THE IMPACT OF CRIMINALITY ON THE PRODUCTIVITY OF THE SOUTHERN ITALIAN ECONOMY: A REVIEW OF THE EMPIRICAL STUDIES

FERDINANDO OFRIA AND DOMENICA FARINELLA[1]

Past studies have highlighted how criminality acts as an obstacle to development in the south of Italy, by diminishing the institutional "quality" of the social fabric and increasing business costs. In particular, a series of analyses based on an econometric study, have revealed the existence of a negative link between criminality and business productivity. This article briefly examines the theoretical reference background and reviews the literature, underlining the techniques used and the main results obtained.

Keywords: Economic Development, Productivity, Cost of Crime, The South.
    JEL: E26; K42; O11; O47

1. The theoretical context: criminality and institutional analysis

Since the 1990s there have been many studies on the relationship between economy, criminality and development in the south of Italy (among others, Centorrino and Signorino, 1997; Centorrino *et al* 2003). In particular, these have tried

---

to show how the presence of criminal networks, including those with mafia-type characteristics, represent an obstacle to economic growth and to the diffusion of social well-being in the territory, and help to explain the enduring differences between the regions. These types of analyses is part of a very dense theoretical framework, which, in turn, opens up other subjects areas.

In international publications (among others, Heidenheimer, 1970; Shelley, 1994; Cohen, 1996; Kind, 1999; Shapland *et al.*, 2003; Ponsaers *et al.*, 2008; Vander Beken and Van Daele, 2008), much space has been dedicated to criminal behaviour and the way in which criminal activity is organized, and how it gains access to markets and conditions the process of reproduction within the local economy. From a micro point of view, Becker's studies (1968) on criminal behaviour as a rational decision, highlight how the choice to commit crime may be a more than legitimate one in comparison to other behavioural decisions, especially in an extremely unregulated context, where the regulatory powers of laws and sanctions have been depleted.

On a macro level, and within the area of neo-institutionalism and the studies on opportunistic behaviour and *free-riding* (Olson, 1965; Williamson, 1975; 1985), it can be seen how criminal activity creates social uncertainty and considerable difficulties for those wishing to enter the marketplace, thus increasing business costs for the social actors. The role of social institutions in helping to contain opportunistic and illicit practices, through the reduction of business costs and by guaranteeing the application of contracts, has been particularly highlighted (North, 1990).

These observations pick up important sociological themes about the relationship between laws, regulation and social stability. The constant inability of the institutional organs to guarantee the application of laws and to regulate certain areas or social needs, leads to the progressive undermining of the legitimacy of the institutions, thus creating huge

risks: as soon as the legal-rational power, on which the law is founded, stops being recognized as socially 'legitimate', it loses its effectiveness and no longer manages to create 'obedience' (Weber, 1961). This results in both the potential erosion of the institutional system as well as the trust people have in it. If the rules 'do not' regulate and 'do not' control the actor, he will be under the impression that he is moving in a social environment in which instability, uncertainty and untrustworthiness predominate. The temptation towards opportunism, *free-riding* and dishonesty, which form the foundations for illicit and criminal behaviours and activities, will become stronger and stronger, especially if we consider that the most common tendency will be the desire for immediate results, rather than looking towards a future which appears completely unpredictable.

As Donolo (2001:18) states, deregulation is an opportunistic regime, in which we find "heightened negative externality, information asymmetries, social opacity, distributive injustices, erosion of *commons* and ecologies, widespread social costs and dominant *de facto* power, uncertainty about the law".

In a situation such as this "staying within the boundaries of formal regulations brings competitive disadvantages, so much so, that behaviours that adapt themselves towards illegality are to be expected" (Magatti 1994: 71-72), especially in the sense that illegal behaviours are so widespread and "practised", that they are no longer considered as such by those who live and work in this environment, so that they eventually expect this type of practice, as Sutherland *et al* (1939) have already stated. It even becomes difficult to distinguish a borderline between legal and illegal. This creates the development of regular "functional surrogates" or "insurance" (Gambetta, 1989; Donolo, 2001), such as "protection" in return for payment. For example, for a business, it may be more convenient and, on balance, less risky to pay protection money rather than press charges. This is the famous problem of the so-called "grey area"

from which the mafia derives its strength (Sciarrone 2006), thanks to the collaboration of external agents, businessmen who are both associates and who collude, and for whom, from a practical point of view, it may be more convenient to decide to collude (Centorrino *et al.* 1999): the choice not to co-operate is only convenient if the relationship between business and criminal organization wears itself out, but if it lasts over time and grows to "accommodate" other agents, then the co-operative strategy may well bring greater advantages (Sciarrone 2006).

