Part 2: The Central Elements of the Current Theoretical Edifice

Particularly, as far as the economic subject of industrial concentration is concerned, the current tenet in antitrust theory in the United States, associated with the Chicago School, is based on the belief that given a particular structure of an industry large-sized companies in concentrated industries have achieved their size only because of distinct efficiency advantages over smaller competitors.

This is compounded by the belief that the various factors of the particular industrial structure play only a minor role in determining performance levels in specific industries, and that therefore solely business conduct should be of importance.

We will, therefore, analyze the central elements of the current theoretical edifice with regard to:

- whether or not efficiency considerations were and are the exclusive concern of antitrust in the United States, comparing the results to the concerns and goals of the Act against Restraints of Competition (ARC) of the Federal Republic of Germany;
- the adequacy and usefulness of neoclassical price theory and the static partial equilibrium model used by adherents to the current tenet in their analyses of antitrust problems; and
- the impact of market share, degree of industrial concentration, and impediments to new competition as the most important factors of industrial structure influencing economic efficiency and the interrelations among each of these factors.¹

I. The Current Debate on The Goals of Antitrust: Economics or Sociopolitics?

We have already emphasized the importance of an explicit system of antitrust goals to provide a link between antitrust theory and policy on the level of positive economics. Antitrust policy cannot be understood, implemented, and evaluated until the ends are defined that such policy should pursue. There

¹ In this Part of the contribution we will restrict our analysis to the role that impediments to new competition play and their interrelation with economic efficiency. The impact of the degree of industry concentration and different market shares on efficiency will be treated in Part 3.
are no policy objectives which are generally valid. Therefore, the setting of antitrust policy goals reflects a choice of normative character.  

The importance of a precise definition of goals becomes obvious in the following remarks by former Professor, now Judge, Robert H. Bork:

"Antitrust policy cannot be made rational until we are able to give a firm answer to one question: What is the point of the law - what are its goals? Everything else follows from the answer we give. Is the antitrust judge to be guided by one value or by several. If by several, how is he to decide cases where a conflict in value arises? Only when the issue of goals has been settled is it possible to frame a coherent body of substantive rules."  

Although the term 'competition' that the law is to preserve has not been clearly defined in the sense of what goals are supposed to be pursued through this competition and which of these goals are meant to prevail in situations where they conflict, the U.S. Federal Supreme Court has stated on several occasions that the object to be protected is competition itself, and that the antitrust laws have a variety of goals within this overall object of protection. It was held that "under the existing antitrust statutes the courts may properly implement a variety of mutually inconsistent goals, most notably the goals of consumer welfare and small business welfare".

This view was challenged some time ago by proponents of the Chicago School. This challenge led to a considerable dispute over the ultimate goal(s) the various U.S. Congresses had in mind when they passed the antitrust statutes. The controversy arose largely because the antitrust statutes are  


rather vague. Their wording is frequently ambiguous, and therefore needs interpretation with regard to legislative history and intent, especially in cases of individual application.6

In the following, we will characterize the current single-goal efficiency orientation in the U.S. and its anti-posture as documented by scholarly commentary. We will then analyze the legislative history of the antitrust statutes, the adjudicative development on the Supreme Court level and critically add some plausibility considerations, all of these referring to Sec. 7 of the Clayton Act. In addition, we will present a recent "rent-seeking" explanatory attempt. Finally, we will analyze the German circumstances with regard to the legislator's motives in introducing antitrust laws and a merger control system by the Second Amendment to the Act against Restraints of Competition.

1. The Current Efficiency-Orientaion

Whereas the economists adhering to the traditional tenet were not able to discover a singular congressional intent with regard to antitrust legislation, proponents of the Chicago School hold that all policy making by the government and the enforcement agencies - especially in the field of antitrust - should be exclusively concerned with the notion of consumer welfare which

finds its equivalent in the concept of efficiency. The term 'competition', the
protection of which is unambiguously the official rationale of the antitrust
statutes, is supposed to describe a specific state of the market in which
consumer welfare cannot be increased by judicial decree.

A primary criticism is that the U.S. Federal Courts - in over 80 years -
have not been able to agree for any extended period of time upon a defini-
tive statement of the law's goals, despite the fact that this should have
been a matter of some importance. Accordingly, extensive confusion may have
arisen that "is likely to leave the impression that antitrust is a cornucopia
of social values, all of them rather vague and undefined but infinitely
attractive".

Proponents who claim that efficiency should be the primary concern of anti-
trust policy attempt to find support in legislative history as well as in the
interpretation of legislative and adjudication. Because of the difficulties in
perceiving the ratio legis, they argue, not only legal wording should be
taken into account, but also the intentions that are inherent in the applica-
tion of the law. As a result, it is concluded that

"(t)he language of the antitrust statutes, their legislative histories, the
major structural features of antitrust law, and considerations of the
scope, nature, consistency, and ease of administration of the law all
indicate that the law should be guided solely by the criterion of con-
sumer welfare".

7 Cf., e.g., Bork, Antitrust and Monopoly ..., supra, 243 f., idem, The Anti-
trust Paradox, op. cit., ch. 2; Bork, Robert H., and Ward S. Bowman, The
Crisis in Antitrust, 65 ColLR (1965), pp. 363-376, 369; Posner, Richard A.,
The Economics of Justice, pp. 92-94; idem, The Ethical and Political Basis
487-507; idem, The Chicago School of Antitrust Analysis, 127 UPLR (1979),
pp. 925-952, 933 f.; and Areeda, Phillip, and Donald F. Turner, Antitrust
Law: An Analysis of Antitrust Principles and Their Application, Boston
10 Cf. Fox, The Modernization of Antitrust ..., supra, 1146.
11 Bork, The Antitrust Paradox, op. cit., 57, emphasis added. For the common
interpretation, cf., e.g., Audretsch, David B., An Evaluation of Horizontal
Merger Enforcement, In: Craven, John (ed.), Industrial Organization, Anti-
trust and Public Policy, Boston 1982, pp. 69-88, 71: "The goal of antitrust
is apparently multidimensional. It includes the prevention and elimination
of monopoly prices and restricted output, the redistribution of wealth
away from monopolistic power, and the diffusion and decentralization of
aggregate concentration of economic resources in society."
The necessity for reform is not primarily seen as a matter for Congress since from this point of view legislative intentions seem obvious. Rather, it is the U.S. Supreme Court and its adjudication that make the necessity for reform arise:  

"I am not suggesting a judicial coup d'état. Rather, I intend to argue that an exclusive adherence to a consumer welfare test is the only legitimate policy for the Supreme Court under present statutes precisely because of the Court's elitist, unrepresentative nature."

In addition, there are attempts to justify the exclusiveness of the consumer welfare goal by claiming certain virtues for it. This can be characterized as a sort of plausibility approach. A single-goal orientation of consumer behavior is seen as being superior to a multiple-goal approach for at least five reasons. 

Firstly, the consumer welfare goal gives fair warning to business men affected by the antitrust laws by providing a small number of relatively simple rules, which allow firms to predict judicial opinions and legal decisions more accurately. It "makes changes in the law predictable and less likely to produce unfairness".

Secondly, the approach offers a relatively precise and politically neutral set of standards, minimizing the fear of excessive judicial power. The approach documents the legislature's primary role in correctly enforcing the law in

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12 Bork, Antitrust and Monopoly ..., supra, 243. For a similar opinion cf. Areeda/Turner, Antitrust Law: An Analysis of Antitrust Principles, op. cit., § 111 d; and Areeda, Phillip, Introduction to Antitrust Economics, 52 ALJ (1983), pp. 523-538, and esp. 536, emphasizing a discrepancy between consumer welfare and efficiency not acknowledged by Bork: "'Consumer welfare' embraces what individual consumers are entitled to expect from a competitive economy. If the efficiency extremists insist that only their definition of consumer welfare is recognized by economists, we would answer that ours is clearly recognized by the statutes. The legislative history of the Sherman Act is not clear on much, but it is clear on this."


comparison to the courts. This is actually a strict application of the per se-rule instead of the rule of reason, the latter allowing too much discretion to the courts as well as to the enforcement agencies:

"Courts are the wrong institution for these unstructured interpersonal comparisons both because political choices of this nature should, ..., be made by elected and representative institutions, and because the courts do not have the facilities for fact-finding on a broad scale that are available to the legislature. The admission by a court of goals in conflict with consumer welfare into the adjudicative process, therefore, involves a serious usurpation of the legislative function by the judicial arm."

Thirdly, making consumer welfare the only antitrust goal is seen as a viable means for courts to force legislature to face and to decide questions that had been left hitherto unanswered. Therefore the consumer welfare is supposed to have the function of making the legislative institutions more responsible and not allowing them to leave important questions to the courts. This would maintain the integrity of the legislative process.

Fourthly, by using the basic principles of price theory as criteria for decision, real rather than unreal economic distinctions can be made with regard to the anticompetitive market conduct of competitors. The consumer welfare goal provides principles and concepts of assessment that allow the courts to determine deviations from the guiding concept of competition. In this context, the concept of 'efficiency' and the yardstick of 'output restriction' serve as central elements.

Avoiding arbitrary or anticonsumer rules is the fifth and final argument in favor of the consumer welfare goal as stated by Bork. It is contended that in a case-by-case approach courts are very unlikely to balance different

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It is pointed out, however, that Congress did not have sufficient economic knowledge and therefore deliberately allowing the judiciary to wield a certain amount of discretionary power, cf. Pitofsky, Robert, The Political Content of Antitrust, 127 UPLR (1979), pp. 1051-1075, 1060.
Bork, Antitrust and Monopoly ..., supra, 253: "The kind of uncertainty which a legal system ought not to tolerate, particularly where statutes are involved, is that which arises because judges are making case-by-case and ex-post facto the political choices."
values which are partly contrary to consumer welfare since "(t)hey are much more likely to arrive at rigid rules which will either be arbitrary or completely anti-consumer." 17

The notion that public policy should be solely guided by consumer welfare and, therefore, according to these proponents, by efficiency considerations, has strongly influenced current government policy as well as courts' decisions. 18

Although Supreme Court decisions have not given the term efficiency a specific interpretation, they have strengthened the claim that antitrust is only a means to promote efficiency. Thus, with Chief Justice Burger who headed the Supreme Court then

"majority opinions by some members of the Court began to reveal a strong undercurrent that business should be left presumptively free to do what it wishes, apparently on the theory that greater private business freedom is crucial to a free society." 19

However, a variety of authors from both the economic and the legal profession disagree with the viewpoint that consumer welfare, as measured by a criterion of efficiency, should constitute the sole goal of antitrust. It is contended that with regard to antitrust policy it can be shown that legisla-

17 Bork, The Antitrust Paradox, op. cit., 86.
Former Assistant Attorney General and then head of the Antitrust Division, William F. Baxter: "The sole goal of antitrust is economic efficiency., The Wall Street Journal, March 4, 1982 at p. 28; and: "The statutes talk in terms of competition and restraints on trade — which I take to mean restraints on output and therefore a reference to the economists' concept of efficiency — and that's a challenging undertaking in itself., 'Today's Policies on Antitrust', San Francisco Chronicle, December 15, 1982, at A-6 and A-8, col. 1, respectively.
tive history, the ratio legis, and the interpretation of the laws by the Federal Supreme Court contradict the assertion by the single-goal proponents that the basis of the American antitrust laws is only the promotion of efficiency. Rather, it comprises several goal complexes, all of which are interrelated.20

There is no consensus among the scholars of anti-Chicago persuasion about the goal which originally predominated and about the goal that is supposed to predominate in cases where goals are in conflict with each other. The principle of a multiple goal approach is unequivocally emphasized, however, as is distinctly pointed out by Robert Pitofsky, a former Commissioner of the Federal Trade Commission, whose statement implies that several values other than efficiency should be regarded as axiomatic:21

"It is bad history, bad policy, and bad law to exclude certain political values in interpreting the antitrust laws. By 'political values', I mean, first, a fear that excessive concentrations of economic power will breed antidemocratic political pressures, and second, a desire to enhance individual and business freedom by reducing the range within which private discretion by a few in the economic sphere controls the welfare of all. A third and overriding political concern is that if the free-market sector of the economy is allowed to develop under antitrust rules that are blind to all but economic concerns, the likely result will be an economy so dominated by few corporate giants that it will be impossible for the state not to play a more intrusive role in economic affairs. (Fourth), an antitrust policy that failed to take political concerns into account would be unresponsive to the will of Congress and out of touch with the rough political consensus that has supported antitrust enforcement for almost a century."

21 Pitofsky, The Political Content of Antitrust, supra, 1051 f., emphasis added.
2. Evidence of the Goals of Antitrust

Evidence of the actual motives of the legislator in passing certain statutes can primarily be found not only in the legislative history of the body of antitrust laws as a whole but also in the legislative history of the individual statutes. Furthermore, the inquiry has to be guided by plausibility considerations which account for the logical background of the legal body, as it were, and by the tenets of Supreme Court adjudication, as it is the Supreme Court which is responsible for ruling along the lines of the statutes and which, in arriving at such rulings makes use of the range of discretion granted to it by Congress.

a. Legislative History of the Antitrust Statutes

The examination of the legislative history of the antitrust statutes shows that Congress followed a multiple-goal approach with a limited number of specific goals. The rationale underlying the American antitrust laws comprises welfare considerations (efficiency approach), the protection of freedom

\[22\text{ Cf. Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 150.}\]
to compete, as well as the control of economic power (populist approach).\textsuperscript{23} It was this second goal complex which was emphasized originally.

This contention is already documented by the remarks Senator \textit{Sherman} made when the Act named after him, as the first of the antitrust statutes, was passed in 1890:\textsuperscript{24}

"If we will not endure a king as a political power we should not endure a king over the production, transportation, and sale of any of the necessaries of life. If we would not submit to an emperor we should not submit to an autocrat of trade, with power to prevent competition and to fix the price of any commodity."

Especially with regard to Sec. 7 of the original Clayton Act, together with the Celler-Kefauver Antimerger Act as the new Sec. 7 of the Clayton Act,

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- the so-called radical populist approach (ensuring the freedom to compete and the control of economic power),
- the small business approach, and
- the economic efficiency approach.
They view "the provision of legal checks to the exercise of power as the mainspring of antitrust", p. 339.
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A variety of findings can be presented on the issue which resemble the one just described, cf. Elzinga, The Goals of Antitrust, supra, 1053-1057; Fox, The Modernization of Antitrust ..., supra, 1154; Hovenkamp, Distributive Justice and the Antitrust Laws, supra, 16 f.; Kauper, The Goals of United States Antitrust Policy ..., supra, 416-418; Pitofsky, The Political Content of Antitrust, supra, 1053-1057; and Hofstadter, The Paranoid Style ..., op. cit., 199 f.: "\textit{The goals of antitrust were of three kinds. The first were economic}; the classical model of competition confirmed the belief that the maximum of economic efficiency would be produced by competition, and at least some members of Congress must have been under the spell of this intellectually elegant model, insofar as they were able to formulate their economic intentions in abstract terms. \textit{The second class of goals was political}; the antitrust principle was intended to block private accumulations of power and protect democratic government. \textit{The third was social and moral}; the competitive process was believed to be a kind of disciplinary machinery for the development of character, and the competitiveness of the people - the fundamental stimulus to national morale - was believed to need protection", emphasis added.

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\textsuperscript{24} Quoted from Scherer, Frederic M., The Posnerian Harvest: Separating Wheat from Chaff, 86 YLJ (1977), pp. 974-1001, 980.
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For an extensive survey of quotes regarding the legislative history of the antitrust statutes, and proving the contention presented submitted, cf. Fox, The Modernization of Antitrust ..., supra, 1148-1155.
legislative history indicates that improved efficiency was not a central goal and, moreover, that Congress did not mean to provide an efficiency defense in individual merger cases. The legislative documents clearly and overwhelmingly emphasize the social evils of concentration, as is shown by the remarks of Senator Kefauver, one of the fathers of the Celller/Kefauver Amendment to Section 7 of the Clayton Act, who emphasized the links between economic and political order:

"Through monopolistic mergers the people are losing power to direct their own economic welfare. When they lose the power to direct their economic welfare they also lose the means to direct their political future. ... A point is eventually reached, ... where the public steps in to take over when concentration and monopoly gain to much power."

The assertion that so-called non- or metaeconomic goals were at the core of Congress' design in passing the Sherman as well as the Clayton Act has been repeatedly affirmed by the Federal Supreme Court. This has been vari-

25 Cf. Bok, Derek, Section 7 of the Clayton Act and the Merging of Law and Economics, 74 HLR (1960), pp. 226-335, 318: "There is little basis for concluding that the achievement of lower costs as such should give rise to favored treatment under Section 7. The possibility of lower costs was brushed aside in the legislative deliberations and there is every reason to believe that Congress preferred the noneconomic advantages of deconcentrated markets to limited reductions in the cost of operations."; cf. as well Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 140-142.
This was adopted in FTC v. Procter & Gamble Co., 1967 CCH Trade Cases § 72,061 asserting that efficiency gains cannot offset illegality that would lead to a lessening of competition. But cf. Areeda, Phillip, and Donald F. Turner, Antitrust Law: An Analysis of Antitrust Principles and Their Application, Boston and Toronto 1980, vol. 4, p. 151, who are of the opinion that Sec. 7 of the Clayton Act does not in principle compel the courts to reject a defense on the basis of economies of size or scale.

26 Quoted from Plotfsky, The Political Content of Antitrust, supra, 1051. Similar remarks were made by Representative Celler: "I want to point out the danger of this trend toward more and better combines. I read from a report filed with (the former Secretary of War) as to the history of the cartelization and concentration of industry in Germany: 'Germany under the Nazi set-up built up a great series of monopolies in steel, rubber, coal and other materials. The monopolies soon got control of Germany, brought Hitler to power and forced virtually the whole world into war.'... I do not want to see my country go the way of Japan or the way of Italy or the way of Germany or even the way of England." , quoted from Fox, The Modernization of Antitrust ..., supra, 1151, note 56.
ously criticized as a simple deviation from the criterion of economic efficiency.\textsuperscript{27}

\textbf{b. Adjudicative Development}

Evidence for the actual goals of antitrust legislation can also be found in the verdicts of the courts. Adjudication before the 1970s was characterized by a strong reliance on sociopolitical goals, the pursuance of which was seen as Congress' primary objective in passing the antitrust statutes. In the Alcoa case, Judge Learned \textit{Hand} declined to distinguish good from bad monopolies. This was justified by pointing to the sociopolitical goals of the Sherman Act:\textsuperscript{28}

"(C)ongress ... did not condone 'good trusts' and condemn 'bad' ones; it forbade all. Moreover, in so doing it was not necessarily actuated by economic motives alone. ... We have been speaking only of the economic reasons which forbid monopoly; but as we have already implied, there are others, based upon \textbf{the belief that great industrial consolidations are inherently undesirable, regardless of their economic results.} In the debates in Congress Senator Sherman himself ... showed that among the purposes of Congress in 1890 was a desire to put an end to great aggregations of capital because of the helplessness of individual before them."

