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Introduction to Swiss Anti-Trust Law

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Abbreviations

This text uses the following abbreviations:

AJP/PJA	Aktuelle Juristische Praxis
BBl	Bundesblatt (Federal Journal)
BV	Swiss Federal Constitution
CL	Swiss Cartel Law
EC Treaty	Treaty establishing the European Community as amended by the Treaty on European Union (Maastricht-Treaty)
EGV	EC Treaty
FN	Footnote
FTC	Federal Trade Commission
GWB	German Antitrust Act
JV	Joint Venture
KG	Swiss Antitrust Act
OJ	Official Journal of the European Communities
SJZ	Schweizerische Juristenzeitung
VwVG	Swiss Federal Act on Administrative Procedure
WuW	Wirtschaft und Wettbewerb

The New Swiss Antitrust Act and State Action

Marc Amstutz*

I.

1. The belief that state intervention in the economy is a blessing has in recent years given way to increasing disenchantment. Empirical and theoretical studies have shown that the success of regulatory measures is not simply a question of the quantity of resources used.[1] The economy has its own logic, which can resist political control according to the form of intervention chosen, whether there are now ten or one hundred regulators at work.[2] Very little is known about this logic. Nevertheless, as a rule, liberal schemes seem to produce better results than do heteronomous solutions. The widespread call for *deregulation* has emerged from this insight and is the basis for the attempt to "revive the free market economy" of Switzerland.

Of course, deregulation means different things. Thus, the concept is not very helpful when referring to the decrease in the stock of rules,[3] because it cannot concretely indicate what will be gained by stemming the flood of laws. The same is true for descriptions which equate deregulation with the precept of restricting state intervention to that which is absolutely essential,[4] because doing so is simply repeating unnecessarily a basic principle of Swiss administrative law.[5] Thus, only an understanding based on *economic theory* can be appropriate. Accordingly, deregulation means *the expansion of the range of free-*

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1 See Teubner 1989.

2 With respect to the fact that the control of the economy is not just – i.e., is only very *subsidiarily* – a question of *quantity*, but is rather primarily a question of *quality*, see generally Niggli & Amstutz 1995: 23 et seq.

3 Thus the Swiss people's initiative, "Deregulierungsinitiative: Mehr Freiheit – weniger Gesetze", BBl 1995 IV 1376.

4 Wohlmann 1995: 185.

5 See Jaag 1994: 478.

dom of participants in the economic process in furtherance of general public policy goals.[6] This involves a new balancing of the respective scopes of interventionism and competition.[7]

2. There are thus three main concerns: (1) eliminating barriers to commerce across borders, (2) abolishing domestic trade, as well as mobility, barriers, and (3) controlling the behavior of market participants which distorts competition, regardless of whether private or public firms are involved. Each economic system organized on a free market basis must deal with these questions, lest it accumulate unnecessary, possibly dangerous social costs. The European Community is currently the most significant example of a *system* established on a legal basis which protects competition within the Common Market from distortions in accordance with the three aforementioned principles.[8] Since the rejection of accession to the European Economic Area, Switzerland is now likewise striving for a system implementing such a competition policy. It has therefore enacted a new antitrust statute, an internal market act, and rules for suppressing technical barriers to trade.[9]

While the elimination of tariff and non-tariff restrictions on trade is currently still a long-term task which must be worked out primarily at the international level, it is assumed that domestic competition will be *comprehensively* protected by the new antitrust and internal market laws: On one hand, the *government* is asked to keep commerce free of barriers,[10] and on the other hand, *firms* are required not to take any

[6] Basedow 1991: 151–52; Möschel 1988: 888.

[7] See Kirchner & Ehricke 1993: 573–74.

[8] Essentially, the references are to the following provisions of the EC Treaty: Art. 92, 93 (subsidies); Art. 101, 102 (harmonization of laws to eliminate or impede distortions of competition); Art. 85, 86 (competition rules); Art. 90 (public undertakings); Art. 37 (commercial monopolies); Art. 30 et seq. (prohibition on quantitative restrictions and measures with equivalent effect). The merger control regulation (Council Regulation [EEC] No. 4064/89 of December 21, 1989 on the control of concentrations, OJ L395/1989, 1 et seq.) must also be added to this group of rules. Bach 1992: 6 et seq. gives a good overview on the question of how these provisions are functionally connected.

[9] The so-called GATT legislation, which is not treated here, is still associated with this. With respect to the entire matter, see Zäch 1992: 858–59.

[10] See Richli 1995: 601 et seq.; Schweizer 1994: 739 et seq.

measures which distort competition.[11] In truth, however, this "completeness dogma" is misleading. As shown by the European Court of Justice's *Van Eycke* judgement and its progeny, another phenomenon which is not only common in the European Community, but is also widespread in Switzerland, may disturb effectively free market economy, that is the integration of private combinations into regulatory schemes emanating from the government. Such is e.g. the case when government requires or encourages undertakings to conclude cartels or reinforces the effects thereof, or when it divests its regulations of their public character by delegating to the undertakings the responsibility to take decisions concerning the parameters of competition.[12] These "hybrids" are so prone to escape economic control because they appear to elude both the scope of application of the Internal Market Act and the scope of application of the Antitrust Act: Often they preserve the *Cassis de Dijon* principle and do not otherwise discriminate.[13] On the other hand, the reach of prohibitions on competitive restraints is uncertain. In particular, it is open to question whether the participating undertakings do not have the defense that they have been induced, or even required, to enter into competition agreements on the basis of state action. If this should be true, they would then be exempted under Art. 3, par. 1 CL.

3. To date, commentators and the courts have only inadequately clarified these (and similar) questions, although it is actually more or less undisputed that the most serious restrictions on competition in Switzerland generally come from the state.[14] To the extent *antitrust law* aspects are under discussion – just as they are below – the core of

[11] The Communication on a federal law respecting cartels and other restrictions on competition of November 23, 1994, BBl, 1995 I 527 (hereinafter: "Communication CL 1994"), expresses this, to the effect that "[t]he planned federal law concerning the internal market […] [is] not in a *competing* relationship, but rather is in a *complementary* relationship with the draft for a new antitrust act" (emphasis added). With respect to this delineation (from a theoretical standpoint), see Niemeyer 1994: 721 et seq.; Mestmäcker 1992: 277 et seq.; Ehricke 1991: 183 et seq.; Gyselen 1989: 33 et seq.

[12] See the clear legal factual material by Lauterburg 1991: 85 et seq.

[13] With respect to these criteria, see Richli 1995: 601–2.

[14] See Tercier 1993: 410, 412, 416; Borner et al. 1995: 51; Carron 1994: 63; Biel 1994: 292; VKKP 1988/2: 1 et seq. See also GATT 1991 and OECD 1992.

the problem can be easily shown: Because competition law is tailored to controlling shortcomings of the free market economy which are *inherent in the system* (autologous shortcomings) – i.e., protecting economic freedom where it threatens to defeat itself – it is confronted with difficult questions as soon as distortions of competition of an origin *foreign to the system* (of heteronomous origin) must be assessed. Such distortions are caused by state action which is intended to correct any form of market failure and which thus follows a logic aimed precisely at the purposeful elimination of competition. It is thus questionable whether the antitrust law is generally competent to subject such regulatory measures to *antitrust scrutiny*. If the law dares to tackle a set of measures which mix private activities and public policy in the manner described, it exceeds its usual function of constituting the market and asserts *true deregulatory functions*.[15]

The rules which delineate the *statutory scope of application* (Art. 2 et seq. CL) determine the extent to which antitrust law can deregulate, because they decide *whether* (and if necessary, *to what extent*) state-induced restrictions on competition are to be scrutinized under Art. 5 et seq. CL.[16] This does not in any way involve adapting these substantive legal standards to the special features of such restraints. To the extent the statute is applicable, its analysis standards apply *without restriction*. The following considerations therefore concentrate on penetrating the essence of the regulatory content of Art. 2, par. 1 in conjunction with Art. 3, par. 1 CL. Pursuant to the first provision cited, the Antitrust Act includes "undertakings under private and public law," while the second article cited provides for exemptions, "to the extent that state action does not permit competition in a market for specific goods or services." With respect to the noted "intertwinnings" of regulatory measures and private restrictions on competition, this means that the Antitrust Act applies only if *two* prerequisites have been cumulatively met: *First*, these "hybrids" must be able to be considered

[15] It may perhaps appear paradoxical to discuss *deregulation via antitrust law*, but the idea behind this phrase could be (mis)understood as one type of national economic intervention being replaced by another. However, there *truly* is no paradox so long as the substantively adequate deregulation concept is used. See Section I.1 supra. See also the overview of the problem by Edward & Hoskins 1995: 157 et seq.; Emmerich 1992: 206 et seq.

[16] See also Richli 1995: 596.

the results of *business activity* stemming from "undertakings" within the meaning of the statute – otherwise, the Antitrust Act does not even apply to the case; *second*, state action should not lead to a "true" conflict with competition policy, because then the exemptions of Art. 3, par. 1 CL apply. Of course, not much is gained from these findings because the basic concepts used remain *indefinite*. The following discussion is devoted to clarifying their meaning.

II.

1. Since antitrust law involves controlling the *self-destructive* tendencies of competition, we must determine the scope of application of the statute by identifying first the entities which may spur such dysfunctions. According to the principle, the answer is: *all market participants* regardless of whether they are on the supply side or on the demand side. Exceptionally this is not true at the end of the chain of production, "where the entire flow of goods and services comes to a standstill over processing and transformation."[17] In such a case, the motive for competition, which lies in the will of the competitors to attract the consumer, is lacking. The interaction of such antithetical orientations of will is actually what antitrust legislation focuses on, which also explains why Art. 2, par. 1 CL provides that only those restrictions on competition which emanate from *undertakings* in the statutory meaning are within the reach of the act: Only an entity which participates in the competitive process as an undertaking, i.e., which participates *actively* and *independently*,[18] is in a position to produce *the type of autologous distortions which set the motive for antitrust legislation*.

Now it could be argued with respect to the restrictive behaviors in question here that they are not within the scope of the Antitrust Act because they would be carried out not by undertakings, but by the state itself. The former – so goes the defence – make merely a contribution to realize interventionist measures which as such is not enough to trigger the statutory prohibitions. This contribution is arguendo *irrelevant from an antitrust standpoint*, because the anticompetitive effect at

[17] Kummer 1966: 36.

[18] With respect to this "functional" undertaking concept, see Schluep 1988: 166 et seq.; Stoffel 1994: 7 et seq.; Schürmann 1994a: 473–74.

issue is not to be deemed a product of a private autonomous decision, and thus also not a result of business activity in the sense just described. Yet, it must be remembered that the sole purpose of Art. 2, par. 1 CL is *to identify economic actors* which are in a position to produce the type of dysfunctions aimed at by antitrust law. In light of this statutory provision, it is thus irrelevant whether a given restriction on competition must be imputed to someone in whole or only in part. So long as he participates as an undertaking, according to the principle, the Antitrust Act applies by virtue of Art. 2, par. 1 CL, unless Art. 3, 4 CL provide otherwise.[19], [20]

The question of whether the state's participation in a private distortion of competition can establish immunity under antitrust law must in fact be answered *exclusively* on the basis of Art. 3, par. 1 CL.[21]

2. a) Art. 3, par. 1 CL can only be properly understood on the basis of its *constitutional law background*. This draws the attention to the fact that the Swiss Constitution does not provide expressly for any principle of economic governance. Therefore, the courts and the commentators are called upon to shed light on this issue.[22] Based on the catalog of fundamental rights contained in the Federal Constitution, it is gen-

[19] Schips 1994: 50, fails to appreciate the functional connections between Art. 2, par. 1 and Art. 3, par. 1 CL, when he states that in his opinion, these two provisions would lead to "the act being applied practically only for private [sc. not public] undertakings." In fact, Art. 3, par. 1 CL is oriented to the question of whether the case at issue has anything to do with a regulated sector or not. If the answer is yes, an exemption applies for all participants in the economy, without regard to whether public or private undertakings are involved.

[20] See also Zäch & Zweifel 1995: 31. The doctrine presented in the text must be sharply distinguished from the theory that the Antitrust Act does not recognize any regulated domain and that it applies *a priori* to all sectors of the economy. This theory, which at its core tends to resolve the conflict between coordination models of different characters at the level of the substantive provisions of the Antitrust Act (Art. 5 et seq. CL), is advocated in Switzerland by Stoffel (1994: 185–86) and Carron (1994: 357 et seq.). It is erroneous because it cannot be reconciled with the mixed economy of Switzerland. See Amstutz 1995: 106–7 and Sec. II. 2. a) infra.

[21] See Stoffel 1994: 1 and passim (with respect to Art. 44, par. 2, sec. b old CL). See also Note 30 infra.

[22] Rhinow 1988: Art. 31, n. 6 et seq.

erally recognized that the Swiss economic system is, in principle, *free*.[23]

However, this statement is not fully accurate since Art. 31bis, par. 3 BV grants the legislature the competence to *deviate* from economic freedom under conditions which are not substantively defined. Thus, many difficult questions are left to the fate of legal interpretation. What is certain is that Switzerland – like most western industrial states – lives under a *mixed economy*. The mix of organizational models can basically take two forms: A *horizontal* mix exists where different economic sectors are controlled through different economic coordination mechanisms (e.g., planification corporatism or competition). By contrast, there is a *vertical* mix when regulatory agencies intervene within certain limits in domains which are already dominated by a specific coordination mode (e.g., planification of just one of several competition parameters).[24]

b) These findings are of dual significance for antitrust:[25] (1) First, antitrust must ensure that its rules be not triggered where a coordination mode other than competition is at work (e.g., corporatism). It must thus make an allowance for the horizontal mix of the economy and (in the sense of a non-applicability clause) provide for exemptions. (2) Second, it must determine how to deal with limited state interventions in the free market economy. It must thus take into consideration the vertical mix of the economy and (in the narrow sense of a reservation clause) define the necessary *legal exceptions*.[26]

c) Formally, the new Antitrust Act is completely in keeping with these requirements.[27] Art. 3, par. 1 CL exempts state action, "to the extent … [it does] not permit competition in a market for specific goods or services." What is notable about this wording is that it does not define the scope of application of the Antitrust Act generally, but rather makes the scope of the exemption from the rules of antitrust law dependent

[23] See Schluep 1991: 51 et seq., in particular 65 et seq. See also Rhinow 1988: Art. 31, n. 39 et seq.; Grisel 1993: 87; Schürmann 1994a: 20.
[24] See Schluep 1994: 148.
[25] With respect to the following, see Amstutz 1995: 105 et seq.
[26] See Pernice 1994: Art. 90, n. 51.
[27] See Communication CL 1994: 538–39.

on the specific individual case. In other words, Art. 3, par. 1 CL is not a rigid, but a flexible norm: The reach of antitrust is restricted only to the extent workable competition is precluded. Conversely, it is clear that the Antitrust Act continues to operate where market forces are still at work (and thus worthy of protection).

Art. 3, par. 1, sec. a CL makes it clear that there are situations where the antitrust law must completely recede into the background: If a "state market regulation" is established, this can actually only mean that all the competition forces were replaced and that another coordination system is put into place. This can also be the case in the context of "price control," whenever competition is conducted exclusively with respect to the price parameter (e.g., for commodities). Art. 3, par. 1, sec. b CL distinguishes these (actual) *domain exceptions* from deviations in competition policy which do not entail a complete curtailing of antitrust. In such instances only *legal exceptions* are provided for.

3. In accordance with the finding that Art. 3, par. 1 CL *formally* exhausts the constitutional competence clause, it must also be asked whether this provision contains *a substantive rule of delineation*. Stated another way, clarification requires asking whether the provision cited has *substantive* criteria on hand which can be used to explore whether, e.g., the fact that an authority periodically commissions a private professional association to determine wholesale prices for a fungible good and then declares them to be generally binding, must be classified as an exclusion of competition, as a partial intervention into the free market economy, or (what seems less likely) as irrelevant under Art. 3, par. 1 CL. Art. 44, par. 2, sec. b old CL made no such criteria available.[28] The new Art. 3, par. 1 CL directly builds on this. Its legislative history shows that no efforts were made to *substantively* define the scope of domain and legal exceptions.[29] It must thus be assumed that the legislature preferred to have this question answered by the courts.

[28] See the convincing arguments by Lauterburg 1991: 108 et seq. In addition, see also Carron 1994: 366.

[29] See Communication CL 1994: 536 et seq.; StenBull NatR 1995: 1070 et seq., 2046–47, 2110; StR 1995: 852, 1013–14.

4. a) First, there must be a determination of *how* to find the substantive rules for interpreting Art. 3, par. 1, sec. a and b CL.[30] LAUTERBURG noted that, as a matter of principle, there are *two* possibilities for determining whether the exemptions at issue apply. First, the extent to which the antitrust law must recede into the background may be deduced by interpreting the *applicable public law provisions* to determine how much coordination output will still be produced by competition in the context of regulatory measures; second, it is also possible to make a delineation on the basis of *criteria specific to antitrust law*.[31] Under the old law, the question was not clarified by the courts and remained disputed among the commentators.[32]

b) If an answer is sought under the new law, it must be assumed, as SCHLUEP does, that Art. 31 BV, "as a general basic system required by the constitution, binds the legislature, unless there are constitutional exceptions in derogation of the basic system."[33] Two things follow from this: "First, in the case of doubt, the free market principle also applies in regulated sectors if the deviations are not sufficiently specified according to goal and means in accordance with the Constitution. This is the result of the free market principle's character as a basic system. Second, also following from this is a proportionality rule, in the sense that the exhaustion of exceptional competencies is also unlawful if secondary effects or repercussions endanger the capacity of the free

[30] Actually, the questions posed by Art. 3, par. 1 CL primarily reflect the fact that our theory of business law is still deficient to a great extent. We know how business law is structured (see SCHLUEP 1993: 506 et seq.). We also understand the methodological implications of business law rules (see SCHLUEP 1994: 150; JAAG 1994: 477 et seq.). In addition, legal sociological formulations were proposed for a theory of increased effectiveness of business law (see AMSTUTZ 1993: 128 et seq.) Yet, business law will not be effectively carried out as long as it is not understood as a *meta law* which resolves the conflicts between the various coordination factors used in a mixed economy (competition, planification, corporatism etc.). This would involve developing *principles* which (like the rules of conflict of laws) are oriented to identifying the *policy* governing the "case". First steps in this direction by STOFFEL 1994: 63 et seq.; AMSTUTZ 1995: 107 et seq.; SCHLUEP 1995: 335 et seq.

[31] See LAUTERBURG 1991: 108–9.

[32] While LAUTERBURG 1991: 111 et seq., ultimately leaves the question open, SCHMIDHAUSER 1976: 38, spoke out primarily in favor of the first variant. By contrast, AMSTUTZ 1995: 109 et seq., advocated the second possible solution.

[33] SCHLUEP 1993: 506–7.

market basic system to function."[34] Because the Constitution gave the Antitrust Act the task of implementing the basic system of free enterprise, the act is also competent to monitor the ongoing realization of these two principles.

It must thus be assumed that the *control* of regulatory measures are attributed to the law of restrictions on competition – in addition to its traditional function of controlling the anti-competitive behavior of firms – in response, as it were. It thus contributes to solving one of the problems often lamented in the regulation literature: Although properly speaking, regulation arguments often have a kernel of truth, this kernel still does not sufficiently legitimize regulatory mechanisms; rather, it gives rise to the additional question of "whether the matter in question could not be realized just as well with competition, or in any case with less restriction on competition."[35]

c) The question posed above is thus also answered: Whether the delineation under Art. 3, par. 1 CL must be effected by interpreting the public law provisions or by developing criteria specific to antitrust law, must be decided in favor of the second variant. It is now necessary to examine in detail how these criteria must be construed. First, the conditions under which the existence of a "*domain exception*" within the meaning of Art. 3, par. 1, sec. a CL must be presumed are examined (Sec. III below), and then, when the existence of a "*legal exception*" within the meaning of Art. 3, par. 1, sec. b CL must be affirmed is examined (Sec. IV below).

III.

1. a) The first question is whether a "*domain exception*" within the meaning of Art. 3, par. 1, sec. a CL can legally be established by means of state promotion of private economic distortions of competition.