Apart from the connection between the institutions, deregulation and criminal activity, some research studies have underlined the more social and relational aspects of "corruption", especially in relation to organized crime (Ofria 2006). A mafia network is always formed like a *cluster*, dense and compact, but with many complex, shady outside connections (Sciarrone 1998). For this reason, an analysis of the diffusion of criminal activity simply from an individualistic point of view, of rational choice and structures that create incentives, undervalues its true range (Granovetter 2006). On the contrary, it leads to mechanisms that create consensus, loyalty and legitimacy, which also develop inside criminal groups. The latter have solid social networks, based on forms of trust and particularistic social capital, which are positive only for those who are members, and negative for the community (Granovetter, 2006).

As already mentioned, in relation to the negative effects on the development of the territory, criminality has been pinpointed as a serious negative externality which influences the economy in a negative way, increasing transaction costs and, as a consequence, business costs, and it creates distinct distortions in market functioning (Centorrino *et al.*, 1999).

In general, ideas of this sort lead to the consideration that criminality is just one of many aspects linked to the inefficiency of the local institutions. From a sociological point of view, and taking Banfield (1958) and Putnam (1993) as a departure

point, it has been analyzed how institutional performance within different territories influences their processes of socio-economic development. These studies underline the link between institutional factors and development, from a historical, qualitative and comparative point of view.

Nevertheless, on the economic side, even after the stimulus provided by the *endogenous growth theory*, one line of thought has concentrated on the question from a quantitative point of view, using econometric methodologies. However, as underlined by Cellini and Scorcu (1997: 460) it is "the identification of the appropriate indicators (or rather the variables to consider as empirical correspondents) that constitutes the crucial point for all quantitative studies that inquire into the relationship between institutions and growth", also because "institutional, social and economic phenomena interact in an extremely complex way, making the identification of the connected causes very difficult" (Cellini e Scorcu, 1997: 459).

Starting from the awareness of the difficulties in "defining" and "measuring" the variables, economic studies which have analyzed the relationship between criminality, development in the South of Italy and the persistent differences between territories, have tended to adopt a pragmatic and sector-based approach. The aim is to measure, in quantitative terms, the extent of crime, and especially organized crime, on the different aspects of the economy. What has been specifically analyzed, are the effects of criminality on variables such as productivity within the economic sectors, (cfr. see article below), public spending (Felli and Tria, 2000; Del Monte and Papagni, 2001; Caruso, 2008), foreign investment (Basile, 2001; Daniele, 2007; Daniele and Marani, 2008; 2010), the efficiency of the credit market (Ofria, 1996; Centorrino e Ofria (1997); Ofria and Venturi, 2000; Bonaccorsi di Patti, 2009) and so on.

These studies aim to confirm empirically, piece by piece, the theory that the diffusion of organized crime in the South means that competition is severely disadvantaged, which can discourage investment in the South, even though the area

holds distinct advantages in that there are low labour costs and investment incentives (La Spina and Lo Forte, 2006).

As already mentioned, some of these analyses have worked towards verifying exactly how work productivity is negatively influenced by organized crime.

Of the different branches of industry, work productivity certainly represents a particularly sensitive indicator of the quality and strength of the production area and the territorial economic system.

Within Italy, it has already been underlined that there is a link between productivity levels and regional differences, showing that the more backward regions are those in which there is lower work productivity (for a review cfr. Ofria 1998a). The next step is to analyze the links between business performance and criminality, also because those regions with greater differences are also those in which there is a more deeply rooted presence of criminal organizations (in particular Sicily, Campania, Calabria and Apulia). The analysis of the links between work productivity and criminality can therefore be considered a good *proxy* of the negative effects of criminal activity on economic growth.

The aim of this article is to present an up-to-date review of all the studies that analyze the effects of criminality on economic productivity, highlighting both the techniques used for the analysis as well as the results obtained. As the same Daniele (2009) underlines, it is a relatively narrow sphere of studies, with a strongly empirical pattern and an econometric form.

2. An overall landscape of work Productivity and criminality

The first econometric study to analyze the impact of criminality on the productivity of manufacturing businesses on a regional level in Italy was by Busetta and Sacco (1992). After this, there were in-depth examinations by Cellini and

Scorcu (1997), Ofria (1997a, 1997b, 1998b, 1999, 2000) and Centorrino and Ofria (2001; 2008), together with those by Netti (1999), Felli and Tria (2000), who developed this idea, using more sophisticated econometric methodologies and more numerous data samples. The main objective in this work was to single out the "criminality" variable as one of the causes or co-causes for the existence of regional differences in business productivity.

This and the following paragraph analyze the studies in greater detail.

