

Fazio, Giorgio; Piacentino, Davide; Vassallo, Erasmo

Conference Paper

Regional Disparities and Public Policies in Italy: Some Considerations in Light of a Performance Analysis

46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Fazio, Giorgio; Piacentino, Davide; Vassallo, Erasmo (2006) : Regional Disparities and Public Policies in Italy: Some Considerations in Light of a Performance Analysis, 46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/118355>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

**Regional Disparities and Public Policies in Italy:
Some considerations in light of a *performance* analysis**

ERSA Conference Paper No.439
June 2006

Giorgio Fazio
faziog@economia.unipa.it
DSEAF, *Università degli Studi di Palermo*

Davide Piacentino*
dpiacentino@economia.unipa.it
CIRMET, *Università degli Studi di Palermo*

Erasmus Vassallo
erasmo.vassallo@unipa.it
DICAP, *Università degli Studi di Palermo*

Abstract

Since the beginning of the 1990s, the Italian Government has attempted to implement a new generation of policies aimed at reducing regional disparities. It is claimed that compared to the past, these policies should be more far reaching by emphasising the importance of the socio-institutional context in promoting regional convergence. In this paper, we use a novel dataset of regional social and economic indicators in order to produce a ranking of the performance of Italian regions with respect to both GDP per capita and competitiveness and look at the evidence surrounding the outcome of these policies. A frontier approach seems to be suitable for the purpose of this research, as it yields a ranking of performance scores where regions can be compared in cross-sectional and a temporal dimension. Early results seem to provide interesting evidence with respect to the regional features of the development policies.

JEL Codes: A13, C14, C15, O17, R58

Keywords: Regional Policy, Social Environment, Data Envelopment Analysis

* Address for correspondence: Davide Piacentino, CIRMET, Università degli Studi di Palermo, Viale delle Scienze, 90128, Palermo. Email: dpiacentino@economia.unipa.it.

1. Introduction

During the 1990s regional policies in Italy have undergone a fundamental transformation. Recognition of the failure of the so-called “Extraordinary Intervention Measures” (*Intervento Straordinario per il Mezzogiorno*) to produce a persistent reduction of the North-South income gap promoted the adoption of new policies, which placed greater emphasis on the social and institutional context. While old policies evolved around a national authority in charge of both planning and funding, the new policies gave a more important role, especially at the planning stage, to sub-national units tied to the territory. The “New Intervention” (*Nuova Programmazione*) approach places the social environment, a collective public good, at the centre stage of the regional development process. With respect to this approach, however, some considerations seem to be important. Firstly, the literature linking growth and the socio-institutional context is still at an infant stage and a lot remain to be said about this particular relationship. In particular, traditional studies seem to address this problem with particular difficulty. Secondly, after almost ten years since the beginning of the New Planning strategy, it seems important to start a preliminary assessment of its effects.

In this paper, we try to pursue two interests. The first is related the ability of a region to produce and compete in the international markets, with both its economic inputs, as indicated by the traditional toolbox of economic growth, and its social inputs, as stated in some recent contributions of economic geography. The second is to provide some grounding and some preliminary evidence on the new policy intervention strategy. Hence, we apply a *Data Envelopment Analysis* (DEA) approach to produce a ranking of the “efficiency” of each region over the period 1997-2003 and consider the role of both sets of inputs in determining a better “outcome”. We also propose an assessment of the validity of these results by means of a Monte Carlo experiment that produces bootstrap standard errors and an optimistic and a pessimistic ranking of the 20 Italian regions over time. With these considerations in mind, in the next section we provide a brief overview of regional disparities and regional policies in Italy. Section 3 presents the data and section 4 discusses the methodology employed. Sections 5 and 6 comment on the obtained results and provide some concluding remarks.

2. Regional disparities and regional policies in Italy.

At the beginning of the 1950s, the “Extra-ordinary Intervention for the development of the Mezzogiorno Area” (*Intervento Straordinario per lo Sviluppo del Mezzogiorno*) was devised in order to reduce the substantial economic gap between Northern and Southern regions. This policy, which lasted until 1992, aimed at transforming the largely rural southern economy into an industrial economy. The main objective was to promote industrial development by sustaining the investment of both private and state owned

