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THE ORGANIZATION OF ILLEGAL MARKETS: A THEORETICAL ACCOUNT

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INTRODUCTION

This essay is motivated by an earlier study (Reuter and Rubinstein, 1982) of certain illegal markets (numbers, loansharking, and bookmaking) in New York in the mid-1970s. That study suggested that, contrary to common beliefs, these markets were populated by numerous, relatively small, often ephemeral enterprises whose relationships were closer to competition than collusion. Certainly there were large segments of all three markets in which there was no restraint on entry or any suggestion of price-fixing, the classic indicators of centrally controlled markets. Indeed, there was even direct evidence that one effort at price fixing in the sports bookmaking business had been an abysmal failure because the group that formed the cartel had been unable to identify and coerce all the bookmakers available to their customers.

These results are sharply in contrast with the claims of official agencies since the time of the Kefauver committee.[1] Those claims, also reflected in a vast popular literature, state that illegal markets in many cities, including New York, are subject to central control by a single group, whose authority rests on a well-established reputation for commanding great forces of violence and/or on control of corrupt police and political authority.

The obvious question arising from the empirical study is whether the results can be generalized. Might the findings be accounted for by the choice of site or by the choice of particular product markets? Could they be generalized to other cities and other products? Though the choice of product markets seemed unexceptionable,[2] there was certainly some reason to be concerned about the impact of location. New York is by far the most populous metropolitan area in the U.S. and it is characterized by unusually fragmented political authority; for example, each of the five boroughs has its own district attorney. The combination of sheer size and fragmentation makes the task of controlling an illegal market in New York substantially more difficult than in other large American cities. The fact that New York is believed to be the home of five autonomous families of the Mafia, while no other major city is thought to have more than one family resident in it, increases the suspicion that the finding of fragmentation or competition in illegal markets in New York is not applicable to other cities. Interfamily rivalry, which creates conflicts within markets, may prevent centralization.

The purpose of this essay is to argue that the results are not likely to be unique to New York. There are in fact numerous economic factors which tend to produce small and ephemeral enterprises in illegal markets. Just as importantly, we shall see that the role of violence is not likely to alter this situation. There are constraints, both economic and institutional, which inhibit the use of violence to restrain competition and establish dominance by a single group.

This is not a claim that no illegal market can ever be subject to such control. There is indeed considerable evidence that some major illegal markets have, in the past, been so controlled.[3] However, the analysis does suggest that this is likely to be the result of political circumstances, especially centralized police authority, and of particular modes of marketing.

The rest of the essay is divided into three broad sections. The first is a brief explication of the variations in the organization of legal markets. Some legal markets are characterized by large, diversified firms which operate in numerous product and geographic markets and which integrate many functions related to their final products within the firm. Other markets are characterized by many small firms, each specializing in producing the particular final product and nothing else. By setting out the factors that economists have suggested to explain this variation, we can provide a framework for understanding the organization of illegal markets.

The second section considers the consequences of the illegality of a product for the way in which various participants (entrepreneurs, agents, customers, etc.) will seek to structure their relationships. The threat of police intervention, either to seize assets or to imprison participants, together with the lack of court-enforceable contracts, leads to the formation of small and relatively ephemeral enterprises. The possibility that participants will provide information about others to the police in return for reduced penalties is the critical mediating factor. The addition of corrupt police does not change this result except where there is a single police organization with uncontestable jurisdiction.

The existence of numerous small enterprises selling an essentially undifferentiated product would, in a legal market, assure a high degree of competition; at least it would make it very difficult for collusion to result in excess profits.[4] When a product is illegal, however, we may find collusion among large numbers of enterprises. Yet, the second

section concludes that, even in the absence of anti-trust authorities,[5] fragmented illegal markets will be characterized by little collusion.

At this point, we consider the consequences of violence for the organization of a market. Product illegality makes possible the use of violence for competitive purposes. Indeed, that has been argued to be the major reason for the emergence of monopolies in illegal markets. The third major section of the essay considers the role of violence, arguing that there are some factors which limit its role in organizing markets. Although dominant gangs may emerge, they will be able to reap rewards from their control of violence only after their reputation, and the uncertainty about the size of the forces they command, permit them to reduce their costs of employing violent labor. Reputation, however, is a two-edged sword and there may be additional costs arising from it which still further impede aggressive use of dominant force, such as law enforcement agencies' focusing their efforts on groups who have such a reputation. The last part of this section also discusses the noncompetitive motivations for violent behavior in illegal markets, motives internal to illegal enterprises, and their consequences for the shape of enterprises and markets.

The final section of the paper considers the implications of this analysis for organized crime policy, in particular the efficacy of enforcement strategies which focus on illegal markets. It is argued that campaigns against illegal markets are likely to have little impact on organized crime except in special circumstances, which are delineated in that section.

I. PRINCIPLES OF INDUSTRIAL ORGANIZATION

Why are some markets (e.g., the metal stamping business) characterized by numerous small firms, each specializing in a very limited range of activities, while others (e.g., the aluminum industry) are characterized by a small number of large firms each of which produces a wide range of final and intermediate products? Why do some firms enter a wide range of apparently unrelated markets while others specialize? Why are some goods sold in local markets while others are sold by firms that operate in every region of the nation? The examination of issues such as these constitute the field of economics called "industrial organization." A brief examination of the principles of industrial organization, in particular an emerging line of research which focuses on transactions costs (the costs of carrying out economic transactions either through the market or within an organization) will provide a useful background for our explanation of how illegal markets are organized.[6]

The central analytic focus of industrial organization has traditionally been the shape of cost curves, i.e., the relationship between number of units of output produced by a firm and the cost of producing those units. If cost curves decline continuously, which occurs when each additional unit of output costs less to produce than every previous unit of output, then the market can be captured by a single producer, since a monopolist will incur lower costs for a given output than any larger set of suppliers.

At the other extreme lie markets for products whose production is characterized by cost curves which turn upward (the cost of producing the

next unit is higher than the cost of producing the current one) at an output which is small relative to the market as a whole.[7] The markets for such products will be populated by numerous small firms, each producing at the lowest point on its production function. These are competitive markets in which no single firm controls the price or the quantity of the good sold and current producers cannot prevent the entry of new firms.

What determines the shape of cost curves? There are different classes of factors that can be listed. Some are physical; beer vats of 10,000 gallon capacity require less metal per gallon than do vats of 1,000 gallon capacity. This is simply the result of the capacity of a container increasing by the cube of its diameter while the area of its surface increases only with the square.[8] Thus, the cost per gallon of larger vats will be lower than for small vats. There are other factors which are technological, but not merely physical. Consider again the beer industry. The cost of reaching 10 million potential beer drinkers with an advertising message is less than 10 times that of reaching 1 million, because of the technology of television production and distribution.

Classical industrial organization has stressed such technological factors. Far more important far our purposes, however, is another class of factors affecting the shape of cost curves which are now becoming increasingly important in the field of industrial organization. These are factors relating to the difficulty of coordinating group activities. Although technology points to a continuing decline in the costs of production, that will occur only if every individual involved in the production process acts in the best interests of the firm. Therefore, the costs of monitoring employees' performance to ensure that they do not "shirk" increase rapidly. The factor limiting the size of firms in a particular industry may be the cost of effectively monitoring individual performance in large groups.[9]

As the economy moves increasingly from manufacturing to the production of services, the role of purely technological determinants of firm size has perhaps become less central. Since the illegal markets with which we are concerned are primarily service industries, it is probably appropriate to focus most of our attention on the non-technological determinants of the organization of a market. Gambling and loansharking, the case study markets, are both service industries as are the other major illegal markets, such as those involving the sale of a physical product, drugs. The bulk of the total cost of getting the final good to the consumer is not production but compensation to those involved in the distribution of the drug from production point to the final consumer; for heroin, the mark-up from production to final sale may be as high as 100 times.[10] The cost curve of a heroin distribution enterprise is likely to be determined by human factors.

Williamson (1975) has provided the clearest and most complete statement of the framework for industrial organization which emphasizes human factors. The issue that he puts at the center of his analysis is the choice between organizing a particular transaction (e.g., a purchase of an input such as labor) within the firm or executing it in the market, for it is that choice which determines the size and scope of firms. The choice depends in large part on the ease of monitoring performance, which in turn depends on the flow of information.

Consider, for example, the choice between purchasing an input in the market or producing the input internally, expanding the firm to include related activities which are not currently carried out within it. Should an automobile firm produce its own steel or purchase it from specialized steel producers? By purchasing in the market, the firm is able to make use of price to search out the low cost source of the input; it does not have to invest scarce resources in the management of additional and different productive activities. On the other hand, internal production reduces uncertainty and ensures that the firm is not disadvantaged by small numbers of producers in the input market, which may allow suppliers to manipulate prices above competitive levels in bargaining.[11]

This same approach can also help explain the geographic scope of markets and enterprises. Let us return to the familiar example of the beer industry to illustrate the issue. There is now a national market for beer; each of the major producers sells in all the major regions of the nation. A producer who serves a single city must compete in that city with these national brewers. Contrast this with the situation 50 years ago, immediately after Repeal. Then each city was served by local brewers, who did not have to take into account the actions of brewers in other cities in making price, output, and marketing decisions.[12]

The change is the result of a number of factors. Technology has improved so as to permit storing and transporting beer throughout the nation from a single production point. The optimal size of a brewery, purely in terms of beer production costs, has also increased, i.e., the lowest cost is now attained in a larger brewery than was formerly the case. Perhaps most important has been the development of a national advertising market. It is now possible to reach a national audience at a lower per capita cost than a local brewer can reach the audience in his city alone.[13] Indeed, the creation of national markets in most consumer goods may be the result primarily of this change in advertising together with the increased mobility of consumers. The growth of franchising supports that conclusion; McDonald's and Holiday Inns take advantage of both the national advertising media and the mobility of consumers, who frequently purchase meals and lodging in areas where they have no knowledge of local facilities. The familiar symbols serve as signs of predictable quality.

Related to the improved advertising technology, which has enabled advertising to reach a national audience, is the declining cost of communicating to distant points, which has allowed large national firms to monitor agents in remote locations. Technological advances in the national banking system now permit almost instantaneous transfer of funds, again reducing the transaction costs of running a national firm; the central office and branches of a firm are no longer handicapped by the necessity of keeping large balances at the branches to avert delays or costs in moving funds.

These factors are only a few of the elements that encourage the growth of national markets and firms; they are important here in part because they highlight the importance of human factors: the ability of managers to control activities very distant from them, which is dependent on other institutional developments. The national beer market is the result of the growth of national media, telephone, and banking systems, as well as changes in the technology of production. A beer industry which could not tap into these systems might look very different.

The final dimension of a firm which should be considered is

institutional: its diversification across product markets. In recent years, an increasing number of firms have entered a number of apparently unrelated product markets; these are the conglomerate firms. The existing accounts for this phenomenon are uniformly unsatisfactory.[14] The Williamsonian framework, with its stress on managerial and human factors, is perhaps most advantageous here. A conglomerate may be viewed as the integration of a financial firm, an allocator of capital, with a number of optimal size firms. The advantage of integration is that information flows better to the internal capital source than it does to external capital markets. The financial center is able to make more rapid adaptations in investment allocations between the units than the capital market can.

In summary, our discussion of industrial organization shows that the organization of a market is determined by a complex of technological, institutional, and human factors. They cannot be dealt with separately; it is their interaction which determines the optimal size and scope of firms. However, since the impact of product illegality is most directly on institutional and internal organizational issues, we shall focus attention upon these.[15]

2. THE CONSEQUENCES OF PRODUCT ILLEGALITY

It seems plausible that the legal status of a product will affect the way in which its production and distribution are carried out. For example, if beer were once again prohibited, it is unlikely that it would continue to be produced by such large and conspicuous brewing units, distributed nationally from a small number of central points, and marketed aggressively in a national market. Similarly, if marijuana were legalized, it might well be produced and distributed by entities more like the tobacco companies (national production, heavy brand advertising by producers) than the small, vertically unintegrated enterprises that function in the current illegal market.[16]

The purpose of this section is to explore the impact of the prohibition of a good on the manner in which its production and distribution are organized, focusing on the impact of illegality on the choice of transactional mode. I shall argue that there are numerous economic incentives for illegal markets to be populated by small, localized enterprises, which are not vertically integrated and which operate in only one product market. They are also likely to be ephemeral. In the third section the possible use of violence to control a market will be added to this analysis.

