SURVIVING UNDER THE SHELTER OF GOVERNMENT SUBSIDIES OR 'AVOIDING DISASTER'? NEW EVIDENCE FROM THE ITALIAN INDUSTRIAL DISTRICTS, 1971-1991

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Introduction
Overcoming regional economic divides has been a major aspect of economic policies within Europe since the Second World War. By the beginning of the 1960s ‘regional policy’ had become a distinct area of state intervention in several Western European countries, including Britain, France, Germany and the Netherlands (Artobolevskiy, 1997, pp. 32-36). Considerable resources have been channelled into policies to promote regional development. It might suffice to think that the European Union provided some 149.9 billion Euros to finance regional development projects in the 1958-1998 period, amounting to an estimated 63.9% of all activities in the Union (Vanhove, 1999, p. 460).² After 50 years of such efforts regional economic divides still persist. Although this persistence cannot be interpreted as an outright failure, it indicates the limited effectiveness of such policies.

This paper aims to enhance our understanding of the factors hampering the effectiveness of regional policies, focussing on the specific case of financial subsidies to small and medium-sized firms (henceforth SMEs) in Italy, from 1971-1991. A common criticism of the Italian regional policy is that its financial subsidies enabled

¹ Work in progress, not to be quoted without permission of the author.
² The figures include low interest rate loans extended by the European Investment Bank and grants by the European Regional Development Fund.
Southern entrepreneurs to maximise their profits by reaping benefits from institutions rather than from the market (Trigiglia, 1992, pp. 93-94). This paper tests this criticism for financial subsidies to SMEs in the South and in the more prosperous North-East, where smaller subsidies were available as part of the national industrial policy. It argues that although Southern entrepreneurs did benefit from institutions, the rationale behind their behaviour was the avoidance of risk rather than the maximising of profits.

This paper is structured in five sections. The first illustrates the system of subsidies available to SMEs in the South and compares them to subsidies available in the rest of the country. The second presents the samples of firms on which the analysis is based. As a first assessment of the comparative importance of subsidies, section III discusses the capital structure of firms in the two samples. Section IV analyses the effectiveness of companies in promoting the growth of recipient firms and section V discusses the implications of the findings.

I Regional and national financial subsidies for small firms, 1970s - 1990s

Subsidised medium-term loans were available to small and medium-sized firms through Italy from the early 1950s, via the network of the newly-established Special Credit Institutions (SCIs) - the Regional Medium-Term Credit Institutions (RMTCIs) and the Departments of Industrial Credit (DICs), and their refinancing

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3 In the 1950s small and medium-sized firms were defined as those employing no more than 500 workers and having net assets below 1.5 bn lire. For Southern firms the upper limit on assets was twice as much, 3 bn lire.

4 From the Bank Reform Law of 1936 until the early 1990s, when Italy conformed to the second EU Banking Directive, the banking system was specialised in market terms, meaning that banks could collect and lend money on the short-term market only and SCIs could collect and lend money on the
institution, the Mediocredito Centrale (MCC). RMTCIs were banks operating on the medium-term credit market and specialised in lending to SMEs. The reason for their specialisation lay in the fact that the Bank of Italy (BoI) and the Association of Industrialists (Confindustria) felt that smaller industrial concerns were disadvantaged in accessing finance and at the same time important for the country's economy (Asso and Raitano, 1999). The provision of financial subsidies (soft loans and grants) to Southern SMEs was part of the much wider framework of the regional policy managed by the Cassa per il Mezzogiorno (Cassa) established in 1950. Political and economic considerations led to the implementation of the so-called ‘Extraordinary intervention for the South’ supported by various parties, the brains trust Svimez, the International Bank for Reconstruction and Development (IBRD) and the government (D’Antone, 1997; Weiss, 1984).

Table 1 below shows the main guidelines for the allocation of soft loans and grants, the main financial subsidies for Southern firms, at the beginning of the period under analysis.

Table 1 around here

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5 Until the end of the 1940s, the Bank of Italy (BoI) defined short-term loans as those repayable within one year, medium-term from one year to five years and long-term above five years. In 1952, with the establishment of the MCC, the definitions were changed: short-term credit up to one year, medium-term credit from one year up to ten years, except in Southern Italy (up to 15 years). Short-term finance aimed to provide working capital and medium-term finance provided capital for investment (Pontolillo, 1971).
Table 1 shows the varying percentage of subsidies to which Southern firms were entitled on the basis of their size in terms of fixed assets. From 1971 the Cassa was operating according to policy guidelines established every five years by the Interministerial Committee for Economic Policy (Comitato interministeriale per la politica economica). The guidelines passed in 1971 intended to encourage investment in depopulated areas, rather than in the ‘nuclei and areas of industrial growth’ as it had been from 1957 to 1970. It appeared that the South was experiencing internal migration from the rural hinterland to industrial agglomerations within the South, in addition to migration towards the industrial cities of the North and international migration (Ronzani, 1980).