In Northern Pacific and Brown Shoe the Federal Supreme Court refers to both sociopolitical and economic preferences on the part of the legislator for maintaining a large number of independent firms. The Supreme Court presented the following rationale in his attempt to justify the sociopolitical preferences of the legislator for a large number of independent firms:\textsuperscript{29}

\textsuperscript{27} Cf. Kauper, The Goals of United States Antitrust Policy ..., supra, 420, who critically comments on \textit{Bork}'s criticism of the adjudication as follows: "Whether they are 'wrong', or part of a 'deviant' theme (as Bork states), is ultimately a question of judgment."

\textit{Kauper}, though, defends the view that the question of the size at which a firm gains too much political and social power cannot be an issue for judges but has to be decided ultimately by the legislature.

\textsuperscript{28} U.S. v. Alcoa, 1944-47 CCH Trade Cases § 57,342 at p. 57,682 f., emphasis added. This interpretation can be found in Elzinga, The Goals of Antitrust, supra, 1203; Pitofsky, The Political Content of Antitrust, supra, 1053; and Schmidt, Ingo, and Jan B. Rittaler, \textit{Die Chicago School of Antitrust Analysis: Wettbewerbstheoretische und -politische Analyse eines Credos}, Baden-Baden 1986, p. 42.

\textsuperscript{29} Brown Shoe v. U.S., 1962 CCH Trade Cases § 70,366 at p. 76,500, emphasis added.
"(E)xpansion (of integrated chains) is not rendered unlawful by the mere fact that small independent stores may be adversely affected. It is competition, not competitors, which the Act protects. But we cannot fail to recognize Congress' desire to promote competition through the protection of viable, small, locally owned business. Congress appreciated that occasional higher costs and prices might result from the maintenance of fragmented industries and markets. It resolved these competing considerations in favor of decentralization. We must give effect to that decision."

In Northern Pacific Railway it also becomes apparent that the Sherman Act embraces sociopolitical as well as economic functions of competition in the interpretation of statutory intentions by the Supreme Court:

"The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions."

Both cases show that the Federal Supreme Court preferred less concentrated market structures in the 1950s and 1960s and they provide strong evidence that Congress was willing to accept this even in cases when such decentralized structures would imply possible efficiency losses.

However, verdicts by the District Courts and the Courts of Appeals in the 1970s and 1980s are characterized by a stronger emphasis on economic analysis and efficiency, a fact which has not been pointed out nearly as emphatically as the original intent.

Efficiency considerations have been introduced into court cases in different ways, depending on the actual conduct of competitors dealt with in the pro-

30 Northern Pacific Railway Co. v. U.S., 1958 CCH Trade Cases § 68,961 at p. 73,864, emphasis added.
ceedings. With regard to the first actual case, a merger of the third and sixth ranking retail grocery chains declared illegal for having a nine percent market share, Justice Stewart stated his dissenting opinion with regard to legislative history:

"(T)hrough a simple exercise in sums, it" (i.e., the court) "finds that the number of individual competitors in the market has decreased over the years, and, apparently on the theory that the degree of competition is invariably proportional to the number of competitors, it holds that this historic reduction in the number of units is enough under § 7 to invalidate a merger within the market... This startling per se rule is contrary not only to our previous decisions, but contrary to the language of § 7, contrary to the legislative history of the 1950 amendment, and contrary to economic reality", (italics in original, emphasis added).

With regard to unilateral action, efficiency considerations have been introduced by changing the per se-rule into a rule of reason. Concerning collusive agreements, some of them are not held to violate the relevant statutes. In most of the recent cases, however, the rulings of the courts do not refer to the legislative backup of such changed rulings by the Court which constitutes a serious shortcoming.

32 This was first documented by a dissenting opinion of Justices Harlan and Stewart in U.S. v. Von's Grocery, 1966 CCH Trade Cases, § 71, 780, p. 82, 601: "The Court makes no efforts to appraise the competitive effects of this acquisition in terms of the contemporary economy of the retail food industry in the Los Angeles area.", emphasis added. Sociopolitical considerations are obviously rejected or pushed back: "(T)he court's opinion is hardly more than a requiem for the so-called 'Mom and Pop' grocery stores ... that are now economically and technologically obsolete in many parts of the country."

34 Cf. Continental T.V., Inc. v. GTE-Sylvania, Inc., op. cit., at p. 71,900: "Vertical restrictions promote interbrand competition by allowing the manufacturer to achieve certain efficiencies in the distribution of his products. These 'redeeming virtues' are implicit in every decision sustaining vertical restrictions under the rule of reason. Economists have identified a number of ways in which manufacturers can use such restrictions to compete more effectively against other manufacturers."

35 With regard to the Sherman Act it is held in U.S. v. United States Gypsum Co., op. cit., at p. 74,860 that "(t)he exchange of price data and other information among competitors does not invariably have anti-competitive effects; indeed such practices can in certain circumstances increase economic efficiency and render markets more rather than less competitive. For this reason, we have held that such exchanges of information do not constitute a per se violation of the Sherman Act."
c. Plausibility Considerations

Several theoretical considerations support the view that Congress promoted a multiple-goal approach when passing the antitrust statutes. First of all, the 'imprecise' wording of the statutes leads to the conclusion that legislators did not feel in a position to quantify social and political considerations, and therefore left the solution of possibly conflicting goals to the judiciary.\(^\text{36}\)

If Congress wanted business firms simply to achieve economic efficiency by their own individual action, a system of legal antitrust statutes would have been obsolete since anticompetitive practices according to that view would tend to correct themselves.\(^\text{37}\) The original promoters of efficiency as the only legislative intent opposed all of the attempts to introduce multiple goal-oriented antitrust bills on the grounds that this would induce corrective public action that would interfere with efficient results of the free enterprise system. The fact that the opponents' opinion was obviously overthrown by the majority of legislation, can be seen as an indication of the hypothesis that efficiency was neither the sole aim of Congress, nor was it meant to prevail in cases of conflict. The same applies to laws which are related to antitrust statutes.\(^\text{38}\)

Whereas the effects of income distribution of monopolies were largely known by the time when fundamental antitrust legislation was passed, not much was known about economic efficiency. This also supports the hypothesis that one


\(^{38}\) Cf. Fox, The Modernization of Antitrust ..., supra, 1152 f.; Hovenkamp, Antitrust Policy After Chicago, 84 MLR (1985), pp. 213-284, 250; Schwartz, Louis B., 'Justice' and Other Non-Economic Goals of Antitrust, 127 UPLR (1979), pp. 1076-1081; and Blake, Harlan M., Conglomerate Mergers and the Antitrust Laws, 73 ColLR (1973), pp. 555-592, 577: "If anything, the tendency of the American Economic Association (in 1890) was to question the wisdom of any legislation directed against 'monopoly' in the economic sense, since the prevalent economists' view was that monopoly power, unbuttressed by legal supports such as patents, tariffs, licensing and the like, was by its nature rapidly eroded by market forces, and that legislative intervention would either impede that process or involve unnecessary social costs."
of the major goals of the antitrust laws was the prevention of welfare transfers from consumers to monopolists. This also applies to the resulting conclusion that "(t)he concept of net welfare loss was too technical to enter into the political debates over antitrust policy, and antitrust advocates generally believed that the goals ... were consistent with each other".  

With regard to the interplay between legislature and legal practice, the single-goal, consumer welfare-oriented position has to admit an inconsistency within the chain of causation of its argumentation. All of the alleged non-efficiency goals of antitrust were given specific meaning during the period when the Supreme Court was headed by Chief Justice Warren, without Congress opposing. If, in the opinion of Congress, the courts had misinterpreted original legislative intent in that they deviated from the original will, new legislation could have been drafted containing precise wording and leaving no doubt as to the intended interpretation.

However, when the Antitrust Division tried to assist in overruling the per se-rule against resale price maintenance in order to impose the new efficiency-orientation in Monsanto by means of amicus curiae, the attempt was curtailed by Congress through budgetary regulations restraining the Department of Justice from using certain means in order to de facto abolish

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39 Hovenkamp, Distributive Justice and the Antitrust Laws, supra, 17; cf. Idem, Antitrust Policy After Chicago, supra, 250; Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 65. Plofsky, The Political Content of Antitrust, supra, 1060: "This failure to address the efficiency/political effects trade-off is not hard to understand. Comprehensive antitrust regulation was a new concept to all legislators, and the most authoritative and exhaustive reviews of the legislative have detected a series of vague and not always consistent strands of legislative intent. As many have observed, Congress elected generally to leave specific enforcement decisions to the judiciary", emphasis added, citation omitted; and similarly Scherer, The Posnerian Harvest ..., supra, 977-979: "To be sure, Congress took exception to monopoly output restriction, elevated prices, and bloated profits, but it ... was concerned at least as much with income distribution effects (which were well understood in 1890) as with efficiency effects (which were not).", reviewing Posner, Richard A., Antitrust Law: An Economic Perspective, Chicago 1976.

40 Cf. Fox, The Modernization of Antitrust ..., supra, 1155, note 77; Schmidt/Rittaler, Die Chicago School of Antitrust Analysis, op. cit., 94; and Kauper, The Goals of United States Antitrust Policy ..., supra, 419: "The ultimate question, after all, is what Congress intended. The courts have interpreted the Sherman Act for ninety years, and those interpretations carry great weight, if for no other reason than in large part the Congress has left their decisions intact."
the per se-rule.\textsuperscript{41} Even more drastically, the Committee on the Judiciary passed a resolution on the Vertical Restraints Guidelines issued by the Department of Justice, declaring the guidelines to be inconsistent with existing antitrust laws.\textsuperscript{42} This provides further evidence that the current single-goal enforcement orientation reflects an unlawful minority position on the part of the executive.

Were the efficiency argument to be accepted, it would mean that the public would have agreed to centralized government control of resource allocation, if this was seen to be more efficient than the private enterprise system. The free enterprise system is felt to protect business freedom by means of decentralization. This is primarily the reason why it is accepted, even though efficiency considerations may be pushed into the background occasionally.\textsuperscript{43} Moreover, it can be argued that the achievement of efficiency is neither necessary nor sufficient as a criterion of ideal policy because

"the question of the means by which the social outcomes are achieved is more important than the social allocation outcome itself: for many, an allocation that is inefficient but arrived at in a spirit of voluntary cooperation under law is far better than an ideal allocation established by dictatorial decree".\textsuperscript{44}

In fact, this is the acceptance of 'political values'.

3. Antitrust Legislation and Rent-Seeking Behavior

Proponents of the current tenet have come up with an alternative to the sort of legislative history explanation as to why consumer welfare in the

\textsuperscript{41} Cf. TRR No. 767, July 28, 1986, at p. 4.
\textsuperscript{42} Cf. TRR No. 733, December 9, 1985, at p. 1. The National Association of Attorneys General (NAAG) has joined this resolution and have issued so-called Counter Vertical Restraints Guidelines, cf. 5 CCH TRReR § 50,478.
\textsuperscript{44} Cf. well Fox, The Modernization of Antitrust ..., supra, 1153, note 70, who notes that "(t)he United States embraced a market system rather than government ownership of business or governmentally directed allocation of resources because freedom of private economic action and decentralized centers of decisionmaking were components of American democracy. (I)t seems likely that most Americans ... gladly have sacrificed ... increased efficiency for increased freedom."
form of efficiency-orientation should be the sole goal of antitrust. It is argued in this context that two different kinds of legislation have to be distinguished. On the one hand, there are 'public interest statutes', which are considered to be efficient in that they create more social gains than losses and, therefore, are supposed to be interpreted broadly by the courts because they serve the goal of welfare maximization. Secondly, and in contrast, there are 'private interest statutes', which are characterized by the fact that interest groups purchase favorable legislation from Congress which decreases net welfare of society. These statutes are supposed to be interpreted narrowly by the courts since they do not contribute to consumer welfare.

This approach of explanation has serious shortcomings, however, and has to be rejected concerning the debate on the goals of antitrust, therefore. For one thing, any kind of legislation is by its nature 'private interest legislation', since private interest groups try to interfere with the legislative process and it "depends on the ability of Congress to listen to the arguments from all sides, 'net them out,' and then pass a statute that, on balance, does more good than harm to all affected interests".

Secondly, an insurmountable difficulty arises, if special interest legislation is supposed to be discerned from public interest legislation by judges. Proponents of this approach do not agree upon definitive criteria for such discrimination. This strongly creates the impression that deciding which is

47 Hovenkamp, Antitrust Policy After Chicago, supra, 251, emphasis added.
48 Cf. Easterbrook, Foreword: The Court and the Economic System, supra, 16 f., who finds it difficult to distinguish the two different kinds of legislation at all, and Posner, Economics, Politics, and the Reading of Statutes ..., supra, 270 f., who tries to develop a scheme for classification in actual cases.
which is a rather subjective and arbitrary matter.

Thirdly, such vague discriminations can be used to deny considerations of Congress which were undoubtedly intended, although they were not formulated in statutory language, as in the case of protection of small competitors. The protection of small competitors could easily be brushed away by ascribing it to an interest group legislation, although for instance both the Robinson-Patman as well as the Celler-Kefauver Act show that it was precisely such protection that the legislature had in mind when the laws were passed.49

4. The German Case

Sociopolitical as well as economic considerations underlay the original draft of the Act against Restraints of Competition.50 The sociopolitical considerations encompass the protection of the freedom to compete as well as the protection of competition as a mechanism for the control of economic power and as an adequate equivalent to the democratic system. Encompassing optimization of economic welfare by the best possible supply of consumers is the actual intended aim of the economic considerations. These two rather broadly defined goals together form the nucleus and heart of the ARC.51 The same applies to European antitrust legislation documented by the Treaty of Rome.52

The basic question is which goal complex should prevail in situations where different goals conflict. In particular situations of conflict, the prevailing theory holds that history, ratio legis, and the constitution show that the ultimate objective of the ARC is the protection of the freedom to compete, which is upheld by the verdicts of the German Federal Supreme Court as

50 Cf. Säcker, Franz-Jürgen, Zielkonflikte im deutschen und europäischen Kartellrecht, Düsseldorf n.a., p. 17; and Schmidt, Ingo, Wettbewerbspolitik und Kartellrecht ..., op. cit., 151 f.
52 Cf. the wording of Arts. 85 and 86 Treaty of Rome.
The primary intent of the protection of the freedom to compete is found in the legislative history of the U.S. antitrust laws which served as a guiding star to the draft of the German ARC. In contrast to German legislation and adjudication, however, the U.S. courts have always completely denied taking market performance criteria into consideration for the purpose of relief from illegality, therefore, when judging whether a particular action was competitive or anticompetitive.

Emphasis has been put on economic considerations, in the case of the exemptions of Sec. 1 ARC (Secs. 2-8 ARC), in the case of the control of abuses of market dominating position, and in the case of mergers, even at the risk of sacrificing to a certain extent freedom to compete. Depending on the current legal norm, there is predominance either of sociopolitical considerations or economic considerations, or a conflict between the two complexes of objectives arises.


56 Cf. Schmidt, Wettbewerbspolitik und Kartellrecht ... , op. cit., 81 note 1, who asserts, e.g., that competition as well as competitors are supposed to be protected by Sec. 26 para. 2 ARC, whereas Sec. 18 para 1a and 1b primarily protect competitors, and Sec. 18 para. 1c primarily competition. For the original source on the issue whether competition or competitors are to be protected, cf. Würdinger, Hans, Freiheit der persönlichen Entfaltung - Kartell- und Wettbewerbsrecht, Karlsruhe 1953, p. 9, asserting that the U.S. American law is primarily oriented towards individual freedom, whereas the German law is supposed to be dominated by an overall economic rationale.
The dual goal complex has been maintained also by the Fourth Amendment to the Act against Restraints of Competition, although the amendment has put a far stronger emphasis on economic considerations, especially concerning mergers. The legislator has aimed directly at sociopolitical considerations, but has taken these considerations into account only indirectly by referring to the concept of power in a relevant market, and therefore using economic criteria.\textsuperscript{57} The current de lege lata situation, as stated above, is still based on the predominance of the protection of the freedom to compete. Certain efficiency considerations have been introduced, however, by not prohibiting mergers per se, but basing a possible prohibition of a merger on refutable assumptions documented by market shares. These market shares represent a sort of borderline or limit, after which significant economic efficiencies can no longer be reaped, but freedom to compete is allegedly impaired or restricted unduly.

Recent large-sized company merger cases in the Federal Republic have revived the discussion about sociopolitical aspects of such mergers. In this context, the German Federal Cartel Office (FCO) has re-affirmed again that the legislator was concerned with the protection of the freedom to compete as well as the dispersion of economic power but that he restricted the actual design of the statutes to the protection of competition in actual markets. The refutable size assumption in Sec. 23a para. 1, lit. 2 ARC does not liberate the FCO to prove market dominance in every single case. Hence, large-sized mergers cannot be declared unlawful, just because of their size.\textsuperscript{58}

\textsuperscript{57} Cf. the official government rationale, Regierungsbegründung zum Entwurf eines Vierten Gesetzes zur Änderung des Gesetzes gegen Wettbewerbsbeschränkungen, BTDr. VIII/2136, p. 12; Immenga/Mestmäcker, Kommentar zum Gesetz gegen Wettbewerbsbeschränkungen, München 1981, p. 778; Säcker, Zielkonflikte im deutschen und europäischen Kartellrecht, op. cit., 17 and 30; and Möschel, Recht der Wettbewerbsbeschränkungen, op. cit., 452, who notes that a merger control policy that is oriented towards the protection of competition can only be viewed in the context of markets since economically based criteria cannot be deduced from metaeconomic objectives. Competition policy that is directly aimed at sociopolitical considerations therefore loses its economic basis.

\textsuperscript{58} Cf. Tätigkeitsbericht des Bundeskartellamts 1985/1986, op. cit., p. 12; for the official government rationale along this line, implementing a merger control system, cf. as well Regierungsbegründung zum Entwurf eines Zweiten Gesetzes zur Änderung des Gesetzes gegen Wettbewerbsbeschränkungen, BTDr. VI/2520, p. 16.
II. Methodology and Theoretical Model Underlying the Evaluation of the Competitiveness of Mergers

The current tenet bases its theoretical edifice on the belief that consumer welfare in the form of efficiency should be the only underlying value for antitrust policy. Since structural factors are perceived to be unimportant in determining an industry's performance, business conduct and the model for evaluating its effects on consumer welfare and hence efficiency become the central issues. This poses the question as to whether a certain antitrust goal implies or even requires a certain method of research. If representatives of the current tenet view consumer welfare as the sole antitrust goal, it has to be found out:

- whether they must accept neoclassical analysis as a method of research, simultaneously;
- whether neoclassical price theory can serve as an adequate instrument of analysis; and
- whether the partial equilibrium model used by the adherents of the current tenet offers an appropriate basis for policy decisions.