[34] Schluep 1993: 507.
[35] Basedow 1991: 156. Lehmann 1994: 8–9 fails to appreciate these connections.

In the European Union, this question is currently answered in the negative.[36] In order to prevent Member States and firms from "cooperating" to restrict competition and thus from eroding the *effet utile* of competition rules, the Court of Justice first decided in the *"Inno v. ATAB"* case in 1977 that "Member States may not take any measures which make it possible for private undertakings to withdraw from the conditions imposed on them by Art. 85 to 94 of the Treaty."[37] In establishing this requirement, the Court of Justice relied on Art. 3, sec. g (Art. 3, sec. f EEC Treaty – old version), Art. 5, par. 2, Art. 85, 86 of the Treaty[38]. This guiding principle was clarified in later opinions, to the effect that cases in which state action reinforces or creates the conditions for reinforcing an existing cartel or some other restraints on competition must be distinguished from those cases in which a regula-

[36] See the overviews (compiled specifically from a Swiss point of view) concerning the relevant case law of the Court of Justice by Carron 1994: 196 et seq.; Reinert 1995: 127 et seq. From a comparative law standpoint, the following is noteworthy: Indeed, this case law targets the development of a general prohibition on "quasi-state" restrictions on competition which is intended primarily to bind the Member States on the basis of (*inter alia*) Art. 85, 86 of the Treaty, as well as under mobilization of the concept of loyalty to the Community. In this respect, this case law cannot be directly retooled to Swiss conditions, because the respective backgrounds based on constitutional and administrative law deviate too sharply from each other. But a newer doctrine must also be inferred from the Court of Justice, to the effect that the affected firms themselves remain liable for state-induced contraventions of competition (see Bach 1992: 168 et seq.; see also Sacksofsky 1996: 23). This can mean, e.g., that a business line under price control which is induced by the authorities to agree upon the tariffs and then to have them approved, is subject to antitrust liability despite the state intervention. Of course, the question is whether it is appropriate to let firms answer for a behavior which was officially suggested. However, if this could be justified, it would be an effective tool for controlling state restriction on competition. With respect to this question of effectiveness, see Bach 1992: 171.

[37] ECJ case 13/77, *GB-INNO-BM v. Vereniging van der Kleinhandelaars in Tabak (ATAB)*, ECR 2115, 2145 et seq., consid. 30/35.

[38] The arguments of the Court of Justice can thus be outlined as follows: The starting point is the binding goal of Art. 3, sec. g of the Treaty, under which a system must be set up to protect competition in the domestic market from distortions. This goal must be made definite in the specific case on the basis of the substantive provisions of Art. 85 and 86 of the Treaty, which prohibit cartel agreements and abuse of a dominant position. The concrete duty of the Member States not to take advantage of any measures which might endanger the goal of setting up a system of undistorted competition follows from Art. 5, par. 2 EGV, which urges the Member States, in the sense of a general maxim, to realize the goals of the EC Treaty. See Mestmäcker 1992: 278.

tion of equal effect is instituted without having been preceded by a private agreement.[39] Only the cases in the first group are within the *"Inno v. ATAB"* rule. In particular, state action which contravenes the Treaty can be divided into four groups: (1) that which *prescribes* patterns of behavior that restrict competition,[40] (2) that which *facilitates* patterns of behavior that restrict competition,[41] (3) that which *reinforces* the effects of patterns of behavior that restrict competition,[42] and (4) that which divests government regulations of their public character by delegating to the undertakings the responsibility to take decisions concerning the parameters of competition.[43]

In summary, it may thus be said that the Court of Justice does not tolerate the targeted use of anti-competitive patterns of behavior by firms for regulatory purposes: "Briefly stated, cartels are not a lawful instrument of state regulation".[44]

b) The problem with the case law outlined above is its *lack of economic policy rationale*.[45] It is difficult to see why the insertion of private agreements into state intervention schemes makes the intent of the regulation *per se* socially detrimental. There is also no reason why, in the context of a free market economy system, a "pure state" regulation is preferable to one with a mixed character. Acknowledging the respective advantages and disadvantages of both types of intervention and

[39] For a detailed discussion of this distinction, NIEMEYER 1994: 723 et seq.

[40] The element of "prescribing" is met when firms are compelled by legal or administrative provisions to enter into cartel-type agreements. See ECJ case 188/86, *Ministère public v. Régis Lefèvre*, ECR 2963 et seq., consid. 7.

[41] Such a "facilitation" exists when a Member State creates favorable basic conditions for private restrictions on competition. It can do this, e.g., by "encouraging" restraints on competition by creating financial incentives. See ECJ 66/86, *Ahmed Saeed Flugreisen und Silver Line Reisebüro GmbH v. Zentrale zur Bekämpfung unlauteren Wettbewerbs e.V.*, ECR 803 et seq., consid. 49, 52.

[42] A "reinforcement" must be affirmed, e.g., when price or quantity agreements applicable to a particular business are officially approved and declared to be binding across fields, or when an anti-competitive contract clause is "changed" by a legal provision in a state precept or prohibition. See ECJ case 311/85, *VZW Vereniging van Vlaamse Reisbureaux v. VZW Sociale Dienst van de Plaatselijke en Gewestelijke Overheisdiensten*, ECR 3801 et seq., consid. 23.

[43] See ECJ case 267/86, *"Van Eycke v. ASPA"*, ECR 4769 et seq., consid. 16.

[44] BACH 1992: 225.

[45] See BACH 1992: 227 et seq. (with detailed discussion).

weighing them against each other would go beyond the scope of this article. The criticism is directed exclusively at the *arbitrariness* of the criteria used by the Court of Justice. A meaningful assessment of state restrictions on competition may be made only on the basis of a *coherent policy*, which is not revealed by *"Inno v. ATAB"* and its progeny. With respect to the interpretation of Art. 3, par. 1, sec. a CL, it can be concluded that the existence of an exemption is not to be denied only because a "state market or price control" is established with the help of private economic actors.

2. a) In US-American *antitrust* law, the problem under examination here is solved on the basis of the *state action doctrine*.[46] The question of whether an antitrust exemption applies turns on which actor is deemed responsible for the challenged restraint: (1) Restrictions which originate in the acts of a *state legislature*, the *highest state court* or (probably) a *governor* enjoy *per se immunity*.[47] (2) *Local governments* are exempt from antitrust scrutiny if they effect interventions that distort competition which are *clearly authorized* by one of the top levels of state government.[48] (3) Anti-competitive acts by "private persons" are only immune if they meet the dual conditions of the *clear authorization* just mentioned, and an active supervision by the state (*Midcal test*).[49]

b) Carron tried to use the *state action doctrine* as a basis for interpreting the Swiss system of antitrust exemptions. According to this commentator, an exemption (within the meaning of Art. 3, par. 1, sec. a CL) must be presumed (1) when a *federal law* expressly or impliedly orders it, (2) when *cantons* express their intent to restrict competition with sufficient determination and also exercise adequate

[46] In this respect, see the overview by Hovenkamp 1994: 670 et seq.: Ross 1993: 496 et seq.

[47] *Hoover v. Ronwin*, 466 U.S. 558, 567, 569 (1984).

[48] *Southern Motor Carriers Rate Conference, Inc. v. United States*, 471 U.S. 48, 60–62, 62–63 (1985); *Town of Hallie v. City of Eau Claire*, 471 U.S. 34, 38, 40 (1985); *Hoover*, supra note 47, 568–569; *Community Communications Co. v. City of Boulder*, 455 U.S. 40, 51–52 (1982).

[49] *California Retail Liquor Dealers Association v. Midcal Aluminum, Inc.*, 445 U.S. 97 (1980).

control over their "private" representatives, or (3) when *municipalities* curtail competition within their autonomous area of competence.[50]

c) It is not readily apparent how this proposal can be reconciled with the case law of the Federal Supreme Court, under which the cantons and municipalities[51] are barred from taking regulatory measures which impede competition.[52] CARRON himself remains vague in this respect. Furthermore, his proposals exhibit the same weaknesses as the *state action doctrine*.[53] Thus, US-American case law has shown that certain *practical* questions can barely be overcome: Which actor should be deemed responsible for any given restraint of trade?[54] How explicit must a *clear authorization* be?[55] When is control on the incumbent regulatory agency adequate?[56] Etc. But there are reservations even from a theoretical standpoint. In fact, the *state action doctrine* may lead to inconsistencies, because in some instances hierarchically subordinate agencies have *de facto* more discretion to regulate than do the supervising authorities.[57] It is also questionable whether the antitrust law has the appropriate criteria to assess issues concerning the law of delegation.[58] Administrative law appears to be better equipped in this respect.[59] Moreover, it seems obvious that the state action doctrine tends to confound principles of delegation and antitrust law without offering any overarching theory to guide the resolution of the inevitable doctrinal ambiguities.[60] All these shortcomings make it

[50] CARRON 1994: 366 et seq., 388–89, 430.

[51] I.e., subject to Art. 31ter BV, which authorizes the cantons to regulate hotels and restaurants "if the existence of the trade is threatened by excessive competition."

[52] Decisions of the Federal Court 114 Ib 23; 100 Ia 174 and 449. The principles developed in these cases are unknown in US-American federalism. See EASTERBROOK 1983: 23 et seq.; GARLAND 1987: 499 et seq.; JORDE 1987: 227 et seq.; SPITZER 1988: 1293–94; WILEY 1986: 729 et seq.; ELHAUGE 1991: 669. This fact is a strong indicator that the *state action doctrine* cannot be directly transferred to Swiss conditions.

[53] See the inventory of critical opinions by ELHAUGE 1991: 674 et seq.

[54] See AREEDA & HOVENKAMP 1989: 159–60.

[55] See HOVENKAMP & MACKERRON 1985: 740 et seq.

[56] See *Patrick v. Burget*, 486 U.S. 94, 103–104 (1988).

[57] See ELHAUGE 1991: 675–76.

[58] See EASTERBROOK 1983: 30, 38; WILEY 1986: 715, 730–31, 733–34.

[59] ELHAUGE 1991: 676.

[60] See ELHAUGE 1991: 675.

appear inadvisable to import the *state action doctrine* into Swiss law for the purpose of clarifying the concept of "domain exception" within the meaning of Art. 3, par. 1, sec. a CL.

3. a) The thesis presented here is as follows: A "domain exception" within the meaning of Art. 3, par. 1, sec. a CL exists *if (and only if) the affected undertakings have no de facto or legal possibility of decisively influencing the regulation process*.[61] So long as they can *substantially influence* (at least *de facto*) business factors (in whatever form) – and this is precisely what they do when they can autonomously set parameters within the "regulated field" –, it must be assumed that the goal of the regulation is not *to replace* competition with another coordination factor.[62]

In particular, a twofold test applies:

b) The first prong of the test is theoretical by nature and is rooted in industrial organization. Here, it is necessary to analyze (1) whether the purpose of the regulation still allows competition to control partially the economic process, and – if necessary – (2) whether under antitrust law standards these control effects emanating from "partial" competition are able to produce results which are *substantial* – and therefore *worthy of protection* under Art. 5 et seq. CL.[63] If the answer is negative, a "domain exception" within the meaning of Art. 3, par. 1, sec. a CL still does not necessarily apply. That is why it is necessary to clarify an additional point:

[61] The concept "regulation process" is understood here in its broadest sense. It includes not just the interventionist measure, but also designates the entire system which coordinates of the flow of production and consumption in the regulated domain. This system may be "pure" (e.g., a comprehensive central planning) or "mixed" (e.g., a combination of planning and market elements).

[62] If there is *no* state intent to invalidate – and thus to replace – the competition mechanism, the relevance of the legal exception of Art. 3, par. 1, sec. b CL must be examined. See Sec. IV infra.

[63] See Lauterburg 1991: 105 et seq.; VKKP 1993/3: 99. The doctrine presented in the text is also supported by Schmidhauser 1976: 40, who correctly notes that with respect to the question of whether an antitrust exemption exists in accordance with competition policy, the Antitrust Act must examine "whether the barriers contained in Art. 31bis, par. 3 BV, under which there may be a deviation from freedom of commerce and trade only 'if necessary,' were observed in every respect in a specific case." See also Immenga 1967: 3, 304.

c) The second prong of the test is related to the *procedure* in which the regulation is designed. What must be scrutinized is *the role* each undertaking active in the regulated sector played in establishing the *regulatory framework*. Thus, if they had *any autonomy (even if only de facto)*, the existence of a "domain exception" must be *denied*.[64] This is true even if the incumbent agency confers public law status on the private economic act, provided that the *substance* of this act was not subject to any comprehensive administrative scrutiny. Thus, e.g., if a standard set by a professional association is declared to be generally binding via mere official *rubber-stamping*, the Antitrust Act remains fully applicable to the association's decision.

This *procedural test* is obviously crucial for the deregulation function of antitrust, because it creates the prerequisites for controlling the integration of private combinations into regulatory schemes emanating from the government as noted above,[65] which are disproportionately or otherwise not objectively suited to the purpose of regulation. The reason for this test is found in the "policy of the Antitrust Act":[66] Where the state helps private economic actors (or even just gives them room) to distort competition without placing them under *substantive administrative control*, the antitrust law must fill in the "gaps" in accordance to its function, to help the principle of free market proportionality break through.[67] In these realms it cannot be assumed that private actors will act with a view toward the general welfare.[68]

[64] In this context, the concept of "autonomy" designates the capacity to influence substantially the design of state interventions. Basically, this is not the case with the assertion of democratic rights, because the democratic process is designed to break up individual power. But it is undeniable that difficult questions of delineation may arise here. It would be difficult to decide, e.g., whether the possibility of using personal acquaintances to influence a municipal council to set up a zone arrangement which will disrupt competitors is relevant under antitrust law. Such a case was to be decided in *Omni Outdoor Advertising, Inc. v. Columbia Outdoor Advertising, Inc.*, 499 U.S. 365 (1991).

[65] See Sec. I. 2. supra.

[66] With respect to the doctrine of the "policy of the law," see Steindorff 1973: 217 et seq.

[67] In this respect, see Sec. II. 4. b) supra.

[68] Above all, monopoly theory has adequately shown that private entities, when left to their own devices, tend to behave in a socially detrimental manner in economic matters. See Viscusi et al. 1995: 76 et seq.

IV.

1. If there is a finding that Art. 3, par. 1, sec. a CL does not apply, the next issue to be analyzed is whether the restraint on trade at issue falls within the *"legal exception"* of Art. 3, par. 1, sec b CL.

The starting point for understanding the range of this provision is the fact that the Constitution does not establish an actual competitive economy, but rather strives for a *free* (and thus *state-free*) economy. Stated differently, Art. 31 BV leaves open the question of "whether competition or […] private planning [i.e., a cartel, oligopolistic or monopolistic behavior] should control in the state-free arena".[69] The line is drawn by the Antitrust Act which thus completes the constitutional system. Precisely because freedom promises the best results for the general welfare, this statute has the task of protecting freedom where it is jeopardized by self-defeating tendencies. The statute thus only intervenes in the autonomous decisions of market participants when cartels are formed or when dominant market positions are built up, producing negative effects on the general welfare. Why the Antitrust Act affords a *possibility for justification* is explained by the fact that it proceeds on the assumption that until proven otherwise, private combinations are preferred to state intervention in the form of an antitrust decree, because they are ultimately still the result of an exercise of *economic freedom.*[70]

State-induced restrictions on competition are *never* an expression of an exercise of economic freedom of any nature, because it is legally spoken not conceivable for the state to participate in this freedom (which is, of course, primarily "freedom from the state"). It is thus inconsistent with the *reasoning* of the Antitrust Act to afford such anti-competitive behavior the possibility of being justified. Now, however, Art. 3, par. 1, sec. b CL provides that firms which "use" state intervention to behave in a manner that distorts competition[71] nevertheless have such a possibility, precisely so as not to frustrate "punctual" interventions *a priori*.[72]

[69] Schluep 1991: 65.

[70] See also Schmidhauser 1976: 37; VKKP 1995/1a: 11–12.

[71] See Sec. III. 3. supra.

[72] See Communication CL 1994: 540. In addition, also Baudenbacher 1994: 1369. The interpretation of Art. 3, par. 1, sec. b CL suggested in the text strains the word-

2. Art. 3, par. 1, sec. b CL thus contains no exception of broader extent, because state supplements or adjustments to the system of private organization of the economy are never to contradict the constitutive principle of economic freedom, but rather must run parallel to it.[73] They must be able to fit into the freedom logic underlying the system of free enterprise; otherwise, the Antitrust Act has to prohibit them.

3. However, the *"legal exception"* of Art. 3, par. 1, sec. b CL only applies if there are restrictions on competition which are directly conditioned on the regulatory system chosen or which represent *ancillary restraints* of this system. The state must not carry out or make possible any distortions of competition where there is no mission in the public interest to accomplish.

V.

The preceding article is a first attempt at formulating a *theory of deregulation through antitrust law* based on Art. 3, par. 1 CL. Of course, much careful investigation in this area is still needed and numerous important questions are not dealt with here. Nevertheless, there are two indications that such a theory is more necessary than ever: above all, the continually confirmed suspicion that antitrust injuries in Switzerland are committed primarily by the state (and not by private entities); and second, the fact that the new market law legislation cannot put up an impermeable net to control all the (endogenous and exogenous) factors which disturb the free market economy. It is precisely the particularly problematic combinations between state and private restrictions on competition which clearly show how great a responsibility courts and commentators have in developing the new Antitrust Act into an instrument of deregulation.

ing; however, Schürmann 1994b: 24, has correctly noted that the phrase "[…] equip with special rights to fulfill public functions" is problematic because taken literally, it refers to something that does not actually exist in this form. According to the view presented here, this provision must therefore be interpreted primarily in accordance with the constitutional system. See Sec. II. 2. c) supra.

[73] Similarly, Schmidhauser 1976: 39–40.

Bibliography

AMSTUTZ 1993: Konzernorganisationsrecht, Bern.

id. 1995: Vom Kartellrecht der öffentlichen Unternehmen, in: EIZ (ed.), Aktuelle Fragen zum Wirtschaftsrecht, Zurich, 73 et seq.

AREEDA & HOVENKAMP 1989: Antitrust Law, Supplement 1989, Boston.

BACH 1992: Wettbewerbsrechtliche Schranken für staatliche Massnahmen nach europäischem Gemeinschaftsrecht, Tübingen.

BASEDOW 1991: Deregulierungspolitik und Deregulierungspflichten – Vom Zwang zur Marktöffnung in der EG, Staatswissenschaften und Staatspraxis 2, 151 et seq.

BAUDENBACHER 1994: Zur Revision des schweizerischen Kartellgesetzes, AJP/PJA 3, 1367 et seq.

BIEL 1994: Zu grosse Schlupflöcher für Kartelle im Kartellgesetzentwurf, ST 4, 289 et seq.

BORNER et al. 1995: Ökonomische Analyse zur Revision des schweizerischen Kartellgesetzes, in: Zäch & Zweifel (ed.), Grundfragen der schweizerischen Kartellrechtsreform, St. Gallen, 35 et seq.

CARRON 1994: Le régime des ordres de marché du droit public en droit de la concurrence, Fribourg.

EASTERBROOK 1983: Antitrust and the Economics of Federalism, J.L. & Econ. 26, 23 et seq.

EDWARD & HOSKINS 1995: Article 90: Deregulation and EC Law: Reflections Arising from the XVI FIDE Conference, CML Rev. 32, 157 et seq.

EHRICKE 1991: Staatliche Regulierungen und EG-Wettbewerbsrecht, WuW 41, 183 et seq.

ELHAUGE 1991: The Scope of Antitrust Process, Harv. L. Rev. 104, 667 et seq.

EMMERICH 1992: Die freiheitssichernde Funktion des Wettbewerbsrechts – Deregulierung durch Recht, AJP/PJA 1, 206 et seq.

GARLAND 1987: Antitrust and State Action: Economic Efficiency and the Political Process, Yale L.J. 96, 486 et seq.

GATT 1991: Mécanisme d'examen des politiques commerciales: Switzerland, Geneva.

GRISEL 1993: Liberté du commerce et de l'industrie, Bern.

