Cartels as Efficient Productive Structures

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Cartels are considered to be specific productive structures which allow producers to exert a monopoly power. Evaluation of the working of cartels is thus closely linked to the theory of competition and monopoly which one adopts. This field of economics is certainly one of those in which Murray Rothbard[1] has made breakthrough contributions. He has persuasively shown that there is no monopoly power as far as there are only voluntary arrangements. From this point of view, freedom of entry in production is the only relevant criterion to evaluate productive structures and one might dismiss as irrelevant all the other traditional conditions of the pure and perfect competition theory. In the present article we will not address this general debate about competition and monopoly and we accept the views of Murray Rothbard without any discussion. Our precise aim is rather to look for the specific characteristics of cartels and to evaluate them under the light of this approach. Cartels are generally considered negatively as formal arrangements to restrict production. After having discussed this approach we explain why cartels rather play a positive role in meeting some specific demands of the market. As a consequence they modify the frontier between the firm and the market.

The Cartel as a Restrictive Structure of Production

The traditional theory of pure and perfect competition focuses on the number of participants and, as such, introduces a strong opposition between the competitive case in which demand is perfectly elastic (from the point of view of the individual producer), and the monopoly case in which demand is inelastic, which makes possible for the monopolist to extract a "super-profit." In between is the case of the

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[1]Particularly in *Man, Economy, and State*, 3rd ed. (Auburn, Ala.: Ludwig von Mises Institute, 1993). In the present paper we rely mainly on this book, from which we extracted all quotations for which pages are given without any further indication.

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oligopoly, namely the troublesome case in which there are a few producers on a market.[2]

What is wrong in the traditional theory is not the *formal* analysis of monopoly or oligopoly, but the confusion it has made between the end result and the process. The number of firms on a specific market at one given time is the provisional outcome of a specific process and it has no meaning by itself. On the contrary, the fact that the process is based on the use of public constraint or is purely spontaneous makes the difference. Thus, it is not true that super-profit exists whenever there is freedom of entry on a market, since one cannot explain, in such a case, why there are no more producers trying to get such a super-profit. But the traditional analysis of monopoly is clearly and directly appropriate when applied to the case of a public privilege, namely the existence of a public barrier to entry: In that latter case, the formal analysis of monopoly is a correct description of reality. In this case only does a super-profit exist.

Now, what about the case of a small number of producers, which is the scope of analysis both of the theory of oligopoly and the theory of cartels? Let us assume that for some technical or historical reasons, only a limited number of firms exist at one given time (the possible economies of scale not being large enough as to justify the existence of only one producer). Each producer has to elaborate a strategy of his own in an environment of imperfect information (since the decisions of each producer affect the state of the market, but no one knows about the intentions of others). Thus, authors such as Heinrich von Stackelberg have shown that the outcome of the process may be different according to the strategies followed by different producers. There are, for instance, cooperative and non-cooperative processes, equality between the producers or a distinction between a leader and followers, etc. Once more, these assumptions may have interesting applications. They are debatable as far as they tend to introduce the idea of a monopoly situation in the absence of any public privilege.

A distinction seems to be frequently made between an oligopoly and a cartel. A cartel could be defined as a specific oligopoly in which the different producers, instead of just interacting, enter into a process of explicit cooperation. Thus, a cartel is viewed as an agreement between different producers in order to follow common rules or behaviors, i.e., a system of mutual and freely accepted obligations.

[2]The definition of a market is arbitrary, since it implies the possibility to differentiate perfectly specific goods. This would be possible without any ambiguity only if goods were perfectly not substitutable one to the other. As far as some substitutability exists—which is always the case—the definition of a good and of a market is arbitrary.

It is usually assumed that this agreement can be explained by a common *intention* of participants, namely creating a monopoly position. Therefore, participants who do not face a perfectly elastic demand are able to extract a super-profit from purchasers, which they would be unable to obtain without such an agreement. Thus, cartels are mainly viewed as having a negative aspect, as is expressed in the usual saying that cartels are collusive.