1. The General Methodology of Analysis

a. Neoclassical Price Theory as an Instrument of Analysis

In analyzing the links between economics and law, the substance of different approaches to antitrust theory can be reduced to two core issues. These are the goals or values the law may legitimately and profitably implement, and the validity of the law's vision of reality.¹

Since consumer welfare is accepted as the sole legislative objective of the antitrust statutes and, in essence, this consumer welfare is determined by the effects of business practices on economic efficiency, "(a) consumer-oriented law must employ basic economic theory to judge which market structures and practices are harmful and which are beneficial".² In this context,

² Bork, The Antitrust Paradox, op. cit., 7. Cf. as well Hovenkamp, Antitrust Policy After Chicago, supra, 226, critically emphasizing the Chicago tenet: "(T)he best policy tool currently available for maximizing economic efficiency in the real world is the neoclassical price theory model".
neoclassical price theory is regarded as the only adequate instrument of analysis.

Consumer welfare is considered to be the result of economic behavior in general and of business conduct in particular. Productive and/or allocative efficiency are the measurable outcomes of business conduct, therefore, and these effects can in turn be analyzed by means of neoclassical price theory. In this context, the advantage of this kind of price theory is demonstrably in that it

"enables us to identify, with an acceptable degree of accuracy, those activities whose primary effect is output restricting, leading to the inference that all other activity is either efficiency creating or neutral".3

The primary question which has to be answered is by what standards an economic model is to be judged. In the context of the contribution submitted, it will be evaluated by its ability to explain reality and to make valuable prognoses.4 There are crucial objections to the belief, however, that neoclassical price theory is able to serve either purpose.5 Its assumpti-

3 Bork, The Antitrust Paradox, op. cit., 116; cf. as well Posner, Richard A., The Chicago School of Antitrust Analysis, 127 UPLR (1979), pp. 925-952, 928: "The Chicago School has largely prevailed with respect to its basic point: that the proper lens for viewing antitrust problems is price theory.", and with regard to the industrial organization approach of the Harvard School: "(I)ndustrial organization, the field of economics that studies monopoly questions, tended to be untheoretical, descriptive, 'institutional', and even metaphorical ... The result was that industrial organization regularly advanced propositions that contradicted economic theory.", p. 930.
5 Cf., e.g., Harris, Robert G., and Thomas M. Jorde, Market Definition in the Merger Guidelines: Implications for Antitrust Enforcement, 71 CLR (1983), pp. 464-496, 468, who state that neoclassical price theory as used by the Chicago School cannot reflect reality because of the assumptions made: "Neoclassical price theory is a powerful theoretical construct because it simplifies reality. Assumptions such as perfect information, costless transactions, profit-maximizing firms, and utility-maximizing consumers can be entirely appropriate in some situations ... One should be wary, however, of drawing policy inferences from models founded on assumptions that are incongruent with reality."; Hovenkamp, Antitrust Policy After Chicago, supra, 256: "(T)he neoclassic efficiency model is not sophisticated enough to describe or predict the consequences of real world behavior."; cf. as well Schmidt/Rittaler, Die Chicago School of Antitrust Analysis, op. cit., 33-37.
ons far from correspond to conditions met in reality. This is not surprising, since the neoclassical price theory model tendentially reflected the business conditions prevailing during the Marshallian era. However, the limited scope of economics in general and price theory in particular was then and is nowadays clearly recognized, however.6

If this objection is accepted, a valid explanation has to be looked for, in order to explain why a number of developments in price theory have been dismissed. Such an explanation is lacking, however. In essence, these were developments which dealt with insufficiencies of neoclassical price theory.7

The main objection can be stated with regard to the selective use of price theory. Definitions, premises, and assumptions chosen by the antitrust tenet currently emphasized tend to protect the model against falsification.8 This can be documented for a variety of examples. The terms productive efficiency and allocative efficiency, for instance, are defined in a way that make any kind of business conduct efficiency-increasing. The definition tells what

6 Cf. Marshall, Alfred, Principles of Economics, 8th ed., London 1920, p. 37: "(E)very age and every country has its own problems; and every change in social conditions is likely to require a new development of economic doctrines."; cf. on this point as well, Rowe, Frank M., The Decline of Antitrust and the Delusions of Models: The Faustian Pact of Law and Economics, 72 George LJ (1984), pp. 1511-1570, 1547-1553, citing Kaldor and Knight, holding the identical tenet.


Wilber, Charles K., and Jon D. Wisman, The Chicago School: Positivism or Ideal Type?, in: Samuels, Warren J. (ed.), The Chicago School of Political Economy, East Lansing 1976, pp. 79-93, 87: "Only those phenomena which can be represented in its laissez-faire, capitalist model merit investigation. For example, most members of the Chicago School have ignored the question of monopoly, both empirically and theoretically. Theories of imperfect competition have been dismissed out of hand, and no real attempt has been made empirically to test noncompetitive theory", citations omitted.

is efficient but it never tells what conditions have to be fulfilled: 9

"Productive efficiency, like allocative efficiency, is a normative concept and is defined and measured in terms of consumer welfare. Since a free market system assumes that consumers define their own welfare, it follows that productive efficiency consists in offering anything whether products or services, that consumers are willing to pay for."

The term efficiency and the assumption that business conduct strives for the maximization of efficiency serve as a sort of black-box, therefore, and as a basis for justifying all sorts of restrictions of competition.

The same applies to allocative efficiency as the second component of consumer welfare, since firms are allocatively efficient if they prevail in the end. 10

The underlying assumptions lead to propositions which are not falsifiable. The basic assumption that man is a rational maximizer of his ends in life and business and, therefore, is guided by self-interest, leads to the conclusion that any business conduct is efficiency-enhancing and hence consumer welfare increasing, since otherwise it would not have been performed by the

9 Bork, The Antitrust Paradox, op. cit., 104 f.; and Rowe, The Decline of Antitrust and the Delusions of Models, supra, 1549, stating that any solution the market generates becomes beneficial on the basis of this definition, thus arguing conclusively: "Since nothing succeeds like success, that truism yields neither operational criteria nor predictive norms, for its circularities bless what prevails in the end."

Cf. as well Posner, Economic Analysis of Law, op. cit., 4: "Efficiency is a technical term: it means exploiting economic resources in such a way that human satisfaction as measured by aggregate consumer willingness to pay for goods and services is maximized. Value too is defined by willingness to pay."

10 Cf. Armentano, Dominick T., Antitrust and Monopoly: Anatomy of a Policy Failure, New York et al. 1982, pp. 30 and 162; Bork, The Antitrust Paradox, op. cit., 221 f., 226 f., 248; Brozen, Yale, Mergers In Perspective, New York and London 1982, p. 17, who holds that "(c)oncentrated industries are concentrated because that is the efficient way to organize them. Unconcentrated industries are unconcentrated because that is the efficient way to organize them."; and Rowe, The Decline of Antitrust and the Delusions of Models, supra, 1549: "How can this be? Per the truisms of axioms and circular logic, the market ensures efficiency and cures inefficiency if meddling governments keep out."
economic agent. This can be characterized as a sort of revealed preference approach from which efficiency is concluded, whatever the resulting economic performance.

b. Price/Quantity-Interrelations as Indicators of Consumer Welfare

Another central assumption is that social welfare in general and consumer welfare in particular can be exclusively and sufficiently documented by price/quantity-interrelations of markets, using perfect competition and monopoly as standards of reference. The assumption is based on the premise that people document everything, they assign economic value to by their purchase decisions in the marketplace. However, in the sense of economic order and decentralization of economic power, public policy in the field of antitrust has to be viewed as a kind of public good, the beneficial outcome of which people cannot avoid paying for. In essence, this is a pure free-rider problem that is neglected in this context. Whereas it is neglected in the context of the consideration of noneconomic goals through antitrust, it is heavily emphasized by adherents of the current orientation in theory in the

11 Cf. Posner, Economic Analysis of Law, op. cit., 1; and Leff, Economic Analysis of Law ..., supra, 456 f., showing once more the circularity of the reasoning: "Nothing merely empirical could get in the way of such a structure because it is definitional. That is why the assumption can predict how people behave: in these terms there is no either way they can behave. If, for instance, a society dentist raises his prices and thereby increases his gross volume of business, it is no violation of the principle of inverse relation between price and quantity. It only proves that the buyers now perceive that they are buying something else which they now value more highly, 'society dentistry,' say, rather than 'mere' dentistry", italics in original.

12 Cf., e.g., Bork, The Antitrust Paradox, op. cit., 50-56; and Posner, Richard A., Antitrust Law: An Economic Perspective, Chicago 1976, pp. 19 f.; and Armentano, Antitrust and Monopoly, op. cit., 32: "Importantly, (supply and demand) adjustments are not limited to price and output, as in the standard model, but may encompass any aspect of exchange that consumers believe to be relevant.", qualifications in parentheses added; and for the evaluation, Böbel, Ingo, Marktmacht versus Effizienz: Ein wirtschaftspolitisches Dilemma, 14 LiFo (1987/88), pp. 40-56, 50; and Hovenkamp, Antitrust Policy After Chicago, supra, 242.

13 Cf. Samuels, Further Limits to Chicago School Doctrine, op. cit., 400; Schwartz, 'Justice' and Other Non-Economic Goals of Antitrust, supra, for a number of statutes concerned with values not traded in the market place, such as small business protection; and for the conclusion, Leff, Economic Analysis of Law ..., supra, 467: "Remember, the issue is not, for every consumer/citizen, what he gets out of 'the market' or what he gets out of 'politics,' but what he gets out of the society which is the product of both of these grand systems together."
context of the discussion on the pros and cons of resale price maintenance, however. Therefore, the assumption that price/quantity-interrelations sufficiently document consumer welfare is at least open to question.

A broader measure of consumer welfare including further aspects of life quality such as performance criteria can be affected by a particular industry structure as well. The preservation of local shopping facilities, for example, might lead to a (hardly measureable) increase in consumer welfare though there may be a (quantitatively measureable) decrease in productive efficiency; furthermore, undue concentration is avoided and sufficient competitive pressure thereby maintained in the long run.

The selective omission of the free-rider problem also leads to results in the deficiency that power considerations are not quantifiable in terms of price/quantity-interrelations being more or less excluded from the observation. This makes for a contradiction in the underlying reasoning, since the protection of free choice is a central pillar in the current theoretical edifice. However, the assumption that power factors outside the market do not exist, or at least have no bearings on economic matters, makes the creation of meaningful changes in social institutions impossible, and rules out any explanation of such changes on a proper theoretical basis.14 Closely connected to this is the issue of economic order which we addressed in Part 1 of the thesis submitted. Weight is primarily assigned to market and market-like adjustments as the central mode of order, whereas the institutional setting and other constituting elements of markets are neglected.15

The same applies to the economic issue of external consumer effects. External effects are said to exist when an activity undertaken by an individual or firm benefits or imposes costs on other individuals or firms in addition to the benefits or costs accruing to the acting party. These results are typically "nonexcludable" which means that the acting party is not reimbursed

14 Cf. Wilber/ Wisman, The Chicago School: Positivism or Ideal Type?, op. cit., 90, who view this strictly as a "rationalized justification for social manipulation."

15 Cf. Samuels, Further Limits to Chicago School Doctrine, op. cit., 400, and 405: "It is simply not true that scarce resources are allocated among alternative uses by the market. The real determinant of whatever allocation occurs in any society is the organizational structure of that society - in short, its institutions. At most, the market only gives effect to prevailing institutions."
or charged for the external benefits or costs generated. Because of this characteristic, externalities are passed on outside the price system. There is no inducement to take that benefit or cost into consideration when deciding upon the level of economic activity to undertake and hence what level of costs to be attained. This means that the individual or firm chooses a level of activity at which the private marginal benefits from the activity just equal the private marginal costs of undertaking this activity and ignores the marginal benefits or costs which simultaneously accrue to other parties. Therefore, the overall marginal costs are higher than the private marginal costs — in the case of negative externalities — the latter being a source of orientation for the acting party. Hence the level of activity lies above the optimal level, which leads to a misallocation of resources. The Pareto optimum is not achieved.16

These external effects are dismissed although it is conceded that they do exist and pose an economic problem. Markets are, therefore, relied upon to achieve efficiency by themselves.17 Externalities, however, can be seen as inefficiencies decreasing consumer welfare. Nevertheless, it is held that policy instruments designed to bring about increased (allocative) efficiency could contribute to the increase of 'pure' consumer welfare; this, however, would unambiguously bring about other welfare losses for society. Since antitrust legislation did originally concentrate on consumer welfare in the sense of productive and allocative efficiency, according to the current tenet, it lies within the scope of legislation also to include externalities that influence other goals such as the distribution of income.18

18 Cf. Bork, The Antitrust Paradox, op. cit., 114. In the thesis submitted, we have argued, however, that consumer welfare, in Chicago words that is to say, increases in efficiency, are not the sole purpose of the legislator. Besides, external effects do affect resource allocation since either less than the competitive quantity is supplied or more than it.
Under standard economic theory, utility functions of consumers are at least partly interdependent. In the case of the relative income hypothesis, quantity of demand is also influenced by factors not directly taken into account by the market. In terms of consumer welfare, this means that less value is placed by consumers on allocative improvements than on redistribution:

"People may continue, of course, to struggle to improve their position relative to others but clearly, in the limiting case in which individual welfare depends only on relative income, it would no longer be possible to make everyone better off: only redistribution possibilities would remain open to society."

Through the narrow selection of assumptions, the problem of externalities is defined away.

The most essential problem of the neoclassical price theory and the model of perfect competition, even if only used as a standard of reference, are its strict underlying assumptions which never apply in reality. One can draw the conclusion that neoclassical price theory cannot serve as a framework for welfare economics whose task is to provide an answer to the remaining question how consumer welfare and economic efficiency are affected by actions which aim at influencing market structure and market conduct. Mainly for this reason the theory of second best has been developed. It takes into account the...
consideration that the assumptions of the model of perfect competition are only partly realized. The core issue of the theory is that

"given that one of the Paretian optimum conditions cannot be fulfilled, then an optimum situation can be reached only by departing from all other Paretian conditions. The optimum situation finally attained may be termed a second best optimum because it is achieved subject to a constraint which, by definition, prevents the attainment of a Paretian optimum".

The omission of the theory of second best by the Chicago School is viewed as a major deficiency to the use of neoclassical price theory. The same applies to the neglect of the dynamic aspects of competition which is brought about through the use of a static method of analysis.

Another major assumption is the auto-correction of the market in the long run which would lead to the maximize of consumer welfare. For one thing, it can be doubted that the disciplining function of the market works

23 This theory "should be disregarded and antitrust should concern itself solely with allocative and productive efficiency.", Bork, The Antitrust Paradox, op. cit., 109.
25 Cf. Armentano, Antitrust and Monopoly, op. cit., 22; Markovits, Monopolistic Competition ..., supra, 583, who regards the neglection of second best considerations as the main theoretical error, noting that second-best considerations do not preclude an allocative efficiency rationale for antitrust, p. 587; Polinsky, Economic Analysis as a Potentially Defective Product ..., supra, 1680; and Mishan, The Folklore of the Market ..., op. cit., 102 f.: "There it was demonstrated that the extension of marginal cost pricing in an economy in which some sectors were constrained to realize other pricing rules would not itself increase social welfare and could, indeed, reduce it."
26 "When we speak of competition, we do not just mean competition through prices and product quality. Indeed, standardized staple goods are of lesser importance in our economies. We mean above all competition through innovation, through the development of new products and new processes. This kind of dynamic view is the only realistic way of looking at competition", cf. Caspari, Manfred, Joint Ventures Under EEC Law and Policy, unpublished paper, presented at the Fordham Corporate Law Institute, New York, October 23, 1987, p. 4. This dynamic view is almost completely ignored by the underlying mode of analysis.
the way textbook economics suggests. At least there are reasonable doubts whether this function is performed sufficiently by the market. Secondly, if public policy does not provide for corrective action, further damage to the competitive process might be done which renders any later correction impossible. Thus, the corrective state may never be reached.28

c. The General Methodology: Conclusions

Adherents of the current tenet apply positive methodology to antitrust problems, i.e., the same methodology is applied to economic phenomena as is used in the physical sciences. The difference resides the nature of the empirical subject matter.29 This is a crucial difference, however. The object of analysis is simply not comparable to a physical phenomenon, not at least because it is characterized by extreme data instability.30 Besides this, economics deals with open rather than closed systems, as is shown by the use of partial equilibria models that attempt to reduce the complexity of economic phenomena to manageable proportions. This demonstrates the limited range of applicability of positivist methodology as used by adherents of


29 Cf. Horwitz, Law and Economics ..., supra, 905: "The economic analysis of law is only the most recent claimant to draw upon the prestige of the natural sciences in the effort to create a system of legal thought that is objective, neutral, and apolitical."

current antitrust theory.\textsuperscript{31}

The same reservations apply to the use of neoclassical price theory. Propo-
nents of the Chicago School seem to use theory rather selectively, filtering
it through pre-supposed value judgments and highly tendentious definiti-
ons.\textsuperscript{32}

2. Mergers, Efficiency, and the Model for Evaluation

a. Consumer Welfare and Efficiency: Remarks on Interdependence

In the context of current antitrust theory, competition is regarded as a spe-
cific state of the market in which consumer welfare cannot be increased by
judicial decree.\textsuperscript{33} Furthermore, the use of the efficiency criterion emerges
from the acceptance of consumer welfare as the sole goal of current anti-
trust policy. This presupposes a close link between consumer welfare and
the criterion of efficiency insofar as "(b)usiness efficiency necessarily bene-
fits consumers by lowering the costs of goods and services or by increasing
the value of the product or service offered".\textsuperscript{34}

This assumes that consumers benefit from the efficiency increase automati-
cally; but this only occurs if there is sufficient competitive pressure at any
particular time. A crucial difficulty with regard to the terminology seems to
be that business efficiency and economic efficiency are not properly distin-

\textsuperscript{31} Cf. Wilber/ Wisman, The Chicago School: Positivism or Ideal Type?, op.
cit., 80-83; see as well, Buchanan, James M., Good Economics - Bad Law,
60 VLR (1974), pp. 483-492, 485, commenting on the methodological bias:
"At this point care must be taken to distinguish between positive econo-
ic analysis and the advancement of the efficiency norm that is often
associated with the analysis. The latter, which involves an explicit value
judgment, need not accompany the former."

\textsuperscript{32} Cf. Harris/Jorde, Market Definition in the Merger Guidelines ..., supra,
485: "It is our view that neoclassical price theory simply does not pro-
vide a sufficient basis on which to conduct antitrust policy ... Further-
more, there is great danger when analysts or policymakers confuse the
consequences assumed to flow from a simplified theoretical model with the
realities of a complex economy."; cf. as well Hovenkamp, Antitrust Policy
After Chicago, supra, 256; Schmidt/Rittaler, Die Chicago School of Anti-
trust Analysis, op. cit., 33-37; and Spivack, The Chicago School Approach ...
, supra, 669 f.: "Despite the protestations of some of its proponents,
Chicago School economic theory is just that: theory. It is not a science
giving conclusive answers to the difficult problems that antitrust cases
raise."

\textsuperscript{34} Bork, The Antitrust Paradox, op. cit., 7.
guished from each other. An explicit definition of when efficiency can be said to be achieved is not offered, and even Bork has to concede that efficiency cannot be measured and that substitutes have to be used in order to evaluate whether increases in efficiency have occurred.

b. The Incorporation of Current Efficiency Considerations

We have already established that there is no explicit consideration of efficiency effects where an efficiency defense in merger cases is conducted according to Sec. 7 Clayton Act, although the legislator has presumably incorporated efficiency considerations implicitly through the wording of the statute.


