

This is the first book to use economic theory in the analysis of all the different aspects of organised crime: the origins, the internal organisation, market behaviour and deterrence policies. The theory of rent-seeking is adopted to help understand the origin of criminal organisations from a state of anarchy, while modern industrial organisation theory is used to explain the design of internal rules in the organised crime sector. The market behaviour of organised crime is analysed taking into account its double nature of competitive firm and of monopolist on rule-making. Finally, the 'crime and economics' approach is applied to the analysis of corruption that occurs when the organised crime sector and the government collude to exploit their monopoly on rule-making. This book provides a careful balance between theoretical and institutional or empirical contributions. Each chapter outlines the normative results of the analysis in order to design more sophisticated deterrence policies.

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Economics Focus in *The Economist*

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THE ECONOMICS OF ORGANISED CRIME



The economics of organised crime

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5 Conspiracy among the many: the mafia in legitimate industries

DIEGO GAMBETTA and PETER REUTER

1 Introduction

This paper considers the modes by which the mafia exercises its influence on a number of legitimate industries in both Sicily and the United States. In particular, it discusses the kinds of service the mafia provides, the economic consequences of its influence, the conditions that induce the entry of the mafia in specific industries, and the conditions and policies that make it disappear. We share the view that mafia protection in legitimate industries, although occasionally rapacious and unreliable, is frequently neither bogus nor limited to intimidating new entrants. Under some (perhaps most) circumstances, the primary beneficiaries are the owners of the firms being coerced.

This view is based both on theoretical arguments and empirical evidence. The paper relies on a series of case-studies which were autonomously developed by the authors and presented elsewhere (Reuter, 1987, 1993; Gambetta, 1993). The most important type of protection supplied by racketeers to legitimate industries, which is found in most industries we studied, is the enforcement of a variety of allocation agreements among independently owned firms, with racketeer income as payment for the service. This runs counter to two widespread conceptions of the involvement of the mafia in legitimate industries. One sees the racketeers' role as mere intimidation: the mafioso approach to 'regulated' competition would amount to thugs resorting to muscular persuasion at the expense of an innocent competitor on behalf of either a single monopolist or the mafia's own enterprise. The other sees racketeers as extortionists imposing their presence upon harmless dealers who would rather do without. Let us consider them in turn.

When the mafia looks after the interests of a monopolist, it is clearly useless as a cartel enforcer and protection is limited to the intimidation of new entrants. This, however, is seldom the case: although protectors

have an interest in not expanding the number of protected firms indefinitely, they are subject to an opposite drive to increase it. First, the larger the number of firms the higher is the mafia's autonomy from and bargaining power over any single one of them (Gambetta, 1993, pp. 22–3, 85). Second, supporting a small number of firms is risky because it provides disappointed competitors with an incentive to seek protection from police or rival racketeers (Reuter, 1987, p. 6). Third, larger collusive agreements hold competition in check more effectively both because the cartel acts as a discouraging signal of determination and stability, thus reducing the need to threaten potential competitors, and because the option to exit the cartel becomes less attractive for the participants (Fiorentini, 1994).

Although in particular circumstances collusion is self-enforcing (Friedman, 1983, pp. 65, 132ff), whenever cartels rely on agreements, defection is a potential hazard and a genuine demand for protection may develop. Each partner must feel confident that all other partners will comply with the pact; otherwise the cartel collapses and competition creeps back in. Furthermore, even though anti-competitive outcomes can emerge without cooperation among firms – a large firm may independently decide to exclude new entrants even if rival firms share the advantages but not the cost – whenever restrictive practices require the contribution of all firms, an enforcing agency may be necessary to deter members from free-riding. There is therefore no theoretical reason to expect that the role of the mafia will be one of extortion rather than authentic protection. (Whether the price of protection is 'extortionate' is a separate question to which we return later in Section 8.)

Our argument is that the mafia solves a problem of potential cartels. It may be invited in by entrepreneurs themselves looking to organise some agreement or may initiate the activity itself; we have examples of both. Its comparative advantage is likely to be in organising cartel agreements for large number industries, as well as making cartels more stable; success, however, requires a number of other conditions, that we spell out in the course of the paper. Moreover, the mafia has a unique asset in this capacity, namely its reputation for effective execution of threats of violence; this creates a reputational barrier to entry.

We do not, however, claim that large number cartel organising is the exclusive role of the mafia in legitimate industries. The garment trucking and waterfront industries in the United States (Reuter, 1987, Ch. 3) provide instances of other kinds of predation. However, cartel organisation is an important and distinctive activity of the mafia,¹ and not just in legitimate industries. Although illicit markets do not concern us here, there are signs that the mafia can act as cartel organiser, for instance, in

bookmaking in the United States and in tobacco smuggling and purse snatching in southern Italy (Reuter, 1983, pp. 42-4; Gambetta, 1993, 227-35).

2 The form of cartel agreements

The central problem for cartels is to design agreements which can be maintained over time. Three aspects of agreements, which are relevant to human cooperation generally, are also relevant for establishing cartels: the rules to be followed by members, the means of detecting rule violators, and the sanctions to be imposed against violators. Weakness in any of the three is likely to lead to defections and breakdown of the cartel (Stigler, 1964).

2.1 The rule

At least three dimensions of the rule itself affect cartel members' willingness to enter and remain in association. First, the rule must produce results that, over time, are perceived as equitable, so as to lower risk of defection and complaint. Second, the agreement must be compatible with continued entrepreneurial autonomy. Loss of autonomy – as might arise if the cartel decided that production facilities must be centralised to maximise joint profits – transforms the bargaining positions of members and those who lose production facilities become dependent on others' willingness to honour the original commitment. This may increase the demand on trust to breaking-point. Third, because of illegality, there is likely to be a strong inclination to avoid rules which require 'side-payments' among members that could provide valuable evidence for a prosecutor. More generally, illegal agreements are likely to minimise the number of transactions necessary for their effective execution.

2.2 Detection

The second important issue is the speed and cost of detecting violation. The longer it takes to detect it, the greater the return to violation and the lower the expected lifetime of the cartel (Stigler, 1964). Similarly, the profitability of the cartel will be lowered by high costs of monitoring. More generally, the higher the cost of policing agreements the lower the likelihood that cooperation will emerge.