Financial subsidies to large firms followed a procedure called ‘contrattazione programmata’ (planned bargaining procedures), which ensured consultations between large firms planning investment and a restricted group of Ministries (Budget and Economic Planning, Treasury, Labour and Industry). The aim of this procedure was to ensure that investment projects were compatible with the directives of the national economic planning to limit new investment in areas suffering from congestion and labour shortages; moreover, the aim of the consultations was to make firms aware of the public investment so that they could be exploited to the fullest and conversely to adjust public investment to large companies’ needs (Annesi, 1973).

Table 1 above displays the criteria to allocate soft loans and grants to Southern firms under the main schemes. However, since the beginning of the 1950s a number of regional and national subsidy schemes had been introduced. Their proliferation, leading to a ‘jungle of incentives’, in which the same firm could benefit from various
schemes, has been regarded as a consequence of the lack of a coherent industrial policy. The absence of an all-embracing approach left room for pressure from economic interest groups, which often led to the formulation of schemes addressing specific or sectoral problems (Barca and Manghetti, 1976).

The awareness of the need to simplify the loan system led to the harmonisation of regional and national schemes in 1976-77. By that time, subsidised credit was regarded as particularly important, as the Bank of Italy’s tight monetary policy had made borrowing more expensive (Vassalli and Visentini, 1978). For subsidised credit, Italy was subdivided into 4 areas, 1) South; 2) underdeveloped areas in the Centre; 3) underdeveloped areas in the North; 4) the Centre and North. The details for each region are given in table 2.

Table 2 around here

A new soft loan scheme was introduced in the following year. This was considered particularly important as it placed emphasis on the restructuring of existing plants, rather than on the establishment of new ones (Pent Formengo, 1986).

Table 3 around here

In addition the Cassa amended its grant scheme in 1976. As table 3 demonstrates, after 1979 large investments were entitled to larger grants than originally envisaged.

Table 4 around here
The Cassa had been established in 1950 as a temporary institution supposed to last until 1980, but between 1980 and 1986, 11 ministerial decrees were passed to prolong its activities, sometime for such a short period of time as a year or even six or three months. All political parties agreed to keep an additional flow of resources going to the South, but there were disagreement concerning the institutional framework for the management of these funds (Cafiero and Marciani, 1991)

The uncertainty of the 1980-1986 period was ended by law 64/1986, which refinanced and reorganised the extraordinary intervention for the South until 1993. The system of soft loans and grants created in 1986 is given in table 5.

As 1993 approached, attempts to prolong funding failed because of domestic and external pressures. The Parliamentary debate coincided with growing resentment in the North about the levels of public expenditure in the South, and its harmful effects on Northern employment. Furthermore, critics pointed out that few tangible results had been achieved in 40 years of the Southern policies, which had been a drain on the economy of the North. In addition, there was growing antipathy towards the role of the public administration in the Italian economy and to the institutional structure operating the Mezzogiorno policy. These tensions were reflected in calls for a referendum on the Southern policy and in the considerable success of the Northern separatists. Apart from domestic pressures, the European Commission also influenced the course of events, by refusing to approve the 1992 bill to refinance the Agency.
Taking into account the Commission’s opposition, in December 1992 the Italian Parliament decided to abolish the ‘Extraordinary intervention’ and its institutions, with the Southern policy to be replaced by a national programme of assistance for depressed areas (Yuill et al., 1989).

II The dataset

The impact of state subsidies on recipient firms is analysed using two case studies – the industrial districts (henceforth IDs) of Barletta located in the South and San Mauro Pascoli located in the North-East, the ‘classic’ area of IDs (see map in Appendix A). The two IDs specialise in the production of footwear and clothing and were chosen from a survey that identified 99 IDs across the whole country at the end of the 1980s (Garavini et al., 1988).

The analysis is performed on two relatively small samples of companies (54 overall), the records of which are held at the Chambers of Commerce in Forlì (for the San Mauro ID) and Bari (for the Barletta ID). The samples consist of limited liability and public share companies alone, as these are the only ones legally obliged to deposit their balance sheets at the local Chamber of Commerce. The analysis presented is based on raw balance sheets, reclassified according to financial criteria. Therefore, this dataset allows the isolation of subsidies from other components of liabilities, e.g. soft loans from long-term borrowed funds and grants from reserves. This was not possible in previous works, which were based on the reclassified balance sheets made available by the institutions.
At various points in time, the first sample includes 32 manufacturing companies located in Barletta and the second sample includes 21 manufacturing companies located in San Mauro. The two samples provide 681 observations – annual balance sheets – over time, 460 for Southern companies and 221 for the North-Eastern samples. The smaller number of companies in the North-Eastern sample is related to the smaller size of the manufacturing sector in the SMP ID. The smaller number of annual observations was also determined by the fact that these companies did not have public status or were not trading during the whole 1971-91 period; most were established as public companies or went public in the 1980s in the San Mauro sample, whereas most companies in the Barletta sample did so in the second half of the 1970s. More information about companies in the samples is provided in Appendix B.