This section is generally comparative in that it examines how illegality <u>changes</u> the organization of a market; it presents no theoretical results about the absolute size of the illegal enterprise. The case studies in Reuter and Rubinstein (1982) found very small enterprises in three major markets. Although the argument presented here suggests that the factors that produced these small enterprises are likely to be general, it does not show that only small units will survive but only that illegality will lead to smaller enterprises than otherwise.

Let us begin the analysis by listing some of the significant operational consequences of product legality for participants in the trade:

1. Contracts are not enforceable in courts of law.
2. The assets of the illegal operation may be seized at any time that law enforcement agencies identify the operation and locate its assets.
3. All participants risk arrest and imprisonment.

If these are the fundamental operational effects of product illegality, it is clear that their significance for the organization of a market is likely to vary among products. The severity of legal risk (factor 3) is not constant; heroin dealers face high penalties, numbers retailers low penalties.[17] Some markets are characterized, when legal, by relatively high ratios of fixed capital costs to value added, others by low ratios (factor 2); high fixed capital industries will be more affected. Finally, though less obviously, formal contracts (factor 1) are of variable importance across legal markets.[18]

The most immediate consequence of product illegality, stemming from the costs of asset seizure and arrest, is the need to control the flow of information about participation in the illegal activity. That is, each participant must structure his or her activities, particularly those involving other participants, so as to assure that the risk of the police[19] learning of his or her participation is kept low. That influences whom and how many the participant is willing to transact with, and how he or she structures the transaction.

Before getting into the analysis, we need to specify a critical factual assumption which will make its appearance at various points in the discussion. That assumption concerns police strategies. In illegal markets, the ideology and practice of police is to rank participants in terms of their significance in the trade. A less significant figure (i.e., an agent, employee, or customer) will generally be able to retain his or her freedom by effectively informing against a more significant figure. This is well understood by all participants in the market.[20]

Our analysis proceeds in terms of how members of different participant groups structure their relationships with members of other groups. There are six major roles in the operation of a market: entrepreneur, employee or agent, supplier, final customer, creditor, and regulator (police). The entrepreneur interacts with all of the others. The others in general have attenuated relations with each other.[21] Consequently, we shall focus on the entrepreneur's dealings with agents, creditors, etc. Since the optimal adaptations (from the relations found in the relevant legal market) are not necessarily symmetric, we consider the two sides of each relationship separately.

Employment

Employees present a major threat to the entrepreneur. They have the most detailed knowledge concerning his participation; they can provide information not only about past dealings, but also about future dealings, which might lead to his arrest and the seizure of assets involved in the transaction. The entrepreneur aims then to structure his relationship with employees so as to reduce the amount of information available to them concerning his own participation and to ensure that they have minimal incentive to inform against him.

The first of these objectives he can achieve through segmentation of the enterprise, thus lowering the number of employees with whom he is in direct contact, and also through ensuring that an even smaller number are

knowledgeable about future transactions. For example, a heroin wholesaler, who dilutes ("cuts") the heroin while it is under his control, will seek to ensure that few if any of those involved in the "cutting" know his identity. Agents may be used to recruit personnel for the cutting room. Those who must know will be given elaborate routines to follow so as to minimize the length of time during which they will know where and when the entrepreneur is in possession of the heroin. They might, for example, be required to go to a certain cafe every Thursday evening, there to be given instructions about a transaction which will take place that same evening. Cutting personnel will have minimal information concerning the dealer's identity; they may not even know his real name or address. Indeed, even in bookmaking, where legal penalties are modest, colleagues of many years standing may not know each other's names.[22]

Providing incentives for loyal performance presents a more complex problem. One strategy is to require exclusive employment and to reward such employment by paying high wages. Exclusive employment reduces the ability of the employee to maintain earnings in the event that the entrepreneur is arrested or some other event interrupts the continuity of the enterprise. High wages obviously add to the employee's incentive to protect his employer's freedom. Yet this strategy is potentially expensive; exclusive employment may be unnecessary on purely economic grounds, and above market wages for loyalty raises total production costs.

An alternative strategy is to intimidate employees. The entrepreneur may invest in acquiring a reputation for acting against all those who threaten his freedom or his enterprise. For example, he may seek to make employees believe he will inflict injury on anyone he suspects of acting disloyally by informing police or competitors. This strategy involves two kinds of costs. Not only must the entrepreneur invest in acquiring the necessary reputation by hiring toughs, but he must also compensate employees for the hazard of working in the enterprise. After all, since the standard of proof of disloyalty must necessarily be less than absolute, the innocent employee risks being punished for the disloyalty of others.[23] For this the employee will require additional compensation.

While money and fear are the dominant strategic variables for ensuring loyal performance, there is another approach: attempting to create positive non-economic ties with employees. The recruitment of relatives as employees is one such effort; the enterprise and the family merge as a unit commanding loyalty. Employees who are relatives are also likely to believe that their employment will be long-lasting, increasing the economic incentive for loyalty. Alternatively, the employer may attempt to incorporate the employee into his extended family, which can only be done with a limited number of employees. To attempt this with large numbers would strain credibility as well as require substantial resources. But the restrictions of this method are consistent with a segmented enterprise; only those subordinates who have sufficient contact with the entrepreneur to endanger him personally need be brought into this fictive family relationship.

Now let us consider the employee. He, of course, is also concerned about revelation of his participation in the enterprise. However, it is unlikely that he perceives the entrepreneur as a threat, given the latter's own incentives to behave discretely. The entrepreneur cannot

purchase relief from police by informing against the employee. But, the employee is threatened by other employees who may inform against the enterprise as a whole, some subunit of it, or even against him specifically. This last is a particular threat if there are employees of lower rank.

The larger the number of other employees of the same or lower rank with whom he must deal, the higher the risk. Although this is also true for the entrepreneur, the employee cannot control the structure of the enterprise around him. The entrepreneur, on the other hand, may find that the larger the number of employees he concentrates at a single location, the higher the wage he must offer each for the added risk. As a result he may disperse employees in an attempt to reduce the risk to which each employee is exposed.

This analysis suggests that there are at least three employment related consequences of product illegality which will tend to keep illegal enterprises smaller than their legal counterparts. The necessity for keeping work groups small will prevent the enterprise from taking advantage of production economies of scale. It will also raise the administrative cost of managing a given size work force. The incentive of the entrepreneur to keep small the number of managers reporting to him directly may further constrain the size of the illegal enterprise.[24]

Supply

Under the term supply we consider both forms of vertical integration, forward and backward. Foward integration occurs when the enterprise carries out a function previously carried out by those to whom it sold its good or service. For example, a numbers banker might integrate forward into retailing by substituting salaried employees for the commission agents or controllers currently used.[25] Backward integration occurs when an enterprise produces internally an input which it previously purchased from an independent enterprise; a marijuana distributor might integrate backwards by purchasing his own airplanes and employing pilots rather than contracting with an airlift supply company. These are both treated as supply issues because they alter the number of autonomous enterprises with which the entrepreneur must deal. They are also analytically symmetric; backward integration by one enterprise is forward integration by another.

Since the overwhelming share of the cost of production of illegal goods and services is payment to labor, involving compensation for both time and (more importantly) assumption of risk,[26] the issue of vertical integration can be considered in terms of the choice between employment and other agency relationships. That is, the entrepreneur in vertically integrating increases the number of employees and range of skills in his enterprise, but not the capital goods investment, except in the case of transportation. Even for transportation the possibility of renting most equipment limits the necessary investment. In making the choice the entrepreneur must take into account the relative riskiness of the employment relationship compared to the alternatives, and the costs of managing an expanded and more diverse work force.

Will illegality raise or lower the incentive for internalizing a function? There are factors pushing in both directions. Consider the inducements to integrate. Illegal markets are frequently characterized by high search costs; it may be time consuming to acquire an alternative

supplier for a particular service if the existing relationship is interrupted. It is also difficult to determine whether the price offered by the current supplier is competitive or whether there is a lower cost source. The loyalty of the supplier is uncertain, since he may be able to obtain relief from police interventions by providing the names of a few of his customers. Making the supplier an employee raises the certainty of provision of the input, increases his loyalty, and has relatively small cost in terms of loss of information about the market price of the service.

There are a number of factors working in the opposite direction. The employee, if apprehended, has only one enterprise which he can put at risk in return for continued freedom, namely his employer's, and his regular contact with the entrepreneur will increase the amount of information he can supply. Finally, he may form factions with other employees to supplant the entrepreneur.

Although it is difficult to determine from this theoretical analysis whether illegal enterprises actually benefit from internalizing functions, as a matter of observation illegal enterprises seem to be quite unintegrated. Heroin distribution enterprises involve armslength transactions between different levels rather than integration of importing, wholesale, and retail components.[27] Marijuana importers buy their airplane flight services from independent entrepreneurs, a fact which drug enforcement agencies have put to good use by setting up undercover service supply enterprises. Bookmakers do not hire exclusive sales agents, but retail through independent commission agents.

One possible explanation for the lack of integration is the instability of enterprises and relationships in illegal markets. The employment relationship is encouraged in legal contexts by the probability that the employee will be a member of the enterprise for a considerable period of time; the employer can invest in training the employee to acquire general skills (for which the employee will receive below market wages during training) and skills specific to the firm (for which the employee will receive above market wages after the training).[28]

The planning time horizons of participants in illegal markets are likely to be much shorter. The employees include a disproportionate number of unreliable workers,[29] who are also subject to imprisonment from time to time. The enterprise is more ephemeral for a variety of reasons, including the probability that the entrepreneur himself will be arrested occasionally. The result is that one of the incentives for entering into an employment relationship--the opportunity it provides for both sides to make skill investments--is greatly reduced.

There is another general factor which reduces the attractiveness of the employment relationship in illegal enterprises. Illegal workers often demand covert work settings, making it difficult to monitor their performance. Yet the employment relationship, if it includes wages as well as a commission or profit sharing, requires this monitoring, which is more expensive under such conditions. This increases the attractiveness of buying the same services in the market.[30]

Credit

It has been noted for over fifty years that a critical characteristic of the modern firm is the separation of ownership and management (Berle and Means, 1932). Whereas in the 18th or early 19th

century the firm was identified with the owner/entrepreneur, by the end of the 19th century firms had acquired identities of their own. The retirement of a single individual was no longer a signal to the outside world that the firm had substantially changed. The firm could become an enduring institution, independent of any individual for its continued life.

This also permitted the development of external credit markets in which firms borrowed money from individuals or institutions without those creditors becoming involved in the operation of the firm itself. Properly audited books provided sufficient evidence of collateral (i.e., that the borrower still retained the assets to which the lender would lay claim in case of a default) and the probability of prompt repayment. Specialized auditing firms developed which efficiently provided lenders with the necessary information to make and maintain loans.

This history was not paralleled in the history of illegal enterprises, where three major factors inhibit the development of external capital markets. First, the enterprise cannot present audited books. Not only does the enterprise want to minimize its recordkeeping in order to reduce the evidence available to law enforcement, but it also finds it impossible to have the records verified by a reputable third party. Auditing firms would risk their reputations by auditing the records of illegal enterprises; they would not be allowed to continue as auditors if they were detected. The potential creditor is forced to rely on the borrower's representations of the past performance of the enterprise and its ability to repay.[31]

Second, the lender cannot obtain collateral without withdrawing it from the use of the borrower. The bank which lends to an airline has, as collateral for that loan, a claim to the planes the airline purchases with the loan. Numerous legal institutions have been created to give the lender confidence that the collateral can be recovered if the borrower fails to meet his obligations, even though the borrower uses the collateral up to the time of default. The courts enforce such agreements and the state will sanction those who fail to meet their contractual agreements. The lender to the illegal enterprise, however, cannot assure continued access to the asset while leaving it with the borrower for his use. Not only does he lack court protection, but the borrower may reasonably demand secrecy about his disposition of the assets acquired with external capital.[32] The lender cannot effectively monitor the disposition of the collateral without becoming involved in the management of the enterprise.