2.3 Sanctions

The final consideration is the nature of available sanctions. Members will doubt a cartel's potential stability if violations of its rules cannot be punished without ending the cartel. A classic difficulty of price-fixing agreements is that efforts to punish price cutters lead to price reductions for all customers. The possibility of selective and cheap sanctions will increase stability.²

A limited number of rules can sustain collusive agreements. These are price fixing, output quotas and market sharing. Market sharing seems generally easier to enforce than, and logically prior to, the other two alternatives. In the New York carting industry,³ for instance, in which individual customers are allocated on the basis of who served them first, cartel members have complete price autonomy. Being fixed in location, customers have little choice if other carters accept the basic rule. By contrast, if price fixing is practised – assuming that the product is homogeneous – firms usually need further allocative measures. Price fixing creates an incentive to resort to covert inducements, such as advertising, gifts, special offers, guarantees, sponsorship etc. in order to attain higher market shares. Thus, unless firms also have market-sharing rules, price fixing is likely to be unstable, even ignoring potential entry.

3 A comparison of the Sicilian and New York mafias

The differences between the mafia in Sicily and New York are several. For example, in Sicily there is a clear geographic division; individual families have specific areas in which they have sole operating authority. Members of other families can operate there only with permission. Within New York the nature of the division is harder to determine. It is certainly not territorial, perhaps reflecting the lack of effective small-area local government that would permit the use of corrupt government authority to establish monopolistic criminal enterprises. Above all, in a highly diversified and complex urban situation such as that of New York, a monopoly of protection on all transactions is hardly conceivable, even in a relatively small area. By contrast, in a village or district of Sicily, with few inhabitants, any one mafia family can still take care of its clients in most of their businesses; but as the number of exchanges multiplies it becomes increasingly laborious to supply territorially-based protection and protection itself tends to become functionally specialised. Historic roles certainly have an influence in determining where (functionally) a family operates in New York. The Lucchese and Gambino families are the only ones of the five New York families that have a presence in the

carting industry, just as it is the Genovese that are most active on the docks in Manhattan. That seems to have been the case for over 40 years in the case of carting and nearly 70 years for the docks.

The capacity of the mafia to play a role in cartel organisation is probably affected by this general organisational characteristic. Sicilian industry agreements may have territorial limits because the families cannot operate outside those areas. Indeed, it appears that some sharing agreements are cumbersome to execute because of the territorial division of the mafia families; the queuing for contract bids, discussed below, is an instance where arrangements have to be worked out among different families. Also, in New York there is much more of an explicit market in property rights. Carters buy and sell customers at prices that seem to represent the capitalised value of the customer allocation agreement; it is unclear whether mafiosi levy a tax on these sales. In Sicily there is no evidence of markets in such rights. Another difference is one of scale of individual families. The mafia of Sicily are approximately 3,000, in a total of nearly 100 families. In contrast there are an estimated 5,000 mafia in New York, but grouped into only five families. Entry is more restricted in New York and the rewards of membership correspondingly greater. Few seem to enter American mafia families before their late thirties, while in Sicily members enter in their twenties.

A further important difference for our purposes is the role of the labour union. In the United States it has been the central instrument by which the mafia has acquired power in particular industries. The union provides an ideal means to dress up extortion or the suppression of competition as the expression of concern for the rights of individual workers. Interestingly, the union is critical for the initiation of a customer allocation agreement but appears not to be so central for its continuation; expectation and reputation may suffice at that point. In Sicily, on the other hand, the union is not a major institution. The mafia has much more direct ties to the political system and, as argued at length in Gambetta (1993), serves to provide quasi-governmental services that the elected government fails to deliver.

One final difference is worth mentioning. Illegal markets have traditionally been a more important source of income to the New York mafia than to the Sicilian mafia. In markets for horse-betting, certain kinds of lottery, loan-sharking and (in earlier eras) prostitution and bootlegging, the mafia has served both as a provider of the goods themselves and as guarantors of contracts and dispute settlers. In recent decades, it is the latter role that has been most significant (Reuter, 1983). There are thus parallels between the mafia's current roles in legal and illegal markets. For the Sicilian mafia, although the role of protection has been salient

for a long time, markets in illegal commodities have until recently played a less important role. The growth of the heroin market since 1970 has changed that, but the Sicilian mafia in this case has played a direct role in the provision of credit and part of the service too (Gambetta, 1993, pp. 234-44).

4 Instances of mafia cartels

With only a modest number of case-studies available, even including those that have appeared in historical studies, we make modest claims as to the generality of the following summary of the prevalence of different kinds of mafia cartel rules.

We know of few settings in which the mafia has enforced *price-fixing* agreements over long periods of time. In the wholesale fruit and vegetable market in Palermo, for example, the dramatic increase in numbers of authorised market middlemen, known as *commissionari*, made it impossible to continue to fix prices. Until 1955, only twelve *commissionari* were operating and price fixing and quota control were feasible because easy to police. A 'man of respect', himself a *commissionario*, acted as guarantor of these arrangements and controlled the largest share of the transactions. Now that the *commissionari* are 77,⁴ they say that it would no longer be profitable to pay someone who, like 'Don Peppe' in bygone days, enforced collusion. There are simply too many *commissionari* and, given the large number of customers that use the market every day, someone somewhere would always breach the deal. In Section 7 we provide an analysis of why the numbers grew so substantially and broke the cartel.

Output *quotas* are another important alternative. The little available evidence suggests that quota agreements require extensive and intrusive inspection for their maintenance, and these are not attractive for an illegal market. The only known case of regulating output quotas involving the mafia dates back to the nineteenth century. Franchetti, an early and insightful scholar of the phenomenon, reports the existence of two 'societies' based near Palermo: one of millers – la società Mulini – which we would call a cartel, and the other – la società della Posa – a union of cart-drivers and apprentice-millers. Both these societies are said by Franchetti to have been under the protection of 'powerful mafiosi'. Members paid a fee to the society and agreed not to compete. They kept the price of flour high by regulating output, taking turns to restrict production and receiving appropriate compensation. (Note that current EU agricultural policies are not too dissimilar.) The *capo*-mafia ensured that everybody paid their dues, that the miller whose turn it was to

under-produce did not free-ride on his fellows by producing more than he was supposed to; and that the others did not free-ride on him, by failing either to pay the agreed compensation or to restrict production when their turn came (Franchetti, [1876] 1974, pp. 6–7 and 96).