The initial intention was to collect a random sample of at least 30 companies for each ID, in the sectors of specialisation. If 30 such companies could not be found, the samples would have been expanded to include companies in other manufacturing sectors (henceforth man1). However, the scarcity of data was such that the two samples were compiled by collecting all available records of public companies in the manufacturing sectors mentioned, with records starting before 1984 in the case of Barletta, and before 1988 for San Mauro, to provide a sufficiently long period of analysis. Table 6 compares the number of companies in the two samples with the number of companies in the two IDs; it also presents information on the size of public companies.

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6 Including food processing, wood, furniture, paper, publishing, photography and rubber. Sectors such as metal and mineral processing, oil refining and construction have not been included.

7 The different closing dates for the collection of data are due to the availability of records. Having collected records of 32 companies in the Barletta ID, it seemed unnecessary to collect records starting after 1984, as these would offer only seven years of analysis. The smaller number of records available for the San Mauro ID suggested the extension of the closing date to 1988.
Table 6 around here

A precise comparison based on the number of employees is not feasible, as companies in the sample give only occasional information about their workforce. From census data, it emerges that both IDs contain a large number of companies, most of which are very small, and that the average size of public companies is higher than the average company size in the sectors of specialisation. Thus, companies in the samples should also capture a larger portion of the ID workforce than their sheer number suggests.

The inclusion of public companies alone introduces some biases into the sample, particularly as regards capital structure. Their larger size and their legal status might give them easier access to market capital and access to a wider range of types of finance, such as bonds, which can only be issued by public companies. Thus, market finance is likely to be higher for the sample companies than for small and medium-sized companies as a whole in the two IDs. This bias can be magnified by the computation of weighted averages, rather than a simple average. Nevertheless, weighted averages have been preferred in the analysis of the capital structure (tables 8 and 9) as the purpose of the capital structure analysis is to offer a broader picture of the IDs. It thus seemed correct to allocate greater weight to the sources of finance of larger companies than, for instance, to those of a small start-up company.

The samples contain a further bias. Far more records in the Southern sample date back to the 1970s than in the North-Eastern counterpart. Considering that the 1980s saw more stable economic growth than the 1970s, this might affect the differences
emerging from the comparison of the two samples. This bias does not affect the comparison of the capital structure and performance of the two samples in tables 8 and 9, as in those tables the overall period of analysis is broken into sub-periods, e.g. 1971-75, 1976-80. Table 7 below shows the size, in terms of net capital stock and the turnover of the companies in the two samples.

Table 7 around here

Despite the larger dimension of the Southern companies in terms of fixed net capital, they are considerably smaller in terms of turnover. The largest Southern company, in terms of assets, also determines the upper limit of turnover. Without this company, the upper limit of turnover for Southern companies would be 8.5bn lire. The lower limit of turnover in the San Mauro sample derives from one company that traded for four years, after which it went bankrupt. Excluding this company, the lower limit would be 236m lire.

III Capital structure

This section assesses the relative importance of subsidies as a source of finance of the companies in the two samples. The analysis covers the 1971-91 period. It has been broken into sub-periods in the attempt to identify possible changes in the capital structure of these companies. Moreover, as not all 54 companies in the two samples traded or remained public from 1971 to 1991, this choice allows a clear identification of the number of company records available in each sub-period.
The components of liabilities have been calculated as a weighted average. The share in total liability of each source of finance (short-term bank loans, commercial debts, long-term borrowed capital, equity, loans and contributions by partners, paid-up capital) has been computed for each district in each sub-period using the following formula (Edwards and Fisher, 1994):

\[
\frac{\sum i'_{jt}}{\sum I_t} = \frac{\sum i'_{jt}}{\sum I_t}
\]

Where \(i'_{jt}\) denotes the amount of finance of type \(j\) in year \(t\), \(I_t = \sum_{J=1}^{n} i'_{jt}\)

(there are \(n\) different types of finance).

Table 8 displays the greater reliance of companies in the Barletta sample on subsidies. Not only do subsidised loans represent a higher percentage of total liabilities, but also the implicit subsidy\(^8\) within soft loans was much higher for Southern firms. This reflects the fact that the differential between the medium-term non-subsidised interest rate and the average subsidised interest rate was higher in the South than in the Centre and North, and the redemption period was longer. The variation in the implicit subsidy within each sample and across sub-periods is not affected by the redemption period, which remained constant throughout the whole period of analysis, but rather reflects the fluctuations in the differential between non-subsidised and average subsidised interest rates in the South and in the Centre and North.