In the traditional theory the super-profit is shared between participants according to *a priori* rules, for instance their market shares. It is well-known that cartels are considered unstable structures, since participants are tempted to become free riders: Although they have an interest in others' respecting the agreement, they can expect a larger share of the common super-profit by introducing some degree of competition with regard to their partners.

The cartel is sometimes considered as worse than the monopoly. In fact, it is often assumed that a monopoly exists for purely technical reasons, for instance because techniques are such that large economies of scale make it impossible for several firms to coexist in the most profitable way (natural monopoly).[3] In such cases no normative judgment is issued against the monopoly, but it is argued only that the state has to prevent the assumed *exploitation* of consumers by regulating the monopoly or by nationalizing it. The value judgment concerning cartels is more critical since it is assumed that there is no technical reason for any monopolist position, but that the cartel is created *ex nihilo* by an explicit agreement between producers in order to exploit purchasers. From this point of view any cartel arrangement ought to be prohibited, for the cartel exists *in order to* create restrictive procedures.

In fact, as we shall see later, this negative approach to the cartel is a direct consequence of the traditional theory of competition. According to it, pure or perfect competition can only exist when a great number of (identical) producers produce a homogeneous good. In fact this theory does not describe a real process of competition between real entrepreneurs, but the technical organization of managers in a non-innovative system, for instance the managers of plants in a Soviet-style centralized system of production: It is assumed that there is one single technique—an *optimal* technique from a purely technical point of view—to produce a given good and all (numerous) managers have to apply exactly the same technique to produce exactly the same good.

[3]Anyhow, those who support such views do not usually consider the possibility of competition from producers located in other nations and are ready to support protectionist measures.

In that sense, it can be said that the theory of pure and perfect competition is in fact a theory of central planning.[4]

The Austrian theory of competition leads to an opposite view. The end result of a competitive process is not the production of identical goods by numerous producers, but, on the contrary, the *differentiation* of goods produced by entrepreneurs who are innovators and who are induced by competition—namely the free entry of potential competitors—to offer better goods at lower prices.

Therefore, as far as cartel agreements intend the homogenization of goods (either of their specific characteristics or their price), one may wonder for which category of theories it could be a problem. From the point of view of a supporter of the traditional approach of competition, the problem may not be that of homogenizing goods, but of creating monopoly power. From the point of view of the supporter of the Austrian theory of competition, there is no such thing as monopoly power, as far as the process of monopolization by cartels is spontaneous. But the reason for homogenization has to be clarified—which we will try to do later—since the merit of competition relies on the fact that it induces *differentiation*.

The approach used by Murray Rothbard to study the specific case of cartels seems to be the following: He accepts the idea according to which cartels are a system of collusion aiming at introducing some restrictive actions in a productive system (rarefaction of production). However, he shows that, on the one hand, restrictive actions of producers are perfectly justified and that, on the other hand, cartels cannot create monopoly power since such power cannot exist as long as there is free entry on a market. Thus, in Murray Rothbard's view, if producers organize themselves into a restrictive agreement—a cartel—it is to meet a demand by purchasers for a restrictive action. The argument goes as follows. A monopoly position can be reached by a single producer or a set of producers organized into a cartel only if demand is inelastic, which makes restriction of production possible and profitable. But, it is up to demanders not to have an inelastic demand: If ever they were unsatisfied with the cartel's behavior, they could decide on having a perfectly elastic demand, i.e., not accepting an increase in prices through the restriction of production. As Murray Rothbard wrote,

> If the consumers were really opposed to the cartel action, and if the resulting exchanges really hurt them, they would boycott the

[4]We have developed this view in a short book, *La concurrence*, in the *Que sais-je?* collection (Paris: Presses Universitaires de France, 1995).