The remaining collusive rule, namely *market-sharing*, can follow any one of three cases: locations, customers or queues. Which of them is adopted depends on the general conditions of the market – physical and technological constraints, size of units of demand and supply, frequency of transactions – and on which proves more suitable to monitor defectors. In what follows we assume for simplicity of exposition that agents sharing the market are sellers, but the same arguments apply to buyers. For instance, in the wholesale fish market in Palermo, middlemen share suppliers, i.e. fishermen.

4.1 Location or territory

A gets the north side, B the south side; A runs on route X and B on route Y. Trading within territorial boundaries is found in a variety of industries, such as bus companies, airlines, telephone line suppliers, estate agents and many more. When firms are few, and monitoring each other presents no great problem, firms can easily agree with no need of 'muscle'. The three top Italian producers of lead and amianthus pipes, for instance, are said to share territories – north, south and centre – when it comes to large orders. These firms do not seem to need any special agency to enforce their understanding. When it comes to small contracts, which are too arduous to police, they simply prefer to compete.

But other sectors – as diverse as construction, transport and street-hawkers – have been territorially controlled by mafiosi in Sicily. Enforcing the territorial allocation when markets are both visible and immobile (or at least well defined as bus routes are) is relatively simple. Territoriality has a logical basis that makes it the dominant alternative. In Naples and Palermo mafia enforcement has also helped prevent conflict among unofficial parking attendants, whereas in a similar market in Rome, that for cleaning windcreens at traffic lights, the mafia has not been available. In 1989 this business was lucrative: each man (mostly Polish immigrants) made between 100,000 and 300,000 lire per day (\$80–250) and, according to the carabinieri, this led to violent fights over the allocation of the most profitable road junctions. The cleaners were unable to cooperate and thus attracted the attention of the authorities (*la Repubblica*, 2 July 1989).

4.2 Customers

Not all markets are efficiently allocated by territory. For instance, dealers may congregate in one location, as in wholesale markets, or agents may be highly mobile and unpredictable, as, for example, taxi drivers and, as noted by Schelling, burglars, who are both mobile and, as a matter of trade, invisible (Gambetta, 1993, pp. 220–35). Furthermore, geographical divisions are not always satisfactory because profits may be so unevenly and unpredictably distributed (e.g. because of differences in regional patterns of development) that some cartel members perceive the continuation of the agreement as inequitable. An alternative solution consists in sharing customers: cartel members, in other words agree not to accept or seek business from customers who are currently served by another member of the cartel. Where feasible, customer allocation dominates the other rules. Violations are easily detected within a short period of time and almost automatically because if a cartel member provides service to the customer of another member, that member will be aware of the loss of business of that customer. Moreover, selective sanctions can be applied by aggressive solicitation of the violator's customers.

The rule is also equitable and simple to apply. It gives to each participant what he thinks of as his already, namely his existing customers. It does not require other forms of cooperation which leave paper trails for investigators. Members can charge different prices and provide different qualities of products, though there may be limits on the variation depending on the ease of comparison by customers. This type of sharing is particularly attractive if customers are 'fixed in location and the service or good is delivered to [them]' (Reuter, 1987, p. 7) for policing is simpler. More generally, it is successful if the conditions permit an easy way to identify customers and keep track of their movements. When customers are big, for instance, they are easily shared between suppliers: A works for the electric company, B for the water company and so on.

This applies to the wholesale fruit and vegetable market too in Palermo. In fact, although most daily transactions now take place competitively, there is an exception which still provides mafiosi with an opportunity to exert their influence. A group of 6–7 *commissionari* – those said to be of 'greater respect' – collude over the contracts taken out by institutions, such as schools, hospitals, barracks and old people's homes. Each *commissionario* supplies specific institutions and the problem of competition is eliminated radically: by common agreement only one *commissionario* shows up at each tender. Relative to private customers, public institutions are fewer, take out longer-term contracts, buy fixed quan-

ties, are generally slack about quality, careless about price and corruptible. In short, they are easy to share. The small number of participants as well as the availability of sanctions – they share the same crowded market area and could easily make life difficult for each other – are such that this agreement could in principle do without outside assistance, although some evidence suggests that this is not the case (Gambetta, 1993, pp. 206–14).

Under customer allocation agreements, customers effectively become part of the supplier's assets; they are internalised and are in some instances traded like any other form of property. Carters in the New York metropolitan area (Long Island, New York City and New Jersey) buy and sell customers both individually and in groups. The prices of those customers, roughly 40 times their monthly gross billings in the early 1980s, provide the basis for estimating the capitalised value of the allocation agreement (Reuter, 1987, pp. 48–51).

4.3 Queues

Sharing customers, however, can prove arduous. There may simply be too many of them around, or they may be too occasional or too mobile. In short, they can be difficult to identify: how could, say, restaurants share tourists or petrol stations share motorway drivers? Until the mid-1950s, when *commissionari* were very few at the fruit and vegetable market in Palermo, some ordinary customer sharing went on. Since both customers and sources of supply have increased, however, these arrangements have been abandoned. One strategy for dealing with these problematic markets involves taking turns. Provided customers can be funnelled through particular locations, queueing can help. The obvious case is that of taxis who line up at stations and airports.

Sharing customers is also meaningless if there is only one buyer, or, more generally, if there are fewer buyers than sellers. If there is just one buyer, queueing can work if purchases are repeated: sellers can then enter a (metaphorical) line and share the market on this basis. One common method of collusion found among building contractors in Sicily runs as follows: firms A1, A2, A3, ... agree that, say, A2 should obtain the contract; the others bid artificially high prices so that A2's offer is certain to be the lowest. There are certain prerequisites for a deal of this kind to work: first, only firms in the cartel can participate while free riders must be excluded. Next, A2 must be confident that none of the other firms will submit a competitive bid at the last minute. In turn, A1, A3 ... require guarantees that A2 will return the favour on a future occasion and entrepreneurs therefore keep careful records of who obtained which

contract. Where a contract is publicly bid on a repeat basis, the cartel may instead allocate a contract to one firm, with others designated to provide 'courtesy' bids as camouflage for the arrangement. That behaviour has been observed among the carters in both New Jersey and Long Island. These rights can be permanent enough for the contracts to be sold from one carter to another.

