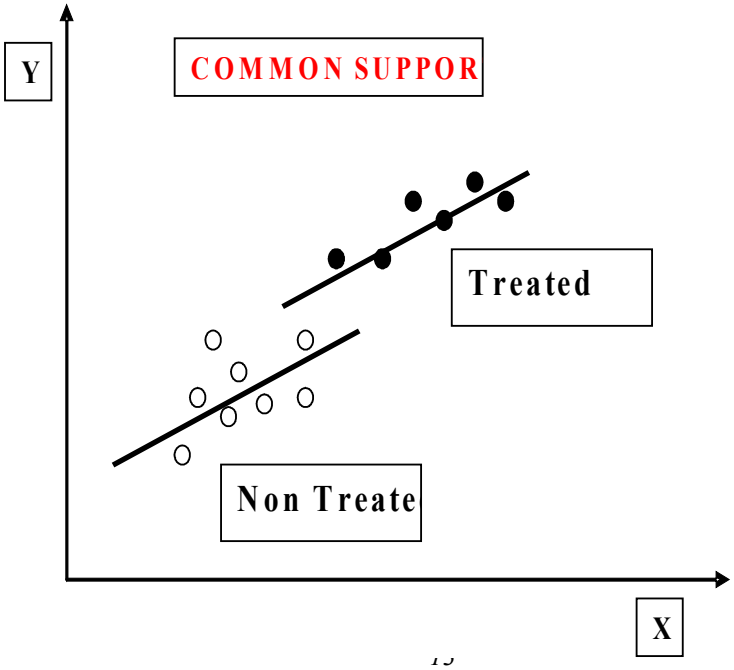
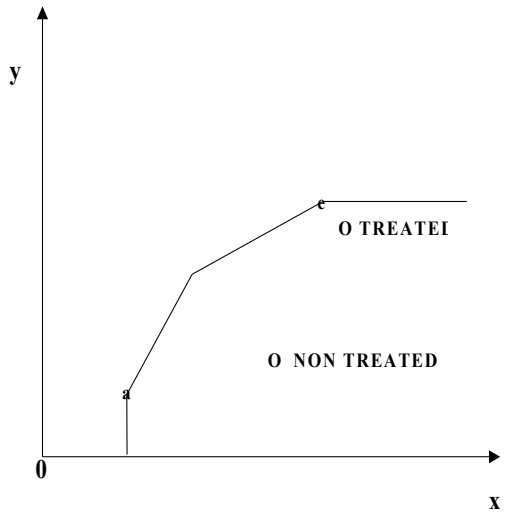


Figure 4.3.b – Policy Evaluation: The Regression Framework (b)



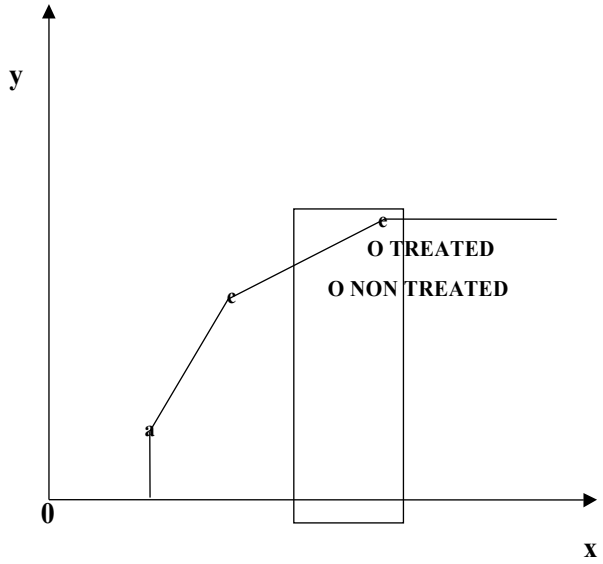
Consider Figure 4.3.a. An estimate of the policy effect can only be obtained by extrapolating the regression line (supported by non-treated units) close to the treated units. This policy estimates are highly dependent, among other things, on assumptions about functional form. In Figure 4.3.b, on the other hand, comparisons between treated and non-treated units can be made for similar values of the conditioning variables. In non-parametric matching such a comparison (for similar values of the conditioning variables) is made by construction. In DEA all observations are always compared with linear combinations of other actual observations (see Figure 4.4). This means that all observations, either treated or non-treated, are compared with units with a similar input-output mix.