enterprises together with the improvement of infrastructures (Cafiero, 2000). The chosen approach was a top-down strategy with little consideration for the local peculiarities of the territory where the policy would produce its effects. Planning was very much centralised with very little or no input from the local actors of development. Inspired largely by the neoclassical growth paradigm, the growth of firms' capital investment and infrastructures (i.e. the growth of private and public stock of capital) should have caused the convergence of Northern and Southern regions. Clearly, other things equal (even same socio-institutional context) an increase of capital in the less developed regions should have produced the desired convergence (under the hypothesis of diminishing rates of returns). The irrelevance in this framework of the social and institutional context seems a too stringent assumption in the case of Italian regions. Indeed, the often poor quality of the social and institutional conditions in the South is likely to have been a cause of distorted use of public finances. Indeed, a now large empirical literature (see, among the others, Di Liberto, 1994; Mauro and Podrecca, 1994; Paci and Pigliaru, 1995; Paci and Saba, 1998; Margani and Ricciuti, 2001) has highlighted how the effects of old policies on the convergence process are at best confined to the short term. A common view attributes the causes of this failure to the inability of the policy to impact on the economic and social context which ultimately determines growth in the long run (Wolleb and Wolleb, 1993). The inability of southern region to project into the future the initial impulse of public expenditure is attributed mainly to the lack of this "absorptive capacity". These criticisms were later incorporated in the spirit of the new policies, where a greater emphasis was placed on the social and institutional quality of the local economic systems (see table 1 for a comparison between the two intervention strategies). In the 2000-2006 **Community Support Framework** (CSF) for Objective 1 regions, drafted for Italy by the Treasury (Ministero dell'Economia e delle Finanze): <<[...] A "break with the past" strategy is proposed in the form of the concerted action of the CSF and complementary policies at national level. These policies as a whole can lead to a permanent improvement in the economic, social and environmental context and generate a discontinuity in the behaviour and attitudes of economic operators [...]>> (Ministero dell'Economia, 2004, pag.3). The new attitude of the CSF is partly founded on the recent attempts by economic growth theory and the economic geography literature to overcome some of the limitations of the neoclassical paradigm. While endogenous growth treats as endogenous factors such as human capital and technology, economic geography attributes a greater importance to the role of the social-institutional ground where growth takes place (see Martin and Sunley, 1998; and Rodriguez-Pose, 1998). However, the literature on the effects of these factors on growth is still at its infant stages, especially at the regional level. Hence, in this paper we make a first attempt to run an empirical analysis on the relationship between regional efficiency and a large number of factors pertaining to both the economic and the socio-institutional factors of growth. Since the consideration of social variables in regional economic systems makes the use of the traditional econometrics toolbox

particularly problematic, we decide to apply a non-parametric approach, such as that envisaged in the Data Envelopment Analysis methodology. This approach allows us to produce a ranking of Italian regions, which depends also on social factors and to provide a preliminary comment on the new strategy of intervention. The next section and the following describe the data and the methodology employed.

3. Data

In order to evaluate the effects of the adoption of the new policies in the 2000-2006 CSF, the Italian National Statistical Office (ISTAT) has collected a dataset of “context key Indicators” and “break with the past variables”. In light of the above discussion, we have used this dataset to select two sets of inputs for each of the 20 Italian regions during the period 1997-2003. The first set refers to factors conventionally considered as growth determinants by endogenous growth models, the other tries to capture the focus variables of the CSF. In greater detail, the first set of inputs, named “economic context factors” includes the following indicators: 1) gross fixed capital formation over GDP; 2) number of employed in Research and Development every 1000 inhabitants; 3) number of employed belonging to the 25-64 age range taking part to education activities over the total number of employed in the same age range; 4) public¹ and private expenditure in Research and Development. While the first indicator refers to physical capital, the other three concern human capital and technology. The second set of inputs, broadly referred to as “social factors”, refer to the strategic lines of the CSF, and it includes the following indicators: 1) percentage of households’ complaints of irregular water distribution; 2) percentage of solid urban waste disposal recycled over the total disposal; 3) theatre and concert tickets sold every 100 inhabitants; 4) male-female employment gap in the 15-64 age range; 5) percentage of population in the 14-18 age range enrolled in secondary schools; 6) new firms minus closed firms over total number of firms registered in the previous year multiplied by 100; 7) number of “petty” crimes reported every 1000 inhabitants; 8) number of organised crime related reports weighted by the average between the minimum and the maximum possible sentence; 9) percentage of crimes reported committed by minors; 10) percentage of households admitting to feel unsafe in their neighbourhood; 11) percentage of users who state satisfaction from the rail service; 12) percentage of households with internet access; 13) percentage of population over 14 participating to voluntary work and belonging to environmental and human rights associations; 14) North-South interest rate differential on short term loans. With respect to the indicators of output, we have considered both a conventional measure, such as per capita GDP and an indicator of competitiveness, such as exports over GDP.

¹ This voice includes direct Government’s expenditure, Universities’ and companies owned by the Government expenditure.

In order to assess the relationship between inputs and outputs at the regional level, we have employed *Data Envelopment Analysis* (DEA) methods in order to compute performance scores unaffected by the usual limitations of the traditional approaches based on parametric methods (see Rodriguez-Pose, 2000).