GYSELEN 1989: State Action and the Effectiveness of the EEC Treaty's Competition Provisions, CML Rev. 26, 33 et seq.

HOVENKAMP 1994: Federal Antitrust Policy, St. Paul, Min.

HOVENKAMP & MACKERRON 1985: Municipal Regulation and Federal Antitrust Policy, UCLA L. Rev. 32, 719 et seq.

IMMENGA 1967: Wettbewerbsbeschränkungen auf staatlich gelenkten Märkten, Tübingen.

JAAG 1994: Wettbewerbsneutralität bei der Gewährung von Privilegien im Wirtschaftsverwaltungsrecht, in: Walder et al. (ed.), Aspekte des Wirtschaftsrechts: Festgabe zum Schweizerischen Juristentag 1994, Zurich, 477 et seq.

JORDE 1987: Antitrust and the New State Action Doctrine: A Return to Deferential Economic Federalism, Calif. L. Rev. 75, 227 et seq.

KIRCHNER & EHRICKE 1993: Kartellrechtliche und EG-rechtliche Schranken einer Reregulierung durch Landesgesetze, WuW 43, 573 et seq.

KUMMER 1966: Der Begriff des Kartells, Bern.

LAUTERBURG 1991: Zwischen Wettbewerbsordnung und Preisadministration, in: SCHÜRMANN (ed.), Probleme des Kartellverwaltungsrechts: Festschrift für BRUNO SCHMIDHAUSER zum 60. Geburtstag, Bern, 85 et seq.

LEHMANN 1994: Gedanken zur anstehenden Kartellgesetz-Revision, Gewerbliche Rundschau 18, 3 et seq.

MESTMÄCKER 1992: Zur Anwendbarkeit der Wettbewerbsregeln auf die Mitgliedstaaten und die Europäischen Gemeinschaften, in: BAUR et al. (ed.), Europarecht, Energierecht, Wirtschaftsrecht: Festschrift für BODO BÖRNER, Cologne et al., 277 et seq.

MÖSCHEL 1988: Privatisierung, Deregulierung und Wettbewerbsordnung, JZ 43, 885 et seq.

NIEMEYER 1994: Die Anwendbarkeit der Art. 85 und 86 EG-Vertrag auf staatliche Massnahmen, WuW 44, 721 et seq.

NIGGLI & AMSTUTZ 1994: Recht als Amoral, in: PAYCHÈRE (ed.), Tagung der Schweiz. IVR-Sektion, ARSP-Beiheft 62, Stuttgart, 11 et seq.

OECD 1992: Etudes économiques de l'OCDE: Switzerland, Paris.

PERNICE 1994: Art. 90 EGV, in: GRABITZ (ed.), Kommentar zum EWG-Vertrag, Munich, 1 et seq.

REINERT 1995: Staatliche Regulierung des Wettbewerbs und Art. 5 Abs. 2 EGV, in: EIZ (ed.), Aktuelle Fragen zum Wirtschaftsrecht, Zurich, 127 et seq.

RHINOW 1988: Art. 31 BV, in: AUBERT et al. (ed.), Kommentar zur Bundesverfassung der Schweizerischen Eidgenossenschaft vom 29. Mai 1874, Basel et al., 1 et seq.

RICHLI 1995: Neues Kartellgesetz und Binnenmarktgesetz – Überblick und Würdigung aus öffentlichrechtlicher Sicht, AJP/PJA 4, 593 et seq.

ROSS 1993: Principles of Antitrust Law, Westbury, N.Y.

SACKSOFSKY 1996: Wettbewerbspolitische und kartellrechtliche Probleme der Liberalisierung von Bahn, Post und Telekommunikation, WuW 46, 20 et seq.

SCHIPS 1994: Ökonomische Überlegungen zum Vorentwurf vom 3. September 1993 für ein "Bundesgesetz über Kartelle und andere Wettbewerbsbeschränkungen", Gewerbliche Rundschau 18, 43 et seq.

SCHLUEP 1988: Einleitung, Ingress und Art. 1 bis 19 KG, Gegenbemerkungen SCHLUEP zu Art. 29 KG, in: SCHÜRMAN & SCHLUEP (ed.), KG & PüG, Kommentar, Zurich, 39 et seq.

id. 1991: Wettbewerbsfreiheit – staatliche Wirtschaftspolitik: Gegensatz oder Ergänzung?, ZSR 110 I, 51 et seq.

id. 1993: Revitalisierung, Deregulierung, Reprivatisierung, Wettbewerb der Systeme – was sonst noch an neuen wirtschaftsrechtlichen Delikatessen?, in: SCHLUEP et al. (ed.), Recht, Staat und Politik am Ende des zweiten Jahrtausends: Festschrift zum 60. Geburtstag von Bundesrat ARNOLD KOLLER, Bern et al., 477 et seq.

id. 1994: Über Funktionalität im Wirtschaftsrecht, in: WALDER et al. (ed.), Aspekte des Wirtschaftsrechts: Festgabe zum Schweizerischen Juristentag 1994, Zurich, 139 et seq.

id. 1995: Wirtschaftsrechtliche Punktationen zum Verhältnis wettbewerbsrechtlicher Normen (am Beispiel der Nachahmung fremder Leistungen), in: MEIER et al. (ed.), Rechtskollisionen: Festschrift für ANTON HEINI zum 65. Geburtstag, Zurich, 335 et seq.

SCHMIDHAUSER 1976: Über das Verhältnis zwischen schweizerischem Landwirtschaftsrecht und Kartellrecht. Blätter für Agrarrecht 2, 33 et seq.

SCHÜRMANN 1994a: Wirtschaftsverwaltungsrecht, 3.A., Bern.

id. 1994b: Kritische Bemerkungen zum Entwurf vom 3. September 1993 eines Bundesgesetzes über Kartelle und andere Wettbewerbsbeschränkungen, Gewerbliche Rundschau 18, 19 et seq.

SCHWEIZER 1994: Betrachtungen zum Vorentwurf eines Bundesgesetzes über den Binnenmarkt (BGBM), AJP/PJA 3, 739 et seq.

SPITZER 1988: Antitrust Federalism and Rational Choice Political Economy: A Critique of Capture Theory, S. Cal. L. Rev. 61, 1293 et seq.

STEINDORFF 1973: Politik des Gesetzes als Auslegungsmassstab im Wirtschaftsrecht, in: PAULUS et al. (ed.), Festschrift für KARL LARENZ zum 70. Geburtstag, Munich, 217 et seq.

STOFFEL 1994: Wettbewerbsrecht und staatliche Wirtschaftstätigkeit, Freiburg i.Ue.

TERCIER 1993: Du droit des cartels au droit de la concurrence, ZSR 112 I, 399 et seq.

TEUBNER 1989: Recht als autopoietisches System, Frankfurt a.M..

VISCUSI et al. 1995: Economics of Regulation and Antitrust, 2.A., Cambridge.

WILEY 1986: A Capture Theory of Antitrust Federalism, Harv. L. Rev. 99, 713 et seq.

WOHLMANN 1995: Deregulierung und Kartellrecht, SJZ 91, 185 et seq.

ZÄCH 1992: Schweizerisches Wettbewerbsrecht wohin?, AJP/PJA 1, 857 et seq.

ZÄCH & ZWEIFEL 1995: Plädoyer für das neue Kartellgesetz, in: ZÄCH & ZWEIFEL (ed.), Grundfragen der schweizerischen Kartellrechtsreform, St. Gallen, 19 et seq.

Unlawful Practices of Enterprises Having a Dominant Position

Markus Ruffner

"… the successful competitor, having been urged to compete, is not to be turned upon when he wins"[1]

"… the purpose of the antitrust law is to protect competition and not competitors"[2]

A. Introduction

1. Controlling Abuse in the System of Restrictions on Competition

As in comparable foreign laws, along with the provisions concerning unlawful agreements on competition and the control of mergers, controls on abuse imposed on the behavior of dominant companies (Art. 7 KG [Antitrust Act]) form the third pillar of a modern competition law, designed to ensure functional market processes. The operation of the controls on the behavior of dominant companies set forth in Art. 7 KG also corresponds to a great extent to the controls on abuse incorporated in Art. 86 of the EEC Treaty.[3] The uniform substantive provisions for controlling behavior under civil and administrative law replace the

[1] *U.S. v. Alcoa*, 148 F.2d 430, 1945.

[2] R.C. Landis/R.S. Rolfe, Market Conduct Under Section 2: When Is It Anticompetitive?, in: M. Fisher Franklin (ed.), Antitrust and Regulation, Essays in Memory of J.J. McGowan, London 1985, 143.

[3] There are functionally equivalent standards in the German Act Against Restraints of Competition, § 22, par. 4/§ 26, par. 2 and in Section 2 of the American Sherman Act, which contains a (criminal) prohibition on "monopolizing". Section 2 of the Sherman Act of 1890 is nevertheless designed somewhat differently from the European regulations; the prohibition includes purposeful acts and is intended to impede the emergence of a dominant market position and not just to restrain the dominant company from specific patterns of behavior.

controls on behavior set forth in Art. 29 old KG[4] and the civil law provisions of Art. 6/7 old KG, which in practice were insignificant to the Antitrust Commission.[5]

Controls on the behavior of dominant companies thus prove necessary to supplement to the provisions concerning collusion and the control of mergers, because individual companies are continually arriving at temporary positions of power in competitive markets due to superior performance or even natural or regulatory market barriers. Monopoly positions also often result in connection with innovative products or services whose exclusivity is secured under the laws of industrial property. Indeed, in the future, the emergence of dominant companies will be partly impeded in Switzerland by the preventive effect of controlling mergers (see Art. 10, par. 1, sec. a). Since combinations which establish or strengthen a dominant market position are authorized under Art. 10, par. 1, sec. b KG if their advantages outweigh their disadvantages, the new Antitrust Act does not cut off all dominant market positions which arise via external growth. In this connection, the Communication expressly refers to the high degree of concentration in numerous Swiss businesses and markets, thus underscoring the importance of controlling behavior.[6]

If an enterprise achieves a dominant market position as a qualified form of market power, under specific conditions, it may use this position to restrict unpopular competitors by driving them from the market or by constructing (additional) market barriers to keep a potential competitor from entering the market. Likewise, increased market power can also be used to discriminate against suppliers or customers in the

[4] Since the balance method set forth in Art. 29 old KG was tailored to assessing horizontal and vertical arrangements under administrative law, it is hardly surprising that the Antitrust Commission examined primarily those restrictive arrangements which were a component of cartel arrangements (for a detailed discussion, M. Ruffner, Funktionale Konkretisierung der Schlüsselartikel des neuen Kartellgesetzes [Functional Concretization of the Key Articles of the New Antitrust Act], Zurich 1990, 113 ff).

[5] For a detailed discussion of the dogmatic conception (unsuccessful, from the standpoint of competition theory) of Art. 6/7 old KG and the instrumentally oriented possibilities for justifying (Art. 7 old KG) "restrictive behavior" (Art. 6 old KG), see Ruffner (FN 4), 125 ff.

[6] Communication respecting a federal law concerning cartels and other restrictions on competition of November 23, 1994, 52.

sense of an abusive exploitation. Further, under specific conditions, dominance achieved in a relevant market may also be transferred to other markets, thus achieving a type of leverage effect. The basic competition law idea of controlling conduct under Art. 7 KG is thus to let dominant companies retain the fruits of their performance-related efforts, while cutting off their non-performance-related patterns of behavior. Such controls on behavior must be particularly oriented to leaving open the possibility that current and potential competitors will seize or challenge the positions of the dominant companies. Temporary positions of power may thus be eroded, so that competition as a process will be guaranteed to fulfill its intended functions.

2. The Dual Nature of Patterns of Behavior

The most basic problem of controlling abuse with respect to dominant companies is the dual nature of most patterns of behavior.[7] Circumstances permitting, price reductions, as a very desirable result of functional competitive processes, may also be used to discipline unpopular competitors or even to drive them from the market. Such strategic patterns of behavior as the premature announcement of new products or technical improvements provide valuable information for the investment decisions of prospective buyers. Under specific conditions, however, such premature information can also be abused by companies with market power to make it more difficult for more innovative and adaptable companies to gain a firm footing in a market.[8]

Since this string of examples could be freely expanded to other conduct,[9] MÖSCHEL agrees that this is the "most difficult question of competition law, i.e., separating the individual behavior of a company

[7] See Communication (FN 6), 53, with reference to a corresponding study by the OECD (Etudes économique de l'OECD (Economic Studies of the OECD: Switzerland) Paris 1992), 76 ff.

[8] With respect to "premature" announcements under US law, see, e.g., the opinions in *California Computer Products Corp. v. IBM Corp*., 613 F.2d 727 (9th Cir. 1979); *Berkey Photo Co. v. Eastman Kodak Co*., 603 F.2d 263 (2d Cir. 1979).

[9] With respect to the competitive ambivalence of price differentiations and discrimination, see W. MÖSCHEL, Preis- und Konditionendifferenzierung durch marktbeherrschende Unternehmen nach EG-Recht [Price and Condition Differentiation by Dominant Companies Under EC Law], RIW [International Economic Law], Number 7 1988, 502.

which restricts competition from conduct which is in harmony with competition, in particular based on higher performance capability".[10] Because of the inherent problem of identifying this type of restrictions on competition, controls on behavior must be based to a great extent on a rule of reason. The associated legal uncertainty thus involves the danger that outsiders will use the standards of behavior of the Antitrust Act for tactically motivated legal actions. Thus, the application of the law must protect not just the interests of outsiders, but also the contractual and competitive freedom of the dominant company and must reduce the risk that contractual disputes will be shrouded in an antitrust cloak.[11] Thus, "not the monopoly can be challenged but its abuse" applies to both Art. 7 KG and Art. 86 EGV [EC Treaty].[12]

B. Unlawful Patterns of Behavior

1. Statutory Definition: Organization and Function

Under Art. 7, par. 1, dominant companies behave unlawfully when they abuse their market position to restrict other companies in their initiation or pursuit of competition or when they adversely affect suppliers or customers. Like Art. 86 EGV, this provision contains a directly applicable prohibition on abuse of a dominant market position.[13] Since only those companies which have increased market power and a prospect for success can engage in abusive behavior, Art. 7 KG refers to the concept of the dominant enterprise as a type of catch phrase which is defined in Art. 4, par. 2 KG. As the legal definition shows, market power and market dominance cannot only originate with a single company, but also originate with several companies.[14]

Under the general rule of par. 1, both behavior which is oriented to restricting competitors and behavior which is oriented to adversely

[10] W. Möschel, Recht der Wettberwerbsbeschränkungen [The Law of Restrictions on Competition], Cologne 1983, 34.

[11] In this sense, see also F. Rittner, Wettbewerbs- und Kartellrecht [Competition and Antitrust Law], 5.A., Heidelberg 1995, 299, with respect to § 26, par. 2 GWB.

[12] D.G. Goyder, EC Competition Law, 2nd ed., Oxford 1993, 342.

[13] In contrast, e.g., § 22 GWB does not contain a prohibition, but rather contains a grant of authority to an official entity.

[14] See Communication (FN 6), 81.

affecting suppliers or customers are unlawful. The general rule of par. 1 is made concrete in par. 2 through a non-exhaustive enumeration of various individual elements of abusive behavior. The examples in Art. 7, par. 2 KG closely follow the list of examples in Art. 86 EGV, which was expanded by two individual elements. The practices of refusing to maintain business relations (sec. a) and targeted price undercutting (sec. c) listed in par. 2 are not explicitly listed in Art. 86 EGV, but also fall under the EC prohibition on abuse as they do under the prohibition in Art. 7 of the new Antitrust Act.

2. Market Dominance as Qualified Market Power

2.1. Two-Step Test of Market Dominance

Only dominant companies are subject to controls on abuse under Art. 7 KG. Pursuant to the legal definition of Art. 4, par. 2 KG, dominant companies are those individual or groups of companies which are in a position, on the supply side or the demand side of a market, to behave independently of other participants in the market.[15] In accordance with the wording and the legislative history,[16] a company is thus dominant if it can behave largely independently in any market in which it is present.[17] The legal definition also clearly expresses the fact that both the supply side and the demand side can have a dominant market position.[18]

Tests of market dominance are laid out in two steps:[19] To determine whether there is a dominant market position in an individual

[15] This definition corresponds to a great extent to the wording of the Court of Justice, under which a dominant market position exists if the position "enables [the company] to impede the maintenance of effective competition in the relevant market by providing the possibility of behaving independently to a considerable extent with respect to its competitors, its customers and its consumers" (Court of Justice, Slg. 1979, 520 Erw. 38, *Hoffmann-LaRoche*).

[16] See Communication (FN 6), 113 f.

[17] In contrast, e.g., § 22, par. 1 GWB, under which a company can never be dominant as such, but rather only in relation to a specific type of products or services of which it is a supplier or a prospective buyer (see Rittner [FN 11], 286).

[18] See Communication (FN 6), 81.

[19] This two-step aspect does not preclude the existence of overlapping between the definition of the market and the establishment of a dominant market position. This is particularly true for the criterion of market barriers, which often plays a role in the spatial definition of a market (for a detailed discussion, J. Jickeli, Marktzutritts-

case, the first step is to establish the "relevant market" with respect to substance, location and time.[20] Once the relevant market has been established, the second step is to ascertain market shares as a starting point for verifying a dominant market position.[21] In accordance with recent competition theory, the Communication makes a reservation for the legal weight of the market shares as the most commonly used structural criterion.[22] Market shares alone afford no latitude to behave

schranken im EG-Kartellrecht [Barriers to Market Entry under EC Antitrust Law] (Part 1), WuW [Economy and Competition] 2/1992, 112 f.).

[20] See W.R. SCHLUEP, Einleitung, Ingress und Art. 1 bis Art. 19 KG [Introduction, Entry and Art. 1 to 19 KG], in: SCHÜRMANN/SCHLUEP, Kommentar Kartellgesetz und Preisüberwachungsgesetz [Commentary on the Antitrust Act and the Price Surveillance Act], Zurich 1988, 211 ff., 254 ff.; E. HOMBURGER, Kommentar zum Schweizerischen Kartellgesetz [Commentary on the Swiss Antitrust Act], Zurich 1990, Art. 4, Rz. 3 ff.; U. LEHMANN/R. WATTER, Die Kontrolle von Unternehmenszusammenschlüssen im neuen Kartellgesetz, in: AJP/PJA (1996), 855–875; U. LEHMANN/R. WATTER, Merger Control in Switzerland, Swiss Commercial Law Series, Vol. 7, Basel/Frankfurt a.M. 1998, C.I.1. With respect to defining the market under Art. 86 EGV, see also R. ZÄCH, Wettbewerbsrecht der Europäischen Union, Praxis von Kommission und Gerichtshof [Competition Law of the European Union, Practice of the Commission and the Court of Justice], Munich 1994, 236 ff.; GOYDER (FN 12), 349. For a critical analysis of more recent attempts to define the market in American competition doctrine which result in including potential competition at the level of defining the market, see M. RUFFNER, Wettbewerbstheoretische Grundlagen der Kartellgesetzrevision [Theoretical Competition-Related Bases for Amending the Antitrust Act], in: Grundfragen der schweizerischen Kartellrechtsreform [Basic Questions of Swiss Antitrust Law Reform] (edited by R. ZÄCH/P. ZWEIFEL), St. Gallen 1995, 224 ff.

[21] It is notable that the legal definition of a dominant enterprise in Art. 4, par. 2 KG is tailored to controlling behavior and is used only in Art. 7 KG, while in the control of mergers, the focus is on dominant market position. This differentiation is of significance, because despite the commonalities, differences may exist in the determination of market dominance in the context of controls on behavior and in the context of the control of combinations (for a detailed discussion of this problem and the differences between the concepts of dominance under the Merger Control Regulation and Art. 86 EGV, see JICKELI [FN 19], 110 f.). Controls on abuse and the control of mergers have different goals and purposes, which can lead to different concretizations of the concept of dominance in the context of teleological interpretation. Thus, for example, because of the need to make projections, it is generally assumed in the control of mergers that structural market criteria must be accorded a greater weight, while in the control of abuse, dominance may also be excluded from the behavior under review. For a detailed discussion of the criteria for identifying a dominant market position under the Merger Control Regulation, see WATTER/LEHMANN, Merger Control in Switzerland, C. I. 2.