5 Conditions of emergence

The ideal strategy from the entrepreneurs' point of view is to collude without paying protection money to the mafia, but this works only so long as everybody follows the rules and everybody believes it. Sometimes, racketeers can be called in simply *ex post facto* to provide a one-time service: once, in the late 1970s, according to a Sicilian building contractor, two firms suddenly defected and went after a forbidden contract so that 'the man of respect was called in and persuaded them to withdraw'. But, generally, not much is known about the conditions that foster the *continued* presence of the mafia in legitimate industries. In the United States the phenomenon of racketeer-influenced industries, despite a substantial journalistic interest, has attracted little scholarly attention. As for Sicily, research on this topic is virtually non-existent.

There seems to be just one known case, the waterfront industry in New York, in which the presence of racketeers qualifies as 'pure extortion'; and, even so, employers take advantage of their presence to control union members (Reuter, 1987, p. vii; Bell, 1960). But existing studies – e.g. Landesco (1929), Block (1982), Reuter *et al.* (1982), Reuter (1987) and Gambetta (1993) – found evidence that competitors seeking a collusive solution to market problems provide racketeers with the opportunity to acquire a role in their industry. Racketeers can enter 'by invitation' rather than on their own initiative. Recent evidence from Sicily illustrates this case. Baldassare di Maggio, a mafioso who turned state witness in 1992, said that Angelo Siino, a building contractor, 'came to me and said that if (...) we, that is Cosa Nostra, were capable of coordinating the bids we could get much bigger profits (...)'. In that first stage, Cosa Nostra's problem was that of making [Siino] credible in the eyes of other contractors' (*Panorama*, 11 April 1993). In order for collusion to succeed, the organisational force of the cartel must be credible: every participant must respect the agreement and in turn confidently expect that his moment to bid will come and that others will respect it. Cosa Nostra supplies these guarantees. A surveyor involved in the same enquiry said that the mafia intervenes as 'an organization which takes care of the way in which the various jobs are equitably distributed

among the interested firms' (*la Repubblica*, 28 October 1992). In the interrogation which originally started this enquiry in 1990, the former Mayor of Baucina, near Palermo, summing up the role of the mafia, said that the local mafiosi 'oversaw the fair distribution of contracts among firms participating in bids' (*la Repubblica*, 14 April 1990).

There is a parallel with New York: federal prosecutors in the case *United States vs. Salerno* in 1985 proved that 'the Cosa Nostra families established a club of concrete contractors who decided which contractor would submit the lowest bid on each project; other cartel members prepared their complementary bids accordingly. The "lowest bid" was far higher than the price that fair competition would have produced' (New York Organized Crime Task Force [OCTF], 1988, p. 11, fn. 17).

In general, racketeers offer the prospect that the conspiracy will work, simply because they provide credible enforcement. Large number cartels appear generally to have short lives because there is always an incentive for a member to leave the agreement and take advantage of the restrictions imposed on the remaining members (Scherer, 1970, Ch. 6). Potential conspirators are aware of this and may be reluctant to enter into an arrangement that is probably short lived as well as illegal. By promising to take illegal but effective actions against defectors, racketeers provide potential members with credible assurance that it is likely to be of lasting benefit.

But the racketeer involvement has another benefit, once it becomes known. It reduces the willingness of customers to protest the high prices charged under the agreement or to solicit competing bids from other dealers, tempting violation. Note that the customers in the commercial sector of the carting industry in New York include major corporations competent at understanding and exercising their rights. The unspoken threat, perhaps occasionally articulated in a vague way, that aggressive action may be punished by mafia interventions, smooths customer relations for the cartel members. Given the small share of total costs associated with garbage collection, and the fact that rivals are also believed to be extorted, risky resistance is unlikely to be an attractive option. The New Jersey State Commission of Investigation (1989) noted that one carter told a reporter that a story about racketeer involvement in the industry would only help his business.

Finally, racketeers provide a reputational barrier to entry. Entrants must be concerned that they will be the target of retaliation by racketeers. Their trucks and stores may be destroyed and their customers threatened or actually subject to violence. This was certainly the case when the Brooklyn District Attorney's Office started a carting firm in 1972, as part of an undercover investigation of the industry.

Collusion alone, however, is not in itself a sufficient cause. There is no evidence of mafia control among large corporations – steel, automobiles, chemicals, rubber (Bell, 1960, p. 176; Reuter, 1987, p. 7). Entrepreneurs of this calibre can probably count on political collusion and, more generally, *grander* means than the mafia (e.g. Friedman, 1988). Nor does it develop in hi-tech industries. For markets to be vulnerable to the mafia, collusion must be both highly desirable and difficult to bring about. The former condition depends on inelastic demand and little product differentiation, whereas the latter is due to impediments such as numerous firms and low barriers to entry (Reuter, 1987, p. 6).

Even when all the right conditions obtain, however, a triggering event often seems necessary to attract racketeers. Slumps in the economy, for instance, can provide the activating force: in the United States during the Depression, an extraordinarily deep and rapid decline in demand intensified the incentive for collusive action and related services. The need for cash becomes an important factor: Lucky Luciano, a leading mafioso during the Depression claimed:

[W]e gave the companies that worked with us the money to help them buyin' goods and all the stuff they needed to operate with. Then, if one of our manufacturers got into us for dough that he could not pay back, and the guy had what looked like a good business, then we would become his partner (...) we actually kept a whole bunch of garment manufacturers alive, and we helped all them unions, the Ladies' Garment Workers and the Amalgamated, organize the place. (Gosch and Hammer, 1975, pp. 77–8)

Racketeers' intervention can also be sparked off by the sudden greed of one of the cartel participants. Funeral homes in Naples, for instance, shared hospitals for many years without outside intervention: firm A was responsible for the deceased in hospital X, B for those in hospital Y and so on. They managed to keep the number of firms surprisingly low: while in Turin there are 50 firms for 1 million residents and in Rome 70 for 2.8 million, in Naples a population of 1.2 million is supplied by only 13 firms. The cartel achieved these impressive results with the assistance of corrupt local politicians and administrators who rejected new applicants. But collusive arrangements remain exposed to the risk of foundering and hence to the temptation to call in the mafiosi. At the end of the 1970s one firm tried to increase its share by enlisting the protection of an aggressive gang, *La Nuova Camorra Organizzata*. The other funeral homes attempted first to repel the move 'politically', then called in rival racketeers, who did not limit themselves to providing a one-time service but decided to continue levying a protection fee even after the triggering event had been sorted out. A similar case is found in the New Jersey

Table 5.1 Conditions favouring the emergence of mafia-controlled cartels

Product differentiation	Low
Barriers to entry	Low
Technology	Low
Labour	Unskilled
Demand	Inelastic
Number of firms	Large
Size of firms	Small
Unionisation	Present

garbage collection industry; there, however, the aggressive carter was not backed by outside racketeers and the other carters successfully opposed his attempts to expand by 'political' means alone.