36 Cf. Scherer, Frederic M., The Posnerian Harvest: Separating Wheat from Chaff, 86 YLJ (1977), pp. 974-1001, 995 ff.: "Also I have been unable to find an explicit definition (of efficiency) ... ", There is no explicit consensus, whether efficiency just means allocative efficiency or whether productive efficiency and, therefore, productivity increases have to be included, cf. Polinsky, Economic Analysis as a Potentially Defective Product ..., supra, 1659-1663; and Posner, Economic Analysis of Law, op. cit., 4: "By a process of voluntary exchange, resources are shifted to those uses in which the value to the consumer, as measured by the consumer's willingness to pay, is highest. When resources are being used where their value is greatest, we may say that they are being employed efficiently."

37 Cf. Bork, The Antitrust Paradox, op. cit., 192 and 117: "... antitrust must avoid any standards that require direct measurement and quantification of either restriction of output or efficiency. Such tasks are impossible."; and Scherer, The Posnerian Harvest ..., supra, 979: "Posner appears to view the condition for achieving economic efficiency as the equality of price with long-run marginal costs under equilibrium condition."


There is also the position that there should definitely be an explicit efficiency defense: "The one simple rule that is obviously needed is that a merger ... should be allowed if the merging firms can demonstrate that the merger would substantially increase real efficiency in production and distribution. (T)hat ... enforcement would be in accord with accepted
The current efficiency-orientation of the government, the enforcement agencies, and the courts are also directed towards reorientation in the application of Sec. 7 Clayton Act. Like the other antitrust statutes, Sec. 7 Clayton Act is regarded as a consumer welfare prescription with the intention to promote economic efficiency.\(^{39}\)

Whereas the 1968 Merger Guidelines did not take efficiency considerations into account, the 1982 and 1984 Guidelines elevated minimum threshold levels for challenging mergers.\(^{40}\) At the same time, the Merger Guidelines 1984 of the Antitrust Division have introduced an explicit efficiency-defense and the failing firm defense has been extended to failing divisions of otherwise healthy firms.\(^{41}\) This has again revived the extensive discussion about the manner in which and the method by which efficiency considerations should be taken into account and thereby find an optimal solution for balancing different factors and effects associated with the occurrence of a merger, in accordance with the contents of the statutes.\(^{42}\)

The point of departure for analyzing the current orientation could be the possible effects of a merger on allocative efficiency, productive efficiency,
and the amount of wealth transfer from producers to consumers and vice versa.43

**c. The Partial Equilibrium Trade-Off Model Reconsidered**

The current considerations on the possible effects of mergers are based on a partial equilibrium welfare model which was originally introduced by Harberger and which demonstrates the welfare differences between monopoly and competition, especially the resulting welfare loss and resource misallocation in individual industries due to market power.44 The model is based on the concept of consumer’s rent (consumer’s surplus), originally introduced by Dupuit and Marshall45 and has been enlarged on by Williamson, who gave up the assumption of constant returns to scale inherent in the classical models used for the purpose of welfare measurement.46

Among other purposes, the model serves to balance the efficiency effects resulting from a merger. Mergers do cause market power, and, therefore, allocative inefficiency, on the one hand, by allowing the possibility of restricting the output and raising the price; but on the other hand, mergers offer


possible cost reductions due to an increase in productive efficiency. According to adherents of the model, these counteracting effects have to be balanced against each other in order to determine possible beneficial or detrimental effects of mergers and other business practices.47

Williamson exemplified this trade-off between the positive and negative results of horizontal mergers by a merger of duopolists: on the one hand possible cost advantages, and on the other an increase in market power which leads to a resource misallocation.48 In this context, he juxtaposes a market situation that is characterized by competition before a merger occurs, to a market situation after the merger has been carried out. The effects on the allocation of resources and the acquiring firm's productivity due to the merger are then determined. The resulting cost advantages from the merger and the resulting market power demonstrated by the increase in price are hence presented in a partial equilibrium model:49

Fig. 2: The Williamson Trade-Off Model


47 Bork, The Antitrust Paradox, op. cit., 91: "The whole task of antitrust can be summed up as the effort to improve allocative efficiency without impairing productive efficiency so greatly as to produce either no gain or a net loss in consumer welfare."


Within the *Williamsonian* model it is assumed that the long-run average costs of the two merging parties - approximated by the marginal cost curve - can be reduced from MC\textsubscript{c} to MC\textsubscript{m} by an increase in productive efficiency due to the merger which leads to a joint new cost function. However, the merger leads to a restriction of output due to the increase in market power so that after the merger is carried out, the output quantity is reduced from Q\textsubscript{c} to Q\textsubscript{m}.

On the basis of the model and prevalent empirical studies on welfare losses, it is now assumed that the cost savings documented by rectangle A\textsubscript{2} outweigh by far the welfare losses due to the restriction of output documented by triangle A\textsubscript{1} (so-called deadweight loss).\textsuperscript{50}

Adherents of the model hold that economies as little as two percent in general yield net allocative-efficiency gains to society. This means that relatively small efficiency gains resulting from a merger would more than offset relatively large gains in the merging parties' market power. *Williamson* has calculated the reductions in costs necessary to offset the allocative inefficiency resulting from a specific percentage price increase due to an increase in monopoly power: \textsuperscript{51}

The deadweight loss due to the restriction of output represents the amount by which the social welfare of society could be increased if antitrust policy could prevent such output restrictions, cf. Armentano, Antitrust and Monopoly ..., op. cit., 21.

\textsuperscript{51} Cf. Williamson, Oliver E., Economies as an Antitrust Defense Revisited, 125 UPLR (1977), pp. 699-736, 708 f. The table presents the cost decreases necessary to offset the increases in price due to increased market power, choosing different levels of demand elasticity: "For example, a merger likely to increase consumer prices by ten percent would have a net social gain if cost efficiencies exceeded two percent, for any demand elasticity up to three (percent).", Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1629.

**Tab. 6: Williamson's Offset Calculations**

<table>
<thead>
<tr>
<th>Increase in price (%)</th>
<th>ν=3</th>
<th>ν=2</th>
<th>ν=1</th>
<th>ν=½</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0.44</td>
<td>0.27</td>
<td>0.13</td>
<td>0.06</td>
</tr>
<tr>
<td>10</td>
<td>2.00</td>
<td>1.21</td>
<td>0.55</td>
<td>0.26</td>
</tr>
<tr>
<td>20</td>
<td>10.38</td>
<td>5.76</td>
<td>2.40</td>
<td>1.10</td>
</tr>
</tbody>
</table>

\textsuperscript{50} The deadweight loss due to the restriction of output represents the amount by which the social welfare of society could be increased if antitrust policy could prevent such output restrictions, cf. Armentano, Antitrust and Monopoly ..., op. cit., 21.
From a public policy point of view it does not seem useful - except in some extreme cases - to declare mergers illegal, since the model shows that, as a rule, mergers bring about net efficiency gains and, therefore, an increase in consumer welfare. As a rule, a merger of two different firms at the same level of production is seen as an expression of efficiency if this merger does not lead to a duopoly. Even in highly concentrated markets, and taking this provision into account, a merger should not be the subject of judicial enquiry as long as there are any efficiency advantages associated with it.

The validity of the Williamson welfare trade-off as an underlying model for the evaluation of possible effects of mergers depends on the effect of the qualifications necessary to transform the 'naive' Williamson model into a model with more realistic assumptions. These qualifications can be classified into different categories: qualifications with respect to premises and assumptions of the model, general welfare measurement qualifications, qualifications associated with the effects of a merger on productive efficiency, qualifications associated with the effects of a merger on allocative efficiency, and qualifications associated with the consideration of possible wealth transfers.


53 Bork, The Antitrust Paradox, op. cit., 221 f.: "My guess is that ... mergers up to 60 or 70 percent of the market should be permitted ... Partly as a tactical concession to current oligopoly phobia ..., I am willing to weaken that conclusion ... making presumptively lawful all horizontal mergers up to market shares that would allow for other mergers of similar size in the industry and still leave three significant companies."

54 We will not perform a general critique associated with the original Harberger model since this would be an undertaking which goes beyond the scope and the emphasis of the thesis submitted; besides, in any case its has already been done elsewhere, cf., e.g., Bergson, Abram, On Monopoly Welfare Losses, 63 AER (1973), 853-870; Böbel, Wettbewerb und Industriestruktur ..., op. cit., 201-208; Cowling, Keith, and Dennis C. Mueller, The Social Costs of Monopoly Power Revisited, 91 EJ (1981), pp. 727-748; and Littlechild, Misleading Calculations ..., supra; we will emphasize crucial aspects with regard to the specific application of the Williamson model, however.
d. Qualifications to the Model

aa. Premises and Assumptions

The main purpose of this section is not to show primarily that the premises and assumptions underlying the Williamsonian model and current antitrust theory do not correspond to reality but to show how the model would react to altered specification of the premises and assumptions.55

A main assumption of the original Harberger model, which is also accepted by promoters of the Chicago approach, is that the standards of reference are the states of perfect competition and monopoly. In the state of perfect competition, however, demand functions do not slope downwards, or rather have a price-elasticity of demand approaching a value close to infinity. In the case of downward-sloping demand functions, there is a divergence of price from marginal costs under all selling conditions which threatens to make the theory of resource misallocation under imperfect competition appear absurd. The peril here is that the standard of reference can be lost altogether, since a misallocation of resources is relative to a chosen standard.56

If one assumes demand functions with a rather low price-elasticity of demand in comparison to a more elastic demand function, the deadweight loss associated with a merger may eventually be smaller than the one derived from the Williamsonian model, but at the same time restrictions with regard to price and quantity in comparison to the more elastic demand function are left out of consideration. This neglects part of the harm done to the consumer due to decreased output and elevated price and hence understates the burden put on society.

The identical conclusion follows from the assumption that premerger market structures embody some degree of market power as is the case most prob-

55 Cf. Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1638, who emphasize the dramatic shift resulting from changes in the model's assumptions: "Once we relax ... these assumptions, the range of cost savings necessary to offset anticipated price increases widens so substantially that a given percentage of cost savings would no longer presumably offset much greater price increases from a merger."

Williamson himself showed that the validity of his model and hence the net welfare effect of mergers would strongly be influenced by the shape of the cost curve, the elasticity of demand for the product, and the alleged increase in market power. How valuable the Chicago approach is altogether, has been treated in terms of the methodology applied supra.

56 Cf. Armentano, Antitrust and Monopoly ..., op. cit., 23 f.
ly in most of the real existing industrial markets. If this is taken into consideration, the model understates the resulting burden on society by just emphasizing the deadweight loss and neglecting the price/quantity consequences as well as the wealth transfers due to the merger. The degree of preexisting market power as well as the amount of price-elasticity of demand for the product in question therefore become crucial variables.

A further assumption appears to underestimate considerably the increases in efficiency necessary to outweigh the deadweight loss resulting from a merger. The model assumes price increases of not more than thirty percent above pre-merger levels. A number of studies have shown however, that merger-induced price increases exceeding thirty percent are by no means a rarity.

A further assumption closely connected to the price increase assumption is that price elasticities of demand are in the range of three or below. Besides the fact that empirical studies show the contrary, determining the value of price elasticities crucially depends on the length of the selected time period for measurement: as a rule price elasticities tend to be greater


58 Cf. Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1641: "Regardless of the amount of correction, however, the direction is clear: the greater the preexisting market power, ceteris paribus, the greater the expected cost efficiencies should be to permit a merger likely to increase monopoly power", italics in original.


60 Cf. Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1643.

61 Cf. Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1643, holding that empirical studies show elasticities of demand for successful consumer brand products between one and fifteen and the majority between two and a half to five: "Nevertheless, if demand elasticities of as much as five are not uncommon, the efficiencies necessary to compensate for possible market-power effects would increase dramatically", emphasis added.
in the longer run than in the short term.\textsuperscript{62} Since different elasticities of demand are connected with corresponding changes in the level of price, the lower the profit-maximizing price, the higher the price elasticity of demand for a given increase in monopoly power. This interrelatedness further increases the difficulty in predicting welfare effects.\textsuperscript{63}

\textbf{bb. General Welfare Measurement}

Real changes in net welfare can only be determined accurately if changes in productive efficiency and changes in allocative inefficiency are taken into account; in other words, the comparative-static nature of the model must be given up. Thus, the measurement must account for the timing of the trade-off, and the discounted present values of the stream of costs and benefits arising from a merger.\textsuperscript{64} An accurate prognosis of the effects on the welfare trade-off of extending the time period measured is rather complicated because of numerous imponderabilities. In the case of the two cost functions of the merging firms, this is particularly obvious. The model assumes two cost functions that can be unambiguously determined. It is left out of consideration, however, that in a dynamic view the intensity of competitive pressure determines the extent of cost control that is performed by the market, and hence also determines the stream of costs which arise. The trade-off therefore can only claim validity in the short term.\textsuperscript{65}

Comparison between welfare losses due to market power, and cost savings due to a shifted cost function, can only be performed if data is available. This data, however, is generally unknown or unavailable. The \textit{Williamsonian} model is therefore difficult to handle, difficult to operationalize, and difficult

\textsuperscript{63} Cf. Fisher/Lande, \textit{Efficiency Considerations in Merger Enforcement}, supra, 1643.
to put into practice. If additional factors are taken into consideration, the model loses its analytical clarity.

**cc. Allocative Efficiency**

Different kinds of efficiencies can be discerned in economics. As already pointed out, efficiency is seen in terms of a quantifiable amount of consumer welfare. In this sense, consumer welfare depends on productive efficiency on the one hand, and on allocative efficiency on the other:

"Allocative efficiency, as used here, refers to the placement of resources in the economy, a question of whether resources are employed in tasks where consumers value their output most."

This characterization is based on the Pareto definition of efficiency (Pareto optimality), which suggests that an allocation of resources is efficient if no rearrangement of resources to make one participating economic agent better off, can be made without rendering at least one participating economic agent worse off in terms of his own welfare. The neoclassical price theory is believed to define the circumstances under which this will occur.

The level of consumer welfare in the perceived market equilibrium is influenced on the one hand by the preferences of all individuals which are re-

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66 Even Bork concedes that "(i)t is disastrous to draw policy conclusions from that diagram. Its only valid use is to indicate the general relationship of loss and gain in cases in which both occur. ... One simply cannot read appropriate merger policy off a chart.". Bork, The Antitrust Paradox, op. cit., 220. There is a variety of authors who reject the partial equilibrium trade-off model as being unable to perform its function in specific cases because of the imponderabilities; for the most prominent cf. Adams, Walter, Economic Theory and Economic Policy, 40 RSE (1982), pp. 1-12; Armentano, Antitrust and Monopoly ..., op. cit., ch. 2; Fox, The Modernization of Antitrust ..., supra, 1159-1966; and Singer, Eugene, Antitrust Economics and Legal Analysis, Columbus, Ohio 1981.


68 Bork, The Antitrust Paradox, op. cit., 91. In the view of the Chicago School there is a balancing problem since productive and allocative efficiency, for example, may oppose each other in the case of a merger: "(P)roductive efficiency is one of the two opposing forces that determine the degree of consumer well-being (the other one being resource misallocation due to monopoly power) ...". ibid., 7.

69 Cf. Hovenkamp, Antitrust Policy After Chicago, supra, 239; Mansfield, Microeconomics ..., op. cit., 57 f., 440, and 459; Scherer, Industrial market structure ..., op. cit., 595 f.
vealed by total demand, and on the other hand by the costs that arise from
the production of goods and services that fulfill the demands of society.

Against the background of neoclassical price theory, the Chicago School con-
tends that in a market characterized by perfect competition, marginal reve-
ues of a single firm always equal market demand, thus determining market
price. The market power of a single firm in a market that is characterized
by perfect competition can only be small and is hence negligible, whereas
in the case of monopoly the price is elevated and the output restricted in
comparison to perfect competition. In this context, allocative inefficiency in a
monopoly is characterized by a divergence of price from marginal costs:

"The distinctive feature of the monopoly situation is that the monopolist
has created a gap between marginal costs and price, which means that
social costs and social desires are no longer equated ... (t)he evil of
monopoly, then, is not higher prices or smaller production (though
these are its concomitants) but misallocated resources or allocation in-
efficiency."

Because a supplier produces less than he would have produced under com-
petitive conditions, some resources will be used for other economic purposes.
These are purposes that are valued less by the consumer, however. This
leads to a reduction of total wealth. The measurable outcome of allocative in-
efficiency is the deadweight loss due to market power.

Two major qualifications have to be considered with regard to the original
amount of deadweight loss due to a merger measured by the Williamsonian
model. Williamson originally assumed a non-linear iso-elastic demand curve.
However, if a more or less linear demand curve is assumed (as may seem ap-
propriate in some situations), the resulting deadweight loss always exceeds

formulation is rather imprecise and resembles phraseology since in the
case of perfect competition there is no problem of power.
72 Bork, The Antitrust Paradox, op. cit., 101; and Böbel, Wettbewerb und In-
dustriestruktur ..., op. cit., 179 ff. This definition leads the classical view
on monopoly ad absurdum since monopoly was originally associated with
the evils of restricted output quantities and elevated price levels.
73 Cf. Fig. 2 of this contribution. For a formal proof that monopoly power
leads to allocative inefficiency, cf. Mansfield, Microeconomics ..., op. cit.,
277-292; Scherer, Industrial market structure ..., op. cit., ch. 2; and
81.
the deadweight loss calculated from a *Williamsonian* demand curve.\(^7\) Hence, deadweight loss seems to be tendentially larger than Williamson's model would have us believe:

*Fig. 3:* Deadweight Loss and Linear Demand Curve

A further aspect is that deadweight loss in this model is confined to the individual loss of consumer surplus, however, equally important is social opportunity loss due to inefficient use of resources and possible under-utilization of these resources. This loss is largely neglected. It can be calculated by comparing the Cournot equilibrium with the competitive equilibrium. The latter is attained by assuming internal growth which leads to an increase in productive efficiency and, therefore, to a lower cost function also.\(^7\)

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dd. Productive Efficiency

The second factor determining consumer welfare is productive efficiency. Whereas allocative efficiency is concerned with the overall placement of economic resources, "(p)roductive efficiency refers to the effective use of resources by particular firms". Therefore, productive efficiency is concerned with the individual firm's flow of resources to their most effective use within the firm.

In this context, adherent of the current tenet speak of "competitive effectiveness" and apply the concept not only to mechanistical or technical processes that can be inquired into by so-called engineering studies. Productive efficiency is supposed to be determined only to a certain extent by economies of scale and transaction-cost efficiencies. Considerably stronger factors of influence that determine productive efficiency are specialization, ability to obtain capital, management skills etc., but these are elements which are difficult to quantify.

Productive efficiency is not seen as analogous to or in any way associated with profitability, in contrast to the view of the Harvard School, since the relative efficiency of a firm is not evaluated by its profit rates, but by its relative success in the market-place. This success is evaluated on the basis of the so-called "survivor test", developed by Stigler. The standard of reference for the underlying cost situation is the structure of an industry that for a longer period has not been subject to legal barriers to entry and furthermore, has not changed its market position.