Figure 4.4 – Policy Evaluation: A DEA General Framework



The scope for common support in DEA can be increased by restricting comparison to categories of similar observations (by size, area, …). See for instance Figure 4.5. If these categories are relevant for the provision of business incentives, this restricted comparison can also be reinterpreted as a procedure correcting for the selection bias in the evaluation of state aid.

Figure 4.5 – Policy Evaluation: A DEA Restricted Framework



DEA can accommodate the variables relevant for the provision of business incentives as non-discretionary (fixed) inputs (Banker and Morey, 1986). Efficiency scores are calculated in the direction of other inputs and outputs, comparing only producers within a given category of non-discretionary inputs. Obviously this is valid solution to the selection bias only if we can observe (and included in the analysis) all the variables relevant for the provision of business incentives.

5. *The Capitalia database*

We now turn to the description of the Capitalia database, some features of which are decisive in shaping up the structure of our empirical exercise. We will deal first with the database in gen-

eral; then we will take a closer look to the treatment of business incentives in it.

The database structure

Our data refer to the four more recent Capitalia surveys (5th to 8th) going from 1989 to 2000. The 5th survey covers the 1989-1991 years, the 6th goes from 1992 to 1994, the 7th from 1995 to 1997 and the 8th from 1998 to 2000. The Capitalia surveys consider an open panel of Italian manufacturing firms, with about 4500 firms for each survey. Besides balance sheet data, they provide qualitative information ranging from general aspects (year when the firm was founded, legal form, reorganisations, ownership and control, groups and consortia) to workforce qualifications and training; from investment and R&D to firm's finance and financial and fiscal incentives.[5] Most of this qualitative information relates to the three-year period as a whole. Only a few of it (for instance the number of white-collar and blue-collar employees) is available for each year. The balance sheet information includes most items from the firms' balance sheets for all the three years.

The firms included in the surveys were selected by means of a mixed procedure: sample-based for firms with between 11 and 500 employees, and exhaustive for firms with more than 500 employees. The composition of the sample was determined by means of a random selection procedure stratified by class of employees, area and sector. A supplementary list of about 8000 firms was constructed for each survey, in order to integrate by stratum the firms that had failed to reply.

It is useful to consider in Table A.1 the consequences of this sampling procedure on the composition of the panel over time. There are only 163 firms surviving throughout the four surveys. The number of surviving firms is always considerably higher in contiguous surveys.[6] Analysing the surveys in details (see Nese and O'Higgins, 2005) reveals that this attrition is far from having a random nature. Hence, a panel-like use of these surveys is rather problematic. In the empirical analysis we will take each survey

[5] There are about 200 questions in the 4th and 5th survey, while the 8th survey contains 400 questions.

[6] The rather low rate of survival between the 6th and the 7th survey could partially depend from the lack of a common firm code between these surveys.

separately, and try to control for the presence of an attrition bias in our results.

Business incentives in the Capitalia database

Information on business incentives is available in the Capitalia database in two different ways. There is a point in the questionnaire asking firms (i) whether they have received any kind of business incentive, and (ii) under which Act is the incentive given. A second source of information derives from the points relating to investments and R&D expenditures. Here firms are also asked how they finance these projects. Among the different forms of finance they can indicate soft loans, grants, or tax rebates.

The first source of information separates firms that received some aid from firms who did not. Almost 44% of firms in the sample received some kind of business incentive (see Figure A.1). This source has two drawbacks. There is no information either on the kind of project being financed or on the amount received. Furthermore, the sample coverage of the point relating to the single Acts is not very satisfactory. We subsequently turn to the second source of information.

In the points of the questionnaire relating to investments and R&D expenditures, firms are asked to describe the kind of finance utilised. In the 5th and 6th surveys they give purely qualitative information. Only in the two following surveys the firm is actually asked to specify the quota of a given kind of finance over the total project. In all the four surveys we find soft loans and grants among these categories, while tax rebates cannot be found in the 5th survey. However, in that period this kind of business incentive was virtually non-existent in Italian manufacturing.