Busetta and Sacco (1992) have verified the existence of the negative impact of criminality on the work productivity of manufacturing businesses, by using ISTAT data with reference to 1987, and by using an econometric methodology based simply on the calculation of the linear correlation coefficient between the work productivity of manufacturing businesses and indicators of "economic quality" in the environment and of the presence of economic infrastructures.

The indicators of environment quality were put together using a simple arithmetical average, by collecting the following indicators for each region:

    a. *protests*, calculated as the number of protests over bank loans;

    b. *banking distresss*, calculated as the number of banking distress over total credits cash;

    c. *unemployment*, calculated as the number of people looking for work over work force;

    d. *murders*, calculated as the number of murders per 100,000 citizens.

The analysis highlights a significant correlation between the quality of the environment and work productivity in manufacturing businesses. In particular, the low level of environment quality, which exists particularly in the southern regions, inevitably leads to a low level of productivity.

A series of studies by Ofria (1997a, 1997b, 1998b, 1999, 2000), which used data samples from the *Quinta indagine sul settore Manifatturiero (Fifth investigation of the Manufacturing sector)* made by Mediocredito Centrale, estimate, using parametric methodologies, the global productivity for each single business. These better highlight, in comparison to the work by Busetta and Sacco, the negative effects on the productivity of businesses due to environmental factors, including criminality.

ᐟ In order to streamline this discourse, only the results obtained from one of the most recent research studies in this series of investigations, is mentioned here: Ofria (2000). Although it confirms the results obtained from previous research, unlike the others, this study analyzes each manufacturing sector in econometric terms (Traditional, Scale, Specialized, High Technology) and the different effects that environmental factors have on those businesses that export and on those who operate only within the national market. In particular, this research tries to confirm whether certain socio-environmental (presence of criminality, social problems and lack of infrastructures) and business factors (organizational abilities and vertical integration) within the Italian regions, which in other research studies have been relevant as far as differences in productivity within the regions are concerned, have a more important influence on exporting manufacturing businesses or those who sell only on the national market. To this end, data for 1991 was used, which regarded, of a sample of 4,135 businesses, 166 distributed over the national territory. The results show (Ofria, 2000: 62) that:

1) environmental factors influence businesses belonging to all sectors in a more or less relevant way;

2) in sectors (traditional and specialized) where the businesses are, on average, smaller in size, environmental conditions influence non-exporting

businesses to a greater extent, confirming the results which emerged from the literature mentioned above;

3) in those sectors (High Technology and Scale) where there are mostly larger sized businesses, environmental factors have less influence;

4) only in traditional sectors do all the variables have the expected sign.

To sum up, therefore, the results of this research confirm the hypothesis that environmental variables influence the productivity of manufacturing businesses. This influence assumes a greater statistical significance for those businesses that belong to the «traditional» sector, and in particular, to those who are not exportoriented.

Cellini and Scorcu's study (1997) tries to analyze the links between economic growth and the institutional apparatus, starting from a regional-based data panel, dating from 1970 to 1991, based on the reworking of data from Istat and Svimez. At first they do a Granger causality test, and then a multiple cross-section regression and panel regression. The growth process is measured by the level and growth rate of work productivity. On a theoretical level, the variations in productivity can be explained as a function of a series of institutional variables, such as: *catching-up*, investments, schooling, growth of the work force, consumer levels and public deficit. Given the difficulty of assessing an overall model which simultaneously presents all the institutional variables, the decision is made to measure some specific empirical relationships. In order to do this, all the institutional variables are grouped together in groups which refer to different dimensions. The most interesting regard the economic-institutional and "social climate" aspects.

The first includes variables that are relative to the structure of credit markets (the number of bank branches per 10,000 inhabitants, the employment/deposit relationship, the sensitivity coefficient of consumer levels to current income)

and work (reduced to the number of participants on courses for professional formation in relation to resident population).

The second refers to the social climate, making reference to a measurement of socio-economic conflict (given by the number of hours lost through strike action) and "social problems", expressed by the crime rate, and given as the number of cases of murder and attempted murder in relation to the population, and by the number of robberies in relation to the population. It should be underlined that here, it is general crime rates that have been considered, not organized crime. The results obtained are very dense. In relation to the links between social problems and economic development, and starting from the analysis of the mere correlation, the authors conclude:

> a negative connection between productivity levels and murder emerges: greater economic well-being can be associated to a reduction in the numbers of cases of attempted murder and murder *per capita*. Weak at first, the relationship becomes clearer and clearer and at the end of the 1980s it is significantly different from zero (Cellini e Scorcu, 1997: 472).