According to one Sicilian contractor, mafioso intervention is much favoured by submissive expectations and can therefore be avoided; he himself had coordinated queues, ostensibly without being a mafioso. By yielding too quickly to the mafia – he claimed – one loses the respect which may otherwise be sufficient to control collusion: 'a lot of entrepreneurs end up in the arms of the mafia simply because they believe it is inevitable'. In New York the OCTF also found, in its investigation of the building industry, that 'sometimes contractors claim not to know exactly why they pay; experience tells them that payoffs are necessary to assure that "things run smoothly"' (1988, p. 17). The stronger the rumour that mafia services are indispensable in a certain market or area, the higher seems the likelihood that they will be requested or accepted without question.⁵ In addition, institutions looking for builders may themselves feel lost without an outsider to choose for them for no-one wants to take responsibility for the allocation: in at least one case the contracting agent in Sicily actively sought the intervention of an external fixer when the latter was slow in coming forward autonomously.

6 Consequences

Although it is difficult to establish *ex post facto* whether a given collusive arrangement could have emerged without the involvement of the mafiosi, the availability of mafia services generally makes collusion more likely, more elaborate and more enduring. Thus, not only do collusive arrangements sustain the mafia, but the availability of mafia protection also provides an incentive to seek collusive solutions.

Agreements supervised by mafiosi can embrace larger numbers of both dealers and customers: in the New York carting industry, for instance, in

which racketeers played a continuing role in the operation of the allocation agreement, primarily through the constant need to mediate disputes, the cartel involved the allocation of over 100,000 customers to as many as 300 carters (Reuter, 1987, p. 11). The greater the number of firms the harder it becomes to ensure that they all keep their word. An Italian building contractor spoke of a 'queue' of as many as 160 firms. It took a great deal of patience and manoeuvring before he eventually succeeded, as he put it, in 'buying' a contract: 'it is obvious that to safeguard agreements of this size one needs the threat of violence'. This threat was not supplied by an entrepreneur belonging to the cartel; at most 'he owns a few caterpillars'. Without such a threat, as the OCTF in New York also found, 'bid-rigging conspiracies may founder because the conspirators are unable to police their cartels effectively' (1988, p. 38).

Irrespective of the method adopted, the general consequences of restrictive practices, as Reuter argued, are threefold: less efficient production, higher prices, and smaller firms.

Less efficient production is engendered by the reduced incentive for lowering production costs; a firm cannot obtain an increase in market share by lowering costs, since all existing customers are allocated. ... The agreement also permits inefficient firms to stay in the market and prevents efficient firms from growing. The higher prices result directly from the imposition of restraints of trade. ... In each dimension, the effect is likely to be greater for a racket-run cartel than for other cartels. (Reuter, 1988, p. 7)

The first victims of collusion are consumers who end up purchasing lower-quality goods for higher prices. Potential competitors come next: successful collusion makes it almost impossible for outsiders even to contemplate entering an industry, and overt intimidation becomes redundant. This is why the enforcement of internal agreements is much more important than the brutal discouragement of rivals, even though the lack of entrepreneurial energy in the south of Italy makes the function less important there. Finally, since racketeers increase the confidence of participating entrepreneurs that the cartel will endure, incentives for efficient production are even more sharply reduced than they would be in a conventional cartel, where certainty about future success is always limited and the probability of imminent competition never vanishes.

The depressing effect on quality caused by mafia involvement can go further, especially in Sicily where inter-mafia conflicts have been more common than in the United States. The operation of the mafia is based on its reputation for effective contingent violence but that does not mean that actual violence is unknown. Both in New York and Sicily an

occasional killing or act of violence has been required to discipline a cartel member. Though these acts are situation specific, they also serve to enhance the reputation of the mafia and augment the reputational barrier. However, when such acts of violence become 'too' frequent because of internecine wars – in Sicily during the 1980s several entrepreneurs died in the crossfire (Gambetta, 1993, pp. 191–4) – the barrier becomes so strong that those very few who venture to take up entrepreneurial activities must be selected from risk-prone individuals who both have little chance of an alternative (and less dangerous) career and are already tightly connected with a mafia family. Even discounting for the lack of incentives for efficient production enjoyed by mafia-protected cartels, this group is most unlikely to contain characters versed in proper entrepreneurial tasks.

7 Conditions of disappearance

Again we note that our set of case-studies is too small and diverse for the development of general propositions. The examples are interesting in themselves, however, as pointing to the variety of circumstances that can lead to the demise of mafia control. The fruit and vegetable market in Palermo is now largely competitive. Agents appear more concerned with quality than with establishing or violating collusive deals. The threat of violence seems as remote as in any normal business environment. Local authorities can take none of the credit for the market's evolution: 'The contacts which our group had with the present Mayor and the assessore all'Annona', concluded the Anti-Mafia Parliamentary Commission in 1969, 'gave us the impression, increasingly so, of lack of both interest and information, often coupled with open irritation towards those trying to unsettle a status quo which was not altogether disliked'.⁶

For years local authorities tolerated unfair dealing: for instance, an area of the market designated for use by producers selling without the intervention of middlemen was invaded by the most powerful *commissionari* who then cheekily levied a 10 per cent charge from farmers wanting to share it. In 1969 the Commission asked the Mayor why an area adjacent to the market was left unused instead of being developed into further stands. The Mayor replied that it was the site of a church that could not be demolished because of its artistic value. A letter of inquiry to the Soprintendenza delle Belle Arti of Palermo went unanswered. The members of the Commission went to see for themselves: they found a small chapel of no aesthetic merit being used as a garbage dump. In the same period, beautiful buildings, such as late nineteenth-century villas by

Basile, were ruthlessly demolished in Palermo to make room for urban speculators (Chubb, 1982, Ch. 6).