About 38% of firms in the sample received some kind of state support to investment or R&D. Examining the data we realised that a non-negligible share of firms reported a state-aided project share smaller than 10%. We decided not to consider as state-aided those firms. Under this restricted definition state aid was distributed to only 31% of firms. Some firms obtained more than one form of aid, but, as shown in Figure A.1, overlappings are not very large (26% receive one kind of aid, 5% two kinds, and not even 0.1% three kinds). As shown in Table A.2, soft loans are the most

common form of state aid: it was given to 18% of firms, while 10% obtained a grant, and 8% a tax rebate.

6. *The empirical analysis*

Given the structure of the Capitalia database, we analyse every wave on its own. Actually we consider data for the last year of each survey: 1991, 1994, 1997, and 2000. In order to reduce the scope for unobserved heterogeneity, we compute the efficiency scores by considering separately firm-level data for 12 industries (ranked alphabetically in Table 6.1). A finer level of disaggregation was not permitted by considerations of sample size.

Table 6.1 – The Industries under Scrutiny

INDUSTRIES
Apparel & Leather
Chemicals & Rubber
Electrical machinery
Fabricated Metal Products
Food
Means of Transport
Metal Products
Non-electrical Machinery
Non-metallic Mineral Products
Other Industries
Paper & Printing
Textiles

We separate state-aided from non state-aided firms, and we also analyse separately the effects of soft loans, grants and tax rebates. The analytical set-up presented in Section 4 suggests the specification of an extended production set, including outputs, inputs and a set of control variables relevant for the provision of business incentives.

Table 6.2 – The Production Set

OUTPUT: Sales INPUTS: Intermediate inputs Capital: gross fixed capital stock at book value Labour: number of blue collars; number of white collars CONTROL VARIABLES: Area (South or non-South) Consortium (belonging or not) Size (three categories: up to 50, 51-100, more than 100 employees, all taken in the first year of the wave)

Some of the control variables (especially size) are related to the changing nature of the samples (see Nese and O'Higgins, 2005). Hence, by including them in our production set, we control to some extent for the presence of an attrition bias in our results. We do not impose constant returns to scale, and calculate both input- and output-oriented efficiency scores.

We obtain DEA efficiency scores with quite high mean and low variance, even without the controls (see Table A.2). They compare favourably with results from a production set with value added, labour and capital (not shown here).

In broad agreement with a priori expectations, business incentives have a slight unfavourable impact on technical efficiency (see Table A.3). However, this is mostly true for soft loans. Also, this negative impact weakens over time (see Table A.4).

There is no clear cross-industry pattern (see Table A.5).

7. Concluding remarks

In this paper we have focused on the impact of business incentives on the technical efficiency of manufacturing firms. A dis-

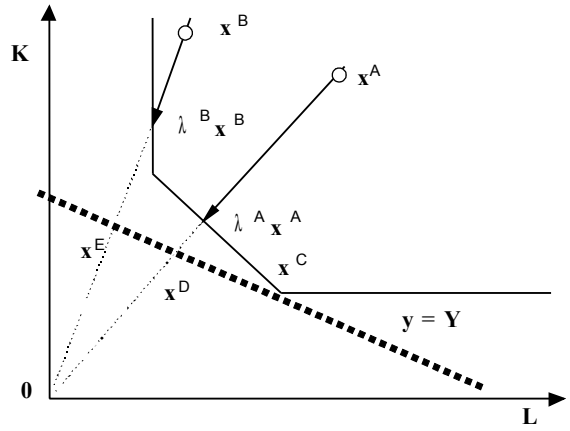
tinctive feature of our work is that we have adopted DEA as a tool capable of dealing with the well-known problems of omitted-variable and selection bias. We used the Capitalia database, focusing separately on its four more recent surveys (5th to 8th). This means that, at least for the time being, we have not been able to ascertain the dynamic influence of business incentives (say over a three-to-six year time span).

In broad agreement with a priori expectations, business incentives have a slight unfavourable impact on technical efficiency. However, this negative impact weakens over time. There is no clear cross-industry pattern. On the other hand, the negative impact on technical efficiency mostly relates to soft loans.