77 For further definitions of productive efficiency cf. Mansfield, Microeconomics ..., op. cit., 4-6; and Scherer, Industrial market structure ..., op. cit., 13-21.
"proceeds to solve the problem of determining the optimum firm size as follows: classify the firm in an industry by size, and calculate the share of industry output coming from each class over time. If the share of a given class falls, it is relatively inefficient, and in general is more inefficient the more rapidly the share falls."

As has been shown above, it is assumed that a merger will reduce the anticipated joint total average costs of an acquiring firm—approximated by its marginal costs—from MC\textsubscript{c} to MC\textsubscript{m}. The effect of mergers and, therefore, concentration on productive efficiency is rather complex, however, and not as unambiguous as portrayed by the Williamsonian model.

Rising concentration can have negative effects on productive efficiency as well. Primarily this can be subsumed under the headings of 'X-inefficiency' and 'diseconomies of scale'. X-inefficiencies can be considered a kind of organizational slack due to motivation and incentive problems on the part of managers and workers. Such problems are likely to occur if incumbent competitors are protected from sufficient competitive pressure. As a result, these competitors will show an increased level of discretion in the market.

The resulting inefficiencies are considered by some economists to be at least as large as losses from allocative inefficiency. The critical reviews of

81 Stigler, George J., The Organization of Industry, Homewood, Ill. 1968, p. 73. The other method being engineering studies, trying to elaborate on the exact shape and properties of cost functions.

82 Observed as early as 1935, cf. Hicks, John, Annual Survey of Economic Theory: The Theory of Monopoly, 3 Econometrica (1935), pp. 1-20, 8; and for the explicit description of the phenomenon, Leibenstein, Harvey, Allocative Efficiency vs. 'X-Efficiency', 35 AER (1966), pp. 392-415, 413: "In situations where competitive pressure is light, many people will trade the disutility of greater effort, of search, and of the control of other people's activities for the utility of feeling less pressure and of better interpersonal relations. But in situations where competitive pressures are high, they will exchange less of the disutility of effort for the utility of freedom from pressure ..."; cf. as well DeAlessi, Louis, Property Rights, Transaction Costs, and X-Efficiency: An Essay in Economic Theory, 73 AER (1983), pp. 64-81.

83 Cf. Scherer, Industrial market structure ..., op. cit., 466; whereas other authors deny the existence of x-inefficiencies, cf. Dilorenzo, Thomas J., Corporate Management, Property Rights and the Xistence of X-efficiency, 48 SEJ (1981), pp. 116-123, 122: "The main thesis ... is that rational utility maximizing managers of private monopolistic firms will not be more lax in their pursuit of profit maximization than will be the managers in more competitive industries."; and Stigler, George J., The Xistence of X-Efficiency, 66 AER (1976), pp. 213-216.
Leibenstein's approach were carried out mainly on theoretical and rhetoric grounds.\textsuperscript{84}

However, DiLorenzo\textsuperscript{85} and De Alessi\textsuperscript{86} additionally criticized the fact that Leibenstein had focused his studies too much on commodity markets and neglected property rights, the market for corporate control, and managerial labour markets. Despite these critical views and the fragmentary evidence, empirical studies have unambiguously shown that the phenomenon of X-inefficiency exists in big firms and in firms not controlled sufficiently by competition.\textsuperscript{87} This kind of inefficiency can either be regarded as a dead loss in the sense of some degree of sheer waste, or as an involuntary transfer from customers to input suppliers.\textsuperscript{88}

This basic idea has been extended in order to consider that

"lucrative transfer payments in the form of monopoly profits will attract real resources into efforts by sellers to monopolize, ... The costs of the resources so used are costs of monopoly just as much as the costs resulting from the substitution of products that cost society more to produce than the monopolized product".\textsuperscript{89}

Competition for the right to monopolize would proceed until marginal costs of monopolizing would equal marginal returns from monopolizing. This action is

\textsuperscript{84} Stigler, for example, argued that "(w)hen more of one goal is achieved at the cost of less of another goal, the increase in output due to (say) increased effort is not an increase in 'efficiency' it is a change in output", Stigler, The X-listence of X-Efficiency, supra, 215.

\textsuperscript{85} Cf. Di Lorenzo, Corporate Management, ..., supra.

\textsuperscript{86} Cf. De Alessi, Louis, Property Rights, ..., supra.

\textsuperscript{87} This is emphasized by Leibenstein, Allocative Efficiency vs. "X-Efficiency", supra, 413: "The amount to be gained by increasing allocative efficiency is trivial while the amount to be gained by increasing X-efficiency is frequently significant." Evidence for this assertion was found by Primeaux, Walter J., An Assessment of X-Efficiency Gained Through Competition, 59 RES (1977), pp. 105-108, who found inefficiencies as high as 11% of total average costs in the field of regulated energy utilities.


\textsuperscript{89} Posner, Antitrust Law: An Economic Perspective, op. cit., 11; and idem, The Social Costs of Monopoly and Regulation, 83 JPE (1975), pp. 807-827, 807. Posner's error, however, seems to be that he judges such activity to be productive, whereas the productivity of resources in securing and maintaining monopoly positions are clearly negative when judged in terms of social productivity, cf. Buchanan, Good Economics - Bad Law, supra, 487.
referred to as rent-seeking. Empirical evidence is ambiguous on the quantitative significance, however. The production function left unchanged, diseconomies of scale can occur. This is the case if output increases by a smaller proportion than each of the inputs of the production process. Diseconomies typically arise if enterprises reach a certain size and the costs of organization overproportionately increase in comparison to the organization's output. The same applies for the relation between input and output in research and development.

**ee. Transfer of Wealth**

A possible increase in market power due to a merger of two parties is accompanied by a wealth transfer from consumers to stockholders since the acquiring party is able to cut output and elevate price, tendentially approaching the *Cournot* equilibrium. Neither the *Harberger* model nor the *Williamsonian* model take wealth transfers into account since these models solely allow statements about the wealth of society as a whole. They do not allow statements about the distribution of income and wealth changes due to changed economic conditions. This is also a characteristic of the original Chicago School approach since within the theoretical edifice the abstraction from distributional aspects is considered a conditio sine qua non. Consumer

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92 Cf. Fisher/Lande, Efficiency Considerations in Merger Enforcement, supra, 1625, 1631-1633, 1645, and 1693; Hovenkamp, Merger Actions for Damages, supra, 950; idem, Economics and Federal Antitrust Law, St. Paul, Minn. 1985, pp. 19-24; Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 74 and 146 f; as well as Leff, Economic Analysis of Law ..., supra, 480.
welfare is equated with social welfare, which leads to an abstraction from distributional aspects:

"(I)t seems clear the income distribution effects of economic activity should be completely excluded from the determination of the antitrust legality of the activity. It may be sufficient to note that the shift in income distribution does not lessen total wealth, ..."

In abstracting from distributional aspects, monopolists are seen as a different class of consumers, which is in exact accord with the models for welfare measurement. It is conceded that if wealth transfer aspects were taken into account, welfare calculations and the Williamson trade-off would have different results. The extent of the total welfare shift from consumers to

93 Bork, The Antitrust Paradox, op. cit., 111, emphasis added; Areeda, Phillip, and Donald F. Turner, Antitrust Law: An Analysis of Antitrust Principles and Their Application, Boston and Toronto 1980, vol. 4, p. 149 note 2; Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 144-146; Landes, William M., and Richard A. Posner, Market Power in Antitrust Cases, 94 HLR (1981), pp. 937-996, 954, holding that they "ignore possible distributional objections to monopoly, as both controversial and difficult to quantify."; Posner, The Social Costs of Monopoly and Regulation, supra, 821; cf. as well Baxter, Responding to the Reaction ..., supra, 621, with respect to the general inclusion of non-economic considerations such as income distribution: "Direct taxes and subsidies would be less costly (and politically more honest) methods for achieving social and political goals."

94 If net welfare gains arise - that is, if rectangle A2 is larger than triangle A1 - distribution problems are ignored, which means that the welfare gain that is represented by the two rectangles A2 and A3 (the latter drawn shaded) only accrues to the suppliers. The term consumer welfare gain can be considered rather misleading in this context because these gains represent more or less additional profits for suppliers. It would be better to speak of supplier's surplus instead of consumer welfare. Bork, The Antitrust Paradox, op. cit., 110, emphasis added: "Those who continue to buy after a monopoly is formed pay more for the same output, and that shifts income from them to the monopoly and its owners, who are also consumers. This is not deadweight loss due to restriction of output but merely a shift in income between two classes of consumers. The consumer welfare model, which views consumers as a collectivity, does not take this income effect into account. If it did, the results of trade-off calculations would be significantly altered."
stockholders in an economy is not quite clear, however.95

Reasoning along these lines only makes sense, however, if this was the intent of the legislator in the sense of a normative judgment, if allocational aspects can be separated from distributional aspects at all, and if this separation can be performed at bearable costs.

As has been documented, the wealth transfer assumption made by the Chicago School is unprovable and has to be viewed as a normative judgment contrary to the one made by Congress.96 The judgment by the Chicago School is based on the assumption that welfare can only be measured in constant dollars, so that a transfer of a dollar from a consumer to a monopolist has no welfare implications. This assumption has to be considered both unprovable and quite controversial, however, since it "rests on the ordinalist premise that no one can compare the amount of welfare, or satisfaction, that is created by giving a dollar to a poor person, with the amount that is created

95 It is assumed that the share of total personal wealth controlled by the wealthiest 2.4% of U.S. families in 1962 would have been reduced from 40% to somewhere between 16.6 and 32%, cf. Comanor, William S., and Robert H. Smiley, Monopoly and the Distribution of Wealth, 89 QJE (1975), pp. 177-194, 191-193; with regard to the GNP, it is concluded that the sum transferred amounts up to 2 or 3 percent of GNP, Scherer, Industrial market structure ..., op. cit., 471-473.


96 Cf. Buchanan, Good Economics - Bad Law, supra, 487, and 491, who emphasizes that positive economics and distributional aspects have to separated from each other and that the latter are a matter of normative judgment; cf. as well Horwitz, Law and Economics ..., supra, 912; Hovenkamp, Antitrust Policy After Chicago, supra, 235-237; Lande, Wealth Transfers as the Original and Primary Concern of Antitrust ..., supra, 75; Markovits, A Basis Structure for Microeconomic Policy Analysis ..., supra, 985, and 987-989.
by giving the same dollar to someone who is wealthy". Therefore, the same amount of welfare is assigned to any dollar spent. Following this reasoning, the general law of diminishing marginal utility can not be applied to money as an economic good. Furthermore, grave doubts exist as to whether the assumption is correct that a strict separation of allocational from distributional aspects is possible. For one thing, any change towards allocative optimality has distributive effects, in the same way that any change in individuals' incomes will affect resource allocation. Besides, income redistribution will create external effects biasing allocation for nonmaterial reasons (e.g., leisure time). Unless the distributional effects of allocative improvements can be discovered, caution in recommendations should be the rationale. Secondly, the redi-

97 Cf. Hovenkamp, Antitrust Policy After Chicago, supra, 236, and 237: "If the policy maker decided that monopoly wealth transfers do affect welfare and that the antitrust laws are as good a legislative mechanism as any to deal with this problem, he would find plenty of economic argument - also supported by unprovable premises - to back him up"; cf. Posner, Richard A., The Economics of Justice, Chicago 1981, pp. 48-95, defending the assumption.

The conclusions drawn from the assumption that interpersonal utility comparisons are unfeasible differ, however. This does not necessarily mean that a dollar is worth the same to everyone, cf. Markovits, A Basis Structure for Microeconomic Policy Analysis ..., supra, 987; recent scholarship has argued that interpersonal welfare comparisons are possible and that the discussion between the ordinalists and the so-called material welfare school about the comparability of utility was a semantic misunderstanding, cf., e.g., Cooter, Robert, and Peter Rappoport, Were the Ordinalists Wrong About Welfare Economics?, 22 JEL (1984), pp. 507-530.

98 Mansfield, Microeconomics ..., op. cit., 52: "This law states that, as a person consumes more and more of a given commodity (the consumption of other commodities being held constant), the marginal utility of the commodity eventually will tend to decline.", italics in original.

99 Cf. Armentano, Antitrust and Monopoly ..., op. cit., 15-17, holding that a resource allocation can only be judged efficient or inefficient given the distribution of income; Horwitz, Law and Economics ..., supra, 906; Markovits, A Basis Structure for Microeconomic Policy Analysis ..., supra, 977, 983, and 1071; Mishan, The Folklore of the Market ..., op. cit., 102; Polinsky, Economic Analysis as a Potentially Defective Product ..., supra, 1669, and 1677-1679.

100 Cf. Markovits, A Basis Structure for Microeconomic Policy Analysis ..., supra, 977; and Mishan, The Folklore of the Market ..., op. cit., 103 f. In an empirical cost-benefit study of horizontal merger enforcement it is emphasized, for instance, that "(t)he number of economically efficient cases based on (antitrust) benefits depends upon the normative valuation of a dollar redistributed. If the distributive effect is highly valued, almost all of the cases represented a net economic gain", Audretsch, Horizontal Merger Enforcement, op. cit., 79.
stribution of factor endowments is costly, so efficiency has to be traded for equity anyhow. Therefore, there can be no prediction of a policy’s effect on allocative efficiency if its impact on the distribution of income is disregarded.101

III. Impediments to New Competition

The workability of the market mechanism under competitive pressure can be seen in terms of the realization of its basic functions: coordination, information, and allocation. Not only interaction among competitors already in the market (incumbents) is responsible for sufficient competitive pressure. There is a further conditioning factor strongly influencing the extent of competitive pressure: that is, whether or not the market allows free entry and exit by potential competitors, i.e. competitors which are not in the market yet. Only if there is sufficient potential competition can profit and loss expectations properly provide incentives and thus make for an effective level of competition. In other words, prevailing conditions must allow a sufficient number of competitors to participate in the market to perform a given set of predefined economic functions.

In the following section we will therefore perform an analysis of impediments to new competition paying particular attention to the following questions:
- whether and how impediments to new competition restrict the occurrence of entry (do they exist at all?);
- how important such impediments to new competition are (to what extent do they actually deter new competition?);
- should public policy deal with impediments to new competition (should findings be integrated into public policy when industry concentration is evaluated?).

101 Cf. Markovits, A Basis Structure for Microeconomic Policy Analysis ..., supra, 1071, who asserts that the assumption that the effect of a policy on allocative efficiency will not depend on its impact on the distribution of income is only correct in a Pareto optimal world, and concludes that policies that tend to redistribute income may tend to increase allocative efficiency.
Cf. as well Mishan, The Folklore of the Market ..., op. cit., 108-110, holding that in situations of conflict a just distribution has a stronger ‘ethical appeal’.
The current theoretical discussion provides a detailed treatment of what are called "structural" impediments to new competition. On the other hand, strategic impediments are only treated summarically. We will attach particular importance to this procedure in the following.

1. Perfect Competition, Monopoly, and Potential Competition

The impact of potential competitors on the intensity of competition within a market has largely been neglected by traditional microeconomic theory. Either totally free access was assumed or access to the market was considered completely blocked. The question of access to a market was essentially considered irrelevant since in atomistic industries market forces would lead to price adjustments, automatically determining long-run equilibrium market prices. An attempt to charge higher prices would lead to the attraction of entry which, in turn, would restore competitive performance. Therefore, in perfectly competitive industries an individual seller would believe the influence of his price or output adjustments on entry to be negligible.1 Free entry in this sense would preclude the persistence of monopoly profits and persistent industrial concentration would reflect nothing but efficiency. If impediments to new competition were negligible, even pure monopoly would have little market power.2

Within the context of oligopoly analysis, impediments to potential competition were diagnosed that shielded supraregressive profits from erosion. It was held that incumbent firms were only able to raise prices above the level of minimum average costs collectively if circumstances existed which would

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deter the entry of potential competitors. The underlying rationale was that the extent of pricing discretion exercised by incumbent firms depended on how easy it would be for potential competitors to enter a market. Conditions of entry, therefore, became a crucial structural variable in addition to the number of competitors, and the degree of industry concentration, in determining market conduct. Each industry can be characterized by conditions to entry, these conditions being equivalent to the extent of potential competition the industry has to face from new competitors.

The crucial question remains, therefore, as to what extent potential competitors are impeded in entering the market, since only if such impediments exist, can supracompetitive profits be a proxy for market power at all. Since there is no consensus in economic literature at all about whether impediments to new competition exist and if so, what actually constitutes such a 'barrier to entry', as Joe S. Bain has termed the phenomenon, a closer look at the meaning and definition of barriers to entry seems appropriate at this point.

2. The Meaning, Definition, and Importance of Barriers to New Competition

Current differences in evaluating barriers to new competition stem from the lack of consensus on the question of what actually constitutes a barrier to new competition. As there is no indisputable definition of the phenomenon, it is obvious that the concept should carry different meanings for different

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3 Cf. Asch, Peter, Industrial Organization and Antitrust Policy, rev. ed., New York et al. 1983, p. 160; Bain, Joe S., Pricing in Monopoly and Oligopoly, 39 AER (1949), pp. 446-464; Mansfield, Microeconomics ..., op. cit., 351 f.; and Bain, Joe S., Relation of Profit Rate to Industry Concentration, American Manufacturing, 1936-1940, QJE (1951), pp. 293-324, 294: "... the average profit rate of firms in oligopolistic industries of a high concentration will tend to be significantly larger than that of firms in less concentrated oligopolies or in industries of atomistic structure."

4 Cf. Asch, Industrial Organization ..., op. cit., 134; and Yip, George S., Barriers to Entry, Lexington, Mass. 1982. For some early of the numerous empirical confirmations cf., e.g., Bain, Joe S., Relation of Profit Rate to Industry Concentration ..., supra; idem, Barriers to New Competition, Cambridge, Mass. 1956; and Mann, H. Michael, Seller Concentration, Barriers to Entry, and Rates of Return in Thirty Industries, 1950-1960, 48 RES (1966), pp. 296-327.

5 We will henceforth use the term 'impediments to new competition' to include both barriers to entry and barriers to exit, regardless of the actual kind, unless we refer to other approaches explicitly.
economists. So in part, the issue is a definitional one.\(^6\) The disagreement is further complicated by the fact that there is no consensus over what entry really is. For the purpose of our discussion, entry will be understood as meaning the occurrence of new capacity by a firm which did not supply products to the relevant market, regardless of whether this is considered a de novo entry or an entry by a firm already established in markets other than the one in question.\(^7\)

Among the economists who accept the notion of barriers to new competition, three distinct approaches can be discerned under which all other attempts to define barriers to entry can be subsumed.