However, the analysis of the simple correlation does not permit the indication of the causality between the variables considered, or an understanding of whether the relationship is false due to some intervening variable. The analysis of Granger causality and cross-section regression do not underline anything of significance for the variables of criminality on productivity levels, while in a context of dynamic regressions on panel data, on a regional level, there are significant and negative effects for conflict in the workplace and negative effects (though of dubious significance) for crime rates. While achieving partial and introductory results, the analysis is interesting for its ambition in trying to keep together those different institutional dimensions (including crime) which have an effect on productivity levels.

In contrast to the literature reviewed so far, Netti's study

(1999) analyzes the negative effects of environmental conditions on productivity, only for the macro-areas of the Centre-North and South. The study estimates global productivity, using data from 3,075 manufacturing businesses distributed throughout the regions of Italy, and considered by the investigation into manufacturing businesses by Mediocredito Centrale, for the years 1991-1993. The research aims to verify whether the average production costs met by businesses in the South are higher in comparison to those in the Centre-North, and whether this cost differential might be attributable to the differing «environmental facilities» in the two macro-areas. In order to measure the impact of environmental indicators on business efficiency, the author has used the econometric model of minimum production costs[2].

These estimates (Netti, 1999: 62-64) confirm that the production costs incurred by businesses are affected by the influence of the environmental characteristics of the Regions in which they are located. The author writes (Netti, 1999: 68):

> [...] therefore, a lack of infrastructure facilities, goods and services, a more limited access to technology, a more limited quality and quantity of credit access, a higher crime rate, all characterize these populated areas, and certainly help to condition the efficiency of southern businesses, influencing negatively on their ability to survive and grow.

3. From the first studies to the most recent analyses

Using econometric methods, Felli and Tria (2000), propose to analyze firstly, in what way criminal behaviour affects public spending and the economic cycle, and then to estimate the effects of criminality on the productivity of the private sector.

---

[2] For further detail on the *proxies* used by the author and on the econometric model, see, *op. cit.*, pp. 59-60.

The first aspect advances the idea that in the presence of public transfers, criminal activity tends to increase. The second, the idea that organized crime in the South produces negative effects on work productivity in the private sector, seeing that, in the opinion of the authors, it causes the dissolution of market mechanisms, creates barriers which dissuade new competitive businesses from entering, and limits the flow of direct investments from abroad[3].

In order to verify these hypotheses, for the years 1960-1996, they use different methods of calculation (SUR and GLS) for the twenty Italian regions.[4]

In particular, to analyze the effects on productivity, they use the following equation[5]:

(1) $p_{it} = f(o_{it}, g_{it})$

where p is work productivity in the market sector (goods and services); o, represents cases of murder per capita (*proxy* of criminality); g, is the weight of the non-market sector in regional economies, obtained from the relationship between the value added rates of the public administrations, and the product in the private sector, at a regional level (*proxy* indicating the degree of underdevelopment in market institutions); i and t, respectively, denote spatial and temporal dimensions.

In essence, this equation describes regional productivity for the private sector in relation to regional crime rates and a variable which describes the weight of the non-market sector

---

[3]   On this last point, see Daniele (2007; 2009) and Daniele and Marani (2008, 2010), who underline a negative correlation between criminality and investments in southern provinces.

[4]   In their research, the authors do not cite the sources of the data they use for their econometric analysis.

[5]   The authors obtain more satisfactory econometric results by using the *SUR* (*Seemingly Unrelated Regression*) method, which also considers the productivity delayed by a year variable as a regressor, so as to resolve problems of simultaneousness.

in the regional economy. The econometric results obtained from the research (Felli e Tria, 2000: 97), highlight, for each region, both that the crime rate (approximated from the murder rate) goes up with the increase in public transfers and is sensitive to trends in the national economy, and also, that both crime rates and the non-market added value rates influence negatively on productivity levels. In particular, the analysis underlines that they highlight how the dependency of the southern regions on aid from the public sector has helped to increase crime rates, especially in Sicily, Calabria, Campania and Apulia.

Similar results, for the period 1960-93, were obtained by Tullio and Quarella (1999), even though they use GDP per capita and not productivity as dependent variables, the latter variable being a principle characteristic of this review.