It was thanks to the central authorities, the Prefects and the Anti-Mafia Commission, that the process of expansion, already to some extent 'naturally' under way, was accelerated. The present director of the market concedes that the Palermo Prefect's policy of increasing the availability of permits was crucial in alleviating the troubles of the market. Permits rose particularly during the 1970s until the last increment, in 1981, brought the number of licences to 77.

Yet, if the action of public authorities were the sole factor which brought about competition, why has the same process not occurred at the fish market? The answer lies in the diverse nature of the commodities involved. The supply of fresh fish is constrained both by limited natural resources – which are either unaffected or depleted by technological development – and by the fact that it is channelled through a limited number of clearly identified ports. Fishing firms, furthermore, are fewer and easier to control than farmers. In the fruit and vegetable trade the sources of supply are both many and widely scattered, and transport routes and delivery points outside the wholesale market can multiply unnoticed.

The rapid increase in agricultural productivity and conservation techniques after the war, as well as the improved efficiency of transport, accentuated these differences and made it virtually impossible to monopolise produce. The only example of collusion mentioned by the Commission involving *commissionari* and their emissaries concerns a case in which distribution is forced through a bottleneck: by controlling the boats linking the small island of Pantelleria to the main island, a group known as L'Associazione made sure that the local cooperative sold the zibibbo grape exclusively to them. But in general, monopolies were already being eroded in the 1960s because, according to the Parliamentary Commission, 'wealthy wholesale and retail dealers collect directly from northern Italy and introduce ever-increasing quantities of good fruit for consumption'.

A further bottleneck has also been broken. Before the rural Casse di Risparmio started to function properly, credit was in the hands of the 'man of respect'. Producers who wanted credit were obliged to sell their goods to him. As sources multiplied credit no longer had the same kind of strings attached. It is now granted sparingly to customers rather than producers and is a means of fostering competition rather than enforcing collusion. Creditors are less inclined to resort to violence against insolvent debtors lest other clients are diverted to more benign rivals.

There are also instances of the New York mafia losing its influence in

industries. The trucking industry, in which the mafia notoriously had acquired influence throughout much of the nation through the instrumentality of the Teamsters Union (three of whose presidents have been convicted of corruption), now seems to be much less subject to that influence. Two factors may have been significant here; deregulation of the industry (which reduced the power of the union) and aggressive and imaginative prosecution of the Teamster leadership (which resulted in a reform leadership being installed at the beginning of the 1990s).

However, most targeted efforts to remove the mafia from specific industries in the United States have been generally unsuccessful. In response to concerns about the role of the mafia (and lack of competition) in the carting industry in New Jersey and New York City, the industry has been subject to regulation (since 1956 in New York City and since 1968 in New Jersey). A flow of cases shows that the regulation has been utterly ineffective in New York City; the evidence concerning New Jersey is less clear but anti-competitive agreements, perhaps with mafia involvement, have been alleged as late as 1988. The regulatory apparatus had indeed become one of the tools for the operation of the customer allocation agreement. The regulators allowed the sale of customers and, through inflexible price rules in New Jersey, provided the basis for contesting new entry.

8 Prices and profits

The returns to participants in these cartels are difficult to determine. The available data are best for the carting industry, where customers are treated as assets and frequently bought and sold by the participants (Reuter, 1987).

The little we know of the charges by mafia members for their services suggests that, at least where the relationship with the industry is stable, those charges are surprisingly modest, indeed well below extortionate levels. In the Long Island carting industry in the mid-1980s it appeared that the mafia took no more than \$400,000 annually in tribute, though the estimated profits accruing to the carters was over \$10 million. The mafia-run concrete cartel in New York City levied only 2 per cent of the contract price for its services in fixing prices. As for Sicily we have the following evidence: in 1993, Baldassare di Maggio, a *pentito* we encountered already, describing the mafia's role in organising bid-rigging in construction, reported that they kept 5 per cent; 3 per cent was for the mafioso organisation and 2 per cent was given to Siino to pay the politicians that were paid as part of the overall agreement.

The fact that customers of carters are sold at such high prices in inter-

carter transactions provided evidence that the primary beneficiaries of the agreement in that industry were the carters themselves. If the mafia taxed away all the returns from the agreement, then customers would have no greater value than they would in a competitive industry; in fact they sold for a very substantial mark-up over the competitive price.

We can offer no convincing explanation for these observations. If the mafia were marketing its cartel-organising services, then these might be seen as prices intended to maximise their profits over the entire market for such services. However, the peculiar lack of mafia entrepreneurialism – no new industries have been identified as being subject to mafia control over the last decades – weakens this supposition. Nor does it seem that the mafia lacks information about the profits generated to other actors in this business. Access to accounts of member enterprises is certainly not a problem in the New York markets in which the organisation is active. Finally, we do not believe that these prices are set so as to minimise the risk of aggressive informing by other participants.

9 Conclusions

We make no claim to have identified all the relationships between the mafia and legitimate enterprises. The casino industry in Nevada, where the mafia interest was confined to tax fraud, debt collection from bettors, and some bankruptcy scams involving capital from the Central States Teamsters pension fund, represents a very different situation. On the waterfront, in New York and Florida, the mafia seems to have used its power, again through the instrumentality of a union, to extort shippers, carriers and those providing services on the docks. In neither of these industries has it acted to suppress competition on a continuing basis. Yet, we believe that the phenomenon described in this paper is one that has received too little attention. The suppression of competition is a near-universal dream of established entrepreneurs. The mafia is one of the few non-governmental institutions that can help accomplish this goal. Our impression, based on a limited set of examples, is that once the mafia has entered, its success in meeting the needs of its customers, as well as its unique reputational asset, makes the reintroduction of competition extremely difficult. The phenomenon observed here may be just a generalised form of the Stigler-Peltzman theory of state regulation (Stigler, 1971; Peltzman, 1976). The state is unable or unwilling to meet the demand of entrepreneurs for profit-enhancing and risk-reducing regulation; the mafia provides the service instead.