[22] Communication (FN 6), 82.

independently with respect to competition.[23] As emphasized in the Communication, the latitude for the behavior of an enterprise also depends in particular on the barriers to entry and mobility[24] of a market and on the number, quality and position of potential competitors.[25] Also among the possible barriers for potential competitors are technological advantages,[26] industrial property rights which secure monopoly positions, overcapacities, closed channels of distribution, barriers to access to important procurement markets, inefficiencies of capital markets with higher capital costs (adjusted for risk) for smaller companies, regulatory barriers and – particularly significant for a small national economy like Switzerland – non-tariff entry barriers for foreign competitors.[27]

2.2. Market Shares and Market Barriers

Since the legislative history ascribes a comparatively great weight to the conditions for entering and exiting a market, as compared with the criteria of current competition, as a guiding principle for analyzing dominant market position, and also repeatedly makes reference to

[23] This thesis is most logically justified in the context of the theory of contestable markets. Accordingly, expressed in a somewhat simplified form, the latitude of a company with respect to its potential competitors depends primarily on the level of exit barriers, while structural criteria like market shares are completely irrelevant (see W.J. Baumol/J. Panzer/R. Willig, Contestable Markets and the Theory of Industrial Structure, New York 1982).

[24] For a basic discussion of the problem of market entry and exit barriers (sunk costs), see Baumol/Panzar/Willig (FN 23). With respect to the concept of mobility barriers, see R.E. Caves/M.E. Porter, From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition, 91 Quarterly Journal of Economics, 241 ff.

[25] Communication (FN 6), 81.

[26] See European Court of Justice, Slg. 1979, 525 Erw. 48, Hoffmann-LaRoche, where this criterion is classified as competent evidence of a dominant position.

[27] For a detailed discussion of these market barriers under EC antitrust law, see J. Jickeli, Marktzutrittsschranken im EG-Kartellrecht [Barriers to Market Entry Under EC Antitrust Law] (Part 2), WuW [Economy and Competition] 3/1992, 197 ff. See also the valuable overview by Lehmann/Watter, Merger Control in Switzerland, C. I. 2. It is remarkable that the EC precedents make no reference to theoretical concepts of competition theory, although the problem, and in particular the effects, of the various types of market barriers are among the most discussed subjects in "industrial economics".

modern competition concepts,[28] the party applying the law is kept from ascribing too great a weight – perhaps even more than in individual decisions of the EC Commission or the Court of Justice[29] – to the criterion of market share in concretizing this idea.[30] High market shares are only connected with qualified market power if there are non-trivial market barriers in existence.[31] Conversely, there are no structural conditions for a dominant market position if the market shares are below a specific critical threshold.[32] High market shares which have not changed over time also cannot be a sole indicator of dominant market position,[33] while an erosion of market shares over time indicates that a company is confronted with effective competition which narrowly limits its latitude to act. Another thoroughly useful criterion for analyzing dominant market position is the difference between the market shares of the company in question and those of its next largest competitors,[34] since the potential for restriction with constellations of dominant companies and with fringe competitors which do not set prices is particularly high.[35] From the point of view of modern competition theory, the criterion of the economic power and financial strength of the participating company must be modified even more sharply than the structural criterion of market share. A company's potential to specify the most important parameters for competition for

[28] Communication (FN 6), 37 ff.

[29] ZÄCH (FN 20), 257 ff. gives an overview of the element of dominant position under Art. 86 EGV.

[30] Too strong a focus on percentages is impossible only because the determination of the relevant market is always somewhat arbitrary (see also RUFFNER (FN 20), 224 ff.). In addition, it can be shown by means of simple price models and a numerical example that according to assumptions concerning the elasticity of a market's supply and demand, shares between 23 % and 61 % each yield an equal level of market power if the capacity to raise prices above the level of equilibrium is taken into consideration.

[31] In this sense, also JICKELI (FN 19), 108.

[32] See GOYDER (FN 12), 343, according to whom it is unlikely under Art. 86 EGV "that any undertaking having a market share of less than 25 per cent will be held to have a dominant position".

[33] In this sense, also European Court of Justice, Slg. 1979, 525 Erw. 48, Hoffmann-LaRoche.

[34] See European Court of Justice, Slg. 1979, 525 Erw. 48, Hoffmann-LaRoche.

[35] See W.G. SHEPHERD, Assessing "Predatory" Actions by Market Shares and Selectivity, Antitrust Bulletin, 1986, 22 ff., which developed a specific test for restriction on this basis, based on the difference in market shares.

its own products and services, without regard to the reactions of competitors and customers, depends primarily on the existence and level of market barriers and only peripherally on the financial strength of the company.[36]

Although it is not explicitly stated in the legislative history, market dominance can also be identified on the basis of behavior and performance criteria in addition to structural criteria (market shares, market and mobility barriers).[37]

3. Abuse of Market Position

3.1. General Rule (Art. 7, par. 1 KG)

a. Restrictive and Exploitative Practices

The general rule of Art. 7, par. 1 KG prohibits dominant companies from all conceivable patterns of behavior which restrict other companies from initiating or pursuing competition through abuse of their market position, or which adversely affect suppliers or customers. Accordingly, both restrictive practices and exploitative practices by companies with increased market power are unlawful. In modern competition theory, restrictive practices are classified basically as "disciplinary", price-related and non-price-related (strategic) restrictive behavior. Included under disciplinary restrictive practices are those which represent a conscious and purposeful reaction to the unpopular behavior of a competitor, whether this competitor breaks out of a tacit pricing restraint or wishes to compete with the dominant company in another market.

The concepts "initiate" and "pursue" make it clear that neither patterns of behavior oriented to establishing market entry, market exit and mobility barriers, nor practices aimed at displacing competitors or increasing the costs of market rivals,[38] is lawful. The wording "which

[36] For a critical analysis of conventional "deep pocket" theories, see Williamson (1987), 121.

[37] See Schluep, "Wirksamer Wettbewerb", Schlüsselbegriff des neuen schweizerischen Wettbewerbsrechts ["Effective Competition", Key Concept of the New Swiss Competition Law], Bern 1987, 63 f., Schluep (FN 20), 265 f.

[38] For a basic discussion of strategies which aim to increase the costs of rivals. S. Salop/D. Schehffman, Raising Rivals Cost, 73 American Economic Review, 1983, 267 ff.

adversely affect suppliers or customers" also includes patterns of behavior which are generally adjudged to constitute abusive exploitation. In particular, certain forms of price differentiation, tie-in practices and the individual elements listed in Art. 7, par. 2, sec. c KG, are included. It is notable that certain practices can be simultaneously restrictive and exploitative, and that restrictive behavior usually aims at enforcing better prices and business conditions with respect to customers and consumers following the successful displacement or intimidation of a competitor.

b. Substantive Review

aa. "Legitimate Business Reasons"

Only those patterns of behavior which represent a company's abuse of its dominant position in the market are unlawful. Accordingly, abuse requires the instrumental and causal use of market power.[39] As indicated above, the analytic problem of controlling abuse consists primarily of finding suitable tools and criteria for distinguishing competitive behavior from abusive behavior. As a rule, the dual nature of patterns of behavior requires that the special circumstances of the individual case be carefully reviewed.[40] According to the comments in the Communication, "relevant competitive behavior of dominant companies is … basically unlawful if it restricts other companies from initiating or pursuing competition without objectively justifiable reasons or if it adversely affects suppliers or customers".[41] Such "legitimate business reasons" exist in particular "when the company in question can rely on business principles".[42] "With reference to abusive exploitation, as a rule, foreign law focuses on whether business conditions deviate essentially from those which would be highly likely to result in the event of effective competition".[43]

[39] In this sense, for Art. 86 EGV, E.-J. Mestmäcker, Zum Begriff des Missbrauchs in Art. 86 des Vertrages über die Europäische Gemeinschaft [The Concept of Abuse in Art. 86 of the European Community Treaty], in: Festschrift für Raisch [Publication in Honor of Raisch], 1995, 455.
[40] Communication (FN 6), 102.
[41] Communication (FN 6), 102.
[42] Communication (FN 6), 102.
[43] Communication (FN 6), 103.

All these formulations in the legislative history cannot obscure the fact that Art. 7 KG does not actually contain any analytic concept for separating lawful patterns of behavior from abusive patterns of behavior.[44] The history of the comparatively restrictive US competition law in particular contains numerous examples of unusual business practices which were quickly designated by the antitrust authorities or the courts as restricting competition. In these cases, competition theory subsequently offered plausible explanations which demonstrated the competitive nature of these practices.[45] Thus, there is still a danger that the application of the law will concretize such concepts as "without objectively justifiable reasons", "business principles", "unfair strategy" on the basis of everyday economic theories for which there is little substantiation or – from the point of view of modern industrial economics – on the basis of outmoded competition theories. Foreign practice and doctrine concerning controls on behavior have also dealt repeatedly with the problem of concretizing as broad an expression as the abuse of a dominant market position, which contains economic references as a legal concept. In particular, the German doctrine concerning § 26 GWB [Act Against Restraints of Competition] and the American doctrine concerning Section 2 of the Sherman Act have developed general standards and concepts which will be restated here in summary form.[46]

[44] Also similarly is the language of the Court of Justice regarding the element of abusive exploitation. It sees here an "objective concept" which "includes those patterns of behavior of a company in a dominant position which can affect the structure of a market in which competition is already weakened precisely due to the presence of that company, and which restrict the maintenance of the competition existing in the market or its development though the use of means different from the means of normal competition in products or services on the basis of the performance of the market's constituents" (Court of Justice WuW [Economy and Competition] 1982, 59, 61 = WuW/E EWG/MUV [Antitrust Case Law EEC/ECSC] 521, 523, *L'Oreal*). See also Rittner (FN 11), 314, who notes with respect to this language that "there is never 'normal' competition".

[45] This is true, for example, for a series of vertical restrictions on competition which can be explained by the legitimate desire to save on transactional costs despite the exclusive nature and restrictive effect associated with them (see the overview by Ruffner [FN 20], 201 ff.).

[46] Ruffner (FN 4), 117 ff., contains a detailed overview.

bb. Proving Intent to Restrict

When a competitor is particularly successful, competitive behavior operates always and primarily as a restriction on competitors. In view of this ambivalence in patterns of behavior, "unfair" restrictive practices can be most easily distinguished from performance-related behavior if an intent to restrict or displace can be proven.[47] By way of example, the EC Commission focused on this subjective element, i.e., an intent to displace in the sense of a direct intent, in the case of *ECS/AKZO*.[48] But antitrust authorities do not always find written evidence which clearly proves an intent to displace, so that often, such an intent can only be proven on the basis of circumstantial evidence and the facts of the case.[49] Primarily, such proof of intent to displace may succeed in the event of disciplinary restrictive behavior which is characterized by its selectivity and which usually represents a reaction to the unruly behavior of an outsider which is willing to compete.

Such disciplinary behavior also often occurs in the form of classic boycotts, the discontinuation of business relations or selective price discrimination. Often, however, dominant companies will do everything they can to conceal the intent underlying a restriction behind "legitimate business reasons".[50] The identification of restrictive behavior on the basis of subjective motivations and business plans thus runs up against inherent limits, especially since even companies with increased market power cannot be barred from gaining market shares or restructuring their marketing channels.

[47] For a detailed discussion on identifying restrictive behavior based on "intent", see O. Tyllack, Wettbewerb und Behinderung: Eine rechtsvergleichende Untersuchung zur Beurteilung von Individual- und Wettbewerbsbehinderungen nach deutschem und amerikanischem Recht [Competition and Restraint: A Comparative Legal Examination of the Assessment of Individual and Competitive Restrictions Under German and American Law], Munich 1984, 360.

[48] See OJ 1985 L374/21, *ECS/AKZO*. For an analysis of this case, see also Möschel (FN 9), 505.

[49] See also Möschel (FN 9), 505, who comments on the smooth transition of a subjective and objective approach in this connection.

[50] See also Ruffner (FN 20), 208 f.

cc. The Concept of Non-Performance Competition

Controls on behavior do not include the development of market power based on superior economic performance. In view of this fundamental idea, the concept of non-performance competition, developed on the basis of the elements of abuse in the German GWB for normatively assessing the unfairness of the restriction, attempts to obtain standards which can be generalized through orientation to the performance-relatedness of the behavior of dominant companies.[51] This formulation attempts to delineate the clear "black" and "white" areas which correspond to restrictive competition and performance competition. However, this formulation does not offer a functional shifting of boundaries for patterns of behavior which correspond to the remaining "gray areas". Rather, as some (older) court decisions under § 22 GWB show, this formulation conceals the danger that performance competition will be determined on the basis of concretely predefined market results and that competition will be reduced from a discovery process to a substantively predefined event.[52]

dd. Weighing of Interests with a View Toward the Purpose of the Statute

This methodical formulation is supported in the German competition law in the concretization of § 22 GWB (abuse of market power) as an alternative to the concept of performance competition; it also defines the practice under § 26, par. 2 and 3 GWB (prohibition on discrimina-

[51] R. Schmitz, Preisunterbietung als Problem des GWB [Predatory Pricing as a Problem under the GWB], WuW [Economy and Competition] 3/1992, 215. The concept of non-performance competition is based on P. Ulmer, Schranken zulässigen Wettbewerbs marktbeherrschender Unternehmen [Barriers to Lawful Competition by Dominant Companies], Tübingen 1977.

[52] For a critical discussion in the German literature, Möschel (FN 10), 330, according to whom "the boundary has become almost absurd" in individual court decisions. Similarly, K. Markert, Die Wettbewerberbehinderung im GWB nach der vierten Kartellnovelle [Restriction of Competitors in the GWB under the Fourth Antitrust Amendment], Heidelberg 1982, 20, which notes that even an empty phrase (the concept of non-performance competition) "(can) be dangerous, because it creates opportunities for filling the phrase with inappropriate contents". According to Rittner (FN 11), 311, the criterion of "performance competition" is unsuitable.

tion and restriction).[53] Accordingly, in view of their dual nature, patterns of behavior of dominant companies can only be diagnosed by weighing "the competing interests of the participants, taking into consideration the statutory goal of freedom of competition".[54] According to MÖSCHEL,[55] the orientation to protecting freedom of competition eliminates any structural and social policy aspects, as well as an orientation to results criteria or market performance, from the outset. Even if the new Swiss Antitrust Act is oriented not just to protecting freedom of competition, but also to ensuring the expected functions of competition,[56] this restriction on the actual criteria for competition would also have to apply to a weighing of interests with a view toward the purpose of the statute under Art. 7 KG.[57]

The difficulties of this formulation lie, however, in the fact "that a weighing of interests is still just a procedure which conveys no framework for orientation …".[58] In this connection, the suggestion that dominant companies should be restricted to using the most gentle measures with respect to their competitors must also be assessed rather skeptically.[59] In each case, weighing the interests with a view toward the purpose of the statute remains dependent on a reference system, which ultimately can offer only that competition theory based on modern industrial economics which is repeatedly referred to in the legislative history of the new KG. "Such an analysis is useful in applying the law to the extent that there is a correspondence between the respective eco-

[53] See W. MÖSCHEL, in: U. IMMENGA/E.-J. MESTMÄCKER, GWB Kommentar zum Kartellgesetz [GWB Commentary on the Antitrust Act], 2.A., Munich 1992, Rdz. 16 at § 22. K. MARKERT, in: U. IMMENGA/E.-J. MESTMÄCKER, GWB Kommentar zum Kartellgesetz [GWB Commentary on the Antitrust Act], 2.A., Munich 1992, Rdz. 196 at § 26.

[54] MÖSCHEL (FN 10), 404.

[55] MÖSCHEL (FN 10), 408 f.

[56] See Communication (FN 6), 44 ff.

[57] This is in contrast to Art. 7 old KG, where non-competitive aspects (e.g., promoting the economic structure of an economic sector) also entered into the weighing of interests in the context of justification in the sense of an instrumentalization of competition.

[58] MÖSCHEL (FN 54), Rdz. § 22 GWB.

[59] For a critical analysis, MÖSCHEL (FN 10), 329. In this sense, also MESTMÄCKER (FN 40), 444: "In the context of this system, even dominant companies are entitled to safeguard their own business interests. Dominant companies have no general responsibility for the structure of the market or the viability of their competitors."

nomic interests and the purpose of the legal provision in question, i.e., the underlying value-judgement."[60] Thus, the efforts of the application of the law to systematically classify groups of cases coincides with the competition theory procedure of analyzing different types of patterns of behavior according to specific economic problems, using the theoretical building blocks which are currently suitable.[61] In this sense, modern competition theory offers a reference system for weighing interests with a view toward the purpose of the statute, as well as valuable assistance in concretizing the classification-related concept of "legitimate business reasons".

3.2. Individual Elements[62]

a. Preliminary Observations

Art. 7, par. 2 KG contains a non-exhaustive listing of unlawful patterns of behavior. Newer forms of restrictive practices, like non-price strategic patterns of behavior oriented to increasing market barriers for competitors, much discussed in American competition doctrine, are not explicitly listed as individual elements.[63] Based on the comments in the Communication, however, there can be no doubt that Art. 7 KG also includes these forms of restrictive behavior.[64] It is notable that in view of the multiplicity of manifestations of the individual elements contained in sec. a–f, it is not always possible to clearly attribute specific facts of the case and the business practices chosen often represent combinations of different restrictive and exploitative behaviors.

Considering just the definitions of unlawful patterns of behavior chosen in par. 2 could give the impression that such patterns of behavior as the refusal to maintain business relations are *per se* unlawful. But par. 2 must be read in conjunction with the general rule of par. 1.

[60] Möschel (FN 9), 501.

[61] Typical of such a synthesis, Möschel (FN 9), who shows how to economize the application of the law in the example of price and condition differentiation by dominant companies under EC law.

[62] The comments below concentrate on actual restrictive practices and do not consider the elements of sec. c, the first line of which refers to abusive exploitation (with respect to abuse of power on the demand side, see B. Schmidhauser, in this issue).

[63] With respect to non-price restrictive behavior, see Ruffner (FN 20), 212.

[64] See Communication (FN 6), 41; 52. Certain newer forms of restrictive practices, like strategic innovations, are also subsumed under par. 2, sec. c.

The same is true with respect to verifying for each individual set of facts whether, in addition to the elements of par. 2, the general criteria for abuse contained in Art. 7, par. 1 KG are also met.[65] Accordingly, for example, the refusal to maintain business relations is only unlawful if there are no objective reasons for it.[66]

In my opinion, the emphasis of the controls on behavior aimed at in Art. 7 KG must be clearly directed to actual restrictive practices. The assessment of abusive exploitation is necessarily connected with a result orientation; under intensive interpretation in an individual case, this would boil down to price and conditions surveillance (Art. 7, par. 2, sec. c),[67] or even the control of innovations (sec. e) – legally and factually extremely questionable and dysfunctional.

b. Refusal to Maintain Business Relations

aa. The Right to Freely Choose a Trading Partner

"Economically, freedom of decision concerning the initiation or continuation of business relations is a precondition for the freedom of choice of trading partners which characterizes competition and makes it possible."[68] In particular, those to whom the statute is addressed have the freedom to shape transactions: to decide on a specific marketing system and to develop new and innovative forms of distribution.[69] A certain selectivity in the choice of business partners is thus quite characteristic of competition. Under Art. 6, par. 1, sec. c KG, vertical agreements of an exclusive nature make selective refusals to deal necessary. Since they are often connected with savings in opera-

[65] Communication (FN 6), 103.

[66] In the preliminary draft (see Art. 22, par. 2 Preliminary Draft KG), the concept "without objective reasons" was still explicitly listed for various individual elements.

[67] The wording of sec. c largely corresponds to the wording of Art. 86, par. 1, sec. a EGV, which also constitutes the basis for assessing "excessive prices" (for a detailed discussion, Goyder [FN 12], 356 ff.).

[68] Mestmäcker (FN 40), 460.