Third, since the enterprise does not exist independent of the entrepreneur, the loan is made directly to the individual entrepreneur and not to the enterprise. His death or incarceration may deprive the creditor of repayment. As we shall see below, the enterprise has little, if any, value as an ongoing business, independent of the entrepreneur who created it. Indeed, even if it had, the creditor would have difficulty identifying the party to whom the claim should be made, i.e., the entrepreneur's successor. Since he may not know any other participants in the enterprise, they can always claim that the previous entrepreneur had not entered into a contract binding upon the successors.

This third factor might only result in loans to illegal enterprises or entrepreneurs having a high risk premium, high interest rates to compensate for the uncertainty. However, the problem is more fundamental than that. It involves "moral hazard" or "impacted information."[33] The

borrower has positive information about his own performance that he cannot credibly communicate to the lender; this is a more general version of the problem of not having auditable books. He may assert that his enterprise is profitably and cautiously operated, but he cannot prove it. The result is that those entrepreneurs who actually have small likelihood of arrest (perhaps by being more cautious) and are good managers, are unable to prove it. The lenders may assign all bookmakers or heroin dealers to the same risk class, for lack of such information. The better ones are unwilling to pay the risk premium and do not borrow. This means that the set of potential borrowers contains in fact the riskiest ones; the lenders will raise the lending rate to reflect that. The result may be to eliminate the external credit market for all but the highest risk borrower.

These constraints on external credit markets are possibly the most significant influence on the organization of illegal markets, for they severely limit the ability of the enterprise to grow. Absent smoothly working capital markets, the growth must be internally financed; the enterprise can grow only through financing the growth out of profits. In the heroin importing business, where each successful transaction may double the capital of the enterprise,[34] this may be a minor restriction. For a numbers bank, with a relatively modest cash flow and a need to maintain a substantial cash reserve, this may be a very important constraint.[35]

The difficulty of obtaining other forms of external capital as well has an important impact on the size attained by illegal enterprises. The inhibitions on external credit markets extend not only to borrowed capital but also to equity financing. Partnerships, in which all members of the partnership are also involved in the operation of the enterprise, are possible, but may require generation of more written records than would be optimal for an illegal enterprise; partners can only monitor the disbursal of profits through such records. Truly external financing, in which one individual lends to another in return for a share of the profits, exposes the lender even more clearly to the same opportunistic behavior that we discussed earlier. There are no audited books; the manager can always misrepresent the extent of the enterprise in ways that are difficult to challenge, i.e., the profitability is a matter of self-declaration.[36] The problem for the persons providing equity finance, as opposed to pure loans, is accentuated because the agreement is couched in terms of the profits arising from the enterprise.

Similarly, it may be difficult to establish a market value for "ownership" of the enterprise. In conventional markets, the firm is composed of individuals, relationships with customers and among employees, capital equipment, and technology. The owners of a firm may sell this collection of attributes to others. Although they cannot guarantee that some members of the firm will not leave it and thus possibly lessen the profits, the rest of the attributes can be transferred with a guarantee of their nature and title.

In the case of an illegal enterprise, the sale of the firm as a going concern is vastly more uncertain. The entrepreneur may own certain fixed assets which he can transfer to the new owner, but such equipment is likely to account for a small part of the profits of the enterprise. There is no guarantee of customer loyalty, since customers generally adhere to the agents of the enterprise and not to the enterprise itself, as illustrated in the case studies. When an illegal enterprise tries to

create brand loyalty, it only ends in providing the police with information. Moreover, it cannot cheaply prevent others from counterfeiting the name.[37] The new owner must also contend with the possibility that members of the enterprise may attempt to acquire control of it through force. Since the loyalty of members of an enterprise is affected by the reputation of the entrepreneur for honesty and control of force, the firm may be sold only to those few with the same reputational assets. This greatly reduces the value of the ongoing enterprise and explains why transfer often occurs within the same family group.

All this suggests that illegal enterprises lack the durability possessed by legal firms. The departure of the entrepreneur is likely to lead to such substantial changes that the enterprise itself may be regarded by the participants as terminated. If this is so, then it has an important consequence for the organization of illegal markets, for the size of the enterprise may be limited by the extent to which it grows during the operating lifetime of its founder. Yet the most efficient growth path of the enterprise, starting from the smallest size at which it can operate, may be longer than the expected operating lifetime of one individual. This limitation results in enterprises in illegal markets remaining smaller, on average, than their legal counterparts. This situation is further exacerbated by the great likelihood that the entrepreneur will have a short operating lifetime as a result of such factors as homicide and imprisonment.[38]

Since the entrepreneur will be able to reap returns from investments in the illegal enterprise only during the period he anticipates being in charge of it, he will adapt his investment behavior accordingly. There are some pieces of capital equipment that are used in these enterprises which have a market value separate from the enterprise, but the bulk of the investments are likely to be in the cultivation of good will. As he approaches retirement age, he will discount these over a shorter and shorter period. Alternative investment forms will become more attractive. If he wishes to leave his assets to his heirs, he may invest an increasing share of his profits in legal assets which he can pass on to them.[39] The result is yet another dynamic constraint on the size of illegal enterprises.

Regulation

All illegal businesses, like most legal business in contemporary America, are subject to regulation. For illegal businesses, the regulators are the police. As in the legitimate economy, the extent of regulation is a function of the nature of the product and the location of the business. In both types of markets, the regulator can impose costs on the entrepreneur and the entrepreneur may attempt to make improper payments to the regulatory official in order to reduce those costs.

Corruption, therefore, probably should not be viewed as unique to illegal markets since there are legal markets in which corrupting public officials seems to be a part of the operating routine of business. The recent trial and conviction of Anthony Scotto, a major labor leader in New York, has reaffirmed that statement for the New York docks. A stevedoring business that was unwilling to make payments to union officials would probably incur substantial additional costs as a result of harassment, and those costs might make it uncompetitive.[40]

Nonetheless, corruption plays a more central role in illegal markets

than it does in legal markets. Certainly, conventional industrial organization analysis has paid little attention to the impact that corruption might have on the structure of markets. In contrast, the small body of literature on the organization of illegal markets (cf. Reuter and Rubinstein, 1982, Chapter I) stresses the role of corruption of police in the tendency toward monopoly in those markets.

The argument implicit in those analyses is that centralized police authority itself leads to monopoly in the illegal market. A public agency which can, in effect, create a monopoly franchise by enforcing laws against all but the selected operator may maximize its corrupt income by doing so. Profits are increased on both sides by conferring the monopoly and dividing those profits between the police and the licensed operator. Schelling (1967) analyzed the Miami bookmaking industry, as described in the Kefauver committee hearings, in these terms. In that case, the initiative came from criminals outside of the police department who used the police as their licensing and tax collection agency. Schelling pointed out, however, that the opposite situation might have occurred if the police department had shown more initiative and centralized decisionmaking ability. The criminal extortionists could have become the collection and licensing arm for the police.[41]

This argument applies only in situations where one law enforcement agency has exclusive jurisdiction. It ignores the complex structure of contemporary law enforcement in most American cities and the consequent riskiness of different strategies that might be adopted by corrupt police. When one takes these factors into account, corruption on the part of law enforcement agencies could actually lead to more decentralized market structures than would a situation in which there was no corruption and random enforcement.[42]

In contrast to the situation that existed when the Kefauver committee conducted its investigation and the popular views on illegal markets were formed, enforcement of criminal laws is now widely dispersed across agencies and levels of government. Consider illegal gambling in New York, a major focus of the committee's attention. In 1950, when Senator Kefauver conducted his famous hearings in New York, only the New York City Police Department had gambling enforcement responsibility.[43]

By 1970, there were at least three additional independent agencies with jurisdiction over illegal gambling. The FBI can investigate gambling operations involving interstate betting or more than $2000 per day in wagers. The IRS has authority to conduct criminal investigations in order to collect wagering excise and occupational stamp taxes.[44] At the state level, the State Investigations Commission can conduct investigations of gambling and gambling enforcement at its discretion. There is a similar fracturing of authority in every major city for most important illegal products. In the case of any of the major drug markets, the Drug Enforcement Administration has authority for Federal investigation and prosecution. In the last decade, the state police of many states have acquired major investigative resources that enable them to intrude into areas that previously were left to large city police departments.

In terms of Rose-Ackerman's (1978) classification of bureaucratic structures, illegal markets are subject to fragmented authority. No single agency or agent can issue a license for an illegal operator which will provide complete protection; each agency can only lessen the

probability of arrest for an operator. How does this fragmentation affect the organization of the market?

The most obvious effect is that enforcement activities which discriminate in favor of the entrepreneurs who are paying that particular enforcement agency may tip off the other enforcement agencies.[45] Those entrepreneurs who are not making payments can provide information about corruption to the other agencies. In particular, it may not be in the interest of the corrupt agency to issue and enforce a monopoly franchise, since that will greatly increase the probability that one of the other agencies will become aware of the corruption.

The risk from discriminatory enforcement takes two distinct forms. First, during the period in which the corrupt police are attempting to eliminate the competitors to their chosen franchisee, a relatively large number of persons motivated to inform against the franchisee will be well-situated to provide information to the non-corrupt agencies. Second, even if the corrupt police are able to eliminate the competition, they are then faced with the problems arising from the visibility of their franchisee, who will be the target of the enforcement efforts of the honest agencies.[46]

That is not to say that fragmented enforcement will lead to honest enforcement. There are numerous opportunities for corruption by individual officers which have low probability of detection by other agencies. A police officer, having observed an offense, may still choose to accept payment for not enforcing against that offense, particularly if no third party is aware of the transaction. He may then have a lower price for overlooking a second offense. Of the many reasons for this phenomenon, the most compelling is that the corrupted officer is reassured by the success of the first corrupt transaction that the person with whom he is dealing is not an informant.[47] This assurance is particularly important when the police invest heavily in anti-corruption investigations, as they did in New York in the 1970s (cf. Kornblum, 1976, pp. 113-115). Under fragmented authority, both the individual agent and the agency will have to adopt more cautious strategies, extorting lower payments for the lesser degree of protection.

One possible way in which the corrupt agency can minimize the risk of bribery income being detected is by focusing its actual enforcement efforts on the most aggressive or visible entrepreneurs. Since these entrepreneurs are the most likely targets of the honest agencies, they are also the most likely to be placed in a position where they will wish to trade information about corruption in return for leniency. As a result, corruption may increase fragmentation in the illegal markets; the larger the enterprise becomes the higher its costs of purchasing favors from a corrupt agency.

This result depends on assumptions about the flow of information from markets to agencies, the bribe prices that can be offered by enterprises of different sizes, and the risk the corrupt police are willing to take. For example, historically agencies have acted so as to maximize arrest rates. Therefore, agencies may hesitate to target the largest enterprises, which can invest most heavily in precautionary activities. The above analysis merely indicates the ambiguous impact of corruption on market organization in a world of complex enforcement structures.

Final Sale

Final customers, those who actually consume the illegal goods, are a significant threat to the illegal entrepreneur. They are many in number, have small loyalty to the enterprise, and take few precautions against police surveillance because they face little risk from the police. Customers are the starting point for most investigations against illegal enterprises[48] and the entrepreneur must deal with them carefully.

In particular, he may use two strategies to reduce customer-based threats to the enterprise. He can seek to separate their dealings from the rest of the enterprise. The heroin dealer does not make sales from his cutting operation; the bookmaker does not settle accounts at his wireroom. The costs of such dispersion may make larger enterprises less efficient.