In future work we want to extend the set of the variables relevant for the provision of subsidies. The variables most immediately coming to mind in this respect are binary indicators for the exporting nature of the firm, and indicators of the financial stance of the firm, such as the debt-to-asset ratio. In order to assess more fully the impact of business incentives, we can also analyse their influence on allocative efficiency. Indeed, there is some evidence (see Table A.6) that state aid has some impact on the shadow prices of inputs (especially those of capital stock and, to a lesser extent, of labour). Through DEA one can compare these shadow prices to the actual market prices of inputs, obtaining a measure of allocative efficiency (see Figure 7.1).

In the Capitalia database it is rather easy to obtain market prices for the capital stock and for aggregate labour. In order to find prices for white- and blue-collars, it is however necessary to use information from other data-sets (possibly based on the INPS archive). Also prices of the intermediate inputs can be computed using some outside information, which in this case can probably be obtained only at the industry level.

Figure 7.1 – Measuring Allocative Efficiency through DEA



Finally, we also intend to explore in the future the possibility to deal more explicitly with the presence of an attrition bias in the Capitalia database, carrying out a dynamic analysis of business incentives.

Acknowledgements

Financial support from MIUR is gratefully acknowledged.

Appendix

Figure A.1 - Some Descriptive Evidence on Business Incentives #1

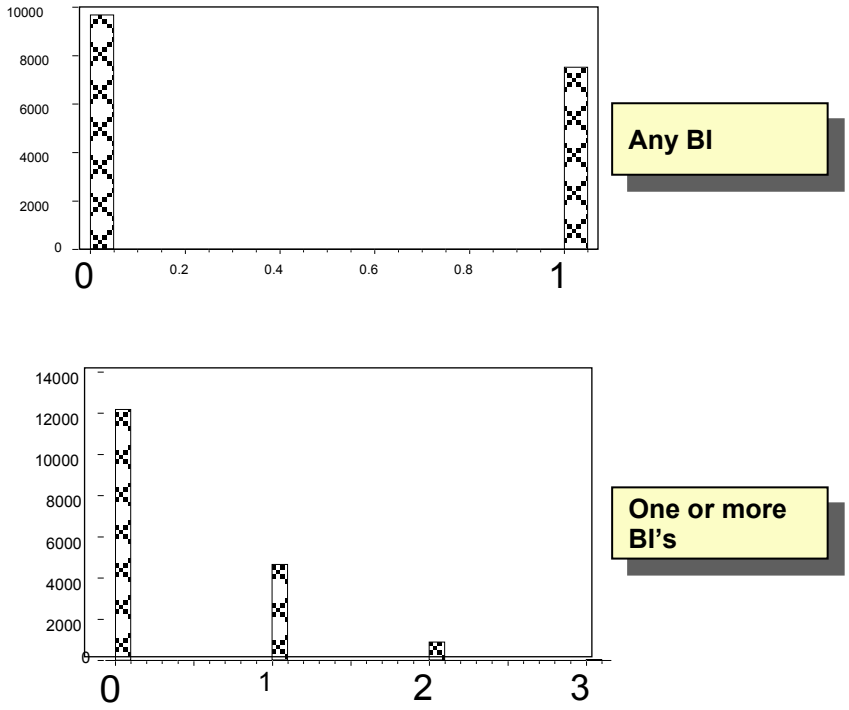


Figure A.2 - Some Descriptive Evidence on Business Incentives #2

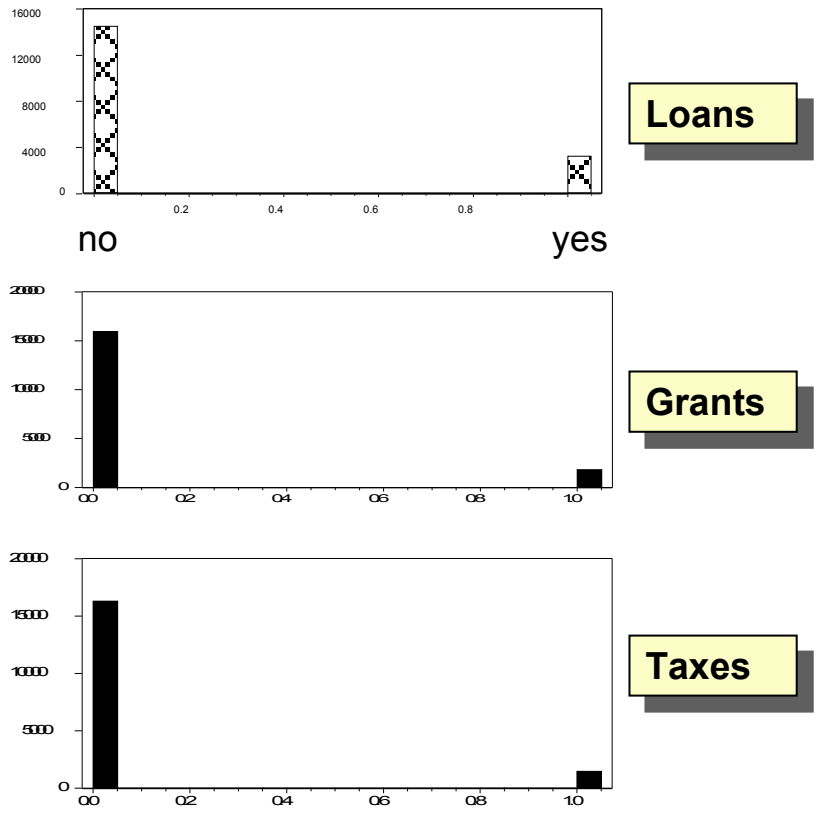


Table A.1 Number of Firms in the Various Surveys