> "monopolistic" firm or firms, they would lower their purchasing so that the demand curve became *elastic*, and the firm would be forced to increase its production and reduce its price again. If the "monopolistic price" action had been taken by a cartel of firms, and the cartel had no other advantages for rendering production more efficient, it would then have to disband, because of the now demonstrated elasticity of the demand schedule.[5]

By saying that demanders could react against the cartel by lowering their purchases, he implicitly assumes that the good produced by the cartel has close substitutes, so that the demanders can decline the restrictive action of producers (and the corresponding increase in prices) by shifting to these substitutes, without any significant loss of utility.

Thus, if a cartel burns coffee in order to increase its price, the waste comes from the fact that there has been an excessive production of coffee and not from the fact it is burnt (since coffee has no other value than the one it gets from its relative scarcity in comparison with other goods). In some sense the restrictive action is not specific to a cartel, since on any free market one always restricts the production of a good in order to produce another one. According to Murray Rothbard: "The cartel's action, in reducing the production of coffee and causing an increase in the production of rubber, jungle guiding, etc., led to an increase in the power of the productive resources to satisfy consumer desires,"[6] and "A cartel action, if it is a voluntary one, cannot injure freedom of competition and, if it proves profitable, benefits rather than injures the consumers."[7] Thus, either the cartel results from the free working of the market and its possible restrictive actions are *wanted* by consumers, or it is the consequence of a barrier to entry and the restrictive action is a pure monopoly—i.e., state created—exploitation of purchasers.

However, Murray Rothbard seems to limit justification for cartels to the case of voluntary and beneficial restrictions of production, although he does not exclude the possibility of other cartel actions when he writes:

> To regard a cartel as immoral or as hampering some sort of consumer's sovereignty is therefore completely unwarranted. And this is true even in the seemingly "worst" case of a cartel that we may assume is founded *solely* for "restrictive" purposes, and where, as a

[5]Murray Rothbard, *Man, Economy, and State*, p. 565.
[6]Ibid., p. 569.
[7]Ibid., p. 584.

result of previous error and the perishability of product, actual destruction will occur.[8]

However, the very notion of a "restrictive action" is by itself debatable, inasmuch as such an action can be labeled as restrictive only in comparison with a norm which could undoubtedly be named non-restrictive. Let us take the example of coffee producers burning coffee in order to increase its price and obtain a maximum profit. A cooperative action is necessary in order to avoid free-riding. However, instead of burning coffee after it has been produced, producers could have decided on a cooperative action before producing it in order to avoid overproduction. They did not do it just because they lacked the necessary information on the future state of the market. Therefore, burning coffee is a restrictive action only in comparison with a specific state of affairs which had been freely chosen by producers in a situation of imperfect information.[9] Therefore, it would be preferable to avoid using the normative word of "restriction" and to just assume that the cartel aims at profit maximization.

Now, if there is free entry on the market, it is wrong to say that this profit maximization corresponds to a super-profit. As is the notion of a restrictive action, the notion of a super-profit is meaningless, since it implies a comparison with a completely non-existing norm, namely the rate of profit obtained in a situation of pure or perfect competition.

The mere definition of a cartel does not imply anything about the degree of freedom of entry on the market. The theory of monopoly has no scope as long as the reasons for the existence of one single producer are not made precise (e.g., barriers to entry, economies of scale or innovation). Similarly, the theory of cartels is meaningless without a clear understanding of the reasons for the existence of such a market structure. As we have seen, the possibility to introduce a restrictive action on a market is not an acceptable explanation and we have to consider other justifications for cartels.

If there is not a single producer but a couple of producers in a given market, it means for instance that there is no additional gain to be obtained from shifting from several producers to one single producer (the optimal size of firms has been obtained with several firms and there is no marginal economy of scale). To most theorists, cartels appear as unstable market structures, because they can find explanations for a situation with one monopolist or for a situation with a great number

[8]Ibid., p. 570.

[9]Moreover, in such a case, the cartel is only a transitory market structure to cope with the unexpected consequences of non-cooperative behaviors. Now, in principle, the market is a coordination process which makes cooperation unnecessary.

of producers, but not for any in-between situation. The cartel thus appears as a transitory solution to solve a specific problem. However, this intermediate market structure can be perfectly stable and optimal.