The work of Centorrino and Ofria (2001), for the years 1998-99, using ISTAT regional accounts data, analyzes, using a *pooling* methodology, the effects of the environmental variables quoted above, on the productivity of the private sector economy in the southern regions. In particular, the econometric results, obtained by Centorrino and Ofria (2001: 80) comparing regional differences in productivity with environmental ones, registered for the same years, underline that in the South these factors influence, in a more or less significant way, businesses which belong to all sectors. There is less influence in the sector «Industry in a strict sense», where there is a greater presence of businesses which produce «Energy products». Probably, these businesses are less influenced by local environmental conditions, because being larger and often part of multinationals, their *management* centres are often located in completely different areas to the main plants. Businesses in the «Agriculture, forestry and fishing» and «Construction» sectors are, on the other hand, more conditioned by environmental factors, which might be explained, according to the authors, by the fact that they generally operate in a strictly local market and have little

inclination to comply to co-operation strategies with other businesses («group»). These conditions make them more «attackable» and less «defendable» in comparison to a «group» structure. Further, it is unnecessary to remember that the businesses which belong to a «group» enjoy significant advantages over the independent ones, in terms of research and development activities, collaborative agreements with other foreign businesses, the acquisition of patents and licenses from abroad, technical-production agreements with other Italian businesses. For the businesses belonging to the group, even those advantages of a financial nature might, in theory, be independent of the environmental conditions in the area in which they are located.

Lastly, in a more recent study, again, carried out by Centorrino and Ofria (2008), an analysis was made on the relationship between work productivity and crime, starting from the "Kaldor-Verdoon"[6] theoretical approach, and using the Verdoon law. As the authors state:

> this law sustains that over a long period of time, "as a rule, productivity develops proportionately to the square root of the volume of production". It follows that over a long period of time, production volume may partially explain productivity, with a relationship expressed as a multiplicative function of constant elasticity, integrated by a trend factor, which takes other factors which affect the rise in productivity, into account (Centorrino and Ofria, 2008: 169).

The analysis uses ISTAT regional Accounts data for the period 1983-2005, and concentrates on those regions in which organized crime is established (Calabria, Campania, Apulia and Sicily) and in the following sectors: "agriculture",

---

[6]   For this approach, see: Centorrino and Ofria, 2008: 168-169.

"services", "construction" and "industry". In particular, the authors estimate how the growth of work productivity is influenced by the growth in productivity, from the relationship between gross investments and GDP and by a *proxy* for crime, given by the relationship between the murder rate for "mafia, camorra, 'ndrangheta and "sacra corona unita" and the population.

The following regression equations are calculated:

(2) $\dot{p} = a + b\,\dot{y} + c\,CR$

(3) $\dot{p} = a + b\,\dot{y} + c\dfrac{I}{GDP} + d\,CR$

(4) $\dot{y} = e + f\,CR$

where a and e represent the constants; is the rate of growth of labour productivity, *is the* sample of output growth (added value), *I/GDP* the relationship between investment and GDP and *CR* the *proxy* for organized crime.

The two authors underline, "the last equation is calculated assuming that the variable CR acts indirectly on the variable through. In that case the CR produces a negative impact (endogenous) on the "demand" component of the model under consideration" (Centorrino and Ofria, 2008: 173).

The significance of the crime *proxy* in the four sectors under consideration, is summed up in Tab.1. Specifically, it can be seen how organized crime influences negatively on the productivity in the construction sector and on other *non tradable* sectors.

Tab.1 – Significance of the "crime" proxy with the negative sign:

$1<t<2$ = •; $2,1<t<2,5$ = ••; $t>2,6$ = •••

Regions	Agriculture	Services	Construction	Industry
Calabria	••	•	•	•
Campania	••	•	•••	•••
Apulia	••	•	•••	•
Sicily	••	•	•••	••

4. Conclusions

As stated, organized crime influences the market economy in the South in direct and indirect ways, influencing its development in a negative way. In the first case, it takes the form of a "business" itself; while in the second, it conditions the market with its parasitic and predatory activities, or it co-operates with the legal economy. The "market failures" that follow, obviously generate high social costs, both for the community in general, as well as for single production businesses in particular. Some research asserts that it is the high crime rate in the South which hinders the natural course of business activity.[7]

In the South, the activities directly connected to territory size (extortion, the fixing of public and local economy contracts, usury, drug dealing, capital offences, etc.) continue to make up an important percentage of the revenue and are a confirmation of the power of criminal groups. Of these activities, the infiltration of contracting and public works contracts, plays a strategic role, and is, at the same time, the primary source of income, a way to socially legitimize wealth, a method of controlling the territory and the economic fabric, a way to connect and do business with local council management (Ofria 2006).

---

[7]   Among others, see: Becchi (2000), Centorrino and Ofria (2001), Centorrino et al. (2003), La Spina and Lo Forte (2006), La Spina (2008).

The deep-rooted existence of mafia-type activity in many parts of the South is particularly damaging in the way that it conditions local business, and for the overall disadvantages which result, as far as competition is concerned. Above all, it creates a distortion in the market since it modifies the dynamics of public contracts, and also of the work market and capital. Secondly, the presence of a parallel organization which consumes money, and which acts like a parasite, and penetrates the legal economy, helps to drain all the available resources within the territory, changing salary mechanisms.