[69] With respect to the multiplicity of different marketing systems, for a somewhat narrow discussion, Markert (FN 53), Rdz. 222 at § 26, who relates the freedom to shape transactions to the basic decision of a manufacturer concerning specific (traditional) forms of marketing.

tional costs,[70] and thus with an improvement in efficiency, there is also usually an objective reason for a refusal to supply. Even dominant companies must be allowed to adapt their procurement and marketing channels to new circumstances and to change their suppliers and customers.[71] Basically, controls on behavior and the individual element of refusal to deal can offer no protection for companies "which have not found alternatives, in practice usually alternative dependencies".[72] A qualitative selection, in accordance with which a distributor must meet some specific objective criteria, must also be lawful.[73]

bb. Refusals to Deal which Have Restrictive Effect

By contrast, if there is no objective reason, the dissolution or restriction of business relations can be unfair if there is an attempt to discipline companies which are willing to compete. This includes cases in which business relations with a contractual partner are broken off because it is promoting the sale of competing products.[74] To what extent covenants in restraint of trade are lawful can only be assessed in accordance with the facts of an individual case. Their restrictive effect is great primarily in those cases in which there is also market power on the level of distribution and in which current and potential competitors are barred from access to important marketing channels.

Refusals to deal can also be used to impede or complicate access to the dominated market. Such restrictive behavior is particularly promising when a company "is the only one with facilities which are indispensable to the production of specific services or the manufacture of specific products".[75] A graphic example from the recent practice of

[70] See Communication (FN 6), 40; see also the overview by M. Ruffner, Neue Wettbewerbstheorie und schweizerisches Kartellrecht [New Competition Theory and Swiss Antitrust Law], Zurich 1990, 168 ff.; Ruffner (FN 20), 182 ff.

[71] With respect to the problem of appropriate time limits for readjusting distribution channels in the system of control of abuse under the GWB, see Markert (FN 53), Rdz. 222 at § 26.

[72] Rittner (FN 11), 297.

[73] With respect to the distinction between qualitative and quantitative selection, see Markert (FN 53), Rdz. 22 at § 26. According to Markert, it is undisputed that less stringent requirements are imposed on the qualitative selection of customers than on the quantitative selection.

[74] An example is Court of Justice, Slg. 1978, 207, 297 Erw. 27/76, *United Brands*.

[75] Communication (FN 6), 104.

the Court of Justice is the refusal of a dominant airline to allow a new outsider entering the market to participate in the "interlining system". This system, which is indispensable to the competitiveness of a supplier, entitles airlines to issue tickets for routes they do not serve on the basis of reciprocal accounting.[76]

Refusals to deal which restrict competition in upstream or downstream markets form a related group of elements. If a company with a dominant market position in raw materials or intermediate products is only active in the downstream market, under an older decision of the Court of Justice, it may not withdraw as a supplier if that would have the effect of driving a customer which has become a direct competitor from the market.[77] The unlawfulness of a refusal to deal is thus inferred from a comparison of previous market conduct and current market conduct.[78] The question of whether somewhat stricter standards are imposed on refusals to supply long-standing customers than on refusals to supply occasional customers or new competitors has thus not been clearly decided under Art. 86 EGV.[79]

Similar questions can also arise with respect to dominant market positions based on industrial property rights. Thus, for example, the Court of First Instance decided under Art. 86 EGV that the Irish broadcasting company RTE and the British broadcasting company BBC had to make available to a publisher the information necessary for the publication of a weekly program guide concerning their own competing products.[80] The refusal to surrender this information was viewed as a restriction on competition beyond the essential function of the copy-

[76] ABI vom April 10, 1992, L96/34, *British Midland/Air Lingus*.

[77] Court of Justice, Slg. 1974, 223, 252 f., Erw. 6 and 7/73, *Commercial Solvents*. It is notable that this decision is based on the leverage theory, outmoded from the perspective of competition theory, under which it is possible to transfer market power from one market to another regardless of the circumstances (see Goyder [FN 12], 350). With respect to the modification of this formulation, described in vertical relationships as well as in foreclosure theory, St. Martin, Industrial Economics, New York/London 1988, 266 f. The basic idea of this critical analysis, which also applies to vertical combinations, is the consideration that it is not possible to achieve "two times a monopoly yield" in downstream markets.

[78] Mestmäcker (FN 40), 463.

[79] Goyder (FN 12), 352.

[80] Court of First Instance, Slg. 1991 II 485–534 Erw. 69/89, RTE; Court of First Instance, Slg. 1991 II, 535–574 Erw. 70/89, BBC.

right law allowing the transfer of a dominant position in the market for program information to the derivative market for television program guides by means of a refusal to deal. Thus, the variations in the company's own behavior, observed in parts of (foreign) markets with respect to third parties, also served as criteria for abusive behavior. An important distinction from the "Commercial Solvents" decision outlined above is that the broadcasting companies have a monopoly on a comparatively insignificant "product" which is indispensable for the production of another, more complex product (program guides), so that in this case, it actually appears possible to leverage market power.

These groups of elements would have to be potentially significant in the future, in particular for patterns of behavior of a legally protected monopoly.[81] Sec. a could play an even more important role in controlling abuse of *de facto* monopolies which will be emerging in the coming years in the course of the deregulation of network-related monopolies (telecommunications, power industry, etc.).[82] In particular, great significance is attached to the network access here, which can only be secured via the legal consequence of the legal obligation to enter into contracts, which is tied in to the unlawfulness of a refusal to deal.

c. Discrimination by Trading Partners

aa. The Dual Nature of Price Differentiations

A less severe form of discrimination, as compared with the refusal to supply (an extreme form of discrimination), is discrimination by trading partners with respect to prices and the terms and conditions for doing business. The manifestations of discrimination include not just the disparate treatment of identical circumstances, but also the identical treatment of dissimilar circumstances.[83] Discrimination in conditions can also be treated as an instance of price discrimination, since conditions are convertible into price components, so that the following presentation can be limited to price differentiations. The criterion for

[81] In this sense, also Communication (FN 6), 104.

[82] For a detailed discussion with extensive proof, Mestmäcker (FN 40), 466.

[83] Communication (FN 6), 105. See also Möschel (FN 9), 501, who lists disproportionate disparate treatment of dissimilar circumstances – hardly an accessible rule of law – as an additional manifestation.

assessing price discrimination is always a cost relationship. For example, if there are differences in the costs of transportation and distribution or in any other returns to scale in relation to an individual customer, there is an objective reason for price differentiations.

From an economic perspective, as with other patterns of behavior, price differentiations must not be classified as *per se* detrimental. From the perspective of a national economy, for example, price differentiations which temper price discipline in oligopolistic markets or which break open rigidities in pricing are desirable. Price differentiations even work to intensify competition when companies use them to gain a foothold in a new part of a market. Overly rigorous control of price discrimination conceals the danger that costly product differentiations will be undertaken without major advantages to customers in order to bypass such provisions.[84] Under specific market conditions, however, price differentiations can also exhibit a restrictive effect in the market of the discriminating company (primary-line competition) or in the market of the company being discriminated against (secondary-line competition[85]). Thus, abusive price differentiation can only be established on the basis of the specific facts of an individual case.

bb. Price Differentiations which Have Restrictive Effect

In practice, the graduation of prices according to geographic markets and/or different customer groups constitutes the most common form of price differentiation. Certain barriers between the individual markets, in which additionally different elasticities in demand must be present, are a condition for profitable price differentiation. Accordingly, a competition policy oriented against this type of price differentiation may initially try to dismantle such barriers as barriers to foreign trade, which make such discrimination possible among countries and customer groups. The prohibition against clauses in contracts which

[84] For a detailed discussion, MARTIN (FN 77), 394 f., who notes that the welfare-theory assessment of price discrimination is also ambivalent, since price discrimination can lead to both an expansion and a restriction of output and demand. Similarly, MÖSCHEL (FN 9), 502.

[85] Primary-line and secondary-line competition are distinguished on the basis of the case law under the American *Robinson-Patman Act* (see MARTIN [FN 77], 382 ff.).

restrict resales between individual market segments, and thus an actual arbitrage, also effectively restricts the opportunities for price discrimination.

In the case of *Napier Brown & Co. Ltd. v. British Sugar* PLC,[86] price discrimination by a vertically integrated company, which had requested higher prices as the supplier of an intermediate product to a direct competitor in the downstream market than it had as a supplier to other customers, was adjudged to be unlawful, *inter alia* on the basis of Art. 86 EGV. In fact, due to price discrimination against unpleasant competitors, the costs of these market rivals increase and their ability to compete is restricted. As in other similar cases involving a refusal to supply, the idea behind these judgements is to restrict the "transfer effects" of a completely lawful "dominant market position".[87] Such price discrimination exhibits a restrictive effect, however, only when the competitor being discriminated against has insufficient opportunities for avoidance.

On the other hand, in the *Michelin* case, abusive price differentiation at the dealer level (secondary-line competition) was rejected, since the claim "that this disparate treatment of specific dealers was due to the application of different criteria and was not justified by legitimate business considerations" was deemed not to have been proven.[88] Accordingly, there is a certain reluctance to adjudge price differentiations at the dealer level unlawful under EC law. Likewise, according to Möschel, nothing indicates that Art. 86, sec. c EGV is leaning in the direction of protecting small and medium-sized businesses or of a small business doctrine, especially since the latter has nothing to do with protecting competitive market processes.[89]

cc. Loyalty Discounts

Price discrimination involving the level of primary-line competition, and thus competition between the discriminating dominant company and its competitors, is subsumed under Art. 86, sec. b, which largely

[86] OJ No. L284/41, 53 of October 19, 1988 (see also the terse description of this case by Goyder [FN 12], 356).
[87] Möschel (FN 9), 503.
[88] Court of Justice, Slg. 1983, 3520, *NBI Michelin.*
[89] Möschel (FN 9), 504.

corresponds to sec. e of the Swiss Antitrust Act. In particular, loyalty discounts, which divide customers into those with and those without outsider relations, are classified by the Court of Justice as *per se* abusive, since the competitors complicate access to the customers and, therefore, these practices are connected with a restrictive effect.[90] Target discounts, which are the equivalent of a secret loyalty discount because of the way they are arranged, are adjudged similarly strictly, and the so-called English Clause[91] does not help.[92] By contrast, quantity discounts are not implicated, since as a rule they automatically contribute to the fact that price differentiations occur in accordance with costs.

d. Targeted Price Undercutting

aa. Selectivity

Price reductions must be assessed as decidedly positive, primarily from the point of view of the demand side, and are usually an expression of effective competition. Under specific market conditions, however, dominant companies may also try to drive unpopular competitors from the market with targeted price reductions. At the same time, such behavior signals potential competitors that they will have to contend with a price war if they try to enter the market. In view of this ambivalence concerning price reductions, it is not very easy to find the dividing line between desirable and unlawful price undercutting, while at the same time minimizing the risk that companies whose prices fall due to better performance and lower costs will be penalized.

In most cases, proof of an intent to displace connected with a price reduction will fail because companies try to conceal such a price reduction as well as possible behind objective reasons. Possible indi-

[90] Court of Justice, Slg. 1975, 2020f. Erw. 510/512–526/527; Court of Justice, Slg. 1979, 540, *Hoffmann-LaRoche.*

[91] The "English Clause" refers to a loyalty discount system which requires the customer to advise suppliers of more favorable possibilities for procurement. The purchaser may turn to other suppliers without forfeiting the loyalty discount only if the supplier does not grant the same terms and conditions (for a detailed discussion, Goyder [FN 12], 360). The application of an "English Clause" can supply the company with market power or a cartel with valuable information concerning the market behavior of competitors and the discipline of cartel members.

[92] Court of Justice, Slg. 1979, 543, *Hoffmann-LaRoche.*

cators of abusive pricing are selectivity ("undercutting aimed at specific competitors") and temporary use (prices raised again following the successful displacement of competitors). Accordingly, selectivity has also been incorporated in sec. d as an additional element, since price undercutting is profitable for companies with market power primarily when it is targeted and used on a temporary basis against small outsiders in limited parts of markets.

bb. Abusive Price Undercutting ("Predatory Tests")

In order to be able to identify abusive price undercutting aimed at specific competitors with legal certainty in the interest of those to whom the statute is addressed, competition theory based on modern industrial economics has also developed a series of tests. The basic idea of the tests listed below is to replace a "full-blown economic analysis", in the sense of a rule of reason, with simpler *per se* rules which focus on a few small structural and behavioral criteria:

1. According to the "predatory test" developed by Areeda/Turner[93] on the basis of the equilibrium theory, targeted price reductions are abusive when prices are below average variable costs. These serve as an approximate value for short-term marginal costs and it is assumed that prices below these marginal costs make it possible to conclude that there is an intent to restrict.

2. By contrast, Baumol[94] proposed a rule under which targeted price reductions are connected with the condition that price increases can only be effected after the displacement of a competitor if they can be justified by subsequent increases in costs or a change in demand. This rule is intended to preventively motivate dominant companies to reduce prices in the short term only as low as they would wish to keep them for the long term.

93 P.H. Areeda/D.F. Turner, Predatory Pricing and Related Practices under Section 2 of the Sherman Act, Harvard Law Review, 1975, 697 ff.

94 W.J. Baumol, Quasi-Permanence of Price Reductions: A Policy for Prevention of Predatory Pricing, 89 Yale Law Journal, 1 ff.

3. A similar rule, with a focus on prevention, comes from WILLIAMSON,[95] who seeks to prohibit a dominant company from expanding production after a new competitor entered the market. In particular, this is intended to impede the company from building surplus capacities to keep potential competitors from entering the market.[96]

4. On the other hand, SHEPHERD[97] falls back on two criteria for identifying abusive price undercutting and non-price restrictive practices: First, there has to be a focus on the disparity in the market shares between the company making the attack and the company being attacked. Second, there is a focus on the selectivity of behavior which must be oriented to a specific company.

All these tests show their strengths and weaknesses primarily with respect to practicability[98] and, with the exception of the AREEDA/TURNER test, are also compatible with the dogmatic conception of Art. 7 KG to only a limited extent. For purposes of applying the law, the principal advantage of these tests is that they have sharpened the understanding of the problem of diagnosing this element of abuse. They also clearly show the boundaries of the application of *per se* rules on patterns of behavior of dominant companies. MÖSCHEL is accordingly in complete agreement "that to date, there has been no more feasible option in the area of predatory pricing than the conventional full-blown analysis in the sense of a rule of reason."[99] The Court of Justice applied such a formulation in assessing the targeted price undercutting of *AKZO* against *ECS*, basing its opinion primarily on proof of an intent to displace.[100]

[95] O.C. WILLIAMSON, Predatory Pricing: A Strategic and Welfare Analysis, 87 Yale Law Journal, 1977, 284 ff.

[96] See MÖSCHEL (FN 9), 507, who notes that this test was not applicable in the *ECS/AKZO* case decided by the Commission under Art. 86 EGV, since the market which ECS was kept from entering was not identical with the market in which the price war took place.

[97] SHEPHERD (FN 35), 1 ff.

[98] For a detailed discussion, MARTIN (FN 77), 407 ff.; MÖSCHEL (FN 9), 507 f.

[99] MÖSCHEL (FN 9), 507.

[100] See also MÖSCHEL (FN 9), 508, who emphasizes that the Commission cited the scientific literature for the first time in the *ECS/AKZO* decision.

e. Restriction of Production, Marketing or Technical Development

The element of the restriction of production, marketing or technical development contained in sec. e shows a close factual and logical connection with sec. c. As simple monopoly models clearly show, "inappropriate forcing of prices" is always connected with a restriction of output or production. If there is a desire not to use sec. e contrary to the system as a basis for actual price and quantity surveillance of monopolistic companies, or even as an actual control on innovation, it must be assumed that this element is also oriented in particular to restrictive behavior.[101] Accordingly, restrictions primarily on the production, marketing[102] or technical development of foreign companies are included.[103]

Abusive restrictions on foreign technical development based on industrial property rights would have to have a greater practical significance.[104] Basically, it must be assumed that these rights only produce the expected economic incentives if they can be used undisturbed. Accordingly, it cannot be *per se* abusive if, for example, an enterprise refuses to grant competitors a license. Companies with market power must also be allowed to acquire foreign patents and other industrial property rights. However, if this occurs exclusively for the purpose of isolating other companies from the use of new technical developments, by means of defensive patents, for example, competitors are restricted and entry into the market becomes more difficult. Accordingly, it was decided in the case of Tetra Pak under Art. 86 EGV that under the specific circumstances, the acquisition of a foreign license was abusive, since it removed the means of competing with *Tetra Pak* from other companies.[105] A more important aspect was thus the fact that this did not involve the use of the company's own technology, but rather the acquisition of foreign technology.[106]

[101] In this way, the examples listed in the Communication also present abusive patterns of behavior which fall under sec. e (Communication [FN 6], 108).

[102] Accordingly, under EC law, loyalty discounts which restrict the marketing of foreign products are subsumed under Art. 86, sec. b, which corresponds to sec. e in the Swiss antitrust law.

[103] See Communication (FN 6), 108.

[104] Communication (FN 6), 108.

[105] Court of First Instance, Slg. 1990, II–357 f. Erw. 23 f., *Tetra Pak*.

[106] See Goyder (FN 12), 368 f.

Patterns of behavior which cover a restriction on foreign technical developments and which are not directly based on industrial property rights are also subsumed under sec. e. Examples are the refusals of manufacturers of valuable goods (e.g., computers) to publish technical data (e.g., concerning interfaces) (early enough). If dependent manufacturers do not have this data, they cannot manufacture products compatible with the goods from the dominant companies.[107] An assessment of these cases by the antitrust authorities and courts on the basis of market theory has to date proven decidedly difficult under both US and EC law. For purposes of applying the law, it is thus advisable to maintain a certain reserve with respect to classifying patterns of behavior in industries with rapid technical progress as unlawful. Market development in recent years has shown in numerous businesses marked by technical progress that high market shares alone do not guarantee business success in the long run.[108]

f. Tie-In Practices

The element defined in sec. f includes not only the tied-in marketing of two or more goods or services ("acceptance of performance"), but also those cases in which additional services must be "supplied", e.g, the duty of a distributor to market an entire line of products and any additional services ("full-line forcing").

Unlawful tie-in activities thus exist when the additional service has "no reasonable relation to the basic business activity".[109] Accordingly, goods and services which can be considered a single good are not tied in. In particular, a single good is involved when there is a demand for the basic business activity and the additional service in a fixed combination or when they are consumed in a fixed combination. If various services are tied in, this can be justified primarily by the requirement of quality assurance and by safety aspects, as well as on compelling technical and economic grounds.[110] In the case of *Hilti*, a tie-in was

[107] For examples under EC law, see Goyder (FN 12), 363 f.

[108] Due to space considerations, the extent to which the example of Microsoft, much discussed in the American literature, creates an exception must remain unanswered here.

[109] Communication (FN 6), 108.

[110] Communication (FN 6), 109.

affirmed under Art. 86, sec. e when the issue of the customer's safety was not sufficient to justify the tie-in.[111]

What is behind the element of tie-in practices is the idea of stopping the transfer of market power from one market to another. Such "leverage" of market power is only possible when specific constellations of demand exist in the respective markets. In particular, there must be a relatively inelastic demand in the market for the tied-in product (service) in order for tie-in practices to pay off for a company. Once again, tie-in practices can be assessed only on the basis of the specific circumstances and the individual set of facts.

C. Summary

Along with the provisions concerning unlawful agreements and the control of mergers, controls on the behavior of dominant companies constitute the third pillar of a modern competition law. Since abusive restraint and exploitation can only be successful in the presence of specific structural conditions, only dominant enterprises are subject to controls on behavior under Art. 7 KG. Controls on restrictive practices would clearly have to be the focal point of controls on abuse, since the legal assessment of exploitative behavior rapidly leads to the control of prices and conditions contrary to the basic concept of the Swiss antitrust law. The most basic problem in controlling abuse is the dual nature of most patterns of behavior. The more successful competitors are, the more they restrict their competitors, so that the question of the dividing line between lawful restrictions and performance-based, abusive restrictions arises. For most elements of restraint, the concept of "legitimate business reasons" is used to control abuse. Under this concept, relevant competitive behavior of dominant companies is basically unlawful when other companies are restricted or when suppliers or customers are adversely affected without objectively justifiable reasons.