4. A DEA of Regional Performance.

In the traditional view, the concept of efficiency corresponds to the way, with reference to micro units, inputs and outputs are related through a relation of production, deterministic or stochastic, parametric or non-parametric. The extension to a macroeconomic context where territorial areas are the considered units does not represent a formal difficulty, but clearly requires some caution on the setting of the analysis and the interpretation of the results. Following Simar and Wilson (2000a), we now briefly introduce the DEA methodology.² In the production analysis of a micro unit, such as a firm, production is constrained by technical possibilities, denoted for a given a technology by the production set $\Psi = \{(x, y) \in \mathbb{R}_+^{p+q} \mid x \text{ can produce } y\}$, where $x \in \mathbb{R}_+^p$ represents a matrix of inputs and $y \in \mathbb{R}_+^q$ one of outputs. If $\forall y \in \Psi$, $X(y) = \{x \in \mathbb{R}_+^p \mid (x, y) \in \Psi\}$, then the radial input-oriented efficient frontier is $\partial X(y) = \{x \mid x \in X(y), \theta x \notin X(y) \forall 0 < \theta < 1\}$; consequently, the Farrell *input-oriented* technical efficiency for a generic point (x, y) is $\theta(x, y) = \inf\{\theta \mid \theta x \in X(y)\}$. Therefore, a production unit is technically efficient when it minimises the input levels for a given level of output. It is easy to transpose this analysis to the output-oriented case. Then, a unit will be technically efficient when it is able to maximise output for a given level of input. When considering a macro unit, such as a region, some words of caution are important. In this paper, the units under consideration are the 20 Italian regions for the years from 1997 to 2003 (hence, $20 \times 7 = 140$ observations); the production process is virtual because we have considered as *inputs* determinants coming from the conventional growth literature and from the social/institutional environment and as *output* indicators of growth and export capacity of a regional area. Hence, no specific consideration can be made about the adopted technology (considered here as time-invariant) and about returns-to-scale (RTS), assumed here as in their most generic form, i.e. variable. The goal of this paper is to measure the “efficient” combination of “production function” factors and social factors that generates greater levels of development and competitive capacity for each region. In this respect, it is more appropriate to refer to the results as conditional measures of regional *performance*, and read the obtained values according to their ordered taxonomy. Anyway, the production possibilities set Ψ is unknown and only the combinations (x, y) of the effectively observed units are known. Therefore, it will be necessary to estimate in some way Ψ and $X(y)$ and $\theta(x, y)$ for the input orientation, or with a similar reasoning, $Y(x)$ and $\phi(x, y)$ for the output orientation. The

² We refer the reader to the above citation for further details.

main question is then to determine and exploit some of the statistical properties of these estimators for the interpretation of the results. Among all the possibilities, those obtained using DEA (*Data Envelopment Analysis*) are definitely the most common (Førsund e Sarafoglou, 2005). For an *input-oriented* DEA, we have:

$$\hat{\theta}_{dea}(x_0, y_0) = \inf \left\{ \theta \mid (\theta x_0, y_0) \in \hat{\Psi}_{dea}(\mathfrak{N}_n) \right\} \text{ with} \quad (1)$$

$$\hat{\Psi}_{dea}(\mathfrak{N}_n) = \left\{ (x, y) \in \mathfrak{R}_+^{p+q} \mid y \leq \sum_{i=1}^n \gamma_i y_i, x \geq \sum_{i=1}^n \gamma_i x_i, \sum_{i=1}^n \gamma_i = 1, \gamma_i \geq 0 \forall i = 1, \dots, n \right\}$$

It is interesting to note that $\hat{\Psi}_{dea} \subseteq \Psi$ e $\theta(x_0, y_0) \leq \hat{\theta}_{dea}(x_0, y_0) \leq 1$. It is immediate to translate this in *output-oriented* terms.

In this analysis, the DEA estimation is applied under the generic (but plausible) assumption of variable returns to scale with a time invariant technology over the observed period. Therefore, the frontier is unique for the 20 regions over the 7 years under consideration (giving 140 observations). Moreover, we have chosen the *output* orientation, which implies the goal of achieving greater *output*, i.e. growth and development and international competitiveness, for given *inputs*, i.e. economic and social factors, under the realistic assumption that the regional unit, seen as the ensemble of entrepreneurial activities and private and public efforts, will be able to exercise a sufficient impact on the considered inputs and outputs (the *inputs* are not conceived as “environmental factors” but as de facto explanatory variables).