The most commonly used definition is the one proposed by Joe S. Bain who introduced the concept of barriers to new competition into the economic literature. In his view a barrier to entry is any advantage held by existing firms over those firms that are potential producers in a market. The amount by which the incumbent firms can persistently raise their prices above the competitive level without attracting new entry into that market is viewed as an adequate proxy.\(^8\) This definition is also a measure for the effectiveness of potential competition. However, it encompasses only those circumstances


\(^8\) Cf. Bain, Barriers to New Competition, op. cit., 3-5, who differentiates between three kinds of barriers to entry: (1) economies of large scale, (2) product differentiation advantages, and (3) absolute cost advantages; cf as well Shepherd, The Economics of Industrial Organization, op. cit., 54; and Bain/Qualls, Industrial Organization: A Treatise, Part A, op. cit., 22 f.: "The condition of entry to an industry denotes roughly the advantages in terms of cost or selling price established firms have over potential entrant firms. It may be measured by the degree to which established firms can persistently elevate their prices above minimal average or competitive costs without making it attractive for new firms to enter."
applying uniformly to all competitors. In this sense it can be viewed as an insider-outsider approach.

A different approach is chosen by George J. Stigler who defines barriers to new competition "as a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry". This approach is contrary to the one chosen by Bain in that it primarily refers to costs and not to prices, and explicitly excludes economies of scale as a barrier to new competition. This is because in Stigler's view such a factor has to be faced by all potential entrants.

Yet another approach for an evaluation of barriers to new competition is presented by Carl-Christian von Weizsäcker, who classifies potential entry deterring factors according to whether or not they are socially desirable. Entry to a particular market is considered as "socially desirable" if it increases the sum of producer's surplus and consumer's surplus (so-called social surplus); if this kind of access to a market is blocked, a barrier to entry is held to obtain. For the case of a monopoly, the social surplus as a measure of welfare can be presented as follows:

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9 Cf. Koch, Industrial Organization and Prices, op. cit., 97; a similar approach is chosen by Ferguson, James M., Advertising and Competition: Theory, Measurement, Fact, Cambridge, Mass. 1974, p. 10, who defines barriers as "factors that make entry unprofitable while permitting established firms to set prices above marginal cost, and to persistently earn monopoly return.", emasizing marginal cost as the criterion of reference.


11 Cf. Koch, Industrial Organization and Prices, op. cit., 96. This is a clear departure from the insider-outsider concept which Bain used and which has been criticized for not including certain kinds of barriers; cf. Demsetz, Barriers to Entry, supra, 48, who mentions legal barriers to new competition.

12 Fixed costs are excluded and constant returns to scale are assumed that are approximated by the marginal cost curve.
The figure shows that the social surplus is maximized if price equals marginal costs (area ADE).

In von Weizsäcker's terms, therefore, only socially undesirable limitations impeding the entry of resources and which are also due to the protection of resource owners already in the market, are considered to be real barriers to new competition.\(^{13}\)

In the view presented in the contribution submitted, impediments to new competition would be taken to encompass those factors which:
- enable incumbent firms to shield themselves against the pressures from potential competition, and/or
- reduce expectations about potential profits by forcing costs on potential entrants formerly not borne by the incumbents.\(^{14}\)

The actual advantage of this definition can be seen in the fact that it does not exclude factors which, although impeding competitive pressure, are not generally recognized as doing so, simply because they are positively associated with economic efficiency. In this connection it is crucially important to realize that certain factors such as economies of scale, while undoubtedly documenting efficiency but, nonetheless act as barriers to entry in the

\(^{13}\) Cf. Weizsäcker, Carl-Christian von, Barriers to Entry: A Theoretical Treatment, Berlin et al. 1980, p. 13; and idem, A Welfare Analysis of Barriers to Entry, 11 BJE (1980), pp. 399–421. Similar reflections on barriers to new competition are performed by Waterson, On the Definition ..., supra, 536–539, who pleads for a reservation of the term barriers to entry for asymmetries in entry conditions to which a pejorative label may be attached.

\(^{14}\) Cf. similarly Schmidt, Wettbewerbspolitik und Kartellrecht, op. cit., 69.
sense that they shield incumbent firms from potential competition.

This view diverges considerably from the currently very influential Chicago School theory. Scholars of the latter theoretical approach admittedly take no homogeneous strand on the phenomenon. But in general it can be said that they either deny that barriers to new competition are an important structural factor, or they treat such barriers as being of minor importance in determining competitive conduct and hence disregard them. Thus factors of impediment focused on in the traditional approach associated with the Harvard School are dismissed by the supporters of the current theoretical tenet: 15

"Alleged barriers to entry such as advertising, vertical integration, and capital requirements all fall into the class of competitive tactics more likely to be associated with productive rivalry than unproductive monopolization ... (t)he current flurry of concern over such 'barriers to entry' reflects the poor guidance that is too often offered to antitrust enthusiasts by economists."

Different positions towards the notion of barriers to new competition can be highlighted if one analyzes how particular definitions affect what is to be considered as the source of a barrier in the first place.

Certainly, some qualifications are necessary to the assertion that meaningful barriers do not exist at all. For instance, there is far-reaching consensus that the control of a scarce input into the production process by a competitor constitutes such a barrier. 16 According to Demsetz 17 a monopoly is – in


16 Cf. Areeda/Turner, Antitrust Law ..., vol. 2, op. cit., 299 ("control over an essential or superior resource, such as a raw material or entrepreneurial genius"); Posner, The Chicago School of Antitrust Analysis, supra, 947; Demsetz, Economics as a Guide ..., supra, 381 f.

contrast to the way the concept is defined in neoclassical price theory - not characterized by the fact that it controls the whole supply in a relevant market, but by the dominant position it has due to its control over certain resources. Demsetz argues that such a position can be achieved by the control of high-grade raw materials (for instance the acquisition of 90% of high-grade ore mines by U.S. Steel in the U.S.A.), of patents, of an efficient team of people or of an efficient method of organizing experts in a team. Such resources all share the characteristic that they make it difficult for competitors who do not have them at their disposal to imitate those who do. According to Kirzner, the classic case of a monopolistic producer has no practical importance; only if the monopolistic producer is also the owner of resources is there a real monopoly.18

If a monopolist is the sole owner of resources, grave consequences for production are conceded. However, the assumption is that such a control is rare and in the long run the market process will take care of the elimination or substantial reduction of the dominating position, so that there is no need for antitrust policy. Besides, the creation of a resource monopoly is regarded as a source of productivity. In his evaluation of the trade-off between productivity and market dominance, Demsetz comes to the conclusion that if one balances the acquisition of a dominant position in the control of a scarce input with the increase in productivity, the danger of penalizing such an increase in productivity is large and the likelihood of reducing unproductive sources of market dominance is small.19

Bork believes that the only question for antitrust policy is whether artificial barriers to entry exist. Impediments of this kind are seen, for example in exclusionary practices and predation. They "must be barriers that are not forms of superior efficiency and which yet prevent the forces of the market ... from operating to erode market positions not based on efficiency".20 However, this kind of 'blocking' action is regarded as very unlikely to occur.

18 Cf. Kirzner, Israel M., Competition and Entrepreneurship, Chicago 1973, p. 22, although Kirzner is considered a (Neo-) Austrian scholar.
19 Cf. Demsetz, Economics as a Guide ..., supra, 382.
20 Bork, The Antitrust Paradox ..., op. cit., 311 and 328 f. as well. This can be termed 'strategic behavior'.
since such unilateral action would be detrimental to the firm undertaking it.21

It is also disputed that a risk premium which has to be paid by newcomers as an expression of a higher risk for losses constitutes a barrier to entry.22

In summary, this approach holds that certain barriers to new competition do exist—though these are different from the ones presented by Bain. However, they are not important factors impeding potential competitors. Before inquiring further into the kinds of barriers and their sources, we will take a brief look at the methods of measuring such barriers.

3. The Measurement of Barriers to New Competition

Differing definitional approaches make it difficult to find a common basis for the measurement of barriers to new competition. Whereas a qualitative evaluation might be feasible, a reduction of the obstacles impeding the measurement of barriers is considered a difficult undertaking.23

The main point of departure has been the attempt to capture the effects of different barriers on competitive performance. Two general approaches in the attempt to measure barriers to new competition can be discerned.24 On the one hand, there is the attempt to categorize possible individual barriers in each industry by giving them labels such as high, medium, or low, and "then subjectively deriving an overall barrier to the industry as very high, 

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21 In the case of such unilateral action the firm must be aware of an immediate entry of newcomers because the lack of barriers would stimulate entry if the firm tried to abuse its monopolistic discretionary power. Such a conduct "would be foolish and selfdefeating behavior" and, therefore, unlikely, cf. Bork, The Antitrust Paradox, op. cit, 144 f., 153, 160, and 309.
23 Cf., e.g., Asch, Industrial Organization ..., op. cit., 138.
substantial or moderate-to-low". On the other hand, there is the attempt to find measurable proxies for the barriers to be analyzed such as, e.g., price/cost margins. These proxies presuppose a close correlation to the height of the barrier in question. The effect of the barriers is estimated by inserting the different proxies separately into a regression equation and thereby quantifying their effects on barriers to a market.

There are different proxies to measure barriers to new competition. The most common ones are price and profitability proxies which measure the extent of deviation of elevated prices from total average costs or marginal costs in the situation of facing entry. The underlying rationale is that high barriers ceteris paribus imply that incumbent firms can use the price parameter more freely and perform an optimal pricing policy, depending on the height of the barrier, by raising prices above the competitive level.

The most common nonprice proxies that are believed to create barriers to new competition are advertising expenditures and R&D expenditures. The underlying rationale for the measurement is that advertising, R&D, and related nonproduction activities can affect firms' cost conditions either by causing scale economies or by creating absolute cost advantages for incumbent firms in comparison to potential entrant firms, resulting in different cost situations.

25 Waterson, On the Definition ..., supra, 521.
4. Kinds of Barriers to New Competition and their Sources: Plausibility and Empirical Evidence

The most common classification of barriers to new competition was introduced by the works of Joe S. Bain and differentiates between economies of large scale, absolute cost advantages, and product differentiation advantages. These original structural barriers can be complemented by certain factors that are barriers to exit from a market but, at the same time, deter entry to it as well. This can be the case since a potential competitor facing entry to a market might eventually not enter this market despite low entry barriers if this market has specific structural features (e.g., idiosyncratic capital) which make exit from the market difficult and prospects for earning adequate rents not promising.

These structural barriers are compounded infra by strategic barriers, that is, impediments raised by incumbents through conduct, in order to deter entry by newcomers and maintain competitive advantages. They include strategies like limit pricing, use of excess capacity, credible threats by sunk costs, and the like. Strategic barriers are erected in order to reduce the attractiveness of the offer the incumbent has to compete against. Structural and strategic barriers are interrelated, however.

a. Structural Barriers

These barriers, as the term implies, are associated specifically with the structural dimensions of the market.

34 Cf. Schmidt, Wettbewerbspolitik und Kartellrecht, op. cit., 69; and Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 714.
aa. Economies of Large Scale

The underlying question is whether scale economies serve as proxy variables for market power which allow price above average costs for lengthy periods and if so whether they should therefore be considered barriers to entry. In this context, economies of scale present "reductions in cost per unit of product manufactured and sold associated with the operation of large as compared to small production, distribution, and merchandising entities". Scale economies are primarily encountered in production but can also be of importance in administration, distribution, and marketing. With regard to the production process, they are assumed to approximately equal to the long-run average cost curve.

Real economies and pecuniary economies can be distinguished. Whereas real or technical economies entail fewer inputs for a distinct level of output and, therefore, fewer of society's scarce resources are used in the production and distribution process, pecuniary economies are monetary savings resulting from purchasing goods at better terms. The latter include, e.g., volume discounts.

Resulting economies of the real kind can have several sources. Among these, the most important are:

- **Indivisibilities** of machinery and labor, leading to costs independent of scale, or to fixed costs over certain levels of output;

35 Cf. Waterson, On the Definition ..., supra, 531.
36 Scherer, Frederic M., Economies of Scale and Industrial Concentration, in: Goldschmid, Harvey, et al. (eds.), Industrial Concentration: The New Learning, Boston, Toronto 1974, pp. 16-54. Note that "(t)he decline in unit costs with increases in the scale of plant or firm will ordinarily tend to be encountered over a certain limited range of increasing scales of plant or firm, and then cease to be encountered if the scales of plant or firm are increased still further", Bain, Barriers to New Competition, op. cit., 53.
- specialization of machinery and labor, leading to increased productivity;
- economies of increased dimensions, occurring if there is an investment in capital equipment such as, e.g., tanks or vessels, and the volume capacity becomes overproportionate in relation to the equipment’s surface and, therefore, costs (so-called 0.6 rule).
- economies of massed reserves, due to spare machinery and parts which have to be held in stock and which amount to a lower percentage of total costs if production is on a large scale.

The reasoning why economies of large scale represent barriers to new competition runs along the following lines. Assuming production with increasing returns, potential entrants will have to produce close to minimum efficient size and, therefore, ad hoc with relatively large capacity in industries in which efficient output is already relatively large in comparison to overall industry demand. Otherwise the product’s price might - if producing at less than minimum efficient scale - eventually fall below the potential entrant’s costs per unit after entry, making it impossible for him to cover his total costs.

So the entry-deterring effect results primarily from the first-mover advantage of incumbent firms producing at minimum efficient size. Hence, a crucial criterion for the distinction of whether or not economies constitute a barrier is the question of how large the fraction constituting the minimum efficient size is, relative to total industry demand (so-called percentage effect).

If it is hence assumed that low scale entry entails significant cost disadvantages per unit, then if the newcomer wants to enter at large scale this constitutes the so-called absolute-capital-requirement effect, making it necessary for the potential competitor to raise significant amounts of capital. If it is either more difficult for the newcomer to raise this capital or he can only


40 This is true anyway in the sense that selling price will be lowered by incumbents and held below the limit price in order to deter entry. This is additional to the possible entry deterring effect due to small scale production, cf. Bain/Qualls, Industrial Organization: A Treatise, Part A, op. cit., 230.

41 Cf. Bain, Barriers to New Competition, op. cit., 55.
raise it at somewhat worse conditions, a barrier is constituted.\textsuperscript{42} An additional criterion, therefore, is whether or not these disadvantages are significant.

The current approach emphasizes that economies of scale are a product of efficient industry structures and do not constitute barriers to new competition as a consequence.\textsuperscript{43} Economies of large scale production advantages of incumbents over potential entrant firms are regarded as natural barriers to entry.\textsuperscript{44} The underlying rationale for this view mainly relies on the assertion that the studies confirming a positive correlation between concentration and profits, which serve as a proxy for barriers due to economies, are based on false methodology and data, and therefore fail to deliver a theoretical basis for the concentration-collusion doctrine. Free access to markets exists and hence economies have to be interpreted as efficiencies.\textsuperscript{45}

This point of view neglects the fact, however, that economies of scale can play a dual role. For one thing, they represent efficiencies and hence a

\textsuperscript{42} Cf. Bain, Barriers to New Competition, op. cit., 55.


\textsuperscript{44} According to Bork natural barriers to entry exist, "(w)hen existing firms are efficient and possess valuable plants, equipment, knowledge, skill, and reputation. (Therefore,) potential entrants will find it correspondingly more difficult to enter the industry, since they must acquire those things.", Bork, The Antitrust Paradox ..., op. cit., 310 f. For a more distinguished view on the issue, cf. Williamson, Oliver E., Antitrust Economics: Mergers, Contracting, and Strategic Behavior, Oxford and New York 1987, p. 325.

\textsuperscript{45} Cf. Brozen, Yale, Bain's Concentration and Rates of Return Revisited, 14 JLE (1971), pp. 351-369; and Demsetz, Harold, Two Systems of Belief About Monopoly, in: Goldschmid, Harvey, et al. (eds.), Industrial Concentration: The New Learning, Boston, Toronto 1974, pp. 164-184, esp. 173: "The lack of a theoretical justification for identifying certain types of expenditures as 'barriers to entry' is even more glaring than is the lack of a theoretical basis for the market concentration doctrine ... (t)he costliness of producing commodities does, of course, limit the amounts that will be made available at particular prices; in this sense cost does create a 'barrier' to production, but no pejorative interpretation can be given to such a 'barrier to entry'." We will give the market concentration doctrine (concentration-collusion doctrine) an indepth treatment in Part 3 of this contribution.
factor "not usually regarded as incompatible with what most economists call free entry", whereas, on the other hand "in a very real sense they constitute a barrier to entry".\textsuperscript{46} The question of the impact of these barriers becomes in fact an issue of trade-off.

bb. Absolute Cost Advantages

According to the traditional tenet a barrier to new competition is created if potential competitors have to bear costs when entering the market that are independent of scale and which incumbent firms did not or do not have to bear. This would lead to production at lower costs and optimal pricing by incumbent firms, setting a limit price marginally below the long-run average cost curve of the potential competitor, thereby deterring entry.\textsuperscript{47}

The lower costs are independent of scale in that "(a)n absolute cost advantage exists if the prospective unit costs of production of potential entrant firms are generally, and more or less at any common scale of operations, higher than those of established firms".\textsuperscript{48}

Under the current tenet this barrier to new competition is judged to be nonexistent or insignificant, also because this kind of natural barrier is considered to result from differential efficiencies.\textsuperscript{49}

The principal and most important sources of absolute cost advantages may be briefly categorized as follows:\textsuperscript{50}

- access of incumbent firms to superior production techniques protected by patents;

\textsuperscript{46} Dewey, Donald, Industrial Concentration and the Rate of Profit: Some Neglected Theory, 19 JLE (1976), pp. 67-78, 69.
\textsuperscript{48} Bain, Barriers to New Competition, op. cit., 144; cf. as well Koutsoyiannis, Modern Microeconomics, op. cit., 292.
\textsuperscript{50} Cf. Areeda/Turner, Antitrust Law ..., vol. 2, op. cit., 305 f; Bain, Barriers to New Competition, op. cit., 144 f.; cf. as well Koutsoyiannis, Modern Microeconomics, op. cit., 292; Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 715.
- control of or lower prices for key raw materials accruing to incumbent firms in comparison to potential entrant firms;
- lower costs of capital for the incumbent firms due to abilities in internal financing, preferred access to capital markets, or favorable terms;
- lower prices for productive factors (as, e.g., skilled personnel) accruing to the incumbent firms due to market imperfections.

We will put our emphasis firstly on the absolute height of capital requirements as a barrier in itself\(^1\) and, secondly, on the issue of differences in capital costs for potential entrant firms in comparison to incumbents, and, thirdly on capital market imperfections. Patent protection, which might lead to cost differences, will be treated infra under the heading of legal and administrative barriers, and potential differences in absolute costs due to resource monopolization have been dealt with supra.

There is no consensus on whether large absolute capital requirements pose an entry barrier to a market in themselves. On the one hand this depends on whether one defines a barrier as including only conditions which have to be faced by all competitors. It is obvious that absolute capital requirements reflect a condition affecting any potential entrant firm. On the other hand, it depends on the definition of entry. For a large firm entering the market it might be possible to raise exorbitant sums of capital, whereas de novo entrants might not be capable of doing this.\(^2\) Empirical evidence suggests, however, that there are markets, which can only be entered with the help of prohibitive sums of capital. In this case, entry would be totally blocked.\(^3\)

Differences in capital costs are attributable to higher risks of failure on the part of potential entrant firms, requiring a higher potential return on invested capital. Furthermore, they are attributable to information costs for

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\(^1\) Cf., e.g., Lenel, Hans O., Ursachen der Konzentration, 2nd ed., Tübingen 1968, pp. 244 f.
\(^2\) Cf. Greer, Industrial Organization and Public Policy, op. cit., 158 f.
potential investors disadvantaging potential entrant firms since it is more costly for investors to verify or falsify information. Finally, these differences can be attributable to capital market imperfections which mean "that a fully qualified borrower cannot obtain (or must pay higher prices for) the capital he wants".