The identification of abusive behavior ultimately amounts to a weighing of interests with a view toward the purpose of the statute,

[111] OJ No. L65/19 of March 11, 1988 (supply of cartridge strips for bolt-firing tools tied in with the purchase of the bolts).

which itself includes no guiding framework. In view of the extremely broad formulation of the concept of abuse, the application of the law is based on a reference system which ultimately can only be offered by modern competition theory and to which reference is repeatedly made in the legislative history. An analysis of the most important EC cases concerning the elements of restraint under Art. 86 EGV, which are to a great extent functionally equivalent to the elements of restraint under the Swiss law (Art. 7 KG), reveals that modern competition theory can offer useful tools for assessment and standard hypotheses which are in no way detrimental to the rational application of the law or to the legal security of those to whom the statute is addressed.

Administrative Law Proceedings under the New Cartel Law

Ralph Malacrida

A. Introduction

The most far-reaching reform of the antitrust law involves the portion that deals with administrative law.[1] The antitrust law has its historical roots in private law; in accordance with the will of the legislature, the first Cartel Law of December 20, 1962, was intended to achieve its goals primarily by taking a private law route.[2] However, administrative (public) antitrust law has increasingly displaced private antitrust law in practical significance. The legislature's attempts to restore the value of the private law portion of the Cartel Law at the time of the 1985 amendment[3] were a failure. Even under the new Cartel Law, this trend (away from private law and toward administrative law) is likely to change little because the civil courts are largely losing their competence to decide on the lawfulness of restrictions on competition to the competition authorities (Art. 15 CL [Cartel Law]).[4] This trend is regrettable, because only through the interplay of private and administrative law can the realization of the goals of the antitrust law be guaranteed. Administrative law is concerned with the state's control of specific cases only and therefore cannot replace the private law which administers relationships among individuals.

[1] Also W.A. Stoffel, Das Schweizerische Kartellrecht: Rückblick auf die jüngste Praxis und Ausblick auf die Revisionsbemühungen [The Swiss Antitrust Law: A Look Back at the Most Recent Practice and the Outlook for the Efforts at Amendment], SZW/RSDA 1994 115.

[2] See Communication, BBl [Federal Journal] II 1961 553 ff.

[3] See Communication, BBl 1981 II 1293 ff.

[4] However, the range of Art. 15 CL is unclear in various respects.

B. Defects in the Cartel Law of December 20, 1985

1. Inefficiency of Administrative Law Proceedings

It is undisputed that the administrative law proceeding under the Cartel Law of December 20, 1985, took too long. On one hand, this was due to the facts that the Antitrust Commission was a militia and that the Secretariat of the Antitrust Commission was outfitted with a minimal work force. On the other hand, the Antitrust Commission had no ready means to implement necessary measures. In particular, the lack of competence to issue orders worked to delay proceedings: under the rules of the VwVG [Federal Administrative Procedure Act], before the Swiss Ministry of the Economy could issue an order, the Commission's entire proceeding had to be caught up.[5]

2. Inadequate Procedural Rights

In view of the rule of law, it was unsatisfactory for the procedural rights of the participants in the Antitrust Commission's investigative proceeding to lag behind the procedural rights provided for in the VwVG. In particular, the right to a hearing and the right to inspect records were not guaranteed to the same extent.

Art. 31, par. 4 CL entitled the participants to express their opinions regarding the findings of fact contained in the Antitrust Commission's report. But according to precedents from the Federal Supreme Court, there was no right to inspect records or to participate in taking evidence.[6] Thus, at the time they expressed their opinion, the participants did not know what evidence the Antitrust Commission had gathered for which questions or how it had weighed this evidence.[7]

[5] See Communication, BBl 1995 I 480 and 487.

[6] See Decisions of the Federal Supreme Court 117 Ib 487.

[7] See A. Limburg, Das Untersuchungsverfahren nach schweizerischem Kartellgesetz [The Investigatory Proceeding under the Swiss Cartel Law], Zurich Diss., Bern 1993, 224.

C. Overview of the Proceedings under the New Cartel Law

1. Competition Authorities

Under the new Cartel Law, the competition authorities consist of a Competition Commission and a Secretariat. The Competition Commission is the decision-making authority; it consists of 11–15 members (some of them working part-time). It carries out its activity via three boards, each of which has a full-time chairman. The Secretariat is the investigative authority; it deals with participants, third parties and officials basically independently. The Competition Commission's governing body is called upon simply to issue procedural orders.

2. Preliminary Investigation

The preliminary investigation is an informal proceeding conducted at the discretion of the Secretariat, on its own initiative or on the basis of a petition filed by a participant or a notice filed by a third party (Art. 26 CL). The preliminary investigation is intended to determine whether a case that requires further investigation exists. In the context of the preliminary investigation, the Secretariat may also propose a consent settlement to the participants[8] which will then require the approval of the Competition Commission.

3. Investigation

If, at the time of a preliminary investigation, the Secretariat concludes that there are sufficient indications of an unlawful restriction on competition, it opens an investigation in agreement with a member of the Competition Commission's governing body (Art. 27 CL). The Competition Commission and the Swiss Ministry of the Economy may also order the institution of an investigation, regardless of whether the Secretariat has proposed an amicable arrangement to the participants[9] or whether the Competition Commission wishes to open an investigation.

[8] See Communication, BBl 1995 I 602.
[9] See Communication, BBl 1995 I 602 f.

Notice that an investigation has been opened is given via an official publication in order to give affected third parties an opportunity to give notice of their participation in the investigation within 30 days (Art. 28 CL). Pursuant to Art. 43, par. 1 CL, persons who have been restricted from initiating or pursuing competition by the restriction on competition may participate in the investigation. In addition, professional and business associations are entitled to participate in an investigation if they meet the requirements for taking advantage of a complaint.[10] Finally, consumer organizations of national and regional significance are also entitled to give notice.[11]

In this regard, it is significant that the Secretariat may require that groups consisting of more than five participants in the proceeding, all of whom have the same interests, appoint a common representative, lest the investigation become excessively complicated (Art. 43, par. 2 CL).

4. Decision

The Secretariat concludes the investigative proceeding by filing an application with the Competition Commission. This application may request either the approval of a consent settlement or an order for specific measures. The Competition Commission then makes its decision concerning the approval or the measures to be taken via an order within the meaning of Art. 5 VwVG.

If the participants and the Secretariat arrive at a consent settlement, technically they enter into a contract administered by administrative law[12] which is subject to the approval of the Competition Commission. The issuance of an order granting the approval simply constitutes the fulfillment of a condition precedent. The basic relationship must still be qualified as a contractual agreement.

If the Competition Commission decides that a restriction on competition is unlawful, the participants may request of the Swiss Ministry

[10] The association must be authorized to safeguard the economic interests of its members in accordance with its bylaws, and the members of the association or a subassociation must themselves be authorized to participate in the investigation.

[11] Accordingly, they are authorized to take advantage of an ideal association complaint.

[12] See P. Richli, Neues Kartellgesetz und Binnenmarktgesetz [The New Cartel Law and the Internal Market Act], AJP/PJA 1995 599.

of the Economy permission by way of exception from the Executive National Council on the grounds of overwhelming public interests.

5. Judicial Relief

Under Art. 44 CL, complaints challenging orders of the Competition Commission or the Secretariat may be filed with the Appellate Commission for Competition Questions.

The decision of the Appellate Commission for Competition Questions may be appealed to the Federal Supreme Court.

5.1. Subject Matter of the Complaint

Both final orders and (pursuant to Art. 45 VwVG) procedural and other interlocutory orders that may produce irreparable harm may be the subject matter of the complaint.[13]

5.2. Authority to File a Complaint

Basically, Art. 48 VwVG states that anyone who is "affected" by the order being challenged and who can assert a (legal or factual) "worthy of protection" interest in having it set aside or modified is entitled to file a complaint. The question up to now was whether in an antitrust proceeding under administrative law, in addition to the entities to whom the order is addressed, entities outside the cartel or competitors were also entitled to file complaints as third parties. In particular, RICHLI, HOMBURGER and GRISEL concluded that outsiders as competitors are entitled to file complaints because of their special economic interest in the outcome of the proceeding. SCHÜRMANN and LIMBURG

[13] In particular, interlocutory decisions of the competition authorities concerning the impartiality of their members, the duty to provide information, to testify or to disclose, the exclusion of a participant from examining witnesses, the refusal to allow an inspection of records and the rejection of evidence which has been offered are thus subject to challenge. The institution or notice of an investigation does not constitute an interlocutory order which is subject to challenge because the notice under Art. 28, par. 3 CL legally affects only third parties. By analogous application of Art. 46, sec. f VwVG, an interlocutory order fixing a time limit for retaining representation is likewise not subject to challenge under Art. 43, par. 2 CL. See Communication, BBl 1995 I 617.

came to the opposite conclusion that third parties basically lack the authority to file complaints because administrative antitrust law does not seek to protect the interests of individual competitors (but rather seeks to protect exclusively public interests), and thus that the interests of outsiders cannot be impaired by an antitrust proceeding under administrative law.[14]

It is true that the new Cartel Law contains no explicit provision concerning the authority to file a complaint. The Communication makes it clear, however, that with respect to the authority of third parties to file complaints, Art. 43, par. 1 CL must be considered a special provision that takes precedence over Art. 48 VwVG. Accordingly, any third party that has participated in the investigation of a restriction on competition pursuant to Art. 43, par. 1 CL is entitled to file a complaint.[15] The legislature thus defined the authority to file a complaint relatively broadly, without going so far as to entitle consumers to also file complaints.[16]

D. Fact-finding and Procedural Rights

1. Basic Applicability of the VwVG

Under the Cartel Law of December 20, 1985, the preliminary investigation and the Antitrust Commission's investigative proceeding were

[14] Cf. the overview by Limburg (FN 7), 64 ff.

[15] See Communication, BBl 1995 I 617.

[16] In this connection, the question remains whether Art. 43, par. 1 CL constitutes a sufficient legal basis for excluding from an appellate proceeding third parties who have not participated in the proceeding. The requirement of a formal ground for complaint (in the sense of the need to participate in the proceeding before the lower court) is not expressly set forth in the act. In addition, the Federal Supreme Court has made it clear in a more recent decision that a formal ground for complaint is not a prerequisite for intervention (Decisions of the Federal Supreme Court 110 Ib 100). As a rule, a (preliminary) waiver of participation in a proceeding does not result in a forfeiture of judicial relief. Indeed, the new Cartel Law provides in Art. 28, par. 2 CL that third parties (as defined in detail in Art. 43, par. 1 CL) must give notice within 30 days from the publication of the notice if they wish to participate in the *investigation*. But it cannot be directly concluded that a waiver of participation in the investigation will result in the forfeiture of *judicial relief* in every case. The Communication nevertheless suggests this conclusion (see BBl 1995 I 617).

not governed by the rules of the VwVG. The participants thus did not have the minimal procedural rights the VwVG guarantees to parties in other administrative proceedings. In particular, the participants had no right to inspect records and no right to participate in examining witnesses. Conversely, the Antitrust Commission had no competence to issue an order and only a limited range of investigative measures from which to choose. In particular, it did not have the right to order searches or to seize evidence.

The reasons for this regulation were first that the goal of the proceeding before the Antitrust Commission was to achieve amicable agreements. In addition, the rights of the participants to participate were restricted to guarantee the anonymity of witnesses, because otherwise they would have been at the mercy of retaliatory measures and would hardly have been prepared to give helpful testimony due to the dependency relationships that frequently existed.

By contrast, under the new Cartel Law, unless otherwise provided by the Act (Art. 39 CL), the provisions of the VwVG basically apply to all proceedings of the competition authorities. The participants thus have full rights to participate, in particular the right to participate in examining witnesses and the right to inspect records. The competition authorities now also have the right to search for and seize evidence.

2. Fact-finding

2.1. Parties

The VwVG makes a fundamental distinction between “parties” and “third persons”. Only parties have procedural rights. In addition, parties – as opposed to third persons – cannot be called as witnesses. Art. 6 VwVG defines a “party” as any person who is authorized to file a complaint under Art. 48 VwVG. Third persons who are entitled to file complaints are thus also considered parties (and not third persons).

The new Cartel Law does not distinguish between “parties” and “third persons”. Instead, the focus is on “participants”, “affected parties”, “affected third parties” and “third parties”. This multiplicity of expressions may make it possible to differentiate the regulation of procedural rights and duties, but it results in confusion and is unsuitable for ensuring clear distinctions.

2.2. Duty to Disclose

Basically, all participants in competition agreements or business combinations and "affected third parties" have a duty to disclose information and documents. This is true regardless of whether an investigation has been instituted or whether the competition authorities are performing other duties, e.g., undertaking a preliminary investigation or just observing the conditions of competition. "Affected third parties" includes outsiders,[17] certain professional and business associations, and consumer protection organizations, but not other third persons.

The persons and organizations mentioned now have a right to refuse to disclose information according to Art. 16 VwVG and Art. 42 of the Federal Civil Procedure Act. Thus, anyone who would be exposed to direct pecuniary loss because of his testimony may refuse to disclose information. However, business secrets do not constitute a ground for refusing to testify.[18] That is why the competition authorities are obligated to keep official secrets (and accordingly not to reveal business secrets).

2.3. Investigative Measures

Pursuant to Art. 12 VwVG, the authorities must determine the facts *ex officio*. Thus, the competition authorities have available to them those types of evidence provided for in the VwVG (documents, information from parties or affected third parties, testimony from third parties, views and expert opinions). In addition, under Art. 42 CL, the authorities have the right to require those affected by the investigation to give statements, the right to order searches and the right to seize evidence.

a. Examining Witnesses and Taking Statements

The competition authorities may call "third parties" as witnesses and may require those "affected by an investigation" to give statements. It is not clear whether outsiders (who are required to disclose information as "affected third parties" under Art. 40 CL) are to be considered

[17] Outsiders are those persons who are restricted from initiating or pursuing competition by a restriction on competition (Art. 43 I, sec. a CL).

[18] See Communication, BBl 1995 I 615.

"third parties" or those "affected by the investigation" under Art. 42 CL. Outsiders, i.e., persons who are restricted in the initiation or pursuit of competition by a restriction on competition, are deemed to be participants in the proceeding under Art. 43, par. 1 CL, which gives them the status of parties under Art. 6 VwVG.[19] Under general procedural principles, as parties or participants in the proceeding, they may not be required to testify as witnesses, but rather may be required at most to give a statement.[20]

b. Searches and Seizures

For the first time, the new Cartel Law authorizes the competition authorities to search for and to seize evidence. These investigative measures have no parallel in the VwVG and might justifiably be considered a threat to economic freedom by those potentially affected. The "*dawn raids*"[21] often cited and much feared in the EC arena are thus also a danger in Switzerland. However, the prerequisites for implementing such sweeping measures are not defined in either the statute or the (currently existing) implementing ordinances. This lack of general-abstract standards for regulating coercive measures is problematic under the rule of law.

As a general rule, the economic freedom of the affected parties may be restricted only on the basis of a clear and sufficiently specific statutory basis (which must meet the public interest and preserve the principle of proportionality). Art. 42 CL is not in keeping with this requirement. In particular, it remains unclear whether the competition authorities may undertake raid-like searches or whether a request for voluntary surrender must basically precede the coercive measures. It also remains unclear whether the inspectors must always present the affected parties with a search warrant (in the sense of a procedural order) which reveals the reason and purpose for the investigation. Finally, it is questionable whether the affected parties have the possi-

[19] See Communication, BBl 1995 I 616.

[20] Outsiders are thus "affected third parties" under Art. 40 CL, "participants in the proceeding" under Art. 43 (1) CL, and "affected by the investigation" under Art. 42 CL.

[21] Which are based on Art. 14 of Council Regulation 17/62. See Charles Lister, Dawn Raids and Other Nightmares: The European Commission's Investigatory Powers in Competition Law Matters, Geo. Wash. J. Int'l L. & Econ. 24/1990, 45 ff.

bility of withdrawing from the ongoing investigation by taking advantage of a complaint filed with the Appellate Commission, or whether the deprivation of the suspensive effect of the complaint can be justified by the authorities to preserve the element of surprise. The establishment of a procedure that preserves the interests of all the participants, like the procedure of sealing in criminal procedural law, for example, would have cleared up much confusion here.

It must thus be requested that the competition authorities make conservative use of their authority to search for and to seize evidence and that they also issue a regulation setting forth the most important rules concerning searches and seizures. Such regulation is inevitable for the competition authorities in order to comply with the precept of equality under the law.

3. Procedural Rights of Participants and Third Parties

The new Cartel Law provides that the VwVG must be applied in all proceedings of the competition authorities, so that the "parties" will also enjoy all the procedural rights guaranteed by the VwVG.

Under Art. 6 VwVG in conjunction with Art. 43, par. 1 CL, parties in an antitrust proceeding under administrative law are deemed to be those to whom an order is addressed, outsiders, professional and business associations authorized to file complaints to protect the association's interests, and regional and national consumer protection organizations. Other third persons have no procedural rights.

3.1. Antithetical Objectives: Disclosure of Sources of Information and Protection of Informants

On one hand, it is desirable under the rule of law to guarantee the most comprehensive procedural rights possible to the participants in an administrative antitrust proceeding. Anyone who is accused of acting to restrict competition must have access to incriminating information in order to be able to defend himself efficiently. On the other hand, it is absolutely necessary to protect informants (as a rule, outsiders). Otherwise, in view of the threat of retaliatory measures, such informants would refuse to speak out against potential cartels and cartel-like organizations. The right to a hearing must therefore be subject to certain barriers.

3.2. Right to a Hearing and to Inspect Records

Among procedural rights, rights to participate are of central significance for the participants. Art. 18 VwVG governs the right to participate in examining witnesses, Art. 26–28 govern the right to inspect records, and Art. 29–32 govern the right to a hearing. The Federal Supreme Court's decisions concerning the right to a hearing under Art. 4 of the Federal Constitution must also be considered.

The Act contains no express provision with respect to the question of whether the participants in the proceeding are entitled to participate in oral disclosures of information (hearings) of other participants or third parties. With regard to the preliminary investigation proceeding, this question must be answered in the negative for the same reasons it was so answered with regard to the right to inspect records. However, if there are hearings in the context of the investigative proceeding, a general exclusion of the other participants in the proceeding can hardly continue to be justified, since the information disclosed in the context of hearings serves as a basis both for the decision of the competition authorities, and for the testimony of witnesses and the taking of statements.

3.3. Barriers to the Right to Participate

Since even under the new Cartel Law there is a danger that potential witnesses and informants may be uncooperative because of the fear of reprisals or that competitors may be fearful that participants will try to find out business secrets, the competition authorities will not be able to avoid restricting the procedural rights of the affected parties. To this end, the authorities rely in particular on Art. 18, par. 2 and Art. 27 VwVG, which allow them to deny participants in the proceeding an opportunity to participate in examining witnesses or to inspect records if there are essential public or private interests. These provisions must also be applied analogously for participation in oral disclosures of information. If the authorities wish to subsequently use the information they have gained, they must advise the participants in the proceeding of its essential content and give them an opportunity to respond and to designate evidence to the contrary (Art. 28 VwVG).

In this connection, SCHLUEP correctly noted that not all that much is gained with the new statutory provision as compared with the pre-

vious law.[22] In order to avoid conclusions concerning the person of the informant, the "essential content" of the information gathered may be transmitted only as a report concerning the findings of fact, which was already the rule under Art. 31, par. 4 old CL. The promised strengthening of procedural rights thus proves to be an illusion.

The new Cartel Law contains a further restriction of procedural rights in Art. 26, par. 3, under which there is generally no right to inspect records in a preliminary investigation proceeding. This restriction is based on the fact that this proceeding is of an informal nature.[23] Conversely, therefore, it must also be requested that the competition authorities not focus on information that they obtained in the preliminary proceeding and have not confirmed in the investigative proceeding when they make their decision.

E. Assessment

Antitrust administrative law has been revised, first, to organize it more efficiently, and second, to strengthen the procedural rights of the participants. The legislature has equipped the competition authorities with better offensive weapons and has tightened up the procedure so that the goal of increasing efficiency can certainly be achieved. On the other hand, the defensive weapons of the participants have become more powerful only in theory. Practically, their effect is barely greater than it was previously. In addition, it must be feared that the legislature has increased the overall potential for conflict between the competition authorities and competitors by creating somewhat unclear legal standards.