The Cartel as a Value-Producing Organization

As we just stressed, contrary to the traditional theory, competition has the merit of inducing producers to differentiate their production one from the other and not to try to produce exactly the same good with the same technique. Now, if we define a cartel as a structure which allows different producers to coordinate their production in order to suppress any differentiation in their products, does it mean that cartels can be viewed as anticompetitive organizations, or that some other reason might explain the emergence of such a productive structure?

There is a very general and simple answer to this question: If competition prevails in the sense that there is free entry on a market and if a cartel has existed for long, it necessarily means that this structure is the best one to meet some specific demand of the market. In other words, a cartel is not necessarily unstable—as is obvious from practical experiences—and if it remains alive in spite of potential competition, it means that it is a useful structure in this specific case. In other words, competition usually leads to differentiation of products, i.e., imperfect substitution between them, whereas a cartel tends to induce homogenization, i.e., substitutability. The benefits of differentiation are so obvious that there must be serious reasons for limiting it and introducing a higher degree of substitutability between products.

In fact there are many specific activities in which there is a demand for homogeneity, especially in network activities, for instance telecommunications, transportation, or money production (which are frequently considered as public utilities and, even, natural monopolies). Generally speaking such situations can be named situations of "sub-additivity,"[10] which includes externalities, economies of scale and economies of scope. In such cases one can obtain gains from coordinating several producers or from substituting one unique producer for a number of them.

As an example, in the case of money production it can be considered that there are economies of scale and, therefore, decreasing marginal costs in the production of money, since, for instance, advertising costs on the characteristics of a currency may be more or less fixed and the centralization of reserves allows savings of resources; there are

[10] This term seems to have been used first by the economists of Bell Co. It is used, for instance, in W. Baumol, J. Panzar, J. C. Willig, *Contestable Markets and the Theory of Industry Structure* (New York: Harcourt, Brace, Jovanovich, 1982).

economies of scope (since information obtained by a financial intermediary can be efficiently used to create money against credit); and, finally, there may be externalities, since, for instance, a currency is more useful for one person the more widely it is used by others. Even if one disagrees with the precise reasons for sub-additivity, anyone may accept the idea that it would not be *optimal* to have a very large number of different currencies.

Governments and all the *experts* who support them usually shift from such observations to the conclusion that there are natural monopolies, so that public monopolies or regulations are necessary in order to avoid the exploitation of demanders by producers. In fact, there is only one conclusion to be drawn from such observations, namely that there is a potential gain to be obtained from decreasing the degree of differentiation in the production of such goods. There are potential gains which can be obtained from substituting one or a limited number of goods for a great diversity. However, it does not mean that the optimal degree of diversification—or, conversely, the optimal degree of homogenization—can be decided *a priori* from a purely technical approach. Two remarks are important at this point:

> (1) If ever gains can be obtained by diminishing the degree of differentiation—for instance because of economies of scale—it does not imply that it is also optimal to diminish the number of producers. As an example, if it could be proven that it would be technically optimal to have one single money or one single computer standard in the world, it would not imply that there ought to be one single producer: Either a monopoly or a cartel can do the job. In fact, a cartel is a productive structure in which *different* producers produce the same good, so that they can be as efficient as a monopoly in meeting sub-additivity problems.

> (2) One cannot know in advance and forever whether there is sub-additivity in an activity. It has to be discovered. And, as is well-known, competition—i.e., free entry—is the best way to discover to which extent sub-additivity does exist and to which extent it may change over time. More specifically, it cannot be generally said that sub-additivity exists in such and such activity, as it may exist at one given time at one point of the production process, but not some particular over its entire range. For instance in a telecommunication or transportation network, it may not be efficient to have more than one major *highway* in some part of the network, whereas in other parts there would not be any economies of scale: the *highway* may be operated by one *monopolistic* producer or by several producers coordinated into a *cartel*, whereas the other parts could be managed by different, not coordinated, producers as well as by a cartel (for

instance the one which is managing the *highway*). As new technologies are discovered, the place of the cartel may change over time.