\(^8\)The implicit subsidy in a subsidised loan has been calculated using the following formula

\[
S = L \left\{ 1 - \frac{(1 + r_{A})^{N}}{1 + r_{M}} \right\} \left[ \frac{(1 + r_{M})^{N-1}}{r_{M}(1 + r_{M})^{N}} \right] \}
\]

where: \(L = \text{loan}\); \(r_{M} = \text{non-subsidised long-term interest rate}\); \(r_{A} = \text{subsidised interest rate}\); \(N = \text{length of the loan}\) (Faini, 1985).
Southern firms display higher shares of long-term debts, mostly consisting of subsidised loans, whereas non-subsidised long-term credit is a more important source of finance for companies in the North-Eastern sample. Therefore, it seems clear that companies in the Southern sample reach shares of long-term capital comparable to the North-Eastern sample only with the substantial help of subsidies, consistent with regional policy’s aim of increasing the availability of long-term capital in the South. Moreover, subsidies seem to have also a crowding-in effect, suggested by the higher value of market long-term capital (total LTBC minus subsidies in brackets) presented by subsidised firms in both samples.

Reserves are a key element in this analysis for two reasons. First, reserves include grants, and secondly, they are built up with undistributed profits, hence reserves represent the company’s ability to self-finance. For the 1971-75 and 1976-80 periods, companies in the North-Eastern sample show a low weight of reserves. This is due to the presence of start-up companies in these periods (two in 1971-75 and two in 1976-80). Moreover, the reserves of the largest company in each period were sharply decreasing while their fixed net assets were increasing, indicating that both were using reserves to finance investment. For the later periods, the higher percentage of reserves and the higher rates of return in the North-Eastern sample demonstrate a greater ability to self-finance by reinvesting profits, whereas Southern companies reached comparable percentages of reserves only with the considerable help of grants.

Commercial debts represent the single largest component of companies’ liabilities. This is not surprising considering the long period over which companies can pay their
suppliers. Between 1985 and 1987 Southern firms paid their suppliers after a period varying from a minimum of 60 days for the food-processing sector, to 150 and 200 days respectively in clothing/textiles and the engineering sectors. In the same years, firms in the same sectors in the Centre and North paid their suppliers after 62, 130 and 190 days (Siracusano and Tresoldi, 1990). Therefore, the balance sheets of companies in the clothing/textile sector, which are relatively numerous in the Southern sample, include goods and services bought in the last five months.

The rate of return on long-term capital clearly shows the lower profitability of Southern companies in the sample (particularly low during 1971-75, mainly due to a large number of start-up companies), which can be explained in both micro- and macroeconomic terms. Southern small firms (20-100 employees) show a slower turnover of inventories (for the textile and footwear sectors - 108 days in the South and 68 in the rest of the country) and a lower utilisation of production capacity - a consequence of the more limited market in the South and smaller export opportunities (Siracusano and Tresoldi, 1990, pp. 113-119 and pp. 125-127). Southern industry was less able to exploit scale economies internal and external to the firm, than firms located in more developed areas of the country (Rossi and Toniolo, 1995). In addition, Southern companies did not exploit economies of specialisation, as the Southern manufacturing sector relied far less on vertical specialisation (Giannola, 1990). Furthermore, it is possible that the lower productivity of Southern companies could also be due to the use of more obsolete equipment. A study of depreciation rates for companies within the sample reveals that in the 1980s North-Eastern companies -
which were then enjoying particularly high rates of return - were replacing their equipment more quickly than their Southern counterparts (Spadavecchia, 2003).\(^9\)

Comparing the rate of return of subsidised and non-subsidised companies in the two samples in the 1980s (when the North-Eastern sample includes a good number of observations), it seems clear that subsidised firms are more profitable in the Southern sample, whereas the opposite applies to North-Eastern firms. However, the observation of financial indicators offers no firm ground to make inferences about the effectiveness of the policy. If subsidised firms seem to enjoy no particular benefits in comparison with non-subsidised firms, as in the North-Eastern sample, it could be inferred that the policy was ineffective. In the case of better financial indicators displayed by subsidised Southern firms, it might be argued that the policy generated dependency and that firms could perform well only when subsidised. This would be an undesirable outcome, resulting from subsidies breaking the nexus between the firms’ performance and efficiency, which in turn entails the permanent capture of government funds and in extreme cases the bailing out of troubled firms (Calomiris and Himmelberg, 1995). Moreover, dividing the companies into just two groups - subsidised and non-subsidised - can hide some interesting differences. After all, the non-subsidised group includes companies that were not subsidised in the specific sub-period but were subsidised a few years later, companies that had been subsidised in previous years, and companies that were never subsidised.

IV The effectiveness of subsidies for the Barletta and San Mauro samples.