[22] See W.R. Schluep, Verfahrensrechtliche Anmerkungen zum BG über Kartelle und ähnliche Organisationen und zu dessen Weiterentwicklung [Procedural Observations Concerning the Federal Law on Cartels and Similar Organizations and on its Further Development], in: Recht und Rechtsdurchsetzung, Festschrift für Hans Ulrich Walder zum 65. Geburtstag [Law and Legal Enforcement, Publication in Honor of the 65th Birthday of Hans Ulrich Walder], Zurich 1994, 120.

[23] See BBl 1995 I 603.

Cooperation in Research and Development

Stefan Bühler and Urs Lehmann

A. Introduction*

1. Problem

Will the competition authorities permit cooperative undertakings – in particular *joint ventures* (JVs) – in the area of research and development (R&D)? The wording of the revised Cartel Law provides a clear answer: Under Art. 5 (2) and Art. 6 (1) (a) of the Cartel Law (CL), arrangements in restraint of competition are permissible in the R&D area if they are justified on *grounds of economic efficiency* and if they do not open up any opportunity for the participating companies to eliminate effective competition.[1] The legislature has left behind an understanding of competition based on the traditional "market structure – market behavior – market results"[2] chain. The dynamic concept of *"effective competition"*, which rejects structural intervention motivated by competition policy, which is in turn motivated by a drifting apart of competitive reality and reference structure ("dilemma thesis"), has taken center stage.[3]

But which economic mechanisms in the R&D area justify that collusive behavior which the competition authorities would, under the

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[1] Green Paper accompanying a federal law on cartels and other restraints of competition (Cartel Law, CL), BBl 1995 I 468 et seq., quoted from a special edition, 89 et seq. The regulations or publications intended pursuant to Art. 6 (1) CL which are to define the conditions for defense have not yet been enacted.

[2] Tirole J., The Theory of Industrial Organization, Seventh printing, London (1994), 1.

[3] Jaeger F., Wettbewerbstheoretische Fundierung des neuen schweizerischen Kartell- und Fusionsrechts, in: Schmid H., Slembeck T. (editors), Finanz- und Wirtschaftspolitik in Theorie und Praxis, Bern (1997), 441–466, 447 et seq.

traditional view, restrict? And might there be situations in which a declaration that activities are unobjectionable is even inappropriate?[4] This article will examine these questions with the help of an economic model. Traditional competition policy and legal precedents have usually declared cooperative R&D undertakings to be unobjectionable based on the presumed existence of *economies to scale*. The model used here examines an *additional* industrial economics argument to justify cooperative R&D undertakings. Investments in R&D frequently exhibit the feature of *"non-exclusion"*: Competitors may not be excluded from using and/or reproducing a research result without paying *consideration*. The legal tools for protecting industrial property rights [the Federal Patent Act (PatG), the Federal Industrial Samples and Models Act (MMG), and the Federal Act on the legal protection of topographies of semiconductor products (ToG)] cannot completely mitigate this *"free rider"* problem.[5] The existence of such "external effects" or *"spillovers"* from one company to another reduces the individual supplier's incentive to be innovative and leads to less-than-optimal investment in R&D.[6]

The economic model (see section B below) will show that cooperative undertakings can resolve the free rider problem in the R&D area. At the same time, we want to examine whether potential customers can also benefit from such cooperation (thanks to lower prices). An analysis based on the model leads us to the thesis that collusion in the R&D area cannot generally be condemned. This distinction cannot be prop-

[4] After all, the principle of effective competition prohibits market structures that would terminate competition permanently.

[5] The ability to prevent a spillover with the help of industrial property rights depends on the *scope* that the intangible property rights are awarded. In particular patent law is only able to protect the *result* of research activities but *not* the *activities* themselves (see C.2.2., FN 52 *infra*). For a comparison of the international development of intangible property rights: see Ullrich H., Lizenzkartellrecht auf dem Weg zur Mitte, in: GRUR Int. (1996) 555 et seq., 562 et seq.

[6] Ruffner M., Wettbewerbstheoretische Grundlagen der Kartellgesetzrevision, in: Zäch R., Zweifel P. (editors), Grundfragen der schweizerischen Kartellrechtsreform, St. Gallen (1995), 145–251, 189 et seq.

erly considered by a competition policy which is oriented exclusively to structural criteria.

With its orientation to the principle of effective competition, the revised Swiss Antitrust Act expands the catalog of justifications for cooperative R&D undertakings with dynamic elements. An analysis of the legal precedents (see section C below) shows that cooperative R&D undertakings are generally considered unobjectionable. In carrying out their assessment, the authorities are oriented primarily to structural criteria and less to dynamic criteria. There is thus a notable tendency to increasingly designate R&D in the high-tech area as a tool the company can use for strategic market isolation.

The dynamic view shows that cooperative R&D undertakings are not objectionable so long as effective competition dominates in the product market. It is the task of the cooperating parties to impede the encroachment of collusion into the product market. The establishment of a *concentrative JV* to house a specific research division proves to be a practical way of resolving this *diffusion problem* (see section D below).

2. Forms of Cooperation

Various forms of cooperation are possible (see section D.2.). A *JV* is a particularly intensive form of cooperation between individual enterprises which creates the best conditions for pooling the parties' research activities and making the research results *completely* accessible to the participating companies. Ideally, the participants in the JV optimize their research efforts toward a joint goal. The less extensive forms of cooperation or cartel can be distinguished on the basis of the *degree of internalization* of spillovers.[7] More simply, the rule is that the more effective a cooperative undertaking, the more a cooperating party can benefit from the investments of another. The forms of cooperation described above are designated below by the term *collusion*.[8]

[7] See Kamien M.I./Muller E./Zang I., Research Joint Ventures and R&D Cartels, in: American Economic Review, 82 (1992), 1293–1306, 1295.

[8] *Collusion* in this context does not mean the criminal procedure law terminus technicus but rather is an economic term that refers to agreements restricting competition as defined by Art. 4 (1) CL. The essential characteristic of such a collusion is that contrary to an *individual* maximization of profits of the individual suppliers the *joint*

B. Economic Model

1. Basic Structure

In this section, we analyze a slightly modified version of a model by D'Aspremont and Jacquemin (1988). A symmetrical duopoly produces a homogeneous commodity, the unit costs for which can be reduced by investments in R&D. The *price-sales function* for the commodity in question is

$$p = a - bQ, \qquad \textbf{(1)}$$

where $Q \equiv (q_i + q_j)$ corresponds to the total quantity of the homogeneous commodity produced.[9] The function for the *production costs* of company *i* is as follows (for $i, j = 1, 2$, and $i \neq j$)[10]:

$$C_i = [A - x_i - \lambda x_j]q_i, \qquad 0 \leq \lambda \leq 1 \qquad \textbf{(2)}$$

Both duopolists show production costs C_i, the amount of which is a function of the *quantity* produced q_i and the *unit costs* $[A - x_i - \lambda x_j]$. The unit costs depend, among other things, on *cost reductions* x_i and λx_j, which are the result of the company's in-house and outside R&D investments. The spillovers in R&D cause the innovative efforts of company *j* to also result in cost reductions (the extent of which is determined by parameter λ) for company *i*.

profits of the participating companies are maximized [Phlips L., Competition Policy: A Game Theoretic Perspective, Cambridge, Massachusetts (1995), 179].

[9] See D'Aspremont C./Jacquemin A., Cooperative and Noncooperative R&D in Duopoly with Spillovers, in: American Economic Review, 78 (1988), 1133–1137. $a, b > 0$ applies to the *price-sales function* (inverse demand function); i.e. the larger the total supply *Q*, the lower the resulting price *p*.

[10] In order to simplify the process, this *cost function* abstracts from *fixed costs* that were not caused by R&D investments. If the two duopolists form an *ideal* JV, $\lambda = 1$ due to the complete internalization of the spillovers and the elimination of duplication in the research area. We also presume $0 < A < a$; $x_i + \lambda x_j \leq A$ and $Q \leq a/b$ for the existence of a solution (that allows production).

Company *i* thus benefits from the R&D investments of company *j* (and vice versa). This is the most important feature of our model (if the symmetry is removed, an enterprise will benefit from another supplier's R&D even in the extreme case in which it does not make any R&D investments itself).

We also assume that both companies exhibit a *quadratic R&D cost function* $(1/2)\gamma x_i^2$, which takes into account the fact that R&D expenditures generally show decreasing marginal returns (expenditures for further cost reductions must thus continually increase). As for the basic structure of D'Aspremont and Jacquemin's model (1988): Two fully informed and rational companies invest in R&D and enter the product market as suppliers.

We now have a theoretical frame of reference within which the effects of alternative regulatory approaches can be assessed. In economic terminology, such a model is described as a *"dynamic"* or *"sequential game"*,[11] the outcome of which is generally determined by means of a special equilibrium concept referred to in the literature as a (perfect) "Nash equilibrium". This concept represents a situation in which each of the players chooses that strategy which produces the best response to the optimal strategies of the other players.[12]

2. Alternative Regulatory Approaches

To answer the question posed at the outset, we analyze four different competition policy regulatory approaches in the context of the model, as summarized in Table 1.

[11] The term *"game"* is due to the fact that the market participants in such models are not price takers and therefore must *anticipate the reactions of the other participants* when carrying out their own actions [for an introduction to economic game theory see: Gibbons R., A Primer in Game Theory, Hertfordshire (1992)].

[12] See, for example, Moreaux M., Normal Form and Nash Equilibrium, in: Laffont J.J., Moreaux M. (Ed.), Dynamics, Incomplete Information and Industrial Economics (1991), 3–25, 9.

Table 1: *Alternative Regulatory Approaches*

Regulatory Approach	Phase 1 (R&D)	Phase 2 (Product Market)	Most Important Results of the Model
"tough"	competition	competition	x^t, q^t
"soft"	collusion	collusion	x^s, q^s
"mixed"	collusion	competition	x^m, q^m
"first-best"	social planner	social planner	x^{fb}, q^{fb}

Advocates of a *"hard" competition policy* ("tough" regulatory approach) prefer a general restraint on collusion – regardless of the specific condition of the market. Guided by a structure-oriented conception of competition, according to which cooperative undertakings inevitably lead to undesired market behavior, and thus ultimately to less-than-optimal market results, they are of the view: The less cooperation, the better. Under this regulatory scheme, duopolists consistently enter both the product market and R&D as competitors.[13]

On the other hand, under a permissive competition policy ("soft" regulatory approach), there is also no intervention in the event of apparently abusive behavior on the part of the suppliers, whether because the competition authorities have inadequate tools, or because there is a general lack of awareness of the significance of a cartel-type disturbance of market regulation. In this case, it is in the interest of the suppliers to cooperate in both interactional phases.

Finally, the approach differentiated and chosen by the Swiss antitrust law ("mixed" regulatory approach) treats competitors differently in different markets: While cooperative R&D undertakings are normally permissible on grounds of economic efficiency, collusion in the product market must be avoided if it eliminates "effective competition" (Art. 5 (2)(b) CL).

From an economic standpoint, which of these competition policy strategies promises the best results? To answer this question, we need a standard for assessing the results yielded under the alternative regulatory approaches in the market model. To this end, we finally consider

[13] This situation approximately corresponds to that in a general *per-se* cartel ban without any possibility of exemption or a very restrictive interpretation of the possible defenses (see D.4.).

the theoretical maximum social welfare ("first-best" regulatory approach[14]) a well-meaning social planner, and not the market participants, would realize.

3. Results

Because some extensive calculations are necessary to derive the various game solutions (see Appendix 1), in this section we summarize the most important results and then deduce the competition policy implications from them.

The focal point is the question of the economic efficiency of the various regulatory approaches. As mentioned, we use the results of the "first-best" solution as a standard. As can be seen, both the highest R&D cost savings effects and the largest output (and thus the lowest prices) are achieved in a "first-best" world (see Table 2). But based on the postulated solution of the free rider problem, we likewise expect higher R&D investments from the regulatory approaches which are "friendly to cooperative undertakings" ("soft" and "mixed") than in the presence of competition in both markets. In analyzing the results of the model, we concentrate on the two strategic business variables 'cost reduction through R&D' x_i and 'output' q_i.[15] Table 2 gives an overview of the outcomes of the game under the alternative regulatory approaches. In equilibrium, the optimal individual strategies depend exclusively on model parameters a, A, b, γ and λ.[16]

[14] This is a purely *theoretical design* that is used exclusively to evaluate the three different regulatory approaches that are to be analyzed.

[15] In a symmetrical duopoly it is irrelevant whether the interpretation of the results is based on the aggregated market result or on the individual, optimum strategies.

[16] To keep the presentation simple, we chose not to show the *second order optimum conditions.* They ensure that maximums are in effect achieved for the indicated equilibrium. See Henriques I., Cooperative and Noncooperative R&D in Duopoly with Spillovers: Comment, in: American Economic Review, 80 (1990), 638–640 and D'Aspremont C./Jacquemin A., Cooperative and Noncooperative R&D in Duopoly with Spillovers: Erratum, in: American Economic Review, 80 (1990), 641–642 for information on the conditions for the stability of the solutions.

Table 2: *Cost Reduction Through R&D and Output in Equilibrium*

	Cost Reduction Through R&D	Output
"tough"	$x^t = \frac{(a-A)(2-\lambda)}{(9/2)b\gamma - (2-\lambda)(1+\lambda)}$	$q^t = \frac{(a-A)(9/2)\gamma}{3[(9/2)b\gamma - (2-\lambda)(1+\lambda)]}$
"soft"	$x^s = \frac{(a-A)(1+\lambda)}{4b\gamma - (1+\lambda)^2}$	$q^s = \frac{(a-A)\gamma}{4b\gamma - (1+\lambda)^2}$
"mixed"	$x^m = \frac{(a-A)(1+\lambda)}{(9/2)b\gamma - (1+\lambda)^2}$	$q^m = \frac{(a-A)(9/2)\gamma}{3[(9/2)b\gamma - (1+\lambda)^2]}$
"first-best"	$x^{fb} = \frac{(a-A)(1+\lambda)}{2b\gamma - (1+\lambda)^2}$	$q^{fb} = \frac{(a-A)\gamma}{2b\gamma - (1+\lambda)^2}$

3.1. Cost Reduction Through R&D Investments

We first consider the optimal R&D-induced cost savings of both companies for given output decisions in the second phase of the game. We are interested in which of the three regulatory approaches at issue in the model involves the greatest cost reductions, and thus the highest R&D investments. We begin by comparing a structure-oriented competition policy with the differentiated approach ("tough" vs. "mixed"). If both quotients are examined more precisely, it will be noted that with one exception, the expression for x^t agrees exactly with the expression for x^m: The difference between the two terms is simply that the expression $(1 + \lambda)$ appears in x^m in place of $(2 - \lambda)$. x^m is thus greater than x^t if the following condition is met:

$$1 + \lambda > 2 - \lambda \qquad \textbf{(3)}$$

This is always the case when $\lambda > 0.5$;[17] i.e., with sufficiently large spillover, investments in R&D are higher if the competition policy permits cooperation. Surprisingly, investments in R&D are even higher still if the competition policy also permits cartels in the product mar-

[17] By definition ($\lambda = 1$) this condition is met for an ideal JV; see FN 10. If, on the other hand, $\lambda \leq 0.4$ applies, the free-rider problem only plays a secondary role. In this case the best R&D and output results are obtained with *non*cooperative behavior [D'Aspremont/Jacquemin (FN 16)].

ket[18] ("soft"), the duopolists thus cooperate in both markets, and a monopoly can be created on a *de facto* basis: Then, since (9/2) > 4, $x^s > x^m$ must also be true. As an examination of output will show, the advantage of the monopoly – the sharpest reduction in production costs via R&D investments – is overcompensated for by the disadvantage of the lack of competition in the product market. Art. 5 (2) (b) CL (under which effective competition may not be eliminated) follows this finding.

In summary: If there are significant spillovers ($\lambda > 0.5$), the following rule applies:

$$x^s > x^m > x^t. \qquad \textbf{(4)}$$

3.2. Output

As already noted, in this model, the size of the aggregate output $Q \equiv (q_i + q_j)$ determines the price of the commodity sold. Once again, we first compare the results for the "tough" and "mixed" regulatory strategies. The argument here can be made by analogy to the case of R&D. The rule is:

$$q^m > q^t, \text{ if } 1 + \lambda > 2 - \lambda \qquad \textbf{(5)}$$

If spillovers in R&D are significant, the "mixed" competition strategy actually leads to a better result than the "tough" strategy. If the competition authorities allow collusion in R&D, there is greater output, reflected in a lower price, than would be the case if there was a restraint on collusion. Finally, one more note on the results in the case of permissive competition policy ("soft" strategy). The economic intuition that both suppliers' output is smallest (and the resulting price highest) when the suppliers create a monopoly is confirmed by the model.

[18] PHLIPS (FN 8), 175 et seq.

In short: For significant spillovers, we find that:

$$q^m > q^t > q^s. \quad \textbf{(6)}$$

3.3. Competition Policy Theses

We return now to our initial question: Will the competition authorities permit cooperative undertakings (JVs in particular) in the area of research and development? The answer under the economic model: Yes, if there are significant spillovers. The model confirms that collusion in R&D need not in any way be detrimental to social welfare. The examination even leads to the finding that the differentiated competition policy approach makes possible the highest of all outputs realizable, thus achieving the lowest possible prices (if referential "social planner" prices are excepted). The fundamentally positive evaluation of collusive behavior in the R&D area is thus also based on the thesis that an improvement in efficiency is actually achieved through such cooperation.

It can thus be concluded that structure-oriented competition policy gives too little consideration to this relevant justification for cooperative R&D undertakings. The revised CL takes this fact into account by providing for justification on grounds of economic efficiency within the meaning of Art. 5 (2) CL via the principle of effective competition.

The question arises whether the results compiled in the context of this simplified model are also correct under more general conditions. After all, *rigid assumptions* were made in the analysis (e.g., the symmetry of the suppliers, or concentrating the examination on process innovations). Indeed, there is extensive agreement in the economic literature that cooperative R&D undertakings increase both R&D investments and social welfare if there are significant spillovers.[19] Generalizations of this model are not trivial, however, and further examinations could produce altogether different results. To date, the effects of cooperative R&D undertakings on social welfare when there

[19] See PHLIPS (FN 8), 178 et seq. and literature cited therein.

are only small spillovers have not yet been subjected to extensive examination.[20]

C. Implementation in Legal Precedents[21]

Under the old Antitrust Act, the Cartel Commission issued no authoritative legal precedents for assessing cooperative R&D undertakings under the antitrust law. The revised CL has only been in effect since mid-1996; Art. 62 (2) CL first introduced new procedures concerning arrangements in restraint of competition in 1997, so that there is still no published practice from the Competition Commission.

To develop heavy-duty solutions for an objectively reasonable assessment of cooperative R&D undertakings under competition law, we fall back on a comparative legal examination of foreign legal precedents.[22] General criteria for justifying cooperative R&D under-

[20] However, see: Yi S.S., The Welfare Effects of Cooperative R&D in Oligopoly with Spillovers, in: Review of Industrial Organization, 11 (1996), 681–698, 681. Our model shows that the extent of the spillovers is of significant importance (see FN 17).

[21] All cited EC rulings can be obtained through OJ, CELEX or the Eurolex CD-ROM. The complete text of rulings with reference numbers can be obtained through the Internet under the websites http://europa.eu.int/en/comm/dg04/dg4home.htm [EC Commission] or http://www.ftc.gov [FTC] or http://www.fedworld.gov/supcourt [US Supreme Court].