Therefore, cartels exist not only, or even not mainly, in order to make resources scarcer and to increase prices, but to increase the value of production and improve the productive processes. The cartel is not created to extract what the traditional theory calls a "super-profit," but to produce coordination gains.

Cartels, as well as monopolies, are the possible outcome of competition, i.e., free entry on a market: Competition makes it possible for real entrepreneurs to innovate, so that they are the only suppliers of the new product they have decided to introduce to the market. As competition has the merit of inducing producers to be the first ones on a market—i.e., to be what traditional theory calls monopolists—it is meaningless to compare cartel situations to a situation with many producers. But it makes sense to compare cartels to monopolies. In fact, if ever there are gains to be obtained from homogenizing production, because of sub-additivity phenomena, is it not more efficient to have one single producer than several ones in a cartel?

In fact, in a cartel there are possible coordination costs which may be opposite to the coordination gains obtained through the homogenization of production. However the cartel may be organized along two different procedures, either spontaneous coordination or explicit cooperation. As an example of the first category, let us take the case of a free banking system and let us assume that, in a given area, several banks produce currencies which benefit from a convertibility guarantee in terms of gold. However, each bank discovers that, in order to make its own money more attractive, it has to increase its liquidity and, therefore, it decides to accept the currencies issued by other banks of the system against its own without limit, at the fixed price given by their mutual gold prices. Such a system of spontaneous coordination makes all currencies perfectly substitutable, which means that the banks of the system have decided to eliminate any possible differentiation of their products. However, one may imagine that some degree of cooperation—i.e., explicit coordination of decisions—may take place, for instance to decide a common name for the *common* currency, but it is not absolutely necessary, since each bank can decide separately to use the name of a currency already issued by one of them. Thus, one cannot define a cartel by the existence of cooperation—or what is sometimes called collusion—but rather by the fact that there is homogenization of goods produced by different producers, whether it results from explicit, centralized decisions or from decentralized, individual decisions.

Coordination costs are certainly higher the more cooperation exists in the system, since it is necessary to monitor the explicit cartel agreement. In such a case, as we have already recalled, each participant in the cartel has an interest in others' honoring the agreement, and in trying to engage in free riding in order to get a larger share of the common market. But coordination costs are almost non-existent whenever the cartel is the result of the spontaneous decisions of its members.

On one hand, a cartel may have some advantages in comparison with the case of a single producer (monopolist). The main gain stems from the fact that, although there is actual homogenization of production, the possibility of *future diversification* remains. As we have already stressed, the existence of coordination gains may change over time as new technologies are discovered. When a single good is produced by several producers in a cartel rather than by a single producer, there may be more incentives to discover new techniques. The traditional assertion according to which a cartel is necessarily unstable is not completely wrong, but it must not be considered as a negative aspect of the cartel, but rather as a positive one. It means that the cartel subsists as long as it is the most efficient productive organization. But that it may burst whenever other productive structures appear as more efficient. Moreover, the participants in the cartel are permanently induced to look for the possibility of inventing more efficient productive organizations, some of which includes the dissolving of the cartel or, maybe, the arrangement of a new form of cartel.

Another possible gain brought by the cartel is a scale gain. Contrary to what is usually assumed economies of scale do not generally exist. Moreover, whenever it can be assumed, that there are economies of scale, they have to be viewed as *technical* and not as *institutional* economies of scale.[11] But there are also diseconomies of scale, which are mainly of an institutional nature. It is well-known that the internal organization of a firm does not rely on explicit exchange procedures, so that the production of information may be more difficult. The larger the firm the larger may be the organization cost. Thus, by coordinating their production—or cooperating—in a cartel, different firms are able to produce a good at the optimal scale, from the technical point of view, and of minimizing institutional costs (diseconomies of scale).