The phenomenon is perhaps of more analytical than policy interest, since there are signs that it is now receding, mainly because the mafia

itself appears to be diminished in power in both countries. In the United States, the results of a continued federal campaign have led to the conviction and long-term imprisonment of much of the leadership. In Sicily too the mafia never had it so bad and is now under unprecedented state pressure: virtually all mafiosi who sat in the mafia 'governing body', known as La Commissione, are now in jail. Mafioso assets worth 3,500 billion lire were seized by customs police in 1992 alone. At the same time, a new crop of mafiosi turning state witnesses has been growing and their revelations are leading to further arrests and repressive actions.⁷ Mafia reputation may be, initially at least, little diminished by these imprisonments, but its ability to venture into new fields is probably limited by the inexperience of, and instability in, the new leadership. Furthermore, the current dramatic political changes in Italy are likely to decrease the opportunities for political corruption and bid-rigging which used to provide the major outlet for mafia-regulated cartels of building contractors. Finally, some of the market conditions that (jointly) facilitate mafia entry as a cartel organiser – such as low technology, unskilled labour and unionisation – occur less frequently now than when it acquired its influence over industries, mostly between 1920 and 1950.

The prospects for increasing our understanding of the phenomenon are being enhanced by the very forces that are diminishing the mafia's powers. Certainly the trials of the major families in both Sicily and various American cities (including Boston, Chicago, Kansas City and New York) have provided a wealth of detailed information on the relationship between the mafia and their legitimate clients which awaits analysis.

NOTES

- 1 Here we prudently use the term mafia as referring to the Sicilian mafia, also known as Cosa Nostra, both in Italy and the United States. Whether other broad and enduring criminal organisations supply the same service is a matter for empirical analysis to establish.
- 2 A curious case of failure of cooperation due to difficulties of both policing and sanctioning is represented by radio taxis in Palermo (see Gambetta, 1993, pp. 220–5).
- 3 Carting is the term used to describe the collection of solid waste, whether from households or commercial establishments. It does not include the collection of hazardous waste, where different possibilities exist for collusion and fraud.
- 4 'Up to perhaps six firms one has oligopoly, and with fifty or more firms of roughly similar size one has competition; however, for sizes in between it may be difficult to say'. This is the rule of thumb offered by James Friedman's textbook (1983, p. 8).
- 5 This is analogous to the argument which holds that widespread corruption is

self-generating: the expectation suffices to produce more of the thing itself (Andvig and Moene, 1990).

- 6 The case of this market is illustrated in full in Gambetta, 1993, pp. 206–14.
- 7 For a full assessment of the mafia's prospects in Sicily see the new introduction to the second Italian edition of Gambetta's *The Sicilian Mafia*, published by Einaudi (Torino) in 1994.

REFERENCES

- Andvig, J. C. and K. O. Moene (1990), 'How Corruption May Corrupt', *Journal of Economic Behavior and Organization*, 13, pp. 63–76.
- Bell, D. (1960), 'The Racket-ridden Longshoremen', in *The End of Ideology*, Glencoe IL: The Free Press.
- Block, A. (1982), *East Side–West Side: Organizing Crime in New York, 1930–1950*, New Brunswick NJ: Transaction Press.
- Chubb, J. (1982), *Patronage, Poverty and Power in Southern Italy: A Tale of Two Cities*, Cambridge: Cambridge University Press.
- Dasgupta, P. (1988), 'Trust as a Commodity', in D. Gambetta (ed.) (1988).
- Fiorentini, G. (1994), 'Cartels Run by Criminal Organizations and Market Contestability', unpublished paper, Department of Economics, Università di Firenze.
- Franchetti, L. [1876] (1974), 'Condizione politiche ed amministrative della Sicilia', Vol. I of L. Franchetti and S. Sonnino (eds.), *Inchiesta in Sicilia*, Firenze: Vallecchi.
- Friedman, A. (1988), *Agnelli and the Network of Italian Power*, London: Mandarin Paperback.
- Friedman, J. (1983), *Oligopoly Theory*, Cambridge: Cambridge University Press.
- Gambetta, D. (1988), (ed.), *Trust. Making and Breaking Cooperative Relations*, Oxford: Basil Blackwell.
- Gambetta, D. (1993), *The Sicilian Mafia: The Business of Private Protection*, Cambridge MA: Harvard University Press.
- Gosch, M. A. and R. Hammer (1975), *The Last Testament of Lucky Luciano*, London: Macmillan.
- Landesco, J. [1929] (1968), 'Illinois Crime Survey, Part III', reprinted in *Organized Crime in Chicago* (with introduction by Mark Heller), Chicago: University of Chicago Press.
- New Jersey State Commission of Investigation (1989), 'Solid Waste Regulation', Trenton NJ.
- New York Organized Crime Task Force (1988), *Corruption and Racketeering in the Construction Industry*, New York: ILR Press.
- Peltzman, S. (1976), 'Toward a More General Theory of Economic Regulation', *Journal of Law and Economics*, 19.
- Reuter, P. (1983), *Disorganized Crime: The Economics of the Visible Hand*, Cambridge MA: MIT Press.
- Reuter, P. (1987), *Racketeering in Legitimate Industries: A Study in the Economics of Intimidation*, Santa Monica CA: The Rand Corporation.
- Reuter, P. (1993), 'The Commercial Cartage Industry in New York', in A. Reiss and M. Tonry (eds.), *Beyond the Law: Corrupt Organizations*, Vol.

18 of *Crime and Justice: A Review of Research*, Chicago: University of Chicago Press.

Reuter, P., J. Rubinstein and S. Wynn (1982), *Racketeering in Legitimate Industries: Two Case Studies*, Washington DC; National Institute of Justice.

Scherer, F. M. (1970), *Industrial Market Structure and Economic Performance*, Chicago: Rand-McNally.

Stigler, G. J. (1964), 'A Theory of Oligopoly', *Journal of Political Economy*, 72, February.

Stigler, G. J. (1971), 'The Theory of Economic Regulation', *Bell Journal of Economics and Management Science*, 2.

Discussion

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Gambetta and Reuter's timely study addresses the neglected problem of the mafia's role in legitimate activities in a new and intriguing way: their idea is that 'mafia solves a problem of potential cartels', by providing a paid service to entrepreneurs asking for 'profit-enhancing and risk-reducing regulation'. In their conclusion they seem to downplay the argument proposed, arguing that in recent years the mafia has been losing power and therefore that their analysis may be of 'more analytical than policy interest'. We think instead that it is too early to be optimistic: the problems raised by Gambetta and Reuter remain important because the mafia is an overlooked danger for the process of European unification and it could prove to be a major obstacle to the well-functioning of its market.