In order to limit the well known dimensionality problem of DEA estimators, and given our interest on a broad-spectrum analysis, we normalise all the variables described in the previous section and do a mean collapse (with equal weight for each component) into one single output indicator and two input indicators (one economic and one social). We normalise the ‘z’ variable to

$$\tilde{z} = \frac{z - \min(z)}{\max(z) - \min(z)},$$

when higher values of the variable indicate better conditions, and to

$$\tilde{z} = \frac{\max(z) - z}{\max(z) - \min(z)},$$

when higher values denote worse conditions. Such a standardisation is invariant with respect to linear transformations of the starting variables and does not modify the linear association intensity between the variables. For presentation purposes, we then use a Shepard distance function (i.e. the inverse of the Farrell distance). We describe the main results in the next section.

5. Results

A preliminary look at the data

A preliminary graphical analysis of the variables considered yields some first interesting comments. Figures 1 and 2 identify a positive relationship between the Output Index (O) and both type-I and type-II Inputs. Tuscany, in particular, seems to be the region with the highest level of output, despite a moderate level of type-I input. Calabria, on the other hand, presents the lowest levels of output. Two further groupings emerge from these figures. As expected, while Centre-North regions form a scatter cloud in the higher part of the graph, Southern regions are located in the lower part. Between these two groups, two regions, Abruzzo and Marche, are in an intermediate location. Figure 3 relates the ratio of Output to type-I Inputs and the ratio of Output to type-II Inputs. By dividing the diagram in four quadrants, we can identify the more efficient regions in the upper-right quadrant and the less efficient in the lower left quadrant. Again, Tuscany seems to be the most efficient region, while Calabria the less efficient one. In general, while the Southern regions are all in the lower-left quadrant, the others are mostly located in the central part of the scatter plot, allowing little further considerations. The application of DEA will allow us to obtain a regional ranking and analyse in greater detail the positioning of each region in terms of efficiency with respect to both sets of inputs.

DEA results

Using the DEA methodology described in section 4, we have obtained the *performance* scores for the 20 Italian regions in every year under observation. The first two columns of table 2 report on the regional average performance scores in the considered period (together with the overall mean score). A first point worth noting is that over the time frame considered, the scores denote very little variability, with the exception of very few cases of limited interest. On the other hand, there is a greater variability of the scores at the cross-sectional level. These results give a portrait of the regional performance that is at large in line with the expected picture. Unsurprisingly, the regions with worse *performance* are confined to the South, while the more "efficient" regions are, on the other hand, distributed over the rest of the country. Interestingly, however, together with the Northern regions, three central regions - Tuscany (the best performer), Abruzzo and Marche - score among the top eight. It seems surprising how these last two regions, often included among the less developed, seem to score immediately after the more industrialised Northern regions, confirming a process of development started a decade ago. The others, Friuli Venezia Giulia, Veneto and Emilia Romagna (belonging to the Nord-East) and Lombardy and Piedmont (in the Nord-West), are all located in the richer part of the country. The surprising performance of regions with a lower level of type-I inputs (related to the traditional production function analysis) but a higher level of type-II inputs (related to

the social environment), such as Tuscany (but also Marche and Abruzzo) seems to confirm the importance of the role of socio-institutional quality in the determination of higher efficiency scores.

Robustness analysis

Given that the DEA scores can be biased upwards, it seems important to have some information about the validity of the estimates. The lack of sufficient theoretical information regarding the DEA estimators, suggests the use of *bootstrap* procedures in order to simulate the Data Generating Process (DGP) of the observed data (see for further details Simar and Wilson, 1998, 2000b). Hence, we perform the *bootstrap* estimation by replicating the Monte Carlo experiment 2.000 times. *Bootstrapping* allows the computation of 5% confidence intervals of the DEA scores, which can be interpreted as a “worse” and a “better” case scenario in the determination of the regional *performances*. A substantial reshuffling of the general ranking would undermine the validity of the results obtained using the standard DEA approach. Table 2 and Figure 4 compare the traditional DEA estimates and the two scenarios obtained by the *Bootstrapped* DEA for the 20 regions. A comparison of these results shows that no meaningful systematic difference can be detected in the positioning of the regions both cross-sectionally and over time. We interpret this as evidence in support of the validity of the approach and the results obtained.

6. Final Remarks and Policy Discussion

In this paper, we have proposed a DEA methodology in order to produce a ranking of Italian regions according to their “efficiency” with respect to the ability to achieve a certain level of performance, in terms of GDP per capita and export capacity, given a set of inputs referring to both economic and social factors. Our results indicate how in every year under observation Southern regions are located at the lower levels of the national scale. At the other side of the spectrum, Tuscany displays the best level of performance and Abruzzo and Marche, two Adriatic Sea coastal regions, confirm a tendency to climb up the national scale of efficiency. As expected, among the top six regions five are based in the Northern part of the country.