The IATA (International Air Transport Association) gives an interesting example of an efficient, rather stable, but changing cartel. Through

[11]As Murray Rothbard rightly wrote, "The critical problem is not the size of the plant, but the size of the firm" (*Man, Economy, and State*, p. 577) and "Economics can make few valid statements about the optimal size of a firm except that the free market will come as close as possible to rendering maximum service to consumers, whether we are considering the size of a firm or any other aspect of production" (Ibid., p. 578).

an agreement which is not very costly to manage, different firms are able to give more value to their services, since the tickets issued by different firms are (nearly perfectly) substitutable one for another, at least as regards regular tickets. However, airlines are allowed some degree of differentiation—for instance in the quality of service—and, on the other hand, they also produce services (e.g., special rates and charters) which do not enter the cartel agreement. Thus, the airline industry is characterized by an optimal degree of differentiation and homogenization from both the points of view of travelers and airlines. To some travelers, the substitutability between airline tickets is very valuable, for some other ones the priority consists in getting the lowest possible prices. Thus, the airline industry meets the different needs of customers.

The traditional theory of competition, as well as the traditional theory of the natural monopoly, have a global view of what they call a *good*. It is considered, for example, that there is something such as *air transportation* or *telecommunications*. Moreover it is assumed that sub-additivity exists in such network activities, so that there is the possibility of a natural monopoly. In fact, as it has been made clear by the *new* theory of consumption,[12] people do not demand *goods*, but characteristics and physically distinct goods are supplying bundles of characteristics, in various proportions. The problem of production is to adjust to the immense variety of characteristics desired by different individuals. Now, homogeneity may be one valuable—and, therefore, demanded—characteristic, as is the case for money or air transportation. Therefore, to be efficient a productive structure has to produce baskets of characteristics which are viewed as optimal by demanders, which implies that some baskets may include homogenized goods and some others differentiated ones. The cartel—which is a mix of differentiation and homogenization—contributes to this adjustment. From this point of view it is an essential feature of productive structures. Contrary to the usual view according to which cartels are fundamentally unstable and, therefore, transitory, and contrary, even, to the view of Murray Rothbard who also considered cartels as somewhat transitory organizations, cartels have a durable, although changing, role to play.

The Cartel as an Intermediate Productive Structure

Thus, the cartel plays an important role in allowing an optimal combination of diversification and homogenization in production, according

[12]K. T. Lancaster, "A New Approach to Consumer Theory," *Journal of Political Economy* (April 1966); reprinted in *Modern Consumer Theory* (Brookfield, Vt. and Aldershot, England: Edward Elgar, 1991).

to the needs of demanders; and in providing an optimal combination of coordination and cooperation. From this latter point of view, it plays an interesting and intermediate role in productive structures.

Murray Rothbard considers that a cartel aims at organizing a "*co-operation* to increase the incomes of the producers" and he adds: "For what is the essence of a cartel action? Individual producers agree to pool their assets into a common lot, this single central organization agrees to make the decisions on production and price policies for all the owners and then to allocate the monetary gains among them. *But is this process not the same as any sort of joint partnership or the formation of a single corporation?*"[13] Comparing the creation of a cartel to that of a centralized firm, he concludes, "*there is therefore no essential difference between a cartel and an ordinary corporation or partnership.*" However, as we already stressed, if ever a cartel and a big firm are exactly the same, why would cartels exist? Seeing no basic difference between them, Rothbard assumes that cartels are mainly transitory structures, contrary to what can be shown by reasoning or experience.[14] In fact, his conclusions are dependent on his definition of the cartel. Viewing the cartel as an explicit cooperation of firms in order to increase the joint profit—according to the traditional definition of a cartel—he assumes that the most efficient firms will be tempted to break the cartel in order to increase their market shares. In fact, as we have seen, a cartel cannot be defined by a strategy of market sharing, although it does exist, but by a coordinated—not necessarily cooperative—effort to homogenize production (which may imply identical prices). If this homogenization is desired by the market, the cartel is efficient and it will last. If it does not meet any specific need of the demanders, but is only the end result of an effort by producers to maximize joint profits, it may fail more or less rapidly.