Second, he can try to use his reputation to intimidate customers so that they are reluctant to provide information to the police and so that they act cautiously in dealings with the enterprise. The loanshark, particularly vulnerable to his customers' providing information to the police, will say "this is Fat Tony's money" to ensure that the customer will fear violent retaliation if he informs against the loanshark. The cost of that method is, of course, that he has provided a piece of information which is of value to the police and can be offered to them by the customer.[49]

A significant consequence of the entrepreneur's need to deal cautiously with final customers has already been mentioned; an entrepenuer cannot advertise without adding to his risk, since advertising provides information to law enforcement agencies. It both informs them about which enterprises are most important and provides evidence about links between the different components of the enterprise. In addition, since it cannot openly use the conventional media, the illegal enterprise has very limited means of advertising. Instead, the entrepreneur is restricted to labelling his product. Even this is likely to be ineffective without recourse to the courts to prevent others from counterfeiting his label and gaining the advantage of his investment in product quality.

As a result one of the major sources of economies of scale in legal markets is not available to the illegal enterprise. The customer's loyalty is to the retail agent with whom he deals. The numbers bettor may be utterly ignorant of the identity of the bank with whom he bets; the marijuana customer knows only the name of the person from whom he buys his grass. The enterprise is unable to develop any customer goodwill; its all rests with the retailing agent. The enterprise can compete only for the service of retailers. Even there, the lack of advertising media restricts the ability of illegal entrepreneurs to tap the major sources of economies of scale for legitimate firms.

Georgraphic Scope

At this stage, let us turn to the issue of the geographic scope of illegal enterprises. Taking all the factors discussed earlier in this section, it is possible to identify a number of reasons for expecting illegal enterprises to be local in scope, i.e., not to include branches in more than one metropolitan area.

Perhaps the most significant factor is the difficulty of monitoring

distant agent performance. A major task of the entrepreneur generally is to monitor the behavior of agents, in order to ensure that they work efficiently and honestly. The design of large modern corporations has been greatly influenced by the problem this presents. A desirable structure is one in which the monitoring can be done by a single, easily observed, performance measure, removing the need to make detailed observation of employee or agent behavior. For example, the divisional form of the corporation[50] is intended to permit corporate executives to use rate of return on invested capital to monitor the performance of high level managers. As mentioned earlier, distance is now a minor impediment to such monitoring in large corporations because of the development of low cost means of rapid information transfer and communication.

Illegal entrepreneurs could conceivably avail themselves of similar performance measures. However, there is an element of performance which is difficult to monitor, but which can be critical to the success of the overall enterprise, and that element is increased exposure to apprehension by law enforcement. Although the agent obviously has incentive to avoid apprehension, it may not be as strong as the entrepreneur would wish. The agent may be more willing than the entrepreneur to take risks since he generally has a lower income and less wealth at stake than the entrepreneur does.[51] In addition, he can appropriate capital (both tangible and organizational) from the enterprise by informing against the entrepreneur.

Although these motivations exist for all agents of illegal entrepreneurs, the entrepreneur is less able to control the first and punish the second when the agent is in a remote location. He cannot force the agent to act cautiously since he is unable to observe the agent's behavior. He will have difficulty punishing informants since he has less information and control of force in remote locations.[52]

A second factor which inhibits the growth of illegal enterprises is the hazard associated with transportation and communication to distant locations. In order to use low cost forms of long-distance transportation, it is necessary to expose agents to risks of severe penalties by delivering large amounts of the prohibited good; that hazard will be reflected in payments to the courier: the extraordinary payments, for example, on a per kilo basis, to pilots of cocaine planes.[53] Even communication hazards are increased by distance. Telephones are notoriously insecure. Although few are tapped, the results of such taps are extraordinarily damaging.[54] Discussions with agents are preferably face-to-face in order to reduce the risk of interception. That is not possible on a short-term basis with agents in distant cities.

A third factor is multiplication of law enforcement agencies with an interest in investigating the enterprise. If the agencies are corrupt, the increased cost is that an additional agency must be paid. If the agencies are honest, the use of interstate facilities provides an additional cause for action by Federal agencies. Given the breadth of Federal jurisdiction, which is largely based on the scale of the activity rather than on its direct use of interstate facilities, this use of interstate facilities probably poses little danger. However, criminal perceptions change slowly; ten years after the passage of a bill which gave the FBI authority against large gambling enterprises operating intrastate, some major bookmakers still were explicitly concerned with the dangers of interstate phone calls.

The inability to develop enterprise-based brand loyalty is the final

factor inhibiting the development of national enterprises. For all the reasons given earlier, the illegal enterprise is unable to use the conventional media. A major avenue for the spread of national retailing and production enterprises, the ability to create national brand loyalty, is closed to the illegal enterprise.

Diversification

Not all illegal enterprises restrict themselves to production of a single good. Some bookmakers offer numbers betting also; many marijuana importers also handle cocaine. In these cases, they are responding to their customers' demands; a reasonable percentage of marijuana customers also use cocaine. They reduce their search costs by purchasing both from a single source. Joint demand generates joint supply.

What about pure conglomeration, diversification into unrelated product lines? For legal markets, the literature identified the incentive for conglomeration as the failure of external capital markets to allocate funds efficiently among enterprises. An internal capital source, with better information available to it, can allocate funds more promptly and efficiently. Considering the failure of external capital markets for illegal enterprises, there would seem to be great motivation for the growth of illegal market conglomerates. The internal fund allocator, after all, should be able to obtain the objective statement of the financial standing of the individual enterprises within the conglomerate, which the external creditor lacks.

There is a countervailing factor, though, which may account for the observed lack of pure conglomerates in illegal markets: the multiplication of exposure that comes from entering a range of activities. Each additional activity increases the number of enforcement units with which the entrepreneur must deal. In an area with a single, centrally-directed police agency that has been bought by the entrepreneur, this presents no problem. However, where he is able to purchase either no protection or only protection from individual officers or units within agencies, the probability of investigation is increased more by extending the range of activities than by expanding involvement in an existing criminal activity.

Summary

The arguments in this section suggest that there are numerous economic factors which may lead to mostly localized, fragmented, ephemeral, and undiversified enterprises operating in illegal markets. Concerns about police intervention and lack of court enforceable contracts are the driving forces. Entrepreneurs are unable to tap economies of scale in production because they must disperse activities in time and space, which raises the managerial and production costs of large enterprises. They are unable to develop goodwill because information disseminated to consumers about the enterprise can be used against it. Thus, they cannot tap many of the sources of distributive efficiency. The growth of enterprises is further inhibited by the difficulty of obtaining external finance, itself the consequence of the lack of auditable books or working collateral arrangements. The lack of auditable books also inhibits the entrepreneur from later investments in other enterprises, which have a very limited market as going concerns.

Product diversification and geographic spread are limited by the increased enforcement risk they entail.

The analysis can be played out in many dimensions. While it is impossible to place any quantitative estimates on the importance of each particular factor, there are no purely economic factors which would contradict the analysis by suggesting that illegal enterprises might tap economies of scale not available to legal enterprises. Before considering the implications of this, we must turn to the use of violence in illegal markets.

3. VIOLENCE AND MARKET ORGANIZATION

There are two reasons why the use of violence for economic purposes is a distinctive feature of illegal markets. First, the victims of violence, except for most customers, are less able to seek police protection since providing an informative complaint will yield information to the police about the illegal activities of the complainant. While this will not prevent all reporting, it certainly lowers the probability of complaints in response to violence.[55] Second, participants in illegal markets lack recourse to state facilities for dispute settlement. Violence or threats may provide the only method of resolving disputes in at least some situations.

Since illegal entrepreneurs face sharply lower costs than legitimate firms in employing violence against their competitors, our analysis of the organizational consequences of product illegality may be irrelevant. Whereas all other economic factors may argue for the emergence of a competitive market, control of superior violence may lead to the establishment of monopolies by eliminating competition. That argument is a central component both of the official account (cf. Reuter and Rubinstein, 1982, Chapter I) and of academic writing on illegal markets. For example, Rubin (1973) asserts "Violence is used essentially for the maintenance of monopoly power, that is, for the prevention of entry" (p. 162).

In this section, however, through an examination of that proposition, we shall show that only in very narrowly defined circumstances will it be optimal to use violence to eliminate competition. In addition, we shall briefly deal with the internal uses

of violence, focusing on their organizational consequences.

Competitive Violence

This analysis is governed by two interrelated assumptions about violent conflict in modern urban settings. First, such conflict differs from military contests in the international realm in that the quality of personnel training and weaponry is not likely to determine who wins the conflict. In conventional war the relative size of an army is only one factor determining its strength and likelihood of success. The repeated success of the Israeli army is recent testimony for this proposition. In contests between urban gangs, on the other hand, size is likely to be a far more important determinant since the skills of the members and the weapons available to both sides are likely to be identical. Indeed, the weaponry of contemporary gangs seems significantly less powerful and sophisticated than that of gangs in earlier eras. Landesco (1929) refers to the routine use of submachine guns in the Chicago gang wars of the 1920s; such occurrences are now rare, though the South Florida drug wars provide an exception (Permanent Subcommittee on Investigation, 1980). More effective firearms law enforcement may account for this change. Although the quality of leadership is possibly an additional factor in a gang's success, none of the available reports or studies mention martial administrative skill among modern gangsters.

The second assumption is that gangs can substantially increase their size quite rapidly. There are large numbers of young men in major American cities who are willing to accept paid employment to carry out acts of violence. Gangs can, and do, expand at short notice. Probably recruitment of new members involves not so much raising wages as taking in persons whose loyalty and tenacity are less certain. Certainly informants regularly tell of incidents in which a "kid" in a local store was recruited to perform some violent errand, despite apparently little connection with the criminal hiring him.

If the size of a gang is an important ingredient in its successful use of violence, then violence itself can lead to monopoly; the entrepreneur with the largest gang can demand payments from other entrepreneurs for not using his gang against them. He might find it optimal to force their exit from the market.

Yet these two assumptions reveal some perplexing problems for the entrepreneur who attempts to use violence to control a market in which he is not actually involved. By employing violence, the gang leader may be able to extract the available monopoly rents (i.e., all profits beyond those available from competitive uses of the same productive factors) from existing enterprises by refusing to permit operation without taxation. He is in the same situation as the owner of a site with unique locational value to some industry. He can set the tax structure so that only a single enterprise will be able to operate, since industry profits are maximized by monopoly operation.

The gang leader's strategy is to set a fixed fee for anyone to operate a business in this market. By setting the fee at the level of profits that would be earned by a monopolist, beyond the costs of paying the necessary factors of production (including the entrepreneur) their opportunity costs, then just one business will be able and willing to meet his fee requirement. However, this strategy requires that he be able to predict with certainty how much entrepreneurs expect to earn in

this line of business. If he overestimates, no entrepreneur will be willing to meet his fee level. If he underestimates, he will fail to extract all the available rents.

This strategy is constrained by many other factors besides the need to have the largest force in order to control the market. Monopolies may attract more intense law enforcement; police may allocate resources across markets so as to target monopolists.[56] The optimal tax structure, taking into account the costs of arrest and conviction, may be one that supports a number of entrepreneurs. Also the productivity of armies marshalled for the purpose of extorting illegal entrepreneurs is affected by idiosyncratic aspects of the market, such as the need for repeated face-to-face contacts between enterprise and customer. Telephone bookmakers are presumably more expensive to coerce than numbers retailers simply because they are hard to identify and locate.

Another factor that may render the coercive use of violence unprofitable is the costs of creating an army large enough to extract the available profits (even overlooking the costs of collection) and the possibility that, since there is a large supply of violent labor, another entrepreneur may recruit an even larger gang to force the first group out. If an entrepreneur has recruited a gang large enough to create a monopoly in a particular market by forcing out all other entrepreneurs, yet another entrepreneur may believe that by building a gang which is slightly larger than the existing one, he can force the existing extortionist out of the market and gain sufficient profits to recoup his investment in assembling the gang. In a world without uncertainty, where there is also unlimited supply of the appropriate labor at a fixed price, the only stable monopoly position will rest on the recruitment of an army so large that it returns no excess profits to its leader. Surely a monopoly, where the rents are exhausted in competitive wage payments to the members of the army, is not what Buchanan (1973), Rubin (1973), Schelling (1967), and others had in mind in speaking of violence-based monopolies. No one would go to the trouble of establishing such an unprofitable enterprise.