However, the current approach holds that capital market imperfections are not existent. Williamson notes that this argument and related ones are only valid if costless market transactions regarding capital flows are assumed. It is all the necessary information on the respective borrower that makes investment funds more costly or less. Hence, a distinct tendency can be confirmed that "(t)he price of capital is usually lower to larger firms, especially to those that hold secure market positions. This is shown by cross-market surveys of loan costs by size of firms, and by more precise studies".

The difference between diversifying entrants and de novo entrants which we have stated with regard to absolute capital requirements applies similarly.

Another argument that supports the imperfect capital market hypothesis is that the management of banks has a sort of self-interest in giving preference to incumbent firms since due to experience based on history they can be evaluated more easily. The risk of losses on current loans would increase if competition was intensified by newcomers. This leads to a sort of de facto cartel between incumbents and banks.

56 Cf. Williamson, Antitrust Economics ..., op. cit., 87 and 90. This is even conceded by adherents to the current tenet, cf. Demsetz, Barriers to Entry, supra, 50: "It is not large capital 'requirements', but the histories of successful firms, in a world in which information is costly to acquire, that constitute the source of such interest rate differentials."
57 Shepherd, The Economics of Industrial Organization, op. cit., 191.
Product Differentiation Advantages

Products of incumbent suppliers are heterogeneous or differentiated to a varying degree in many markets. This means that the consumer has different preferences for different products, respectively, with regard to their actual features, the temporal aspect of their supply, or the regional availability of the product. The stronger the preferences, the stronger the supplier’s ability to raise prices above the competitive level without a total loss of sales and without inducing new entry. Such preferences do exist either for objective reasons because of technical and physical features or because of the way consumers subjectively regard the products in question.\footnote{Cf. Areeda/Turner, Antitrust Law ..., vol. 2, op. cit., 306. Product differentiation in this sense can be seen as the “fact that different buyers have different product allegiances or preference patterns, so that the preferences in question do not result in some universally agreed-upon system of grading or rating for the competing products”, Bain, Barriers to New Competition, op. cit., 114.}

Product differentiation advantages are regarded as constituting a barrier to new competition in that consumers “have a preference, transitory or permanent, for some or all established products as compared to new-entrant products, and this may in essence erect some barriers to entry”.\footnote{Bain, Barriers to New Competition, op. cit., 114; cf. as well Bain/Qualls, Industrial Organization: A Treatise, Part A, op. cit., 221.} The newcomer would have to invest heavily in order to overcome the preferences and the consumer loyalty which are outflows of a first mover advantage when entering the market.\footnote{Cf. Bain, Joe S., Conditions of Entry and the Emergence of Monopoly, in: Chamberlin, Edward H. (ed.), Monopoly Competition and Their Regulation, London 1954, pp. 215-241, 224: “Product differentiation advantages of some or all established firms … resulting for the potential entrant in a ceteris paribus demand schedule at a lower position than those of established firms with equivalent production and selling costs, or in higher costs to place its demand curve in the same position.”; Comanor, William S., and Thomas A. Wilson, Advertising, Market Structure and Performance, 49 RES (1967), pp. 423-440.}

Product differentiation advantages result from a variety of sources.\footnote{Bain, Barriers to New Competition, op. cit., 114; cf. as well Scherer, Industrial market structure ..., op. cit., 375; Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 715; and Yip, Barriers to Entry, op. cit., 18 f.}
"Product differentiation is propagated by differences in the design or physical quality of competing products, by efforts of sellers to distinguish their products through packaging, branding, and the offering of auxiliary services to buyers, and by advertising and sales promotion efforts ..."

With regard to its economic effects, product differentiation has to be considered ambiguous. It benefits consumers, on the one hand, by offering greater product variety according to individual consumer taste. On the other hand, however, in the monopolistic competition market price exceeds marginal cost and output is produced at higher than minimum average cost which leads to resource misallocation and inefficiency.83

Since the extent of product differentiation cannot be measured objectively along a commonly accepted scale, proxy variables are used which are supposed to be positively correlated to the extent of product differentiation. The most common proxies are based on ratios relating relevant quantities to the level of advertising expenditure.84

There are two reasons why advertising expenditures should be regarded as a relevant quantity for measurement. Firstly, advertising is considered the main cause of product differentiation and is so used as a substitute for variables more difficult to measure, such as, the locational distribution of outlets, e.g.

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83 Cf. Areeda/Turner, Antitrust Law ..., vol. 2, op. cit., 307; and for the original source, Chamberlin, Edward H., The Theory of Monopolistic Competition, Cambridge, Mass. 1933. Note that if the reasoning of the current tenet is taken to its logical extreme, these inefficiencies would have to be competed away.

84 Cf. Comanor/Wilson, Advertising, ..., supra; Ferguson, Advertising and Competition ..., op. cit.; Needham, The Economics of Industrial Structure ..., op. cit., 177; Shepherd, The Economics of Industrial Organization, op. cit., 314–320, esp. 318; and Waterson, On the Definition ..., supra, 521 f.
Secondly, the size of advertising expenditures creates economies of scale or other advantages, serving in turn as barriers to new competition.65

Current theory is shifting away from the view that product differentiation and, therefore, advertising expenditures should necessarily be thought of as a means for erecting barriers to new competition. Advertising is more or less seen as a means of entry due to its informational function, and is regarded as desirable, therefore.66 For adherents to current theory the real barrier to entry is high information costs for consumers and it is precisely through advertising that such a barrier is surmounted. Information increases the consumer’s willingness to substitute products for other ones, makes demand curves more elastic, and hence markets more competitive.67


66 Cf. Brozen, Competition, Efficiency, and Antitrust, op. cit., 9: “A new entrant can usually insinuate itself more easily into the market if its product is not identical with those offered by established firms.”


67 Brozen, Yale, Entry Barriers, Advertising, and Product Differentiation, in: Goldschmid, Harvey, et al. (eds.), Industrial Concentration: The New Learning, Boston, Toronto 1974, pp. 115-161, 115: “To any casual observer, it would seem that advertising is a means of competing. Most importantly, advertising is much more means of entry than a barrier to entry.” But see Nelson, however, who poses the question “what kind of information 'great balls of comfort' is meant to convey. Is it really information for me to know that 'If I'm out of Schlitz, I'm out of beer'?” Nelson, Richard L., Comments on a Paper by Posner, 127 UPLR (1979), pp. 949-952, 950.
According to Posner, the rational consumer will pay for advertising only to the extent that his search costs in selecting products are diminished. On these grounds Posner characterizes advertising as a service to customers. In any case, this service cannot be separated from the features that are part of the product itself.\textsuperscript{68}

Empirical evidence for this view was supplied by a study comparing the price of eyeglasses in different U.S. states. It was discovered that in states which allowed advertising for eyeglasses, prices tended to be lower than in states where advertising was regulated.\textsuperscript{69}

Differences in theoretical positions on the issue thus have to do with different views on whether participants in the economic process (suppliers and consumers) act rationally. The traditional approach associated with the Harvard School allegedly presupposes "that consumers are irrational and manipulable". Contrary to this assumption, it is pointed out that "the Chicago theorist rejects this assumption as inconsistent with the premises of price theory".\textsuperscript{70} This amounts to an acceptance of the neoclassical premise that market participants behave rationally. The empirical basis for this assumption, however, has not been unambiguously defined.

One aspect which requires close and critical scrutiny, for instance, is the assumption of autonomous behavior on the part of the consumer, i.e. the postulate that consumers freely decide which goods and services to purchase within the context of their budget constraints and their preferences (consumer sovereignty).\textsuperscript{71}

The representatives of other approaches to antitrust theory and policy also assume a certain rationality in the behavior of economic agents; it is true,

\textsuperscript{68} Cf. Posner, The Chicago School of Antitrust Analysis, supra, 930 f. and 938: "Advertising can make an advertised brand cheaper by reducing the consumer's search costs by an amount greater than the difference in nominal price between that brand and non-advertised brands of the same product." Posner also admits that the fundamental Chicago assumption applies, that the consumer is an absolutely rational human being, cf. ibid., 938 note 38.


\textsuperscript{70} Posner, The Chicago School ..., supra, 930.

certainly, that as a rule, however, the concept of bounded rationality employed by the behavioral sciences is used. In the words of Herbert Simon this bounded rationality can be characterized in that

"(t)he capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world".

By contrast, current theory assumes totally rational behavior in the sense that consumers and suppliers maximize utilities and profits, respectively.

However, there is evidence against this assumption of autonomous behavior. Consumer preferences are clearly influenced at least to a certain extent by external factors. Two arguments seem especially relevant in this context:

- consumers' preferences and, therefore, the demand of goods and services, is influenced by the decisions of other consumers (external consumer effects);
- consumers' decisions are not totally rational because they are influenced by producers through advertising. This is of particular importance since there are two types of advertising: informative and persuasive advertising.

Although a neat separation between these two components is difficult, it is an undeniable fact that human beings - also in their roles as consumers - are not totally rational beings and, therefore, are susceptible to persuasive advertising and even to open manipulation.

It is often pointed out by adherents to this view that only persuasive and informative advertising together can stimulate consumers' interest because the role of the persuasive component is to break down the barrier of selec-

75 Cf. Schmidt/Rittaler, Die Chicago School of Antitrust Analysis, op. cit., 18.
tive perception. However, this argument does not reflect the core problem since it is basically business-oriented and regards advertising from the standpoint of marketing techniques. This latter argument cannot remove suspicion in the economic sense that advertising restricts sovereignty in a free enterprise system.\(^76\)

Even the representatives of the traditional tenet concede that advertising contains information in many cases, but in so doing they do not understate the manipulative effect. Nelson, for instance, argues that advertising often tends rather to set signals in a persuasive sense than to provide information when the industry concerned is conscious that consumers are uncertain about selecting products.\(^77\) The informative component of advertising may play an important role with regard to non-convenience and/or specialty goods. However, as far as convenience goods for daily use are concerned, advertising undoubtedly shifts its accent from information to persuasion. And as the latter kind of goods are encountered more frequently in an economy, it follows logically that persuasive advertising is more widespread.

In summary of what has been argued, then, the dual character of product differentiation should be emphasized. Whether the barrier effect which deters potential competition prevails or the informational effect which is bound to intensify competition, is heavily disputed in current economic literature.\(^78\) The economic effects of advertising and product differentiation have therefore to be seen in a twofold manner:\(^79\)

\(^{76}\) Cf. Schmidt/Rittaler, Die Chicago School of Antitrust Analysis, op. cit., 19; and Waterson, On the Definition ..., supra, 526 f., on the state of the art: "(A)dvertising could potentially, or actually, be a barrier to entry, but on the other hand it may assist entry by allowing new firms convenient access to potential customers ... (t)he outcome, a net effect of several factors, is potentially an empirically discernible one, yet tests within the structure-profit framework to date do not appear particularly helpful in evaluating it."


\(^{78}\) Cf. Albion, Mark S., and Paul W. Farris, The Advertising Controversy: Evidence on the Economic Effects of Advertising, Boston, Mass. 1981, p. 38: "A major point of divergence between the two main streams of research into the economic impacts of advertising is whether advertising should be regarded as persuasive or informative in nature."; cf. as well Shepherd, The Economics of Industrial Organization, op. cit., 318 f.

"There is no contradiction in believing both that advertising is crucial in facilitating firms' entry into new markets and that the entry costs might be steep enough to discourage entry. It is not inconsistent to hold that indivisibilities associated with advertising on nationwide television create market power in certain industries, but that a government policy to severely curtail advertising in these industries would cause prices to become even higher."

This dual role of advertising and, therefore, product differentiation has been confirmed by empirical evidence as well.80

b. Strategic Barriers

So far, barriers to new competition have been considered an exogeneously given determinant of market structure, which are able to influence the rate and extent of entry to a market and, therefore, constrain incumbent firms' conduct. We strongly emphasized in Part 1 of this contribution, however, that structure, conduct, and performance show a circular interdependence in that specific conduct is able to alter market structure. Hence, elements of market structure such as barriers to entry can become the competition parameters of incumbent firms.81 This aspect of barriers is associated with strategic behavior, being either predatory conduct aimed at disciplining or driving incumbents out of the market, or raising particular barriers to the market aimed at deterring potential entrant firms.82

The primary purpose of strategic behavior of the latter kind is to communicate to potential entrant firms verbal threats of retaliation, or actions that enable or might even require retaliation in case of entry. Unlike structural barriers, which occur more or less unintentionally as a side effect of profit maximization, these barriers are purposely erected in order to reduce the

81 Cf. Dirrheimer, Marktkeonzentration ..., op. cit., 35 ff.
82 Cf. Hovenkamp, Antitrust Policy After Chicago, supra, 262 f.; Williamson, Antitrust Economics ..., op. cit., 328, who views strategic behavior as "efforts by established firms to take up advance positions or respond contingently to rivalry in ways that discipline actual and discourage potential competition."
The occurrence of strategic barriers is closely related to the existence of structural barriers to a market which means that "severe structural preconditions in both concentration and entry barrier respects need to be satisfied before an incentive to behave strategically can be claimed to exist".  

The kinds of strategic barriers can be categorized according to the competitive parameters actually used:

- **limit price strategy**, setting price somewhere between the monopoly price and the competitive price, respectively;
- **excess capacity strategy**, expanding output and investment in the pre-entry period or shortly after entry, aimed at discouraging incentives to enter or driving newcomers out of the market;
- **product differentiation strategy**, offering more product variations than in the case of structural barriers; and
- **excess cost strategy**, imposing cost disadvantages on the potential entrant which the incumbent firms did not themselves have to bear when they entered the market.

The adherents of the current theory regard this kind of action as an artificial barrier to new competition. But they maintain that such unilateral action would be detrimental to the firm undertaking it because in the case of such unilateral action and in the absence of structural barriers, the incumbent firm must be aware that if it tried to abuse its discretionary monopolistic power an influx of potential entrants into the market would be immediate.

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83 Cf. Hovenkamp, Antitrust Policy After Chicago, supra, 260-283; Markovits, The Limits of Simplifying Antitrust..., supra, 44; Salop, Steven C., Strategic Entry Deterrence, 69 AER (1979), pp. 335-338; Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 716.


Such conduct "would be foolish and selfdefeating behavior" and, therefore, unlikely.

Even if the existence of at least some kind of structural barriers is accepted, the crucial question still has to be answered as to whether on this basis such strategic barriers to entry exist and whether their erection constitutes a meaningful strategy for the deterrence of entry. In examining this issue, we will refrain from dealing with single kinds of strategic barriers, rather we will address ourselves to the crucial issues of excess capacity, sunk costs, and credible threats that underlie the respective hypotheses on these kinds of barriers and determine their validity. The purpose of this is to demonstrate - pars pro toto - that incumbent firms are able to deter entry by strategic conduct.

The primary argument of the hypothesis is that incumbent firms regulate their capacity which they are going to invest before entry of newcomers in such a way as to equal the presumed post-entry output expected after a potential competitor enters the market. In this case the actual output before newcomers enter is deliberately chosen smaller than overall pre-entry capacity. The resulting excess capacity is used to threaten to expand output, cut prices and, therefore, to make entry unprofitable. Thus the entry deterring effect is achieved by intensifying presumed post-entry competition by


87 In fact, this has been done abundantly elsewhere, cf., e.g., Baron, D. P., Limit Pricing, Potential Entry, and Barriers to Entry, 63 AER (1973), pp. 666-674; Dixit, Avinash K., Recent Developments in Oligopoly Theory, 72 AER (1982), pp. 12-17; Salop, Steven C., and David T. Scheffman, Raising Rivals' Costs, 73 AER (1983), pp. 267-271.

additional output, a course of action which invalidates the Sylos' postulate.\textsuperscript{89} It has been shown that there is an incentive to hold excess capacity at some cost because the anticipated reduction in the profit margin due to eventual entry is perceived to offset these costs.\textsuperscript{90}

In our view, the likelihood of occurrence has to be connected to three preconditions, however. First, the occurrence varies with the extent of structural barriers.\textsuperscript{91} Secondly, the kind of capital invested and the structure of resulting costs determine the likelihood of occurrence, and thirdly, the likelihood of deterrence is also dependent on the extent of credibility that is assigned to the threat by potential entrants.

The issue of structural barriers has been dealt with supra and has to be considered implicitly.

The potential for entry deterrence increases with the extent to which assets are limited in their transferability to alternative economic uses because of specificity in use. This limited degree of mobility of specific assets poses an additional risk to the potential entrant because in case of failure after entry the salvage value cannot fully be recovered. The residual part of the fixed costs which is not recoverable in the case of exit is referred to as 'sunk costs' and is calculated by subtracting the salvage value from the unamortized costs of the asset. The impact of sunk costs has to be taken into consideration by a potential entrant when calculating entry costs because an irrevocable choice of investment can alter the pre-entry conditions or those prevailing after entry has occurred. Such an occurrence is to the incumbents' advantage, because additional costs are imposed on the entrant that

\textsuperscript{89} Cf. Sylos-Labini, Paolo, Oligopoly and Technical Progress, Cambridge, Mass. 1962. The postulate holds that incumbents will keep the pre-entry price on limit level and threaten to keep output constant after entry which would result in an unprofitable post-entry situation; cf as well, Wenders, Excess Capacity as a Barrier to Entry, supra, 15.

\textsuperscript{90} Cf. Spence, A. Michael, Entry, Capacity, ..., supra, 534.

\textsuperscript{91} With regard to the reasoning along the above lines, the strategy can only be used profitably in an oligopoly, cf., e.g., Esposito/Esposito, Excess Capacity and Market Structure, supra, 188. This is consistent with the empirical findings in economic literature, cf., e.g., Lieberman, Excess Capacity as a Barrier to Entry ..., supra, 607.
were not borne by the incumbent. Hence, sunk costs serve as a barrier to entry because they allow exploitation of a first-mover advantage.\textsuperscript{92}

The threat of the incumbent firms to use excess capacity after successful entry and hence make entry unprofitable is dependent on the credibility of the threat.\textsuperscript{93} Potential entrants will not be deterred from entering the market unless the "established firm unambiguously commit(s) itself to a course of action which will deter entry".\textsuperscript{94} The irreversibility of an investment is an instrument to document the credibility of the threat. Again, this leads to the condition that the incumbent firms must invest in durable, specialized assets in order to raise the probability of entry deterrence.\textsuperscript{95}

c. Legal and Administrative Barriers

In addition to the control of an essential input of the production process, the government protection for some industries is regarded by current theory as the second substantial cause of barriers to new competition and, therefore, monopoly power.\textsuperscript{96} This is considered so, because governmentally sanctioned barriers to new competition do not allow monopoly positions to be

\textsuperscript{92} Cf. Dixit, The Role of Investment in Entry-Deterrence, supra, 95 f.; Eaton/Lipsey, Exit Barriers are Entry Barriers ..., supra, 721; Hovenkamp, Antitrust Policy After Chicago, supra, 264-266; and Bailey, Elizabeth E., Contestability and the Design of Regulatory and Antitrust Policy, 71 AER (1981), pp. 178-183, 178 f.: "It is primarily the risk involved in expending large sums of money in order to acquire sunk-cost facilities that deters new entry when an otherwise profitable entry opportunity arises. Potential competition becomes an ever more effective force as the extent of large irretrievable entry costs decline"; emphasis added.