Their analysis offers some novel insights, together with some difficulties which we now consider in more detail. Put into economic terms their model implies a market for a peculiar service, namely the 'punishment' needed for implementing a stable cartel agreement: equilibrium in the market results from a legal demand curve, made up by the firms willing to form a cartel, and the illegal supply curve, provided by the mafia.

The alternative to this framework would be to consider the mafia as an exogenous 'auctioneer', but that would simply assume what has rather to be explained, namely the mafia's economic role. The nature of this market is intrinsically multi-periodic and changing over time: before

selling this service the mafia is (by definition) a monopolist facing a downward demand curve. Once, in the first period, the contract is in force and the price for the service has been paid, the various demand curves of the firms collapse in the single demand curve of the cartel, which can be considered a new, single, fictitious agent acting for the newly formed cartel. In subsequent periods the market is therefore transformed into a double monopoly relationship. Instability of cartels is a well-known fact: if the mafia is successful in implementing a stable cartel, which is the condition for it to be paid the market price of its services, then a bilateral monopoly between a monopolistic seller and a fictitious monopsonistic buyer becomes the ongoing prevailing relationship in the market.

The equilibrium of this market is robust, as one should expect when dealing with the mafia. In fact it is a well-known result that, in a sequential game, a cartel can be sustained in a stable equilibrium by a credible punishment strategy, and indeed the mafia has the capability to implement this kind of strategy. Moreover it can be shown that bilateral monopoly produces a 'double' monopolistic inefficiency, thus helping to explain the detrimental effects of the mafia on economic performance.

This framework seems to account correctly for most of Gambetta and Reuter's results: there are however problems that should be better articulated. The necessary condition which, in the first period, starts the agreement is the existence of gains from trade, namely further profits of the legal cartel that exceed the cost of its enforcement by the illegal mafia. In the case of a bilateral monopoly, the gains from trade are distributed according to the bargaining power of the two monopolists, which, in turn, is related to the distribution of information. Costs cannot be assumed to be common knowledge: the mafia will know better the costs of the cartel's firms, while the cartel, as well as each firm, will find it impossible to know the costs of the mafia. Asymmetric information will, in time, raise the share of the surplus that accrues to the mafia, unless the two monopolists can reach a credible agreement in advance, in the form of an implicit fixed-price contract.

Gambetta and Reuter produce examples of implicit contracts, like in the cartel of the concrete industry in New York City, where the mafia 'levied only 2 per cent of the contract price': however, it is not possible to assess whether 2 per cent is too little or too much unless one considers also the costs for the mafia and the profits for the concrete industry. Indeed, we will argue later, the nature of this contract seems more in the nature of a tax rather than a market price: profits for the mafia will be less volatile than the profits for the cartel because the mafia has shifted part of the market risk on to the cartel.

Moreover, this kind of contract raises again the more general point about information in a bilateral monopoly: given a structure involving asymmetric information, the two parties will usually introduce clauses that allow reciprocal auditing. When common knowledge about costs is impossible, however, because reciprocal auditing is not feasible, vertical integration of firms becomes an efficient answer to both the problems of auditing and risk sharing (Arrow, 1975). In fact one can give countless examples of this economic behaviour between legal firms: the case for vertical integration seems still stronger, as a possibility, when the mafia is present.

This possibility is worthy of exploration by the authors, because the further expansion of the mafia in the legal sectors will increasingly depend on vertical integration. The obvious example is when the mafia simply 'buys' the firm, but the most crucial case seems to be the one in which the mafia is going to have a 'minority' stake in a legal and well-functioning firm. This could easily be the case even in competitive and advanced sectors, where 'venture capitalists' fund new and innovative firms: the seeming absence of the mafia in these sectors requires an explanation which goes beyond the market and technological difficulties of forming cartels underlined by the authors.

We should consider more fully that the mafia is highly risk averse and particularly sensitive to the risk of cheating, which is usually, but not necessarily, more likely in higher-risk sectors, like high technology. Gambetta and Reuter should also better define the nature of the service exchanged, which can be thought of as the punishment or the cartel stability (allowed by the threat of punishment). The mafia provides a service which has the characteristics of a local public good: in fact cartel stability is a service that cannot be individually appropriated and for which not every firm can benefit by excluding the others. The market underlying the bilateral monopoly is indeed a market for a public good: as a consequence we have to cope with the typical problems related to the efficient provision of a public good, namely the free-rider problem and the assessment of the individual willingness to pay. The consequence is that market prices must be replaced with personalised (Lindahl) prices which correspond to the individual willingness to pay: the informational problem, already pervasive, now becomes fundamental, because we are dealing with the peculiar market structure of a bilateral monopoly for a public good. Inadequate information prevents the implementation of Lindahl prices and explains why, in the real economies, we revert to compulsory taxation for financing the provision of public goods.

We must conclude that, in Gambetta and Reuter's model, the theoretical distinction between market prices and taxes is logically

blurred: their empirical examples seem to support more the intuition of taxes rather than prices. This difficulty mirrors the equally ambiguous distinction between voluntary and involuntary economic behaviour, whose explanation is much harder than expected. In a witty remark about involuntary unemployment, Patinkin (1965, p. 313) cited the Talmudic dictum that – in certain cases of private law where the formal consent of an individual is required – the court is permitted 'to coerce him until he says "I am willing"'. The remark seems especially apt when dealing with the mafia, because the distinction between voluntary and involuntary exchanges appears still more confused.

The alternative approach of the mafia as a quasi-governmental institution which levies taxes has been pursued elsewhere with more detail (Campiglio, 1993): it has the advantage of offering some new insights like that of 'comparative disadvantage'. In conclusion, Gambetta and Reuter offer a timely and provocative interpretation of the mafia: in fact there are good reasons to believe that the mafia could pose a serious danger to the process of European integration. The paper offers a rich array of insights and, hopefully, could trigger a wider debate. Economists could offer the contribution of rigorous economic arguments, exploring new lines (like that of endogenous uncertainty) and helping to design a new policy to fight effectively the economic and social tragedy of the mafia.

REFERENCES

- Arrow, K. (1975), 'Vertical Integration and Communication', in *Bell Journal of Economics and Management Science*, 6, pp. 173–83.
- Campiglio, L. (1993), 'Le relazioni di fiducia nello Stato e nel mercato', in S. Zamagni (ed.), *Mercati illegali e mafie*, Bologna: Il Mulino.
- Patinkin, D. (1965), *Money, Interest and Prices*, second edition, Harper International.