Nonetheless, all the evidence points to the existence of profitable violence-based monopolies. These successful enterprises may be the result of the advantages acquired by a "first mover" in a real world characterized by uncertainty. Once a gang has established its superiority, presumably through sheer numbers, it is able to impose costs on potential competitors that it did not have to bear itself. The advantage is similar to that sometimes ascribed to early investment in advertising (Comanor and Wilson, 1967). There are at least two possible sources of this cost advantage. First, recruits for the new gang may require higher wages than those currently paid to members of the existing gang. This reflects their correct assessment of a high probability of conflict with a rival who has powerful existing resources. Even if retainer payments are separated from user charges (i.e., recruits are paid a fee for joining, in addition to payment for actual work), identification with the new army involves risk of attack by members of the old gang and the leader of the new gang may not be in a position, following the attack, to make the agreed compensation.[57] In addition, the attack may not be labelled so clearly that the attacked soldier can make a convincing claim.[58]

The second source of this advantage is the new entrant's inability to determine the size of the existing gang. Over time the current

dominant gang leader may choose to let his force decline. He may fail to recruit new members to replace those who die or retire.[59] Since the list of members is not a publicly available document (even the size of Mafia families is a matter of speculation; a fortiori the difficulty in determining the size of less well-known gangs), new entrants will have to make an assessment which reflects incomplete information. Given the costs of failure, it will be optimal to pay a risk premium by assembling a gang larger than "technically" necessary according to the mean estimate of the initial gang's size.[60] This provides another barrier to entry, an additional cost which was not incurred by the current dominant gang leader.

Therefore, an entrepreneur who first creates a violence-based monopoly has established an enterprise that may grow in profitability over time. At the time the monopoly position is attained, the monopolist gains little, if any, excess profit. He recruits a gang large enough that no larger gang could possible earn any rents. Having established that position, he can then substitute his reputation for costly personnel. The longer his monopoly is unchallenged, the more he can substitute, because recruits for rival gangs will demand ever higher wage risk premiums. How much he will substitute reputation for personnel is a function of his attitude toward risk and the length of his planning horizon, i.e., how long he expects to maintain this position.

A few observations are consistent with this scenario, though they scarcely constitute a rigorous test. The Mafia families which have a dominant reputation (in terms of their supposed capacity for carrying out violent threats) in the illegal economies of some major cities in this country arose through gang wars during the Prohibition Era. This is not to say that there was no Mafia prior to Prohibition, but that the gangs that now occupy the most prominent positions are direct descendants of groups that emerged in struggle with predecessor Mafia and other ethnic gangs. Haller (1974) ascribes the success of the new Italian gangs to their greater willingness to use sustained violence. During that period they were indeed "armies," equipped with relatively sophisticated weaponry and involved in protracted campaigns, sometimes involving pitched battle between groups approximately the size of an army platoon.[61] While the members of the gangs included persons who were involved in the bootlegging industry itself, there appear to have been significant numbers who were essentially "soldiers," specialists in violence.

Since that time, though there have been occasional outbreaks of gang violence, it appears that the armies have disappeared. Certainly no gangster biography mentions such armies in the post World War II era. Nor do law enforcement agencies any longer claim to have identified such groups, though occasionally they indict very violent gangs, such as the Campisis in New Jersey, who appear to have had almost no compunction against using violence either to wipe out competition or discipline members (Aronson, 1978). This situation contrasts with claims about specialized killers in "Murder Inc." in the 1930s and 1940s (Turkus and Feder, 1952). Even the occasional "hit man" that comes to public attention is not a specialist. He may have an unusually sinister reputation, but his prime source of income is conventional criminal activity; Barboza and Messick (1975) provide a good illustration of this. If there remain specialists in violence, they are few in number and have limited employment opportunities.

The Mafia's response to recent challenges to its power has been accommodation rather than conflict. It appears that the growth of autonomous gangs in Black and Hispanic communities, displacing traditional Mafia client-suppliers of gambling, loansharking, and narcotics services in those communities, has not generated any effort by the Mafia to assert control through superior violence. While there are no satisfactory public accounts of these changes, anecdotal evidence, even from police who exaggerate the power of the Mafia, is consistent on this point. In the most prominent gang war of recent years, which occurred in Boston during the 1960s, the Mafia was the prime beneficiary of conflict between others.

There are other possible explanations for this quiescence. Since the Mafia is a large and publicly notorious group, any conflict in which it engages will be met with increased law enforcement efforts. It may correctly assess the cost of large-scale violence, even against other gangsters, as too high. Police response to violence on the part of newer ethnic gangs is less severe. The public, through the police and prosecutors, may indeed take sides in the case of an actual "war" between the Mafia and some other group of gangs from newer ethnic communities.

But reputation is a two-edged sword. On the one hand, it deters rival gangs from direct challenge. On the other hand, the economy of illegal markets is not autonomous, ruled only by its own institutions. It is part of a larger society, which may not respond to various marginal changes in those markets, but is capable of effectively penalizing those gangs whose reputation for violence gives them power within the world of illegal markets. The backlash that results from a reputation for violence is the problem that the Mafia now faces in the markets in which its members have traditionally been active. The major efforts of law enforcement agencies in these markets are directed against the Mafia.[62] For example, success for the Federal Strike Forces Against Organized Crime, at least until recently, appears to have been measured in terms of the number and seniority of Mafia members convicted.[63]

This suggests that one cost of having the reputation as the dominant gang is increased targeted enforcement activity. Given the long lags and historical ineffectiveness of law enforcement agencies, this need not deter the gang leader from attempting to acquire the position. However, it suggests that he will exploit his position in an aggressive way for only a limited period of time. After that it may be wisest for him to let the position erode, investing little in maintaining his army and taking reduced rents while allowing new entrants into the product market(s). That Mafia leaders now tend to be men in their sixties and seventies, presumably with short planning horizons, may also have an influence.[64]

Another strategic issue for the gang leader has already been briefly discussed, namely whether to use his reputation to tax and franchise an operator in a particular market or actually to enter the market himself. There is evidence (Haller, 1974; Landesco, 1929) that Chicago during the 1920s saw the emergence of an army which extorted from a number of illegal markets by issuing restrictive franchises. The markets included bootlegging, prostitution, numbers, and bookmaking. The extent of Mafia involvement in actual operations varied considerably.

On the other hand, there is also ample evidence that, even in cities with strong Mafia families that have well-established reputations for command of great force, other major illegal markets are not subject to

their extortion. This appears to be true of the marijuana market, at least according to police specialists; even the more propagandistic law enforcement agencies do not include marijuana in the list of Mafia controlled markets.[65]

What determines whether violence can be used to acquire control of a market? One obvious factor is simply the return to monopolization. With a highly elastic demand curve and constant returns to scale,[66] the rents available for the gang are modest. It is difficult, though, to find evidence that the demand for any major illegal product is highly elastic. Even with drugs there seems to be limited substitution between different narcotics so that, at least in the medium run, there is inelastic demand for specific drugs.[67]

More important may be idiosyncratic features of distribution. The difference between the distribution systems for numbers and sports bookmaking illustrates the point nicely. Numbers transaction are retailed face-to-face and require that many customers know the identity and location of the retailer. Consequently, that retailer is easily threatened. Competitive violence has a ready focus.[68]

In contrast, sports bookmaking is a telephone business. Each agent deals with a relatively small number of customers and meetings may be arranged irregularly at varying locations. The agents are not exclusively affiliated with a single bookmaker, so that it is difficult for the gang to determine, once they have tracked down an agent, whether he is making transactions on behalf of another enterprise. While this does not make it impossible to create restrictive franchises in the sports bookmaking business, the cost of monitoring may be much higher than in the numbers business.

Bootlegging required fixed and conspicuous locations for distributing the liquor. Bars provided a focus for competitive violence as did the very conspicuous beer trucks. On the other hand, marijuana distribution requires only occasional, perhaps less than monthly, contacts between customers and sellers, no fixed location for transactions, and easily concealed inventories. Competitive violence exercised against lower level agents is unlikely to be effective.

It is interesting to note that the development of territorial franchises in the Chicago bootlegging business took some years. The early years of Prohibition saw remarkably high levels of violence as a result of efforts of individual bootleggers to expand their markets (Landesco, 1929). Haller (1974) identifies one of the sources of this violence as the fractionated political authority in Chicago, where individual ward politicians had a great deal of autonomous power during the 1920s. The lag in establishing territorial franchises was further increased by the mayoralty of William Dever, who made some effort at enforcing the Prohibition laws by reducing police corruption and thus prevented the development of the centralized police corruption which later assisted the franchising by the gangs.

<u>Summary</u>

Violence as a tool for coercing actual and potential competition in illegal markets has occasionally led to the creation of monopoly control. However, the discussion presented here suggests that this is not likely to be a universal occurrence.

If the assumption about the availability of violent labor is

correct, then the profitability of obtaining a monopoly comes only over time, as the gang leader is able to deplete the size of his army and use his reputation and the uncertainty about his actual forces to bluff others from challenging him. The process of investing the necessary resources and incurring the risks, both physical and legal, to achieve a dominant position may require a longer planning horizon than most gang leaders have.

Moreover, the possibilities for monopoly control vary across markets, defined both by location and product. There are two identifiable sets of factors which influence the incentive to acquire a monopoly position. One set might be described as conventionally economic, such as the shape of cost and demand curves. The second set is specific to illegal markets and includes the riskiness of participation in the activity, the nature of the distribution system, physical characteristics of the good involved, and the policies of law enforcement.

<u>IMPLICATIONS FOR ORGANIZED CRIME CONTROL</u>

This essay has argued that there may be a strong tendency for illegal markets to be populated with small and relatively ephemeral enterprises. This tendency is not greatly undermined by the use of violence to suppress competition among these enterprises. Such violence-based monopolies are limited in their effectiveness, except where there is corrupt centralized police authority. What implications do these conclusions have for efforts to control organized crime?

Campaigns against illegal markets have traditionally been at the heart of organized crime control efforts.[69] During the last few years the Federal agencies, at least, have broadened their strategies and have brought many successful cases against leading organized crime figures based on their criminal involvement in unions and legal industries.[70] Nonetheless, there appears to be a continued belief in the importance of illegal markets as a source of organized crime power and income. As mentioned above, the recently announced Federal campaign against the drug traffic is based at least partially on the belief that the heroin business is dominated by "traditional" organized crime, a frequent political euphemism for the Mafia. The relationship between organized crime and illegal markets is thus an important one for policy discussions.

We must, unfortunately, begin with a definition of organized crime, since this is still a matter of controversy. I use here the rather discursive definition presented in Reuter and Rubinstein (1982, p. 11). A group may be called organized crime if it has hierarchy, durability, multiple criminal activities, a willingness to corrupt authority, control of violent labor, and nonviolent means for settling internal disputes.

The definition certainly includes the Mafia. It may also include certain of the recently prominent motorcycle gangs, though it is not clear that they have survived the generational change in leadership which will prove their durability. The definition, however, excludes most illegal entrepreneurs, whose businesses encompass a single criminal activity and whose relationships to organized crime are as clients, not as members.

One consequence of the definition is that organized crime groups are likely to have a reputation that arises from their durability and command

of violence. Indeed, the argument of the previous section was that large-scale violent gangs were created in order to acquire a reputation, at least in the context of suppressing competition in illegal markets.

The critical issue in considering the relationship between organized crime and illegal markets is whether such a reputation is most profitably used to acquire control of illegal markets or whether there are better ways to use it. It may be used to gain control of certain legitimate institutions, such as unions and employer associations (Block, 1980). It may be used indirectly to acquire influence in certain industries, as appears to be the case with Nevada casinos.[71] Finally, it may be used to acquire control over particular illegal markets.

The optimal strategy is determined by the set of opportunities available, the returns and costs associated with each opportunity, and the political structure within which organized crime operates. It is beyond the scope ot this essay to attempt a complete account of the shifting patterns of organized crime activity. However, it is possible to suggest, using this framework, that the involvement of the Mafia in illegal markets is of declining importance to its members.