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\(^9\) For a more extensive discussion of the importance of subsidies as a source of finance for companies within Italian industrial districts see Spadavecchia (2005).
This section assesses the effectiveness of subsidies by analysing companies at various stages of their life cycle, i.e. before receiving subsidies, while being subsidised and after receiving subsidies, and comparing them to companies that were never subsidised. This methodology has been designed by Bagella and Caggese (1995), but it has never been applied. Their study is based on balance sheet indicators and qualitative information on 3,852 manufacturing firms, trading between 1989 and 1991. However, the only information about subsidies is whether or not the company has been subsidised in the period, and from which scheme it benefited (Mediocredito Centrale, 1995). Therefore, they could only compare the profitability and risk of subsidised and non-subsidised companies in the country as a whole and by regions, but admittedly they left open another issue, namely whether subsidies had a positive effect on the recipient firms' ability to stay on the market, once they were no longer subsidised.

Subsidies should increase the profitability of the recipient firms, meaning moving the recipient company from position (1) in the graph below, characterised by low and highly variable profit, to position (2), with higher and less variable profit. Subsidised companies should move from positions (1) to position (2) in the graph as subsidies increase the recipient companies’ profits and decrease the variability of profits, by providing an additional fixed component to their profits. However, in order to assess the effectiveness of subsidies it is crucial to study the position occupied by the company in the post-subsidy stage (Bagella and Caggese, 1995).

Graph 1 around here
For companies in the post-subsidy stage to return to position 1 would mean that their profitability could be improved only by constant subsidies, which would entail a permanent capture of government funds, the breaking of the link between firms’ performance and their efficiency, and in extreme cases the bailing out of troubled firms. Moreover, if the profitability of a company in the post-subsidy stage goes back to position 1, the company will be perceived by banks as a ‘bad company’ and therefore will be credit rationed, whereas if it remains in position 2 or moves to the ‘competitive firm’ position it should not experience credit rationing again (Bagella and Caggese, 1995). Therefore, for subsidies to be considered effective, it is crucial that companies not only move from position 1 to position 2 when subsidised, but also that companies in the post-subsidy stage at least remain in position 2, or preferably, move even further to the right on the graph, closer to the ideal position of ‘competitive firm’. This should happen because as the firm is a learning organisation (Lamoureaux, Raff and Temin, 1999) the recipient company should learn how to conduct its business better while in the subsidised stage.

The two small samples used in this analysis allow the assessment of the positions occupied by companies in the post-subsidy stage in the graph above. The samples have been constructed with companies’ raw records, therefore it has been possible to identify the subsidies and their timing, and divide accordingly the companies’ life into stages, i.e. before receiving subsidies, while subsidised and after receiving subsidies, and separate them from companies that were never subsidised. This subdivision reduces considerably the number of observations available for each group, and therefore the division of observations into sub-periods, applied in tables 8 and 9, has been abandoned and the observations have been aggregated for the whole 1971-91
period. Due to the small size of the samples, the results of this analysis should be considered as indicative, nevertheless it seemed worthwhile to throw some light on a hitherto unexplored issue.

Table 10 around here

The three sub-samples - pre-subsidy, subsidised and post-subsidy - portray a hypothetical life cycle of companies in the two samples, from smaller and younger when unsubsidised to larger and older in the subsidised stage. However, while companies in the North-Eastern sample continue to grow, as measured by the balance sheet size, in the post-subsidy stage, companies in the Southern samples become smaller. As table 11 below shows, this is due to two factors: Southern companies in the post-subsidy stage were only slightly larger than the average while in the subsidised group, in terms of balance sheet size. In addition to this, the size of their balance sheets decreases considerably in the post-subsidy stage also due to the rapid decrease in size of the two companies that are failing while in this stage. In contrast, three out of the four North-Eastern companies in the post-subsidy stage were not only well above the average for the subsidy-stage companies, but also the size of their balance sheet kept increasing in the post-subsidy stage. The fourth North-Eastern company follows a pattern closer to that described for the Southern post-subsidy companies.

Table 11 around here
The three North-eastern companies that saw continued balance-sheet growth left the subsidised stage because they exceeded the upper limit of eligibility for subsidies (2bn lire). Two of these started issuing bonds and managed to secure sums far larger than the soft loans received by companies in the same sample at an interest rate slightly lower than the market one.

As for explaining the reason why other companies in the sample abandoned the system of subsidies or never entered it, it was not possible to make inferences in specific cases. It is possible that these companies’ applications for soft loans were rejected; on the basis of unpublished sources provided by the Ministry of Industry it has been estimated that the percentage of rejected applications in the North-East varied between 10% and 20%. Moreover, according to a 1989-91 survey of 5,000 manufacturing companies in the whole country, 35% did not apply for subsidies despite being aware of them. Firms were discouraged by the delays in the extension of subsidies, the limited availability of funds and the complexity of the application procedure, with the last reason being particularly discouraging for small firms (Ministero dell’Industria and Mediocredito Centrale, 1994).

The younger age of companies in the pre-subsidy stage is supported by previous research. Using interviews and questionnaires, this demonstrated that out of 124 enterprises located in the South only 34 received subsidies in the start-up stage, whereas nearly all were subsidised during their trading life (Del Monte, 1984). The difficulty of securing subsidies in the early stage has been explained by the involvement of the credit institutions, which are much more cautious in extending
loans to new businesses rather than to companies with a proven track record (Del Monte and Luzenberger, 1989).