A prominent feature of our results is that regions with better socio-institutional context perform better. In this respect, the evidence presented seems to validate the motivation behind the New Planning strategy in Italy, which attempts to target the socio-institutional context in order to promote greater output and greater competitiveness in Italian regions. Interestingly, however, our results show that over the period 1997-2003, the first seven years of life the new strategic policy intervention, no significant change in this ranking can be detected, especially with reference to the Southern regions. We can take this as preliminary evidence that the

New Planning strategy has probably not already produced the desired results in terms of reduction of the Northern-Southern gap.

The new regional policies give greater autonomy to the local authorities in the identification of the objectives and the formulation of the strategies for local development. Clearly, however, while a successful policy should be able to improve the local socio-institutional context, its success will also critically depend on the quality of the socio-institutional context where the policy intervention is devised and implemented. Consequently, sub-national units with lower ability will be by definition less able to identify and address the issues of an already troubled socio-economic context, hence exacerbating the problems and producing unwanted policy outcomes in terms of the reduction of regional disparities. Therefore, while a bottom-up approach can represent an opportunity for those regions that benefit from good governance, without an appropriate central rebalancing it can result in a further limitation for those regions which have a substantial deficit in terms of the quality of socio-economic governance.

References

- Cafiero S. 2000. *Storia dell'intervento straordinario nel Mezzogiorno*, Piero Lacaiata Editore, Mandria-Bari-Roma.
- Di Liberto A. 1994. Convergence across Italian regions, *Nota di Lavoro 168 della Fondazione ENI Enrico Mattei*.
- Førsund F. and Sarafoglou N. 2005. *The Tale of Two Research Communities: The Diffusion of Research on Productive Efficiency*, International Journal of Production Economics, 98, 17-40.
- Margani P. and Ricciuti R. 2001. *Further Evidence on Convergence across Italian Regions*, Atti 41° Riunione Scientifica ERSA, Zagabria.
- Mauro L. and Podrecca E. (1994) The case of Italian regions: convergence or dualism?, *Economic Notes*, 24, 2, pp. 447-72.
- Martin, R. and Sunley P. 1998. *Slow Convergence? The New Endogenous Growth Theory and Regional Development*, Economic Geography, 74, 201-227.
- Ministero dell'Economia. 2004. *Quadro Comunitario di Sostegno per le Regioni Italiane Obiettivo 1 2000-2006*, Ministero dell'Economia, Roma.
- Paci R. and Pigliaru F. 1995. Differenziali di crescita tra le regioni italiane: un'analisi cross-section, *Rivista di Politica Economica*, 10, pp. 3-34.
- Paci R. and Saba F. 1998. The empirics of regional economic growth in Italy 1951-1993, *Rivista Internazionale di Scienze Economiche e Sociali*, 45, pp. 515-542.
- Rodriguez-Pose A. 1998. *Dynamics of Regional Growth in Europe. Social and Political Factors*, Oxford University Press, Oxford.
- Rodriguez-Pose A. 2000. *Socio-Political Structure and Economic Growth in the OECD*, mimeo.
- Simar L. and Wilson P. 1998. *Sensitivity analysis of efficiency scores: How to bootstrap in nonparametric frontier models*, Management Science, 44, 49-61.
- Simar L. and Wilson, P. 2000a. *Statistical Inference in Nonparametric Frontier Models: the State of the Art*, Journal of Productivity Analysis, 13, 49-78.

- Simar L. and Wilson, P. 2000b. *A General Methodology for Bootstrapping in Non-Parametric Frontier Models*, Journal of Applied Statistics, 27, 779-802.
- Wolleb E. and Wolleb G. 1993. *Sviluppo economico e squilibri territoriali in Europa*, Il Mulino, Bologna.

APPENDIX I- Italian Regions

<i>Region</i>	<i>Abbreviation</i>
Abruzzo	abr
Basilicata	bas
Calabria	cal
Campania	cam
Emilia Romagna	emi
Piemonte	pie
Lombardia	lom
Friuli Venezia Giulia	fvj
Lazio	laz
Toscana	tos
Liguria	lig
Marche	mar
Molise	mol
Puglia	pug
Sardegna	sar
Sicilia	sic
Trentino	tre
Umbria	umb
Valle d'Aosta	val
Veneto	ven

APPENDIX II – List of Variables

OUTPUT:

- 1) Gross Domestic Product (1995 prices) over population
- 2) Value of Exports as a percentage of Gross Domestic Product

INPUT 1 (production function direct inputs):

- 1) Gross Capital Formation as a percentage of GDP
- 2) Employed participating to education activities
- 3) Employed in R&D every 1.000 inhabitants
- 4) Expenditure in R&D as a percentage of GDP

INPUT 2 (socio-institutional context inputs):