There are three factors suggesting that organized crime involvement in illegal markets is diminishing. First, the most important set of contemporary illegal markets, those for drugs, are not among those which are readily controlled, given current supply sources. Second, the traditional markets are of declining importance economically. Third, the continued growth of the Mafia's reputation, together with certain institutional changes external to it, provide new opportunities. We shall examine each of these in more detail.

Drug Markets and Organized Crime

Official estimates of the scale of illegal markets, in terms of gross operating income, indicate that three drugs (cocaine, marijuana, and heroin) are dominant (IRS, 1979; National Narcotics Intelligence Consumers Committee, 1981). They account for at least 75 percent of total illegal market income.

There was a time when organized crime had control of the heroin market. At that time, prior to about 1965, heroin was imported through southern Europe, where it was processed from opium produced in Southeast Asia. The Mafia's control of that market in the U.S. seems to have originated in the import sector of the industry and probably was built on the relationships that existed between American mafiosi and the heroin processors in southern France and Italy.[72]

During the 1970s a number of other routes and production sources opened up. Mexico was, during the early 1970s, the major source. Importation was carried out by gangs of Mexican origin which did not need Mafia services. Whether these Mexican gangs acquired the defining characteristics of organized crime is a matter of some controversy. My own view is that they show little sign of durability or the capacity for internal dispute settlement which is essential for long-term stability.[73]

Iran also became a major production source. Some Iranian heroin came through a rejuvenated version of the traditional importation route, but much came in through other routes, often involving nationals from the producing areas.

The importation sector of the business no longer could be dominated as it had been in the past. If there were monopoly profits to be made,

the monopoly had to be shifted further down the market. But only at the retail level is there an easily identified source of monopoly control. All higher level transactions occur at variable times and locations in discrete settings. Moreover, the very vulnerability of heroin retailers to police arrest and harassment makes them a poor locus for organized crime extortion. The frequency with which they need to become informants, the strength of their motivation to stay out of prison in order to continue their own access to heroin, and the rapid turn-over in the population of dealers all reduce the prospects for control at the retail level.

The other two drugs, cocaine and marijuana, both come through importation routes which have never been controlled by organized crime. Colombian colonels may have an important role in the licensing of large-scale exports, but the official data on export level prices does not suggest that they are able to extract monopoly rents from the final markets.[74] The backgrounds of those involved in the major smuggling organizations prosecuted by the Department of Justice in recent years also suggest that it is a business into which entry is restricted only by a certain organizational skill and willingness to take risks.[75] At the distribution level there is again no ready focus for extortion and control. Not only do wholesale transactions occur at irregular intervals in inconspicuous locations, but also much of the retail activity is conducted in the same manner.

None of this is to say that individual members of the Mafia do not involve themselves in drug trafficking. The opportunity to make a large income is not easy to resist, even if there is substantial legal risk associated with it. But the characteristics of the drug market do make it unlikely that Mafia gangs will become systematically involved, as they were, for example, in gambling activities during the period from 1930 to 1970. Being a mafioso does not, for most drug transactions, provide any economic advantage. In addition, drug dealers do not require Mafia services, such as the provision of dispute settlement or short-term capital. Moreover, the very high penalties for being caught in the higher levels of the heroin or cocaine traffics may deter members of the Mafia, who have a variety of other revenue opportunities, more than specialized drug dealers, whose alternatives may be those of unskilled criminals generally.

The involvement of motorcycle gangs in certain other drug markets, particularly methamphetamine,[76] provides an interesting counterpoint to Mafia involvement. Though these gangs have acquired a reputation for being able to administer great violence, they have not yet acquired many of the other assets possessed by the Mafia, such as local political power and reputations as skilled negotiators. The set of opportunities available to motorcycle gangs may be far more restricted for those reasons; hence their willingness to enter into the relatively risky drug business.

The Decline of Traditional Markets

It is impossible to provide an estimate of the scope of the major illegal markets in which organized crime has been active in the past. Three forms of gambling (bookmaking, numbers, and casino games) were clearly very important in many cities. Loansharking was also of some importance in at least a few cities. Other illegal markets have probably

been minor for some time. Even in 1967 the President's Commission on Law Enforcement and the Administration of Justice stated that "prostitution and bootlegging play a small and declining role in organized crime's operations" (p. 4): that seems to be even truer today.

We focus then on the opportunities offered by the three forms of gambling and loansharking. Since there are no hard data on the scale of these activities, at least since 1974, the following statements are essentially deductive, based on expectations about the effects of changing external factors on these markets.

Consider the difference between the set of legal opportunities available to the would-be bettor in New York in 1950 and 1980. In the earlier year, he had only one legal gambling outlet, namely the racetrack. He could place a bet legally only if he travelled to the track itself. All other wagers were illegal.

By 1980, the set of legal opportunities had expanded substantially. The state offered a wide variety of lotteries, including a game which was almost identical to the illegal numbers game. It was now possible to place a bet on a horse without going to the track, through the Offtrack Betting Corporation. Atlantic City provided relatively easy access to high quality casinos.

These developments may not have changed the behavior of persons who were accustomed to betting illegally but they probably have affected the number of persons beginning to wager with illegal operators. Only the continued growth of interest in sports betting, for which there are no legal outlets apart from bookmakers in Nevada, provides illegal gambling operators with a distinctive product not available from legal sources.

There are arguments on the other side, contentions that legal gambling actually increases the demand for illegal gambling. The taste for gambling is cultivated by the promotion of legal gambling opportunities. The tax disadvantage of some legal forms of gambling, such as Offtrack Betting which levies an additional 5 percent tax on all wagers, gives illegal operators an advantage, enabling them to cultivate the new clientele created by legal wagering enterprises. Nonetheless, the increasing sophistication of state lottery marketing efforts and the enormous growth of Atlantic City gambling revenues make it plausible that illegal wagering is a declining share of total recreational expenditures.

So little is known about the scale and composition of loansharking that it is difficult to suggest what factors might have influenced its growth over the last decades. Some traditional markets, such as small loans to longshoremen, have probably contracted as longshoremen have become fewer and wealthier. The large number of government programs aimed at providing credit to lower income groups has also probably had a negative effect on the loansharking business. However, there is simply no way to determine whether these segments of the market are more important than providing large loans to small businessmen for high risk ventures or for ventures which legitimate institutions are not permitted to finance. What determines the markets for these is unknown. Nonetheless, the growing financial wealth of the population over the last three decades, the shift of population from the areas in which loansharks were most active, and the development of an increasingly variegated set of financial institutions serving small business all suggest the possibility that the overall market for loansharks has declined.

The Growth of Other Opportunities

Organized crime involvement in legal economic activities is certainly not a new phenomenon. Hutchinson (1970) describes the immense power that members and associates of the Mafia acquired in various industries during the 1930s. The launching of Las Vegas as a national legal gambling center in the late 1940s has always been ascribed to the energies and investments of the Mafia and its associates.

Nonetheless, there have been changes in certain features of the U.S. economy which have increased the opportunities for members of the Mafia to obtain monies from legal activities. Two are particularly important.

1. Growth of the casino industry. As already mentioned, there is continuing evidence that the Mafia has a major stake in the Nevada casino industry. That industry has grown extremely rapidly throughout the period 1960 to 1980; declared gross winnings of Nevada casinos grew from $197 million in 1960 to $2,273 million in 1980. The potential return from involvement in this industry has correspondingly grown over the same period.

2. Failure of efforts to remove organized crime members from positions of influence in certain major unions. The Teamsters, Laborers, and Restaurant Workers unions are only some of those in which the Department of Justice has regularly been able to show that organized crime members have had control over the investment of pension and welfare funds. Though union membership itself is declining, these funds have grown substantially throughout the last three decades. The notorious Central States Teamsters Pension Fund alone now amounts to several billion dollars.

Federal agencies have paid considerable attention to both these matters in the last decade. Nonetheless, there seems little doubt that many organized crime members are able to earn very large sums from their involvement in the casino industry and certain unions. One can certainly not, given the available material, go beyond broad impressions, but it seems plausible that these activities are less risky than illegal market activities.

The Mafia's power within certain unions is a consequence of its reputation, which inhibits effective challenge. That reputation is cheaply sustained by rebuffing the occasional challenge in individual locals. The Mafia's current power within the casino industry is less easily explained. Certainly for many years the general unrespectability of the activity and the regulatory policies of the Nevada Gaming Control Board restrained entry by major corporations (cf. Skolnick, 1978). Yet that has changed recently, as an increasing number of the major hotel chains of the nation have entered the Nevada market. The explanation for the Mafia's continued power may lie in the history of many of the older casinos and the role that the major corrupt union pension funds have played in the casino industry.

Reform campaigns, aimed at eliminating organized crime from particular legitimate activities, have little record of success. The recent conviction of the head of the Teamsters Union, together with some not very senior mafiosi, only points again to the failure of the Justice Department's quarter century effort to prevent the Mafia from controlling that largest of unions. The longer the Mafia is able to sustain its position against these attacks, the more opportunities for profitable legal activities become available.

The factors that have increased Mafia involvement in legal markets do not currently apply to other organized crime groups. They may simply be too young to have acquired the requisite reputation. Or there may only be opportunity for one group at any point in time, a result perhaps

of the narrowness of media reporting, which can only accommodate one set of gangs on a sustained basis. Our knowledge of the development of these gangs is simply too slender to permit a forecast of their likely role in legitimate institutions over time.

Summary

The range of activities in which organized crime members are involved is now, as it always has been, impressively wide. No doubt the extensive list of legitimate and criminal industries which the Kefauver committee provided could be replicated 30 years later.

Nonetheless, there is both argument and evidence that the distribution of organized crime involvement in these activities has changed. There may be fewer opportunities to extort the operators in illegal markets, both because of changes in the composition of these markets and changes in the structure of American policing. At the same time, new opportunities have arisen in the legitimate economy which may offer prospects of higher incomes and lower risk than the traditional illegal market activities. The continued growth of the Mafia's reputation in the postwar era has possibly improved its members' ability to capitalize on these opportunities.

Though there are no hard data that would permit testing these hypotheses, there seems to be some consensus that such a change has occurred. Certainly Federal prosecutive strategies have changed in response to a perception of such a shift.

Nonetheless, the formal doctrine has not changed. The latest call for a national campaign against organized crime is focused on illegal markets. President Reagan, in announcing a "national strategy to expose, prosecute, and ultimately cripple organized crime in America" was referring to the illegal drug market. He referred to its "virtual monopoly in the heroin trade."

Campaigns against organized crime involvement in illegal markets have a particular attraction to politicians. They place the politician in the position of attacking two targets about whose evils there is little ambivalence. Moreover, there is still a widespread belief that significant figures in the illegal markets are almost certainly members, or at least close associates of, organized crime.

The thrust of this paper, however, has been that illegal markets tend not to be dominated by organized crime, but are instead fragmented--populated by small enterprises that are rarely connected with organized crime. In addition, these illegal markets are not easily dominated by gangs who command violent forces; such control succeeds only in certain limited environments. Therefore, enforcement campaigns aimed at illegal markets will fail to strike at the power or income of mature organized crime. Instead, enforcement campaigns will be more successful if they attack organized crime in the arenas where its power is already strong or its involvement is growing.

FOOTNOTES

1. E.g., "In large cities where organized criminal groups exist, very few of the gambling operators are independent of a large organization" (President's Commission on Law Enforcement and the Administration of Justice, 1967, p.2).

2. The gambling markets were chosen precisely because they figured so heavily in the standard account of organized crime. Numbers and bookmaking were also frequently surrounded by allegations of corruption. Loansharking was asserted by the 1967 President's Commission to be the second most important market economically and one in which violence played an important role.

3. The Kefauver Committee's description of bookmaking in Miami certainly supports a conclusion of central control, resting on both corruption and the monopolization of a critical input, the wire service.

4. "Excess profits" is income earned by a factor of production, such as labor or capital, which exceed the income earned by that factor in competitive markets, account being taken of the uncertainty involved in the particular use considered.

5. Anti-trust authorities attempt to prevent restraint of trade, which is particularly likely where there are small numbers of firms.