'Never subsidised' companies are the smallest group within the Southern sample and in both samples, they are the group with the highest rate of failures, thus suggesting that subsidies may have reduced the probability of failure.

As shown in section I, the direct aim of national and regional subsidies was to promote firms' investment activity. Therefore, the Bagella and Caggese methodology has been adopted to assess whether subsidies were effective in this respect. Table 12 displays the results.

Table 12 around here

Table 12 shows that Southern companies reach the highest level of investment when they are subsidised, particularly when looking at investment in absolute terms. The investment activity declines sharply in the post-subsidy period. This can be due either to the high level of fixed assets previously reached, which would reduce the scope for further profitable investment, or else to the sharp decline of the companies’ profitability (see table 14) and increasing financial constraints (table 18). North-Eastern companies behave in the ‘ideal’ way, as their investment activity increases in the post-subsidy period.

In a graph similar to graph 1 above, with investment instead of profits on the X axis, both Southern and North-Eastern companies move from position 1 to position 2 when
they receive subsidies. However, when Southern companies are no longer subsidised they return to position 1, whereas North-Eastern companies would move further to the right towards the ‘competitive firm’ position. This implies that in order to promote the investment activity of Southern firms these should be subsidised constantly, which in turn indicates the ‘dependence’ of recipient firms on subsidies and a permanent capture of government funds.

In order to investigate whether there is an association between increases in subsidies and increases in investment, the coefficient of correlation between these two variables has been calculated. These calculations rely on a limited number of observations, particularly for grants and fiscal subsidies in the North-Eastern sample, which were much less frequent in the San Mauro sample than in the Barletta sample.

Table 13 around here

The results indicate clearly that there is a positive correlation between subsidies and investment. The strength of the correlation varies with the types of subsidy, but can be considered satisfactorily strong, particularly when taking into account that these coefficients of correlation focus on one specific type of long-term capital, whereas a multiplicity of factors influence the investment decision of the firms.

The lower coefficient presented by subsidised loans can be attributed to the difficulty of pointing out the exact time lag between the receipt of such subsidies and investment or vice versa. The Cassa was legally permitted to undertake financial commitment in excess to its current financial means, which entailed the possibility
that firms would receive the secured grant or subsidised loan after undertaking the investment. The Barletta sample displays positive coefficients between implicit subsidies and investment when lagging both investment and subsidies (with values between 0.15 and 0.21), indicating that companies undertook investment both before and after receiving the subsidy. Therefore, any type of time lag will capture only part of the investment.

The explanation of the low coefficient displayed by the North-Eastern samples lies in two observations, the exclusion of which would change the coefficient to 0.88, keeping the same time lag. In both cases, considerable investment was undertaken in the same year in which the subsidised loan was received, and therefore the correlation between subsidies and investment in these two cases is not captured by lagging subsidies by one year.

Table 14 around here

Table 14 presents two measures of profitability: return on equity and return on long-term capital. Southern companies shift from low profitability and high risk before subsidies to higher profitability and similar risk when subsidised. In the post-subsidy stage they become much less profitable and less risky, therefore they do not remain in position 2. Return on equities and return on long-term capital reach negative values in the post-subsidy stage, for two out of the six companies are in the process of failing and are consistently making losses.
North-Eastern companies display the ‘ideal’ behaviour, as far as their profitability is concerned. They move from position 1 before subsidies to position 2 when subsidised, and in the post-subsidy stage they move closer to the ‘competitive firm’ position. Companies never subsidised in both samples seem to opt for a high-profit and high-risk strategy, which entails a higher probability of failures, as shown in table 10.

Southern companies with access to subsidies seem to pursue a ‘survival’ strategy, whereas unsubsidised ones pursue a ‘profit maximising’ strategy, or in the words of the sociological literature subsidised entrepreneurs prefer to reap benefits from institutions and abandon the economic rationale (Trigiglia, 1992). However, this might not be the case and Southern subsidised firms might also be pursuing an economic rationale.

Tables 8 and 9 indicated the different conditions in which companies in the two ID samples cease their activity. Southern firms fold after a long period of losses and when they are financially distressed, while North-Eastern firms close down as soon as their turnover and profits are decreasing and their level of capitalisation (in term of finance) is very high. This indicates that the priority of Southern firms is to continue trading, whereas the priority of the North-Eastern firms is making profits. Moreover, the low capitalisation of Southern companies, particularly the scarcity of company-owned capital (see indicator E/FNA in tables 8 and 9) suggests that Southern companies would have very little capital, if any, to cover possible losses, which is not the case for their North-Eastern counterparts.
With the obvious historical differences, the low-profit low-risk strategy of Southern
subsidised firms can be compared to the behaviour of medieval English peasants as
explained by McCloskey (1976). Before the enclosures (consolidated holdings) of the
seventeenth and eighteenth centuries, farmers opted for scattered plots, despite the
fact that the former provided them with a higher average income. McCloskey explains
that this happened because the farmers’ priority was avoiding disaster, where disaster
means falling below the subsistence level. Scattered plots produced a lower but less
variable income than consolidated land, therefore by choosing the former peasants
reduced their chances of incurring disaster.