- 1) Irregular water distribution
- 2) Differentiated solid waste disposal
- 3) Diffusion of theatre and music performances
- 4) Male-female employment gap
- 5) Secondary school enrollment
- 6) Net firm natality
- 7) Diffused (petty) crime index
- 8) Organised criminality index
- 9) Under age criminality index
- 10) Households' perception of criminality
- 11) Satisfaction of rail transportation
- 12) Internet diffusion
- 13) Social services development capacity
- 14) Financing capacity

Table 1 – Regional Policy in Italy

Period	1950-1992	1993-present
Policy	National Extraordinary Intervention	Ordinary Intervention, New Planning, European Policies for Objective 1 Regions
Planning/Funding	Centralised Domestic funds distributed to the less developed regions in a centralised system. The authority in charge of financing is a temporary National Institution (“Cassa per il Mezzogiorno”)	Decentralised EU funds are distributed according to the directives contained in a document (Community Support Framework - CSF) approved by the member states and the European Commission. The CSF has priority axes and it is implemented through operational programmes. The realisation of the operational programmes involves the cooperation of the regions, which develop the Regional Operation Programmes (ROP)
Areas of intervention	- Funding of Infrastructures - Investment in State Owned Enterprises (SOE) - Funding of Private Enterprises	Axis I - Natural Resources: Optimisation of natural and environmental resources; Axis II - Cultural Resources: Optimisation of cultural and historical resources; Axis III - Human Resources: Optimisation of human resources; Axis IV - Local Development Systems: Reinforcement and optimisation of local development systems; Axis V - Cities: Improvement of the quality of cities, local institutions and collective life; Axis VI - Networks and service nodes: Reinforcement of networks and service nodes.
Goal	Improve infrastructures and promote top-down industrialisation of disadvantaged areas.	Improve the socio-institutional context and promote a bottom-up development of disadvantaged areas
Results	- Impulse to the construction and services sectors - Creation of industrial poles characterised by weak linkages with little top and bottom integration (so called “cathedrals in the desert”) - Little self-sustaining development	Expected Results: - Improvement of the social and institutional context. - Realisation of self-sustaining development
Reasons for failure	- Lack of consideration for the socio-institutional context	...

Table 2 – DEA Rankings of Regions

	<i>Standard DEA</i>		<i>Bootstrap DEA</i>			
			<i>Upper CI</i>		<i>Lower CI</i>	
<i>Rank</i>	<i>Region</i>	<i>Mean</i>	<i>Region</i>	<i>Mean</i>	<i>Region</i>	<i>Mean</i>
1	tos	0.96	tos	0.91	tos	0.68
2	fri	0.67	ven	0.65	ven	0.57
3	ven	0.65	fri	0.64	lom	0.55
4	emi	0.65	emi	0.62	fri	0.53
5	lom	0.61	lom	0.61	pie	0.50
6	pie	0.58	pie	0.57	emi	0.46
7	mar	0.50	mar	0.49	mar	0.45
8	abr	0.42	abr	0.42	abr	0.38
9	umb	0.32	umb	0.31	val	0.28
10	val	0.31	val	0.30	umb	0.25
11	lig	0.27	lig	0.26	tre	0.23
12	tre	0.26	tre	0.26	laz	0.22
13	bas	0.25	bas	0.25	bas	0.22
14	laz	0.24	laz	0.24	lig	0.21
15	mol	0.21	mol	0.21	mol	0.19
16	pug	0.20	pug	0.20	pug	0.17
17	cam	0.18	cam	0.18	cam	0.16
18	sar	0.18	sar	0.17	sar	0.14
19	sic	0.15	sic	0.14	sic	0.11
20	cal	0.05	cal	0.05	cal	0.04
Overall Mean		0.42		0.40		0.33

Note: These rankings are obtained by collapsing regional scores into the period means (where odd scores are removed from the computation). Numbers in bold refer to scores above the overall mean.

Figure 1 –Output index (O) vs. “Production Function” Index (I1)