6. An excellent account of the field of industrial organization is provided by Scherer (1970).

7. This statement is a condensation of a complex argument. The complication is that the size of the market (the amount of the good sold) is determined by the price. The statement refers to an equilibrium state; at the prevailing equilibrium price, the optimal size firm is small relative to the size of the market.

8. Hay and Morris (1979, p. 42).

9. There is a growing theoretical literature dealing with this problem (e.g., Jensen and Meckling, 1976). However, it has so far had little influence on empirical industrial organization research.

10. Figures suggesting this are presented in National Narcotics Intelligence Consumers Committee (1981, p. 30).

11. A small number of steel firms might be able to use methods such as price leadership (i.e., all firms follow the lead of a particular firm) to evade anti-trust restrictions aimed at preventing prices above the competitive level.

12. For a discussion of recent changes in the structure of the beer industry, see Ornstein (1981).

13. Ornstein (1981) discusses the impact of advertising on the distilling industry but not on the beer industry. This oversight is curious since the most significant medium for advertising, television, is available to beer producers but not to distillers.

14. Scherer (1970, pp. 125-127) provides a good summary of the existing analyses of the conglomerate phenomenon, stressing their dependence on unexplained capital market imperfections.

15. Omitted from this analysis is any consideration of the effect of institutional and human factors on technological development. In the long run, technology is not a given, but is generated in response to the needs of firms. If product illegality affects the organization of firms, particularly the size of firms, it will also affect the kind of technology they seek. However, this is unlikely to be central for the service industries which make up the illegal sector.

16. Of course, this would depend upon the nature of the regulations imposed on the marketing. Limits might be placed on the extent of advertising. Although First Amendment considerations probably prevent a ban on newspaper advertising, it might be restricted from other media. This would somewhat reduce the comparative advantage of the national firms.

17. Note here that markets are not defined just by final products. Heroin importers, selling to heroin wholesalers, constitute one market. Heroin retailers, selling to final consumers, constitute another market. For definitions of what constitutes a market, see Scherer (1970, p. 53). The available definitions are of limited operational utility as evidenced in recent efforts to clarify the notion for Justice Department merger policy.

18. For example, the wholesale diamond trade is famed for its reliance on verbal agreements between individuals, often involving hundreds of thousands of dollars. On the other hand, very formal contracts characterize the retailing of automobiles; the retailer makes no organizational resource commitment without a formal contract signed by the customer.

19. The term "police" is used here generically to refer to any representatives of government whose function it is to detect and help sanction illegal market activities. Tax agencies, either federal or state, fall into the category.

20. On police recruitment of informants following arrest, see Manning (1980) and Skolnick (1966). The behavior is particularly important in the drug trades.

21. The regulator potentially deals with all other participants. Indeed, it is this impact that most affects their behavior. However, his ability to intervene is determined by the dealings of the criminal role groups with each other. They do not, except through corruption, have a direct relationship with the regulator.

22. Many persons are known throughout an illegal market by their nicknames. Social contact will always take place away from the home thus preserving anonymity and also, not so incidentally, reducing the risk of neighbors becoming aware of the fact that the individual is involved in an illegal activity.

23. One anecdote suggests though that perhaps even those with well-developed reputations for command of violence are reluctant to use physical discipline against long-term employees. Angelo de Carolo, a Manfiosi in Northern New Jersey whose office was bugged during the 1960's, was very suspicious that the manager of one of his numbers banks was cheating him. He tried frequently to verify his suspicions but never actually disciplined the man. See Zeiger (1975, Chapter 6).

24. The two administrative influences may not both play a role. If the administrative cost expands rapidly enough as the result of the necessity for keeping workgroups small, then the optimal structure may involve a smaller number of direct-contact subordinates than the entrepreneur would impose as a constraint given no other cost considerations.

25. This example also suggests a definitional problem which is not directly dealt with in the industrial organization literature. When does an agent become a member of the enterprise, as opposed to an independent supplier to it? A non-exclusive commission agent, such as a runner (retailer) in the bookmaking business, might be classified as a non-member precisely because of the non-exclusivity. The ability of the bookmaker to direct the runner's actions is very limited. A runner who worked on an exclusive basis seems to me to fall on the margin of membership. The very fact that he is paid on the basis of results not of his inputs indicates a belief on the part of the entrepreneur that he cannot effectively control his agent's actions.

26. The assertion about the relative importance of the two labor components is more speculative than it looks. Wages paid in illegal market enterprises are not strikingly high. A numbers clerk in New York in the mid-1970's might receive a wage of $2000 per week. While this is clearly higher than the market wage for low skill clerical work (a bank teller in 1977 earned approximately $175 per week), it does not include any unemployment or social security contributions by the employer, nor any other fringe benefits.

27. Moore (1977, Part I) analyzes the New York heroin market in terms of vertically non-integrated enterprises. Details about certain heroin enterprises provided in court documents support this assumption. However, heroin dealers at high levels, for example handling multi-kilo lots, do seem also to sell smaller lots when the opportunity presents itself. Since the whole purpose of the non-integration is to cut down on the number of persons who can put the high level dealer at risk, that is an ill-advised practice. Probably, high level dealers are willing to sell to low level customers whom they know well, since they perceive such sales as low risk. This perception is, of course, a questionable one; a small time dealer who can give the police a very high-level dealer is likely to receive particularly lenient treatment.

28. For an analysis of on-the-job training, see Becker (1975).

29. One undercover policeman accounted for his meteoric rise within a Numbers bank by noting that in the criminal world the simple ability to turn up on time at the appointed place made him an outstanding performer.

30. This is distinct from the problems presented by expanding the size of the enterprise. Integrating new functions within the enterprise requires the development of additional performance measures and management skills. Given that management skills are correlated with legitimate market earnings, the risk premium that must be paid to more skilled managers will be higher than for other kinds of labor used in illegal enterprises. Hence, it is likely that such enterprises must find simple structures that reduce the necessary competence of management for efficient functioning.

31. This raises an interesting question as to whether individuals might specialize as auditors for illegal enterprises. Apart from the risks involved in maintaining books in these enterprises the auditing function is likely to founder on two other related issues. The process of auditing requires giving the auditor access to a great deal of information about the enterprise generally. The auditor would become the ideally placed informant. His arrest would put many enterprises at risk. Moreover, the fact that an auditor is dependent on reputation for his income implies that he would be particularly vulnerable to detection by the police.

32. Of course the lender and borrower share an interest in preventing the police from seizing the asset. To this extent the borrower can assume that the lender will be cautious in preventing dissemination of information about the asset.

33. "Moral hazard" refers to self-selection in the insurance market, where the insured have information about themselves which they are unable to communicate cheaply to the insurers. This latter feature is referred to as "information impactedness." See Williamson (1975, pp. 13-16) for an account of these terms.

34. Figures presented in National Narcotics Intelligence Consumers Committee (1982, p. 30) suggest that the price of a kilogram of pure heroin in the U.S. is more than double its export price from Europe.

35. Necessary reserves are quite substantial, perhaps equivalent to six months of gross bank earnings. The reserves requirement is increased by the difficulty that bankers have in collecting monies owed to them by individual collectors (retail agents) and by the very skewed distribution of betting preferences that they face. The latter factor increases the probability that on any one day the banker will have to make substantial payments to bettors.

36. In theory all partners could be allowed to audit transactions at their discretion, letting each judge the extent to which such auditing was necessary. The auditing might include review of very transient written records, thus minimizing exposure to the police. For example, partners in a bookmaking enterprise might have bettors whose records they occasionally checked at the end of the day to confirm that the managing partner was correctly recording the gross and net revenues generated by this bettor's activities. This certainly raises the transaction cost of partnership financing.

37. That does not mean that no illegal enterprise has used brand names. The Illinois State Legislature, investigating numbers in the black areas of Chicago cited a number of banks which used the name of prominent rock groups on their numbers slips. For a time it is said that some heroin retailers in New York put brand names on their product. However, these are exceptions.

38. Given the difficulty of obtaining external capital, there is another factor that shortens the operating lifetime of the entrepreneur, namely that he may not be able to begin the enterprise till he has acquired an adequate capital fund himself. Again, it is useful to note that this is not a problem in high risk activities such as narcotics trading, where a small working capital can be quickly augmented by a few successful transactions.

39. The conversion of illegal profits to legal assets in his own name raises the risk for the entrepreneur of a tax investigation. But given the small number of criminal tax indictments brought each year, no more than 3500 in the late 1970's (Long, 1980, p. 26), this cannot be seen as too great a threat.

40. It is interesting to note the persistence of corruption problems in particular industries, such as stevedoring and construction. Most of these industries are characterized by locally defined and regulated markets. The fact that corruption seems to arise in many of the relatively autonomous local markets suggests that the problem is a structural one, perhaps arising from the inappropriateness of the regulatory approach.

41. The police might have acted without criminal cooperation. Bookmakers could have been taxed directly. The wireservice probably provided a low cost method of supervising extortion and the Miami police could not provide that service without criminal assistance. Attempting to do so would have increased the probability of their exposure to other police agencies.

42. This analysis draws heavily on the work of Rose-Ackerman (1978).

43. The District Attorneys in New York could investigate and prosecute members of the Police Department for corruption. Indeed, this happened shortly after the Kefauver Committee had completed its work. That prosecution (known as the Harry Gross scandal) is briefly discussed in Kornblum (1976). However, the District Attorneys lacked independent investigative resources; they were assigned members of the Police Department for short periods of time. The prosecutors were not in a position to monitor routinely either the police or the illegal markets with which they dealt.

44. Bookmakers are liable for two specific federal taxes. The more important is the Wagering Excise Tax (26 U.S.C. 4401) which levies a 2 percent tax on all wagers except those specifically exempted by statute. A bookmaker's gross margin for sports wagering is only about 4 percent, which he shares with agents. Bad debts are a significant expense so that his operating margin may be only 1 percent or less. All legal wagers, except those with licensed bookmakers in Nevada, are exempt. The second tax is the Wagering Occupational Stamp Tax (26 U.S.C. 4411) which levies a $500 annual fee, payable quarterly, on all persons employed in a non-exempt gambling business. Again, only licensed Nevada bookmaking establishments, among legal gambling enterprises, are not exempt. Tax collection figures suggest that only a trivial percentage of illegal bookmakers pay these taxes.

45. There is a hierarchy of effective investigative authority which deserves note here. Federal agencies investigate local police from time to time, but the local police almost never investigate federal agencies. Paying off federal agents would involve little risk of exposure to local police. However, the federal agents cannot provide the same routine protection as can the local police, with their vastly larger forces. Moreover, generally the federal agencies adopt more extensive anti-corruption measure.

46. Indeed, one's impression from reading materials such as the wiretaps on the De Cavalcante and De Carlo (Zeiger, 1973, 1975) and on a New York numbers banker (Reuter and Rubinstein, 1982, pp. 130-131) is that the purpose of corrupt police protection was not to suppress competition but simply to reduce the risk of interrupting the smooth operation of a business. The police, in turn, seem to have been willing to offer protection to any operator. That was certainly true of the major gambling protection ring in New York during the 1960's.

47. There is one qualification to that argument. Criminals become informants as the result of particular incidents. It is not, in m any cases, a continuing state. Police officer who has consummated a number of corrupt transactions with a criminal ought not be surprised if the same criminal makes use of that valuable information the next time he faces serious criminal charges from another agency. However, additional transactions have diminishing value to the criminal in providing him with evidence to use against the officer. Certainly the officer has lower exposure from three transactions with a single criminal than from one transaction with each of three criminals.

48. E.g., a typical numbers investigation will begin with observation of dense customer traffic at a store at particular times of the day. The customers leave the store without any visible purchases. The observation of this pattern by a patrol officer will provide the basis for a vice squad investigation. Since heroin customers face at least a modest prospect for short-term incarceration, they can be fairly easily persuaded to provide information about their dealer, at least if they have access to more than one so that turning in a dealer does not prevent them from getting heroin when they need it.

49. This assumes that such information is accurate. There is a cost to misrepresenting that it is Fat Tony's money, namely that Fat Tony will learn of this and effectively appropriate the customer, having now learned that the loanshark is weaker than he. This argument is expanded in Reuter (1983).