The scenario in which companies in the two ID samples operate, as far profitability is
concerned, is represented in the following graph, where net profit is defined as total
revenues minus total costs.

Graph 2 around here

In this case the disaster is the failure of the firm and the decision rule is minimising
the probability of failure. If the failure threat were in position $F_1$ neither high-profit
high-risk ($I_2$) nor low-profit low-risk ($I_1$) investment endanger the company, therefore
an economically rational company would chose $I_2$. If the failure threat were in
position $F_2$, it would choose $I_1$, as this would minimise its possibility of failure. If the
failure threat were in position $F_3$ the company has no choice: it needs high profits to
continue trading, and has to undertake $I_2$. 
Therefore, if $F_1$ represents the failure threat for North-Eastern companies and $F_3$ for Southern companies, both groups should choose $I_2$. North-eastern companies to maximise their profits, and Southern companies to survive. However, there is another element to be taken into account, namely subsidies. The following graph shows what happens when subsidies are introduced in this scenario.

Graph 3 around here

Subsidies decrease the cost of the investment and therefore increase the net profit, moving it from $P_1$ to $P_{1s}$. Similarly, subsidies move $P_2$ to $P_{2s}$ but $I_{2s}$ entails a higher probability of falling behind $F_3$, therefore the subsidised company will choose $I_{1s}$.

However, in the long term, choosing $I_{1s}$ is economically rational only if the scenario in graph 3 is permanent - after all, English peasants chose scattered plots for centuries - meaning if there is the possibility of receiving subsidies frequently. If a company knew that after its current subsidy ended it had to undertake a high-risk high-profit investment to survive, it would perceive that undertaking this investment while still being subsidised would reduce the risk of such investment. In graph 3, the area behind $F_3$ in the case of $I_{2s}$ is smaller than in the case of $I_2$. In this case, the company would reap higher profits, which would make its financial situation sounder (for instance increasing its reserves and thus increasing its credit worthiness) and therefore push its own $F_3$ to the left. Moreover, Southern subsidised companies will keep undertaking $I_{1s}$ because frequent subsidies increase the potential loss that partners would face in case of the company failure, as it would mean losing the company income plus frequent
and considerable subsidies. In other words, the access to frequent subsidies increases the opportunity cost of a company's failure.

Therefore, the different levels of the failure threat and the frequency of the subsidies can explain the differences in the behaviour of companies in the two ID samples. Companies in the North-Eastern sample have a failure threat level so low (see for instance their level of overcapitalisation in terms of finance in tables 9 and 15) that whether non-subsidised or subsidised they choose a high-profit and high-risk investment. Companies in the Southern ID sample, having a higher level of failure threat (see for instance their financial capitalisation) choose a high-profit and high-risk strategy if that is the only possibility to survive, i.e. if they belong to the unsubsidised group.

Table 15 around here

Considering the sharp decrease in the profitability of Southern companies in the post-subsidy stage (table 14), it is not surprising that these companies return to a situation of financial constraint, both in the long and short term. In contrast, North-Eastern companies, the profitability of which increases further in the post-subsidy stage, become even less financially constrained (Bagella and Caggese, 1995). Low profits do not allow Southern companies, whether in the subsidised or in the post-subsidy stage, to build high levels of reserves and their financial under-capitalisation does not make these companies creditworthy. The situation is exacerbated in the case of 'post-subsidy' companies, by the lack of subsidies themselves and their crowding-in effect shown in tables 8 and 9.
V Conclusions

V. 1 Risk and the effectiveness of subsidies

The analysis conducted in this paper pointed out that although subsidies represented a smaller source of finance for North-Eastern companies, they were more effective than for Southern firms. North-Eastern companies not only invest more and are more profitable during their subsidised period than in the pre-subsidy period, but also their investment activity and profitability increase in their post-subsidy period. Moreover, they become increasingly less risky through the various stages. Therefore, the lower profitability of non-subsidised companies in the North-Eastern sample (table 9), which would suggest the failure of the subsidies, conceals their real effectiveness. The misleading results of the North-Eastern sample in table 9 are therefore due to the aggregation of pre-subsidy, post-subsidy and ‘never subsidised’ firms in the non-subsidised group, among which the post-subsidy group presents the highest return and lowest risk.