According to Felli and Tria (2000), the mafia-type business (which is seemingly legal but run by the mafia) may secure contracts, win contract bids or auctions, not through competitive offers, but by using the threat of criminal acts and, in the same way, it can hinder non-affiliated businesses from entering the market.

Essentially, it is the sort of behaviour which is found in a *rent-seeking* theoretical model, based on Tullock's (1980) theoretical model. In this type of model, criminal organisations are nothing more than " 'lobbyists', who, in order to ensure the earnings which come from being in a monopolistic position, resort to systematic and continuous violence; they work in a 'lobbyistic' way". (Caruso, 2008: 8), in particular:

> in economies where there is a strong incidence of public spending within the GDP (...) different interest groups compete for the allocation of public transfers or the approval and implementation of particular economic policies. In its most transparent version, the action of rent-seeking becomes a firm part of the existence of lobbyists who are competing to persuade the various *policy-makers*, in order to ensure the approval of economic policies in favour of their reference groups. These actions are normally carried out according to certain pre-set rules. As soon as these rules are broken, the results are sabotage, spying or, in other words, corruption.

In essence, the presence of cartels, which have been instituted by organized crime, constitutes a source of negative pecuniary externality, which reduces the economic activity of many businesses; at the same time, it is a source of inefficiency, since the businesses within the cartel are not forced to increase their productivity because there is no pressure to be competitive. (Centorrino and Ofria, 2008). Felli and Tria (2000: 84) write on this point:

> (...) mafia activity within legitimate markets «confuses» other competitors, as it creates barriers which prevent numerous industries from entering both production markets and work markets. In many respects, these markets are much less competitive in those regions affected by organized crime in comparison to other regions. In some extreme cases, where the mafia manages to control both the supply and demand of goods supplied by the State, the markets (both corrupt and normal markets) are suppressed and there is a hierarchic economic organization, in which those businesses outside the cartel, or those potential candidates for entry, are forced to deal with very high transaction costs. This institutional environment is a source of inefficiency and low productivity growth.

As already underlined in this review, this hypothesis has actually been verified in the various analyses which have used econometric methodologies.

The recent study by Centorrino and Ofria (2008: 175) confirms that "a negative effect on the sample of the growth of work productivity, caused by the 'criminality' variable, is particularly significant, both in the "Construction" sector, as well as, (with the appropriate approximations) in the remaining sectors that were considered". In particular, the greatest significance within the Construction division leads to the tendency for criminality to concentrate itself in sectors

that are directly or indirectly reached by State interventions (Centorrino and Ofria, 2001), that are not very open to external competition (since they are non *tradable sectors*), with high work intensity rather than capital intensity, in such a way as to leave wider margins for money laundering, and also to guarantee some forms of social consensus, through the distribution of work opportunities.

This seems to confirm yet again, that organized crime is one of the co-causes which might explain the enduring differences between southern regions and the rest of the country.

From this point of view, the policies which aim to oppose organized crime in the South assume a greater significance, not simply from a political and social point of view, but also in the sphere of that wider area of economic politics which is concerned with barriers to economic development, and has a particular interest in so-called «market failures».

Rather than being policies which aim merely to oppose, they should be aimed at producing "intelligent regulations", which would help to come through this state of de-regulation or under-regulation, as mentioned in par.1, where illicit practices, opportunism and defection are seemingly more convenient than participation (Donolo, 2001; 2005).   In other words, this means establishing measures for collective learning and of *learning by doing,* which are able to change the actors' preferences and to create shared cognitive maps which activate virtuous circles, from social behaviour to satisfactory regulations (Donolo, 2001). It also means investing in trust strategies, understood as indispensable "relational good", in order to orientate the behaviour of the local actors, since it is really the strong presence of "trust" which induces *voice* (in other words participation and protest), rather than *exit* (surrender and disinterest towards social and public commitment, as well as formal rules) (Hirschman, 1970; Donolo, 2002; D'Albergo, 2002). Finally, it means helping the local institutions to improve their efficiency (Sciarrone, 2006), thus bringing about the process of "governance participation", which is capable of

supporting the emergence of forms of collective rationality as a result of interaction, negotiation, reciprocal exchange, sharing and the circulation of active knowledge, that is, acquired from the union between "learning" and "doing".

BIBLIOGRAPHY

Banfield, E.C. (1958), *The Moral Basis of a Backward Society*, New York: The Free Press.

Basile, R., (2001), *The locational determinants of foreign-owned manufacturing plants in Italy: the role of the south*, Documenti di lavoro 14/01, ISAE, Rome.