50. The divisional form and its evolution in modern American business is discussed extensively in Chandler (1962).

51. As an individual becomes wealthier, there are two reasons why he might become increasingly cautious in avoiding imprisonment. First, he has a larger wealth which may be taken from him through a successful investigation of his assets. Second, he will value his freedom more highly because he has more wealth to consume during that freedom.

52. The weaker control of force in remote locations is a function of the returns to reputation, which in turn are positively affected by the compactness of the relevant population; the investments which yield a reputation for being able to deliver threats have a higher return where the relevant population has numerous interactions. The probability that any individual will have heard about a reputation-enhancing act is an increasing function of the probability that he has contact, through a continuous chain of other persons, with at least one witness to the act. Persons in other cities have less likelihood of being in such a chain. For effective control of force in other cities, the entrepreneur must incur the costs of acquiring a reputation in that city.

53. One former pilot testified that he received payments of $30 per pound or $60,000 for a small airplane load (U.S. Senate, 1981, p. 35).

54. The number of wiretap orders issued by courts each year is quite modest; the number averaged less than 700 during the period 1969-78. However, a single order might cover more than one telephone, through successive amendments to the original order. Nonetheless, the number of tapped phones each year was surely less than 10,000. However, a phone call involves two instruments and the caller is likely to be unaware that the other phone might be tapped. The total number of instruments which were overheard in a wiretap each year may be in the hundreds of thousands, since each phone is in contact with numerous others in the course of a month.

55. That is not to deny that the police may be very well informed incidents of violence in illegal markets. That is one of the major yields from informants. But it is less for the purpose of arresting the perpetrator than to learn about relations between participants in these activities. The victim himself is less likely to provide the information to the police than is some associate.

56. It is difficult to make any definite statement about the determinants of resource commitments against illegal markets. However, it is plausible that the belief that a particular illegal activity is run by a single group will, on some occasions, lead to more intense enforcement.

57. In a legal setting, the entrepreneur and the employee could take out a performance bond, guaranteeing the employee payment in the case of the entrepreneur's death or other adverse contingency. This option is not available for illegal activities.

58. The problem is actually symmetric. The gang leader must be concerned about false claims. Any recruit may assert that he was attacked by members of the other gang and suffered some financial or physical damage in consequence. The leader will have difficulty in determining the validity of such claims.

59. Actually firing gang members is probably a risky strategy because that provides a signal of decline, which will be reinforced by statements by the fired gang member.

60. The gang leader may believe that the current gang has 100 members and that 110 will be enough to defeat them. However, there is a 10 percent probability that the true gang size is 105, for which a gang of 115 will be necessary for victory. The rival gang leader will then have to assemble a gang larger than 110 to optimize his investment. Exactly what size will depend on his taste for risk.

61. Landesco's (1929) classic account of the battles in Chicago does not give figures for the numbers involved in individual conflicts. However, the language certainly suggests that raiding parties of 10 were common for major attacks.

62. This is not to say that most persons arrested for gambling, for example, are members or agents of the Mafia. However, the justification given by city police for gambling enforcement is the role of the Mafia in gambling and long-term investigations are targeted against ostensible Mafia operations. On these matters, see Fowler et al. (1978).

63. See the testimony of the Department of Justice (Criminal Division) before the Commission on the Review of the National Policy toward Gambling (May 11, 1976). Also, General Accounting Office (1977) and the Hearings of the U.S. Senate Permanent Subcommittee on Investigations (1980).

64. If the gang leader does not expect to be in the position more than another five years, say, then he will want to maximize the revenues that he can obtain in that period. he will deplete the actual resource of the gang faster than would a young leader who expects to obtain returns for twenty years or more. The occasional successions struggles in the Mafia may revolve around younger members wanting to avoid the running down of actual gang resources which is advantageous for the aging leader.

65. President Reagan, in a speech announcing the creation of a major federal program against drug traffic, identified only heroin as under the control of the Mafia (New York Times, October 15, 1982, p. 11).

66. The elasticity of demand is measured by the percentage decline in unit sales resulting from a 1 percent increase in price. Highly elastic demand means that a small increase in price will substantially lower sales volume, reducing total revenue. With highly elastic demand, the monopolist's effort to raise prices above the competitive level will result in little additional profit. The constant returns to scale means that the monopolist does not get increased profits as the result of declining costs from having an output level higher than that of all the firms in a competitive industry. See Scherer (1970, Chapters I and II).

67. Moore (1977, Chapter 1) argues that the demand for heroin may be elastic in the short-run because there is a substantial non-addict population. At the long-run monopoly price, where only addicts are in the market, the demand may be quite inelastic. the low price of marijuana, relative to comparable forms of recreation, such as alcohol, suggests an inelastic demand. Cocaine demand, at the current very high prices ($80 for an evening's entertainment), may be the most price responsive.

68. The fact that the retailer is the immediate object of the threats does not mean that only the retail end of the market can be so controlled. The exclusive dealing arrangements of retailers implies that the ability to coerce retailers from the market will also lead to the exclusion of their associated banker.

69. An analysis of the centrality of campaigns against illegal gambling is presented in Reuter and Rubinstein (1982, Chapters V and VI).

70. GAO (1981) reported that the priorities of the federal Organized Crime Strike Forces, as established in 1977, were "labor racketeering, infiltration of legitimate business, public corruption, narcotics conspiracies, and violence" (p. 11). This was very different from the effective priorities established when the Strike Forces began; gambling cases dominated their effort against the labor racketeering and legitimate business interests is contained in Heymann (1980).

71. A good account of Mafia involvement in Nevada casinos is provided in Skolnick (1978).

72. It is difficult to identify any authoritative account of the Mafia's involvement in the heroin trade in earlier years. This description is pieced together by a skeptical reading of such sources as McCoy (1972, Chapters 1 and 2) and the McClellan Committee Report (1965) on narcotics.

73. This is certainly no more than an impression, based on review of investigative documents concerning some major Mexican heroin importing gangs. At least one gang, the Herrera family, is commonly asserted to have survived the incarceration or flight of numerous leaders and to have expanded the scope of its operations beyond narcotics.

74. The export price for cocaine, as reported in National Narcotics Intelligence Consumers Committee (1981, p. 49), is only 2.5 percent of the final price. Columbian officials cannot get all of that 2.5 percent, suggesting either that monopoly rents are not available at that level or that such rents are extremely modest.

75. For interesting material on careers in the marijuana trade, see U.S. Senate (1981, pp. 22-24 and pp. 278-292).

76. [To be submitted.]

REFERENCES

Aronson, Harvey. Deal. New York: Ballantine Books, 1978.

Barboza, Joe, and Henry Messick. Barboza. New York: Dell Books, 1975.

Becker, Gary. Human Capital: A Theoretical and Empirical Analysis (2nd ed.), New York: Columbia University Press, 1975.

Berle, Adolf, and Gardiner Means. The Modern Corporation and Private Property. New York: Harcourt, 1932.

Block, Alan. East Side-West Side: Organizing Crime in New York, 1930-1950. Cardiff, Wales: University College, Cardiff Press, 1980.

Buchaman, James. "A Defense of Organized Crime?" The Economics of Crime and Punishment, edited by Simon Rottenberg. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1973.

Chandler, Alfred. Strategy and Structure. Cambridge, Ma.: MIT Press, 1962.

Comanor, William, and Thomas Wilson. "Advertising, Market Structure and Performance," Review of Economics and Statistics 49 (1967).

Commission on the Review of the National Policy Toward Gambling. Hearings. Springfield, Va.: National Technical Information Service, 1977.

Fowler, J. Floyd, et al. Gambling Law Enforcement in Major American Cities. Washington, D.C.: National Institute of Law Enforcement and Criminal Justice, 1978.

General Accounting Office. War On Organized Crime Faltering--Federal Strike Forces Not Getting Job Done. GGD-77-17, Washington, D.C.: GPO, 1977.

General Accounting Office. Stronger Federal Effort Needed In Fight Against Organized Crime. Report GGD-82-2, Washington, D.C.: GPO, 1981.

Haller, Mark, "Bootlegging in Chicago: The Structure of An Illegal Enterprise," Paper read at American Historical Association convention, December 1974.

Hay, Donald, and Derek Morris. Industrial Economics: Theory and Evidence. Oxford: Oxford University Press, 1979.

Hutchison, John. The Imperfect Union, New York: E. P. Dutton, 1970.

Internal Revenue Service. Estimates of Income Unreported on Individual Income Tax Returns. Report No. 1104, Washington, D.C.: GPO, 1979.

Jensen, Michael, and William Meckling. "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," Journal of Financial Economics 3 (October 1976).

Kornblum, Alan. The Moral Hazards. Lexington, Ma.: D.C. Heath, 1976.

Landesco, John. Organized Crime in Chicago. 1929. Reprint. Chicago: University of Chicago Press, 1968.

Long, Susan. The Internal Revenue Service: Measuring Tax Offenses and Enforcement Response. Washington, D.C.: National Institute of Justice, 1980.

Manning, Peter. The Narc's Game. Cambridge, Ma.: MIT Press, 1980.

McClellan Committee. Narcotics Report. Permanent Subcommittee on Investigation of the Senate Committee on Government Operations, Washington, D.C.: GPO, 1965.

McCoy, Alfred. The Politics of Heroin in Southeast Asia. New York: Harper and Row, 1972.

Moore, Mark. Buy and Bust. Lexington, Ma.: D.C. Heath, 1977.

National Narcotics Intelligence Consumers Committee. The Supply of Drugs to the U.S. Illicit Market from Foreign and Domestic Sources in 1980. Washington, D.C.: GPO, 1982.

Ornstein, Stanley. "Antitrust Policy and Market Forces as Determinants of Industry Structure: Case Histories in Beer and Distilled Spirits," The Antitrust Bulletin 28 (Summer 1981).

Permanent Subcommittee on Investigation. Organized Crime and Use of Violence. Hearings before a Subcommittee of the Committee on Governmental Affairs. U.S. Senate, 96th Congress, 1980.

President's Commission on Law Enforcement and the Administration of Justice. Task Force Report: Organized Crime. Washington, D.C.: GPO, 1967.

Reuter, Peter. "Social Control in Illegal Markets," in Toward a General Theory of Social Control. Donald Black, ed. New York: Academic Press, 1983.

Reuter, Peter, and Jonathan Rubinstein. Illegal Gambling in New York. Washington, D.C.: National Institute of Justice, 1982.

Rose-Ackerman, Susan. Corruption: A Study in Political Economy. New York: Academic Press, 1978.

Rubin, Paul. "The Economic Theory of the Criminal Firm," in The Economics of Crime and Punishment, edited by Simon Rottenberg. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1973.

Schelling, Thomas. "Economic Analysis of Organized Crime," in President's Commission on Law Enforcement and the Administration of Justice, Task Force Report: Organized Crime. Washington, D.C.: GPO, 1967.

Scherer, Frederick. Industrial Market Structure and Market Performance. 2nd ed. Chicago: Rand McNally, 1980.

Skolnick, Jerome. Justice Without Trial; Law Enforcement in a Democratic Society. New York: John Wiley, 1966.

Skolnick, Jerome. House of Cards. Boston: Little, Brown, 1978.

Turkus, Burton, and Sid Feder. Murder Inc. Garden City, NY: Perma Books, 1952.

U.S. House of Representatives. Illicit Methamphetamine Laboratories in the Pennsylvania/New Jersey/Delaware Area. Hearing before the Select Committee on Narcotics Abuse and Control, Washington, D.C., 1980.

U.S. Senate. International Narcotics Trafficking. Hearings before the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, Washington, D.C., 1981.

Williamson, Oliver. Markets and Hierarchies. New York: The Free Press, 1975.

Wilson, James Q. The Investigators. New York: Basic Books, 1978.

Zeiger, Henry. Sam the Plumber. Bergenfield, N.J.: New American Publishers, 1973.

Zeiger, Henry. The Jersey Mob. Bergenfield, NJ: New American Publishers, 1975.

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