As a consequence of his restrictive definition of a cartel, Murray Rothbard thinks that either the cartel is efficient and a merger will rapidly take place between its members, or it is not, and it will break down. As he wrote, "if joint action is the most efficient and profitable course for each member, a merger will soon take place."[15] In reality efficient cartels can and must last, possibly by transforming their structure and activities or the number of their participants. The best example may be that of money production. Under free banking the production of money by members of cartels was efficiently made without

[13]Rothbard, *Man, Economy, and State*, p. 572; emphasis in the original.

[14]"In many cases, a cartel can be considered as simply a tentative step in the direction of permanent merger," ibid., p. 573.

[15]Ibid., p. 579.

any destruction of the cartel or any merger into one single big producer. In fact, if there are no unlimited economies of scale, there is no reason for a merger.

Mergers do not occur precisely because in a cartel firms are independent profit centers, which makes economic calculation more efficient. Instead of viewing a cartel as a set of firms which are about to merge, it may be both more realistic and more efficient to consider it as the ultimate stage of a process by which a big firm has been decentralized into various coordinated *decision centers* and, ultimately, split into independent *profit centers* with different owners.

As is well-known in his seminal work on the modern theory of the firm, Ronald Coase[16] gave an answer to the following question: If, as it is rightly assumed, the market is an efficient way for individuals to organize their mutual exchanges, why substitute other procedures, for instance the cooperative and command procedures which are used inside a firm? The market makes it possible to *coordinate* relations between individuals through voluntary exchange, whereas individual actions are made compatible inside a firm (or any other organization) through *cooperation*, i.e., a complex mix of spontaneous and constrained (command) actions.

Therefore, it is now widely admitted that an optimal organization of production stems from the juxtaposition of two non-excluding schemes, cooperation and coordination. The market is a *coordination* process between voluntary actors and the firm—as well as any other organization—is a *cooperative* system in which the productive process is based not on spontaneous interactions between individuals through contracts but through more vague processes of cooperation (for instance through command, although in any firm there is a mix of command, voluntary decisions and initiatives, coordination through information processes, etc.). Now, there is a sort of frontier between the market process and the organizational process of firms. It can be assumed that the larger a firm is the more difficult is the internal organization process. However, the firm may gain from either the possibility of developing economies of scale or—according to the traditional theory—exploiting a monopoly position and a super-profit. From these conflicting tendencies, an optimal size of the firm results under specific conditions.

Instead of this one-or-the-other approach, a cartel makes it possible to better combine these conflicting tendencies via a better use of both cooperative solutions (internal organization) and coordination

[16]Ronald H. Coase, "The Nature of the Firm," *Economica* (1932).

processes (market). This is the reason why there is a great variety of cartels combining, in different ways, coordination and cooperation procedures. This is also the reason why cartels are not necessarily unstable. They are part of a firm's strategies: If ever a firm considers any change in its production, it does not have to choose only between extending the internal process of cooperation or entering into voluntary exchange on the market. It may be preferable to combine cooperation and coordination under the form of a cartel.[17] The micro-computer industry gives an interesting example of such strategies. According to the evolution of markets, strategies, and technologies, producers decide their standards independently or enter into cooperative agreements which can be considered as cartel arrangements.

From this point of view it is preferable to abandon the definition of a cartel as an agreement between firms which *intends* to exert a restrictive action or any sort of specific action. The actual intention of participants is not relevant. Any action results from an intention, but the content of the intention does not matter from the market point of view. It may be that an entrepreneur enters into an agreement with some specific intention, but the outcome of the agreement is not the one intended, but another one which appears as beneficial, so that the agreement will be maintained. What is important in a cartel is that some mix of coordination-cooperation efficiently blurs the frontier between organizational processes and market processes.

[17]Franchising in retail trade is a well-known example of such strategies.