Becchi, A. (2000), *Criminalità organizzata: paradigmi e scenari delle organizzazioni mafiose in Italia*, Roma: Donzelli.

Becker G. (1968), "Crime and Punishment: An Economic Approach", *Journal of Political Economy*, No.78, pp. 169–217.

Bonaccorsi di Patti E. (2009), "Weak institutions and credit availability: the impact of crime on bank loans", *Occasional Paper*, No.52, Banca d'Italia.

Busetta P., Sacco S. (1992), *Gabbie salariali: verifica empirica di una proposta*, Milano: FrancoAngeli.

Caruso R. (2008), "Spesa pubblica e criminalità organizzata in Italia. Evidenza empirica su dati panel nel periodo 1997-2003", *Munich Personal RePEc Archive*, paper No.6861.

Cellini R., Scorcu, A. E. (1997), *Istituzioni, stabilità e crescita nelle regioni italiane*, L'industria, No.3, pp. 459-483.

Centorrino M., Ofria F. (1997), "Contesti illegali e differenziali di produttività nelle aziende di credito", in M. Centorrino, G. Signorino, eds. Macroeconomia della mafia, Roma: NIS, pp. 131-144.

Centorrino M., Ofria F. (2001), *L'impatto criminale sulla produttività del settore privato dell'economia. Un'analisi regionale*, Milano: Giuffrè.

Centorrino M., Ofria F. (2008), "Criminalità organizzata e produttività del lavoro nel Mezzogiorno: un'applicazione

del modello «Kaldor-Verdoon»", *Rivista economica del Mezzogiorno*, No.1, pp. 163-187.

Centorrino M., Signorino G. (1997), *Macroeconomia della mafia*, Roma: Carocci.

Centorrino M., La Spina A., Signorino G. (1999), *Il nodo gordiano. Criminalità mafiosa e sviluppo nel Mezzogiorno*, Roma-Bari: Laterza.

Centorrino M., Limosani M., Ofria F.(2003), *Il pedaggio dello sviluppo*, Bari: Palomar.

Cohen, S. (1996), "Crime and Politics: Spot the Difference", *British Journal of Sociology*, Vol. 47, No. 1, pp.1-21.

D'Albergo, E. (2002), "Modelli di governance e cambiamento culturale: le politiche pubbliche tra mercato e comunità", in Battistelli F., eds, *La cultura delle amministrazioni fra retorica e innovazione*, Milano: FrancoAngeli, pp.71–90.

Daniele, V. (2007), *Incentivi economici e disincentivi di contesto: Gli investimenti esteri nel Mezzogiorno*, Rivista di Economia e Statistica del Territorio, No. 2, pp.5–34.

Daniele V. (2009), "Organized Crime and Regional Development. A Review of the Italian Case", *Munich Personal RePEc Archive*, paper No. 16547.

Daniele, V., Marani, U. (2008), "Criminalità e investimenti esteri. Un'analisi per le province italiane", *Rivista Economica del Mezzogiorno*, No. 1, 189–218.

Daniele V., Marani U. (2010), "Organized crime, the quality of local institutions and FDI in Italy: A panel data analysis", *European Journal of Political Economy*, article in press, doi:10.1016/j.ejpoleco.2010.04.003.

Del Monte, A., Papagni, E. (2001), "Public expenditure, corruption, and economic growth: the case of Italy", *European Journal of Political Economy*, No.17, 1–16.

Donolo, C. (2001), *Disordine*, Roma: Donzelli.

Donolo, C. (2002), "Politiche integrate come contesto di apprendimento istituzionale" in Battistelli, F., eds, *La cultura delle amministrazioni fra retorica e innovazione*, Milano: FrancoAngeli, pp. 91–108.

Donolo, C. (2005), "Dalle politiche pubbliche alle pratiche sociali nella produzione di beni pubblici? Osservazioni su una nuova generazione di *policies*", *Stato e Mercato*, No. 73, pp. 33–65.

Felli E., Tria G. (2000), "Produttività e crimine organizzato: un'analisi delle regioni italiane", *Sviluppo Economico*, No. 1, pp. 79-101.

Gambetta, D. (ed.) (1989), *Trust. Making and breaking cooperative relations*, Oxford: Blasil Blackwell Ltd.

Granovetter M. (2006), "La costruzione sociale della corruzione", *Stato e Mercato*, No. 3, pp.343-368.

Heidenheimer A. J. (ed.) (1970), *Political Corruption: Readings in Comparative Analysis*, New Brunswick: Transaction Publishers.

Hirschman, A.O. (1970), *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States*, Cambridge: Harvard University Press.

Kind, R. D. (1999), *Doing Research on Crime and Justice*, Oxford University Press.