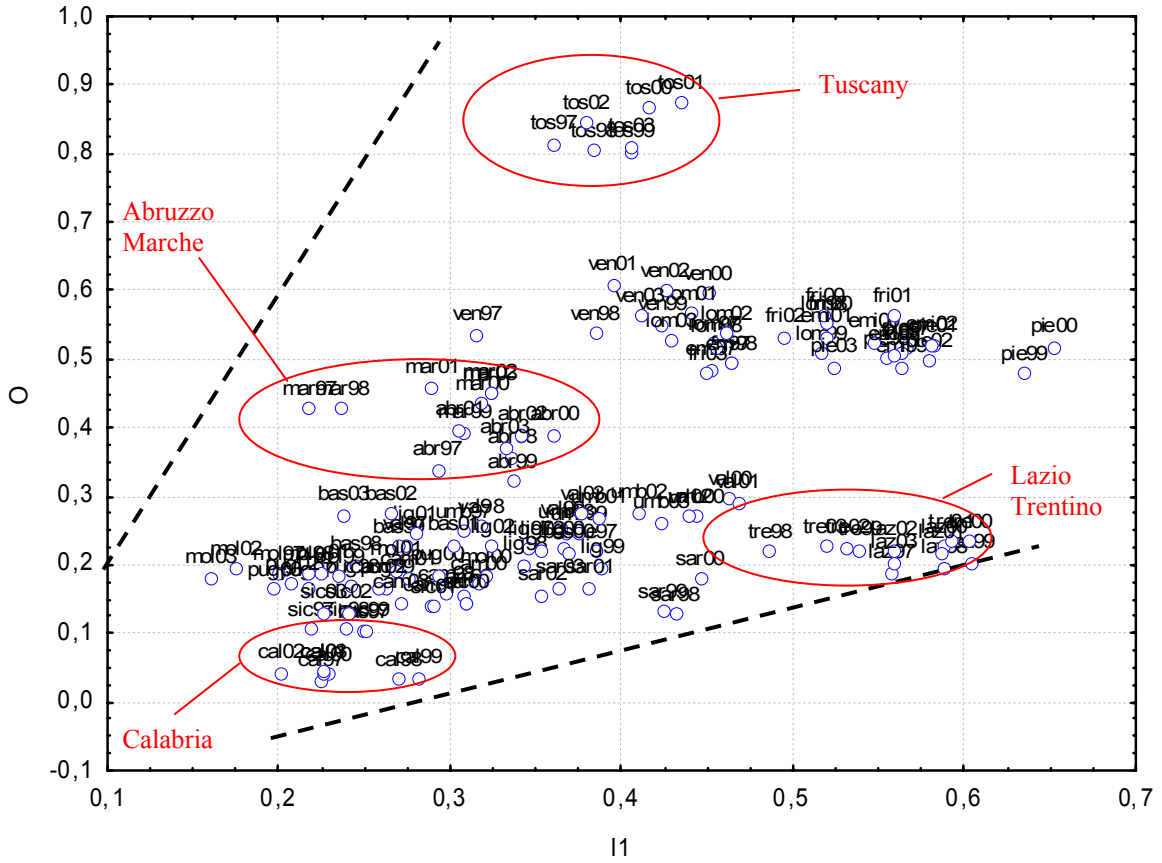


Figure 2 –Output Index (O) vs. Social Context Index (I2)