\textsuperscript{93} Cf., e.g., Wenders, Excess Capacity as a Barrier to Entry, supra, 18.

\textsuperscript{94} Eaton, B. Curtis, and Richard G. Lipsey, Capital, commitment, and entry equilibrium, 12 BJE (1981), pp. 593-604, 594, italics in original; and Spence, A. Michael, Entry, Capacity, ..., supra, 544. The assumption is based on Schelling's distinction between threats and commitments. If an actor has made commitments in a strategic game, it is in his self-interest to take counteraction if the action at which the commitment was aimed, occurs, cf. Schelling, Thomas C., The Strategy of Conflict, Cambridge, Mass. 1960, ch. 2.

\textsuperscript{95} Cf. Eaton/Lipsey, Exit barriers are entry barriers ..., supra, 721; Williamson, Antitrust Economics ..., op. cit., 333. The price as a flexible instrument for reaction can still be used in the actual case. Note that the price is now decreased in order to deter entry, whereas before there was a potential for its elevation.

\textsuperscript{96} Cf. Posner, The Chicago School of Antitrust Analysis, supra, 947 note 65: "Legal barriers to entry such as patents are quite properly ignored as beyond the reach of antitrust policy."
challenged. Barriers to entry erected by government, such as patents, legal restrictions of admission to certain occupations or professions, and similar regulations, have been deliberately established by government and authorities; they are therefore durable and cannot be removed by market forces. This kind of protection is provided by legal and administrative barriers.

According to the current approach, those areas that are exempt for political reasons cannot be defended by economic arguments. At the same time, however, it is very difficult to attack them politically. The protection of these industries against competition should be reduced step by step because, according to present evidence it seems to offer no advantages at all. For instance, the German Monopolies Commission believes that the losses in efficiency in the economy flowing from governmental and public restraints are greater than the ones from market power.

Current government policy aims at abolishing legal and administrative barriers by deregulating those exempted areas. This has also become the official policy of the Reagan Administration. Deregulation has already gone far in the airline industry and in transportation. However, proponents of the current approach admit that it is very difficult to make policy conclusions

97 Cf. Koch, Industrial Organization and Prices, op. cit., 104 f.; and Demsetz, Economics as a Guide ... , supra, 381: "Monopolization has two plausible routes. One follows a circuitous path through fifty state capitals and Washington, D.C. The other is to obtain very dominant control over resources 'essential' to the production of a good."


99 Cf. Demsetz, Economics as a Guide ..., supra, 383: "In addition ... it is difficult to see great gains flowing from government protection of industries from competition, although in some case, as with patent protection, such a case can be made."

100 Cf. the comments on the Sixth Main Report of the German Monopolies Commission by the Federal Government, Stellungnahme der Bundesregierung zum Hauptgutachten VI, BTDr. 11/555, p. 2. This is furthermore emphasized by Caspari, Joint Ventures Under EEC Law and Policy, supra, 12: "Also in Europe, established traditions or social constraints play a major role, and lobbyists as well are all too able to find politicians and bureaucrats who, for reasons of economic ignorance or lack of responsibility, are prepared to protect particular interests."
in fields which have not yet been thoroughly analyzed.\textsuperscript{101} This view is criticized by the traditional industrial organization approach, especially with regard to the problems of natural monopoly. In markets in which economies of scale prevent a competitive market structure, monopoly profits should be avoided by regulation; in such a case, a policy of deregulation would allow monopolists to skim off monopoly profits.

If the policy of deregulation is not to become an ideology, however, the essential question remains as to how regulation should be handled in order to avoid the costs of regulation which have been pointed out by Stigler and others.\textsuperscript{102} This however, is an issue that is beyond the scope of this contribution.\textsuperscript{103}

d. Barriers to Exit

The extent of potential competition that a market faces is determined not only by barriers to entry but also by barriers to exit from that market. If a potential entrant anticipates high barriers to exit from a market he might eventually decide not to enter this market even if the entry barriers themselves are low. This situation may arise if subnormal profitability because of cutthroat competition has to be expected.\textsuperscript{104} Hence, barriers to exit influence performance, profits and industrial structure in the same way as barriers to

\textsuperscript{101} Cf. Demsetz, Economics as a Guide ..., supra, 383.
\textsuperscript{102} Rosenbluth, Gideon, Comment on a Paper by Demsetz, 19 JLE (1976), pp. 389-391, 391: "The question that naturally follows from Demsetz's analysis is: Can we regulate insufficiently competitive industries without incurring all the evils of regulation to which Stigler and others have drawn our attention?".
\textsuperscript{104} Cf., e.g., Caves/Porter, Barriers to Exit, op. cit.; Porter, Michael E., Competitive Strategy: Techniques for Analyzing Industries and Competitors, New York, London 1980, p. 186; Schmidt, Wettbewerbspolitik und Kartellrecht, op. cit., 70; and Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 716 f.
entry do, since they show a structural complementarity. Recent work has emphasized that this aspect has been neglected.105 These two types of structural barriers are related in that factors that impede entry are likely to impede exit as well and actions that incumbent firms can take to deter entry also determine the conditions for their own departure from the market. Absolute cost advantages, product differentiation advantages, as well as economies of large scale can also erect a barrier to exit affecting incumbent firms as well as potential entrant firms.106

Barriers to exit from a market may deter exit because of the following kinds which can be considered fundamental sources of such exit barriers:107

- **durable and highly specialized assets** (idiosyncratic capital) creating irretrievable costs due to diminished liquidation value of the investment;
- **fixed costs of exit** due to pension plans, labor settlements, contract cancellation penalties, and the like;
- **strategic exit barriers** due to overall business relatedness of the existing business unit, access to financial markets, or vertical integration;
- **informational barriers** due to false evaluation or concealment of business performance;
- **government and social barriers** due to the legal system or political pressure; and
- **managerial and emotional barriers** due to emotional attachment and commitment to a business.

105 Cf. Eaton/Lipsey, Exit barriers are entry barriers ..., supra; and Franklin, Some Observations on Exit ..., supra, 299; Koch, Industrial Organization and Prices, op. cit., 103: "The conditions of exit may subtly influence the conditions of entry"; cf., however, Hensley, Roy J., Competition, Regulation and the Public Interest in Nonlife Insurance, Berkeley and Los Angeles 1962, p. 66: "Conditions of exit in an industry are not likely to be as important an influence on industry conduct and performance as are conditions of entry."

106 Cf. Caves/Porter, Barriers to Exit, op. cit., 44. This is strongly supported by recent empirical investigations that confirm a symmetry between entry and exit barriers in terms of an ex-ante symmetry in that barriers to exit serve as barriers to entry, cf. Shapiro, Daniel, and R.S. Khemani, The Determinants of Entry and Exit Reconsidered, 5 IJIO (1987), pp. 15-26, 16 and 25.

107 Cf. Caves/Porter, Barriers to Exit, op. cit., 40-44; Porter, Competitive Strategy ..., op. cit., 259-266; and Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 717.
Empirical results confirm the significance of barriers to exit not only with regard to their importance but also with regard to their function in deterring potential entries to a market.\textsuperscript{108}

The different kinds of impediments to competition may be presented in the following synopsis:

Fig. 5: Impediments to Competition

<table>
<thead>
<tr>
<th>entry</th>
<th>private</th>
<th>governmental/public</th>
</tr>
</thead>
<tbody>
<tr>
<td>-structural</td>
<td>economies of scale; absolute cost advantages; product differentiation advantages</td>
<td>overall industrial policy: - merger policy (e.g., in case of diversification) - commercial law - corporate law - patent and license system</td>
</tr>
<tr>
<td>-strategic</td>
<td>limit price; excess capacity; excess costs; product differentiation</td>
<td>special industrial policies - individual subsidies - regulation policy - patent and license system - occupational access - merger policy (e.g., prohibiting undesirable mergers)</td>
</tr>
<tr>
<td>exit</td>
<td>durable and highly specialized assets; fixed costs of exit (e.g., contract cancellation penalties); informational barriers (e.g., concealed or biased figures on business performance)</td>
<td>barriers due to the legal system (e.g., legal pension plans)</td>
</tr>
<tr>
<td>-structural</td>
<td>overall business relatedness; access to financial markets; vertical integration</td>
<td>political pressure and moral suasion (e.g., in case of firm failure and resulting unemployment)</td>
</tr>
<tr>
<td>-strategic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{108} Cf. Caves/Porter, Barriers to Exit, op. cit., 67-69; Eaton/Lipsey, Exit barriers are entry barriers ..., supra; and Schwalbach, Markteintrittsverhalten industrieller Unternehmen, supra, 723 f.
5. An Evaluation of Impediments to New Competition

Even if Bork's separation into natural barriers - which reflect efficiency differences - and artificial entry barriers - which are not based on efficiency but prevent market forces from eroding positions based on power - is accepted\textsuperscript{109}, there are doubts about the validity of policy conclusions drawn by adherents of current theory. Of course it is possible to regard natural barriers to entry as an expression of superior efficiency. However, under such a view only short-term aspects of efficiency are taken into account; the long-run aspect of maintaining competition as an anonymous control mechanism which forces firms to produce in an efficient way and at the same time to pass on the efficiency gains to consumers is totally disregarded, even if barriers to entry are only understood as a manifestation of efficiency. The possible conflict between the realization of short-term efficiency gains and the long-run elimination of competition as an anonymous control mechanism is denied by the current tenet, since it relies on the force of potential competition. The different view of the traditional theory associated with the Harvard School tries to resolve this conflict and views natural barriers to entry in a different way. It emphasizes the workability of competition as a control mechanism and starts from the assumption that the coordination, information, and allocation function of competition is lessened by high barriers to entry, whether they actually reflect efficiencies or not.

Entry into a market presupposes that barriers to entry, as well as the existing profit opportunities in a relevant market, are well-known and that there are enough competitors possessing spirit of competition to allow these profit chances to be exploited by entering the market. If there is too little information on profit opportunities and/or too little spirit of competition, there will be no market entry even in the case of low barriers to entry. Besides this, the product life cycle plays an important role in deciding whether to enter a market or not.

Therefore, the traditional tenets associated with Harvard School hold that barriers to entry hinder the long-term erosion of powerful positions. Consequently, barriers to entry form a kind of protective shield against competition and keep dominant firms from passing on efficiency gains to the purchasers or to consumers, which leads to increased profits for the dominant firms.

Hence, the conclusion can be drawn that structural barriers to entry to a particular market, and also strategic barriers to entry, which have been erected by established firms in order to keep potential competitors out of the market, are an obstacle for the interindustrial mobility of diversifying firms and de novo competition. Such barriers to entry cause extra costs of entry to arise; and these are extra costs that established competitors were not or are not burdened with.

Recent empirical studies show that market entrance and exit is negatively influenced by these kinds of barriers. Shepherd provides evidence from results of a study on erosion or change in the position of dominant firms during the period 1910 - 1973 in the USA and in the United Kingdom. An important result of his investigation is that "(t)he 'natural' decline of dominant firms was much more in 1910 - 1935 than in 1948 - 1973".

In addition, increasing concentration in most industries underlines the existence of barriers to entry, especially since market entrance in the sense of "net new capacity added by a new firm" has little significance. The figures of the Sixth Main Report of the German Monopolies Commission show that between 1983 and 1985, a period of moderate economic activity, concentration in 93 commodity groups (35,9 %) increased, in 64 commodity groups (24,7 %)

110 Cf. Shepherd, The Economics of Industrial Organization, op. cit., 71-75.
decreased, and in 102 commodity groups (39.4%) fluctuated or remained constant. In essence, this means that in 75% percent of the commodity groups concentration did not decrease. This can be interpreted as strong evidence for the importance of impediments to new competition.

IV. Concluding Remarks

In Part 2 of this contribution we analyzed the central elements of the current theoretical edifice. With regard to the importance of efficiency considerations in the United States' antitrust laws and the current antitrust policy, we can largely adopt the view put forward by the critics of the current theory. This is that the legislative history of the statutes, the ratio legis, the judicial interpretation of the laws by the Federal Supreme Court, and further plausibility considerations, all provide strong evidence that U.S. antitrust legislation was never passed with the intention of upholding and promoting only a single goal or of pursuing one individual goal like, for instance, economic efficiency. The 'imprecise wording' of the statutes has rather led, in fact, to the conclusion that the legislators did not feel in a position to define and quantify additional social and political objectives and therefore left the solution of possible goal conflicts to the judiciary. On the basis of the aforementioned we must thus assume that the antitrust laws of the United States comprise several goals, all of which are interrelated (multiple-goal approach). This interpretation has been confirmed by Congress' unwillingness to initiate any change in the legal statutes to conform to the direction of current theory.

Sociopolitical as well as economic considerations underlay the original draft of the German Act Against Restraints of Competition. The sociopolitical considerations encompass, firstly, the protection of the freedom to compete for its own sake, secondly and as a result of this, the preservation of an important mechanism regulating and controlling economic power in the market, and thirdly, the idea that only such protection and control may serve as an appropriate economic equivalent of the political principles of democracy.

All-encompassing optimization of economic welfare by the best possible supply of consumers is the actual intended result of these economic considerations. The same applies to European law. In German and EEC antitrust philosophy, competition is regarded as an anonymous control and steering mechanism which forces competitors not only to gain efficiency advantages but also to pass them on to consumers. In this view the freedom to compete is an advantage secured for competitors and consumers alike—a view underlined by the European Commission in its Fifteenth Report on Competition Policy in 1986. This, however, is an aspect which is of no importance for the current U.S. approach.

In evaluating the adequacy and usefulness of neoclassical price theory and the static partial equilibrium model used by current theory for antitrust analysis, we found caveats with regard to the use of neoclassical price theory. Neoclassical price theory seems to be used rather selectively by the current tenet, in order to accord with certain a priori premises and pre-existing value judgments. The use of neoclassical price theory as the allegedly appropriate instrument of analysis has led to the omission of developments in price theory starting in the 1930s (Chamberlin, Robinson, J.M. Clark et al.). For the sake of analytical clarity, real world market conceptions have been surrendered or ignored. Total rationality of economic agents, autonomous behavior on the part of consumers, perfectly competitive market structures, perfect information available to economic agents, absence of consumer preferences, and divisibility and mobility of economic resources are the basic assumptions underlying the approach. In the real world, however, these assumptions cannot be met. They must therefore be rejected entirely, or restricted to special cases.

The main objection can be stated with regard to the selective use of price theory. Definitions, premises, and assumptions formulated by current tenet

1 Cf. the wording of Act. 85 para. 3 Treaty of Rome about the passing-on of efficiency gains.
2 Cf. Arts. 85 and 86 Treaty of Rome; and Commission of the European Communities, Fifteenth Report on Competition Policy, Brussels, Luxembourg 1986, p. 11, holding that "(e)ffective competition provides a set of ... checks and balances in the market economy system. It preserves the freedom and right of initiative of the individual economic operator and it fosters the spirit of enterprise. It creates an environment within which European industry can grow and at the same time take account of social goals."
tend to make the underlying model immune from falsification.
Positive methodology - such as that applied in the physical sciences - is used for the purpose of analysis. The only distinction is the empirical subject matter. The subject matter of antitrust is not of a comparable nature, however. It is characterized by extreme data instability, and for this reason alone does not permit valid application of positive methodological principles. Besides this, economics deals with open rather than closed systems, as is shown by the use of partial equilibria models that attempt to reduce the complexity of economic phenomena to manageable proportions. This is a further factor demonstrating the limited range of applicability of positivist methodology to antitrust as used by adherents of the current tenet.

The welfare approach of the Chicago School that is based on price theory relies on the assumption of effective competition, and hence on the existence of competitive prices. If the welfare implications of different policy recommendations are simply considered without concern for the effects on the workability of the market mechanism however, such markets will tend towards self-destruction. By assuming a per se-workability of the market mechanism and neglecting any long-run effects on the workability of the competitive mechanism, advocates of current theory effectively "define conflicts away". The term 'efficiency' tends to become a sort of black box in this context which may be used to justify all kinds of restraints of trade. In addition to application problems inherent to the model, the partial equilibrium trade-off model used as a basis for policy inferences tends to overestimate possible cost reductions due to industrial concentration, tends to underestimate resulting allocative inefficiencies after a merger, and neglects possible wealth transfers from producers to consumers. The necessary qualifications to the model lead to a loss of analytical clarity and increase the difficulties in drawing unambiguous policy implications. Furthermore, the model performs the trade-off between allocative inefficiency and productive efficiency by means of comparative-static analysis which lacks a dynamic character, although competition is nonetheless perceived as a dynamic process.

The measurement of efficiency is not necessarily confined to the use of a partial equilibrium model which we presented. A different method is the construction of an empirically observable relationship between factors that
determine the structure of an industry and the resulting performance. In addition to profits, the degree of technological innovation or technological efficiency could be used as criterion for the measurement of efficiency. A narrowing-down of the analysis on price/quantity relationships invalidates the resulting conclusions.

The assumption of perfectly competitive markets leads to a denial or playing down of the existence of barriers to new competition. Therefore, numerous competitors are assumed to be a factor guaranteeing a constant and permanent source of sufficient (potential) competitive pressure. Hence, the current tenet is based on the view that competition is a "self-maintaining" mechanism which would only be disturbed by public intervention. Therefore, market power is assumed to be only temporary - if it exists at all.

We have documented that this view primarily depends on the definition of the term 'barrier'. Structural and strategic impediments may be simultaneously both an outcome of efficiency on the one hand, and an obstacle to new competition on the other hand. Hence the pros and cons of impediments to new competition have to be evaluated very carefully in judging specific cases of industry concentration. That is, they are essentially of an ambivalent character, as far as economic welfare is concerned. Structural and strategic impediments are interrelated in that the extent of structural barriers is responsible for the range of discretion incumbents possess in the potential or actual erecting of strategic impediments.

The protection of the workability of competition as an anonymous instrument for controlling and steering economic processes is not a topic of fundamental importance for the current tenet. Because of the presumed absence of barriers to entry, sufficient potential competition is always presupposed to be present to force actual competitors to pass on supra-competitive profits to consumers. Economic power considerations are, therefore, restricted to price/quantity-interrelations and the interdependence of a free and decentralized economic order with a free and democratic political system is ignored.

On the basis of these conclusions, Part 3 of our contribution will be devoted to an analysis of the role of the number of competitors, the degree of industry concentration, and the individual market share as crucial structural factors in determining industry performance, and especially interfirm efficiency differences.