La Spina, A., Lo Forte, G., (2006), "I costi dell'illegalità", *Rivista economica del Mezzogiorno*, No. 3-4, 509–570.

La Spina, A. (ed.) (2008), *I costi dell'illegalità. Mafia ed estorsioni in Sicilia*, Il Mulino: Bologna.

Magatti, M. (1994), "Il mercato e le sue regole. Sui limiti dell'impresa come soggetto di modernizzazione", *Stato e Mercato*, No. 40, pp. 69–91.

Netti, N. (1999), "Gli effetti delle caratteristiche socio-economiche delle regioni italiane sull'efficienza di un campione di imprese manifatturiere", *Rivista economica del Mezzogiorno*, No. 3-4 pp. 559-595.

North, D. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.

Ofria, F. (1996), "Performance delle aziende di credito e ambiente socioeconomico", *Banche e Banchieri*, No. 6, pp. 575-581.

Ofria, F. (1997a), *Divari regionali di produttività nell'industria manifatturiera italiana*, Milano: FrancoAngeli.

Ofria, F. (1997b), "Divari regionali di produttività e condizioni ambientali nelle regioni italiane: un'analisi empirica per le aziende manifatturiere del settore «tradizionale»", *Economia Marche*, No. 2, pp. 313-323.

Ofria, F. (1998a), "L'analisi empirica della produttività nell'industria italiana e divari territoriali: una rassegna della letteratura", *L'industria*, No. 1, pp.81-109.

Ofria, F. (1998b), "Divari regionali di produttività e condizioni ambientali: un confronto fra settori nell'industria manifatturiera", *Economia e Politica Industriale*, No. 100, pp. 73-88.

Ofria, F. (1999), "Criminality and Economic Development: An Empirical Verification in Italian Regions (1980-95)", *Mediterranean Journal of Human Rights*, No. 1, pp. 263-275.

Ofria, F. (2000), "Efficienza ed esportazioni: un'analisi empirica per l'industria manifatturiera italiana", *Rivista di Politica Economica*, Vol.90, No.2, pp. 45-64.

Ofria, F. (2006), *Effetti distorsivi sull'economia legale: la corruzione*, Soveria Mannelli: Rubbettino.

Ofria F., Venturi L. (2000), "Divari regionali di efficienza in Italia nelle aziende di credito cooperativo: un'analisi parametrica", *Bancaria*, No. 10, pp. 22-23.

Olson, M. (1965), *The Logic of Collective Action*, Cambridge: Harvard University Press.

Ponsaers P., Shapland J., Williams C.C. (2008), "Does the Informal Economy link to Organised Crime?", *International Journal of Social Economics*, Vol. 35, No. 9, pp. 644-650.

Putnam, R., (1993), *Making Democracy Work*, NJ: Princeton University Press, Princeton.

Shapland J., Albrecht H-J, Ditton J. and Godefroy T (eds) (2003), *The Informal Economy: Threat and Opportunities in the City*, Freiburg: Max Plank Institute.

Shelley, L. (1994), "Mafia and the Italian State: The Historical

Roots of the Current Crisis", *Sociological Forum*, No. 9, pp. 661-668.

Sciarrone, R. (1998), *Mafie vecchie, mafie nuove, radicamento ed espansione*, Roma: Donzelli.

Sciarrone, R. (2000), "I sentieri dello sviluppo all'incrocio delle reti mafiose",*Stato e Mercato*, No. 2, pp.271-301.

Sciarrone, R. (2006), "Mafia e potere: processi di legittimazione e costruzione del consenso", *Stato e Mercato*, No.. 3, pp.369-401.

Sutherland, E., Cressey, D., Luckenbill, D. (1939), *Principles of Criminology*, Philadelfia: Lippincott.

Tullio G., Quarella, S. (1999), "Convergenza economica tra le regioni italiane: il ruolo della criminalità e della spesa pubblica, 1960-1993", *Rivista di Politica Economica*, No. 3, pp. 77-128.

Tullock, G. (1980), Efficient Rent Seeking, in Buchanan, J. M., Tollison R., D., Tullock, G. (eds), *Toward a Theory of the Rent-seeking Society*, Texas A&M University, College Station, pp. 97-112.

Vander Beken, T., Van Daele S. (2008), "Legitimate Business and Crime Vulnerabilities", *International Journal of Social Economics*, Vol. 35, No. 10, pp. 739-750.

Weber, M. (1961), *Economia e società* Vo.1, Milan: Edizioni Comunità.

Williamson, O. E. (1975), *Markets and Hierarchies*, New York: Free Press.

Williamson, O. E. (1985), The *economic institutions of capitalism: Firms, markets, relational contracting*, New York and London: Free Press.