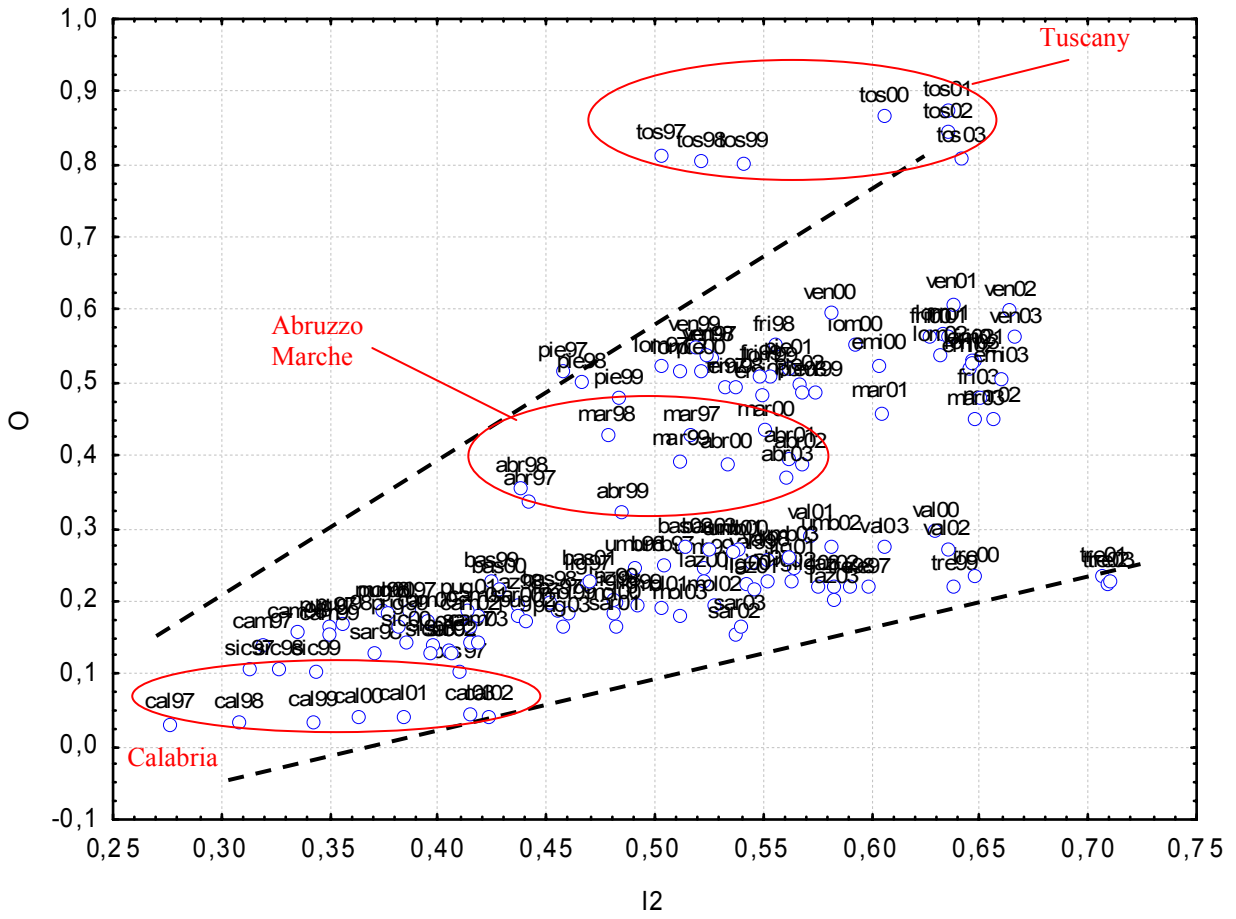


Figure 3 – Output/Type-I Input vs. Output/Type-II Input

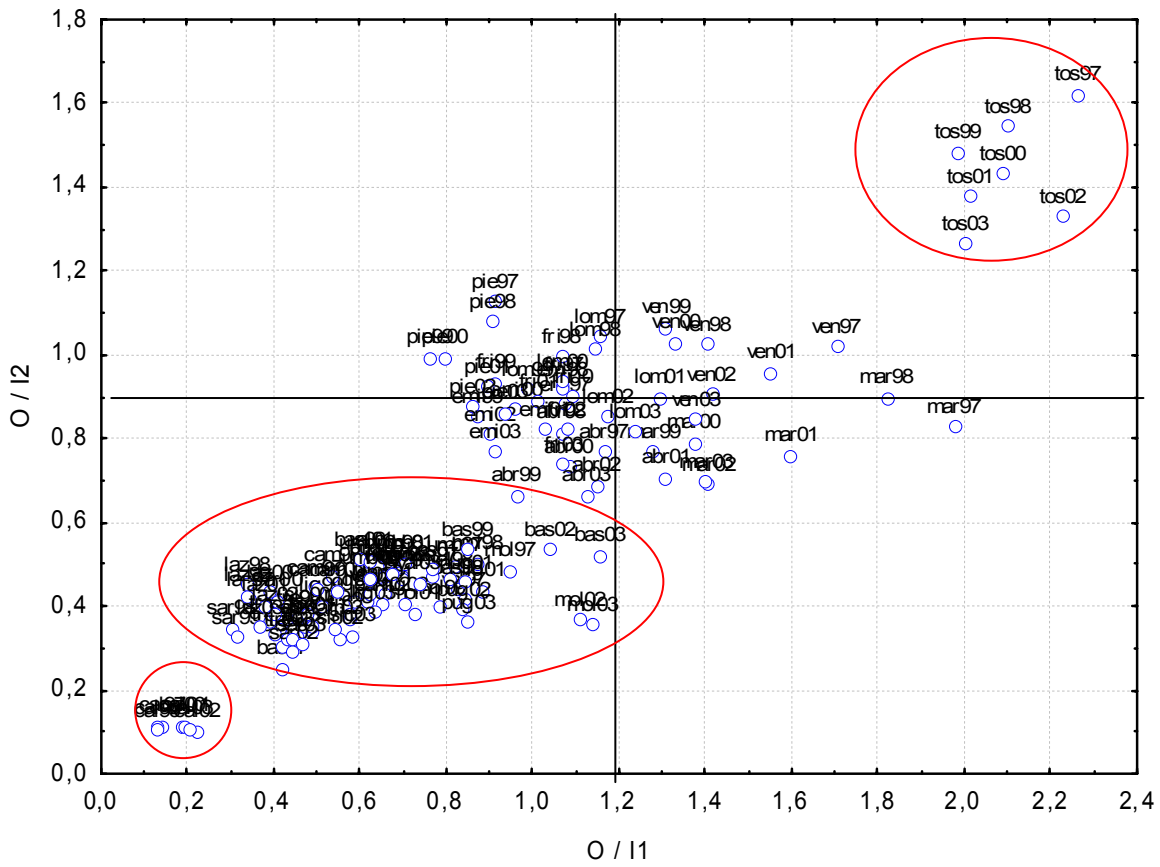


Figure 4 – Regional Performance Scores