The higher rates of return displayed by subsidised companies in the Barletta sample (table 8) conceal the limited effectiveness of the regional subsidies. Southern companies’ investment activity and profitability increase during the subsidy stage, but profitability in particular fell when they were no longer subsidised. Moreover, it is clear that subsidised and post-subsidy companies opt for low-profit and low-risk investment, as opposed to the high-profit and high-risk strategy followed by ‘never subsidised’ companies. The interpretation put forward in this paper singles out three
factors that determined such an outcome: the riskier economic environment in which Southern firms operate, and the amount and frequency of subsidies. Under these conditions, the choice of a low-profit and low-risk strategy of Southern firms in the sample becomes the most rational. Therefore, the analysis does not support the sociological interpretation according to which Southern entrepreneurs abandon the economic rationale and reap benefits from institutions and/or the political environment. Southern entrepreneurs in the sample indeed benefit from institutions but the rationale remains purely economic.

V.2 Wider implications

The policy for the South has been criticised on several accounts. In particular, subsidised credit and capital grants have been criticized as affected by an inefficient bureaucracy, in turn affected by bribery; it is also claimed that financial subsidies did not always translate into productive investment but may have been used to fuel liquidity or undertake financial speculation. Various works stress that large investments in capital-intensive sectors were the main beneficiary of subsidies and that since the lifting of the size limit of eligible companies, in 1962, the system of subsidies in the South was diverted from its original purpose of developing an organic network of small and medium-sized firms. Conversely, subsidies did not favour the development of small local firms and the industrial policy for the South has failed to promote a self-sustaining industrial development similar to that which took place in the North-East. However, a study by Faini (1985), based on subsidies extended by the Cassa by company size between 1970 and 1983, found no evidence of small firms having less access to subsidies than large firms.
The analysis of the two ID samples supports only part of the criticisms mentioned above. Consistently with the Faini study, the large number of subsidised companies in the Southern sample (26 out of 32, the corresponding figure for the North-Eastern sample being 11 out of 21) does not indicate that small firms were at a disadvantage in accessing subsidies. As for the way Southern companies used subsidies, both the Bagella and Caggese method and the coefficients of correlation indicate an association between subsidies and investment. Moreover, subsidies were extremely important for the capitalisation (in financial terms) of such firms. Only when companies in the Southern sample were subsidised did they cover their fixed assets with long-term capital. Therefore, it seems unlikely that companies in the Southern sample were using subsidies for purposes other than financing investment.

However, some of the criticisms are confirmed by the analysis of the two samples. The deterioration of the economic performance of Southern firms in the post-subsidy stage sharply contrasts with the improved performance of the North-Eastern counterparts. This clearly indicates the dependence of companies in the Southern sample on subsidies, whereas the North-Eastern firms show autonomy from subsidies, as their performance improves even in the absence of subsidies. Therefore, although Southern firms in the sample indicate an association between subsidies and investment, the growth promoted by subsidies cannot be considered ‘self-sustaining’ as in the North-East.

Yet another point on which the effectiveness of a policy can be tested is whether it can be an effective mechanism for correcting capital market failures. Echoing the
Gerschenkronian argument, the World Bank stresses that government credit can be an effective mechanism for correcting capital market failures in less developed regions where the capital shortage renders private banking unviable (Calomiris and Himmelberg, 1994). However, even in developed and industrialised regions, government credit can correct capital market imperfections, such as those due to asymmetric information, by assuming the cost of monitoring and providing a senior status to private credit. In this respect North-Eastern subsidies also seem to be more effective. Subsidised companies in both samples display a higher percentage of long-term market borrowed funds as compared to non-subsidised companies, and therefore subsidies seem to have a crowding-in effect. However, while companies in the Southern sample return to a situation of financial constraints in the post-subsidy stage, similar to financial constraints already experienced in the pre-subsidy stage, North-Eastern companies enjoy higher levels of liquidity in their post-subsidy stage. This result is not surprising considering that the profitability of companies in the Southern sample decreases in the post-subsidy stage whereas it increases in the North-Eastern sample.
Appendix A: The regions of Italy

Figure 1 here

Appendix B: List of companies and records available

Companies are designated with three letters, of which the first refers to the area (North or South), while the following two are the initials of the company’s name. The first date corresponds to the year of establishment, the following dates to the period for which records are available. When dates of establishment or change of public status specify the month, it means that the relevant record (i.e. deed of incorporation or the official document recording the change in the company’s legal status) was available in the company’s folder. When the month it is not specified it means that the relevant record was not available, but the year was mentioned in one of the reports available.
Records at the Chamber of Commerce in Bari

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<td></td>
<td>From</td>
<td>To</td>
<td></td>
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<td>1951</td>
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<td>(12/1977)</td>
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<td>1973</td>
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<td>4,600</td>
<td>Sco Pv/Ltd</td>
<td>3/1981</td>
<td>1984</td>
<td>1991</td>
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(6/1984)

Keys: Pv= Private partnership; Ltd = Limited liabilities; Pb= Public share.
Records at the Chamber of Commerce in Forlì

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<td>4/1984</td>
<td>1984-1991</td>
<td>Footwear</td>
</tr>
</tbody>
</table>

Keys as above; * excluding 1966-71 and 1973.

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