	5th survey	6th survey	7th survey	8th survey
5th survey	4156			
6th survey	2571	5415		
7th survey	544	927	4497	
8th survey	163	257	1312	4680

Table A.2 - The DEA Efficiency Scores: Means

Industries	Inp. -Or.	Outp. -Or.
Apparel & Leather	0.90	0.90
Chemicals & Rubber	0.85	0.83
Electrical machinery	0.85	0.84
Fabr. Metal Products	0.87	0.86
Food	0.89	0.88
Means of Transport	0.94	0.93
Metal Products	0.92	0.92
Non -electr. Machinery	0.82	0.81
Non -met. Min. Products	0.90	0.89
Other Industries	0.94	0.93
Paper & Printing	0.89	0.88
Textiles	0.88	0.88

Table A.3 - The Incentives: A Bird's Eye View

TREATMENT	YES	NO	
	MEDIAN TE		K-W TEST (P-Value)
Any BI	.89	.92	.00
Loan	.89	.91	.00
Grant	.90	.91	.46
Tax	.90	.91	.58

Table A.4 - The Incentives: Evolution through Time

TREATMENT	YES	NO	
	MEDIAN TE		K-W TEST (P-Value)
Any BI			
1991	.87	.91	.00
1994	.89	.92	.00
1997	.91	.94	.00
2000	.90	.92	.01
Loan			
1991	.87	.89	.00
1994	.89	.91	.03
1997	.92	.94	.12
2000	.90	.91	.25
Grant			
1991	.87	.89	.23
1994	.90	.90	.81
1997	.93	.93	.84
2000	.91	.91	.42
Tax			
1991	na	na	na
1994	.86	.90	.02
1997	.90	.94	.00
2000	.91	.91	.65

Table A.5 - The Incentives: The Industry View

Industries (Any BI)	**YES**	**NO**
Apparel & Leather	0.94	0.94
Chemicals & Rubber	0.85	0.91
Electrical machinery	0.88	0.90
Fabr. Metal Products	0.89	0.89
Food	0.92	0.95
Means of Transport	1.00	1.00
Metal Products	0.98	0.98
Non-electr. Machinery	0.82	0.86
Non-met. Min. Products	0.91	0.94
Other Industries	0.97	0.98
Paper & Printing	0.90	0.93
Textiles	0.89	0.94

Table A.6 - A Look at the Input Mix

	w (capital stock)	**w (white-collars)**	**w (blue-collars)**	**w (intermediate inputs)**
No BI	0.000017	0.006650	0.003375	0.000075
Any BI	0.000005	0.003665	0.001407	0.000052
All Obs.	0.000009	0.004929	0.002181	0.000062

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