[22] For the method of comparative legal examination in Swiss cartel law see KG-Ducrey/Drolshammer, introductory remarks Art. 9–11 N 31 et seq. and Art. 33 FN 49. According to the Green Paper (FN 1), 96, the standards of the Swiss abuse legislation are not to be stricter than those of the European restriction legislation; in other words, everything that is allowed under EC law, must be allowed *a fortiori* in Switzerland. This recourse to the legal position in the EC is obvious since both economic systems are based on identical principles and pose identical questions of substance; ECJ [European Court of Justice] case 14/68 *Walt Wilhelm/Bundeskartellamt* [1969] ECR 14 et seq. consid. 6–9; recently ECJ case C-332/90 *Steen* [1992] ECR 357; BGH [German Supreme Court] *Grossbacköfen*, in: EuZW (1996), 188 et seq. 190, consid. IV and V; BGH *Pauschalreisen II*, in: NJW [Neue Juristische Wochenschrift] (1993), 2445 et seq.; Brinker I., Ansätze für eine EG-konforme Auslegung des nationalen Kartellrechts, in: WuW (1996), 549 et seq., 551 et seq.; Schütz J., Der räumlich relevante Markt in der Fusionskontrolle, in: WuW (1996), 286; Zäch R., Wettbewerbsrecht der Europäischen Union. Praxis von Kommission und Gerichtshof, Bern/München (1994), 55; FIW [Forschungsinstitut für Wirtschaftsverfassung und Wettbewerb] (1994): Schwerpunkte des Kartellrechts

takings, which permit inferences under Swiss law as to their assessment under competition law and contract formation in conformity with the antitrust law (see D), are compiled by examining the practice under Art. 85 (3) of the EC Treaty (ECT), the R&D group exemption regulation[23] (R&D-Reg.) and FTC decisions. A certain restraint is shown in looking at the legal situation in the EC, especially since the antitrust law in the EC is based on a different legal concept (i.e., the principle of restriction).[24]

1. Classical Justification

Considerations concerning the R&D area are found in the legal precedents of the Commission primarily with regard to the question of whether the pooling of R&D activities contributes to the promotion of technical or economic progress, thus making it exempt under Art. 85 (3) ECT.

1992/93. Verwaltungs- und Rechtsprechungspraxis Bundesrepublik Deutschland und EG. Papers of the 21st FIW Seminar 1993, Cologne, 30 et seq.

[23] Regulation (EEC) No. 418/85, OJ 1985 L 53/5 et seq., changed in OJ 1993 L 21/8 et seq. (hereinafter R&D-Reg.). This regulation was originally due to expire at the end of 1997. The Commission, however, has extended its life until 31 December 2000 (Regulation 2236/97, OJ 1997 L 306/12). To the extent it is necessary, additional regulations are explained, especially the regulation on technology transfer (hereinafter TT-Reg.), regulation (EC) No. 240/96, OJ 1996 L 31/2 et seq. as well as the Merger Control Regulation (EEC) No. 4064/89, OJ 1990 L 257/14 et seq. (hereinafter MCR).

[24] Despite this difference in the concepts both legal systems pursue the same goal: According to the rulings of the ECJ, Art. 3 lit. g EC Treaty is dominant and stipulates that a system is to be created ensuring that competition in the internal market is not distorted: "Articles 85 and 86 seek to achieve the same aim on different levels, viz. the maintenance of effective competition within the Common Market" (ECJ in the case 6/72 *Europemballage und Continental Can* [1973] ECR 244 et seq. consid. 23 et seq., particularly consid. 25). This objective is identical to that in Art. 1 CL, see Green Paper (FN 1), 61 et seq.; Baudenbacher C., Vertikalbeschränkungen im neuen schweizerischen Kartellgesetz, in: AJP/PJA (1996), 826–833, 832 et seq.; Baudenbacher C., Zur Revision des schweizerischen Kartellgesetzes, in : AJP/PJA (1994), 1367 et seq., 1368; KG-Hoffet, Art. 1 N 62.

1.1. Efficiency Defense

Older legal precedents[25] are marked by the view that cooperative undertakings in the R&D area are permissible if they make possible joint R&D projects which a single company could not carry out alone. There must be an improvement in the situation with the cooperative undertaking as compared with an individual project.[26] The reasoning of the decisions is oriented essentially to the following effects of rationalization and an increase in efficiency (see Art. 6 (1) CL):

(i) Economies of scale;[27]

[25] Apart from *Eurogypsum* [OJ 1968 L 57/9] and *ACEC/Berliet* [OJ 1968 L 201/7], there had been no relevant rulings in the Community until 1971. The reversal of the *Henkel/Colgate* ruling [OJ 1972 L 14/14] brought a stricter assessment which regarded R&D cooperations as restrictive to the competition in innovations: *Bayer/Gist-Brocades* [OJ 1976 L 30/13 et seq.]; *United Reprocessors* [OJ 1976 L 51/7 et seq.]; *Vacuum Interrupters* [OJ 1977 L 48/32 et seq.]; *De Laval/Stork* [OJ 1977 L 215/11 et seq.; OJ 1988 L 59/32 et seq.]; *GEC/Weir* [OJ 1977 L 327/26 et seq.]; *Sopelem/Vickers* [OJ 1978 L 70/47 et seq.]; *Beecham/Parke, Davis* [OJ 1979 L 70/11 et seq.]. See US rulings: *FTC* v. *Procter & Gamble*, 386 U.S. 568, 580 (1967), *United States* v. *Philadelphia Nat'l Bank*, 374 U.S. 321, 370–371 (1963); *Brown Shoe* v. *United States*, 370 U.S. 294, 344 (1962); *Continental T.V., Inc.* v. *GTE Sylvania*, 433 U.S. 36 (1977); *Marathon Oil Co.* v. *Mobil Corp.*, 669 F. 2d 378, 380, 382 (6th Cir. 1981), cert. denied, 455 U.S. 982 (1982); *National Collegiate Athletic Association (NCAA)* v. *Board of Regents of the University of Oklahoma*, 468 U.S. 85, 104 S.Ct. 2948 (1984); *Northwest Wholesale Stationers, Inc. v. Pacific Stationary & Printing Co.*, 472 U.S. 284 (1985); Fuchs A., Kartellrechtliche Grenzen der Forschungskooperation, Eine vergleichende Untersuchung nach US-amerikanischem, europäischem und deutschem Recht, Baden-Baden (1989), 162 et seq.; Areeda P., Antitrust Analysis. Problems, Text, Cases, Boston/Toronto (1981), ¶ 126, 404; Roberts G.L./Salop S.C., Efficiencies in Dynamic Merger Analysis. A Summary, World Competition June (1996), 5–17, 5; Axster O., Forschungskooperation und Wettbewerbsbeschränkung, in: GRUR (1980), 343–350, 345 et seq.

[26] *Optical Fibres* [OJ 1986 L 236/38 consid. 59]; *Carbon Gas Technologie* [OJ 1983 L 376/20 consid. B/1 par. 3]; *Vacuum Interrupters* [FN 25], 37 consid. 19; *Bayer/Gist-Brocades* [FN 25], 19 consid. 3/1 par. 2, 3. Terse determination by the Commission in *BP/Kellogg* [OJ 1985 L 369/8 consid. 15 lit. c)]; see Zäch (FN 22), 115 FN 272; Fuchs (FN 25), 195 FN 9.

[27] *Economies of scale* describe the circumstance that the (average) production costs of a product decrease with the number of pieces produced [Tirole (FN 2), 16 FN 4]. *Olivetti/Canon* [OJ 1988 L 52/60 consid. 54 lit. a)]: "Up-to-date technologies, however, require large investments in research and development. The expansion of production in the EEC […] enables the parties to spread the costs of these investments over a larger number of products"; *BBC Brown Boveri* [OJ 1988 L 301/72 consid. 23; WWB (1989), 69 sub-paragraph 64]; *Enichem/ICI* [OJ 1988 L 50/24 consid.

(ii) Economies of scope;[28]

35]; *ENI/Montedison* [OJ 1987 L 5/19 consid. 30]; *BPCL/ICI* [OJ 1984 L 212/8 consid. 35]; *Carbon Gas Technologie* [FN 26], 20 consid. B/1 par. 2; *VW/MAN* [OJ 1983 L 376/14 consid. 26]; *Rockwell/Iveco* [OJ 1983 L 224/25 consid. 8 par. 2]; *Beecham/Parke, Davis* [FN 25]; 18 consid. 37; *Centraal Stikstof Verkoopkantoor* [OJ 1978 L 212/32 consid. 90 et seq.]; *Jaz/Peter II* [OJ 1978 L 61/19 consid. 6 lit. a) par. 1]; *Sopelem/Vickers* [FN 25], 51 consid. III/1 par. 3; *Vacuum Interrupters* [FN 25], 37 consid. 19; *De Laval/Stork* [FN 25], 17 consid. 10 par. 4 and [FN 25 (1988)], 34 consid. 4; *United Reprocessors* [FN 25], 11 consid. III/1 lit. a) par. 1; *Rank/Sopelem* [OJ 1975 L 29/24 consid. III/1]; *ACEC/Berliet* [FN 25], 9 consid. III/1 par. 1; *Drehbänke* [WuW/E BKartA 692]; *Kali II* [WuW/E BKartA 698 et seq.]; *Bleiweiss* [WuW/E BKartA 672]; FUCHS (FN 25), 195, 275. Also see *Synthetic fibres* [OJ 1984 L 207/22 consid. 35 (however, in this case the emphasis was on a specialization process)]: Cooperation "will help the parties achieve optimum plant size and improve their technical efficiency". MACHUNSKY J., Forschungskooperation im Recht der Wettbewerbsbeschränkungen, Göttingen (1985), 99 with references; ZIEGLER J., Die Zulässigkeit der Forschungskooperation im Kartellrecht der EG und der USA. Eine Untersuchung unter besonderer Berücksichtigung der Gruppenfreistellungsverordnung für Forschung und Entwicklung und des National Cooperative Research Act, Diss. Hamburg (1991), 7.

[28] With *economies of scope*, there are common external factors for different product lines: The production of product A reduces the production costs for product B [TIROLE (FN 2), 16 FN 4]. *Mercedes Benz/Kässbohrer* [OJ 1995 L 211/13 consid. 66]; *Ford/Volkswagen* [OJ 1993 L 20/17 consid. 25]; *Asahi/Saint-Gobain* [OJ 1994 L 354/92 consid. 25]; *Fiat/Hitachi* [OJ 1993 L 20/12 consid. 25]; *VIAG/EB Brühl* [OJ 1991 C 333/1 consid. 18]; *Carbon Gas Technologie* [FN 26], 20 consid. B/1 par. 3; *Rockwell/Iveco* [FN 27], 25 consid. 8 par. 3; *Beecham/Parke, Davis* [FN 25], 18 consid. 37; *GEC/Weir* [FN 25], 3 consid. III/1 lit. a); *ACEC/Berliet* [FN 25], 9 consid. III/1 par. 1; Swiss decisions on merger control: *Tagesanzeiger/Berner Zeitung*, VKKP 1a/ 1992, 28 et seq.; *COOP/KVZ*, VKKP 1a/1992, 29; *Feldschlösschen/SIBRA*, VKKP 1a/1992, 31; *Zürich Versicherungen/La Genevoise*, VKKP 1a/1992, 32; *Curti Medien AG*; VKKP 1b/1989, 27; *Anoval/Landis & Gyr*, VKKP 1b/1989, 28; *Rentenanstalt/La Suisse*, VKKP 1b/1989, 32; *Winterthur/Neuenburger*, VKKP 1b/1989, 33; *Lousonna/Payot*, VKKP 1/1988, 24; *Tagesanzeiger/Conzett & Huber*, VKKP 1/1988, 27. In its new approach with regard to merger control the EC Commission considers synergy effects to be negative, see rulings *Tetra Pak/Alfa Laval* [OJ 1991 L 290/35]; *AT&T/NCR* [WuW 1991, 434 sub-paragraph 23 et seq.]; *Aérospatiale-Alenia/de Havilland* [OJ 1991 L 334/51 et seq. sub-paragraphs 32 et seq.]; *Metallgesellschaft/Feldmühle* [WuW 1992, 445 sub-paragraph 23; WuW 1992, 34]; *Mannesmann/VDO* [WuW 1992, 671 sub-paragraph 28]; *Matsushita/MCA* [WuW 1991, 357 et seq. sub-paragraph 11]; see SCHMIDT I., Wettbewerbspolitik und Kartellrecht, Eine Einführung, 3rd edition, Stuttgart/New York (1990), 95 et seq.; FUCHS (FN 25), 195; ULLRICH (FN 5), 561.

(iii) Minimization of costs[29] *and risk*[30]*;*

(iv) Avoidance of parallel research[31]*;*

(v) Advantages of specialization[32]*;*

[29] *Philips/Osram* [OJ 1994 L 378/37 consid. 25]; *Alcatel/Espace/ANT* [OJ 1990 L 32/24 consid. 18 par. 3]; *Olivetti/Canon* [FN 27], 60 consid. 54 lit. a) par. 3; *VW/MAN* [FN 27], 14 consid. 27; *Sopelem/Vickers* [FN 25], 51 consid. III/1 par. 3; also *costs* of r*estructuring* in structural crisis cartels: *Enichem/ICI* [FN 27], 22 consid. 25, 32 and 37; *ENI/Montedison* [FN 27], 18 consid. 31; *BPCL/ICI* [FN 27], 8 consid. 34; *Synthetic fibres* [FN 27], 22 et seq. consid. 28 and 36. However, cost savings alone do not constitute the decisive factor: *Carbon Gas Technologie* [FN 26], 20 consid. B/1 par. 3; *Bayer/Gist-Brocades* [FN 25], 19 consid. III/1 par. 2; *Henkel/Colgate* [FN 25], 16; Ziegler (FN 27), 64; Fuchs (FN 25), 196; Bunte H.J./Sauter H., EG-Gruppenfreistellungsverordnungen. Commentary, Munich (1988), 447 N 4.

[30] EC Commission ruling re: *Beecham/Parke, Davis* [FN 25], 17 et seq. consid. 37; "By reason of these specific properties of the product [sc. complex, pharmacological substance], the necessary investigations and tests are unusually long and costly […]. The risks and costs involved to the parties individually are considerably reduced"; see *Alcatel/Espace/ANT* [FN 29], 25 consid. 18: "The equipment covered by the agreement is technically very sophisticated. Its development is extremely costly and requires a high degree of skill. The efforts and risks involved, if they could be supported independently by the parties, would most certainly not lead to results as rapid, efficient and economic as those envisaged". Critical comments in: Meyer D., Forschungs- und Entwicklungskooperationen. Zur Entscheidungspraxis nationaler und europäischer Kartellbehörden, in: WuW (1993), 193–205, 203.

[31] *Pasteur/Mérieux-Merck* [OJ 1994 L 309/17 consid. 82]; *Alcatel/Espace/ANT* [FN 29], 24 consid. 18 par. 5; *Centraal Stikstof Verkoopkantoor* [FN 27], 34 consid. 102; *Sopelem/Langen* [OJ 1972 L 13/49]; *Jaz/Peter I* [OJ 1969 L 195/9 consid. 12]; BKartA [German Federal Cartel Authority]: *Drehbänke* [FN 27], 692; *Kali II* [FN 27], 698; Axster (FN 25), 348. Mere cost savings due to the elimination of parallel research are not sufficient: *Carbon Gas Technologie* [FN 26], 20 consid. B/1 par. 3; Möschel W., Die EG-Gruppenfreistellungsverordnung für Forschungs- und Entwicklungsgemeinschaften, in: RIW 31 (1985), 261–265, 263; Fuchs (FN 25), 196 et seq., 198; Ziegler (FN 27), 64.

[32] *Enichem/ICI* [FN 27], 24 consid. 37; *ENI/Montedison* [FN 27], 16 consid. 22 subparagraph i) and pp. 18 consid. 29 et seq.; *BPCL/ICI* [FN 27], 8 consid. 35; *Synthetic fibres* [FN 27], 22 consid. 35; *Sopelem/Vickers* [FN 25], 51 consid. III/1 par. 2; *Rank/Sopelem* [FN 27], 24 consid. III/1. The most extensive advantages can be anticipated when all participants make supplementary, technological contributions. *Carbon Gas Technologie* [FN 26], 20 consid. B/1 par. 3; *Rockwell/Iveco* [FN 27], 25 consid. 8 par. 3; *Beecham/Parke, Davis* [FN 25], 18 consid. 37; *GEC/Weir* [FN 25], 33 consid. III/1 lit. a); *Bayer/Gist-Brocades* [FN 25], 19 consid. III/1 par. 2 and par. 3; *ACEC/Berliet* [FN 25], 9 consid. III/1 par. 1 and par. 3; also see the Specialization Reg. [OJ 1972 L 292/23]; Fuchs (FN 25), 195, 197, 285 et

(vi) Product improvements[33].

The legal precedents have also considered *process innovations*[34]. Reference is made in isolated cases to the possibility of *bundling information*[35], easier introduction of a new technology[36] or opening up a new market[37].

These arguments in the legal precedents are aimed essentially at the question of minimum efficient scale of operation[38]. However, this

seq. [with regard to § 5a GWB [Act Against Restraints of Competition]]; ZIEGLER (FN 27), 63.

[33] *Pilkington-Techint/SIV* [OJ 1994 L 158/34 consid. 42]; *Exxon/Shell* [OJ 1994 L 144/31 consid. 67]; *KSB/Goulds/Lowara/ITT* [OJ 1991 L 19/33 consid. 26]; *Alcatel/Espace/ANT* [FN 29], 19 consid. 18 par. 3 (product differentiation); *Sopelem/Vickers* [FN 25], 51 consid. III/3; *Jaz/Peter II* [FN 27], 19 consid. 6 lit. a) par. 3; *United Reprocessors* [FN 25], 11 consid. III/1 lit. b); in the area of environmental protection: *BBC Brown Boveri* [FN 27], 72 consid. 23 par. 2; *Ford/Volkswagen* [FN 28], 17 consid. 26.

[34] See *BP/Kellogg* [FN 26], 6 consid. 6: BP had developed a converter but was unable to use it commercially in any processes. "BP have no experience in the design, construction or commercial exploitation of designs for such a progress". See BKartA in: *Bleiweiss* [FN 27], 671 et seq. and *Drehbänke* [FN 27], 692; FUCHS (FN 25), 277; MEYER (FN 30), 198.

[35] See similar cases *NUOVO CEGAM* [OJ 1984 L 99/34 consid. 19] and *Bayrische Motorenwerke AG* [OJ 1975 L 29/7 consid. 24].

[36] *Fujitsu AMD Semiconductor* [OJ 1994 L 341/73 consid. 41]; *Olivetti/Digital* [OJ 1994 L 309/27 consid. 20 lit. a) and p. 29 et seq. consid. 30]; *CEKACAN* [OJ 1990 L 299/69 consid. 44]; *Olivetti/Canon* [FN 27], 60 consid. 54 lit. b); *Continental/Michelin* [OJ 1988 L 305/40 consid. 25; WWB (1989), 69 sub-paragraph. 65]; *Optical Fibres* [FN 26], 38 consid. 59; FUCHS (FN 25), 195.

[37] In individual cases R&D cooperations are necessary in order to gain entry to the markets in the first place. In the *BT/MCI* ruling British Telecom as the European provider was only able to enter the American telecommunications market after it entered into a R&D cooperation with MCI [OJ 1994 L 223/50 consid. 51]; see *VW/MAN* [FN 27], 14 consid. 27; *Rockwell/Iveco* [FN 27], 25 consid. 8 par. 1; *De Laval-Stork* [FN 25], 17 consid. 10 par. 2; [FN 25 (1988)], 34 consid. 4]; BUNTE/SAUTER (FN 29), 462 N 31.

[38] FUCHS (FN 25), 196 FN 14; MACHUNSKY (FN 27), 68 et seq. with references; SCHMIDT (FN 28), 81 et seq. with reference to SCHUMPETER, GALBRAITH, KAPLAN, LILIENTHAL, SALIN, VILLARD as well as the two Neo-Schumpeter Hypotheses according to which (NSH I) absolute minimum efficient *scale* of operation and R&D activity correlate positively and according to which (NSH II) relative enterprise *concentration* and R&D activities correlate positively: *De Laval/Stork* [FN 25], 17 consid. 10 par. 3; *United Reprocessors* [FN 25], 11 consid. III/1 lit. d); Avoiding structural excess capacity: *Stichting Baksteen* [OJ 1994 L 131/19 consid. 18 et seq.]; *Enichem/ICI* [FN 27], 18 consid. 25 and 32; *ENI/Montedison* [FN 27],

can only be defined for given cost functions. Variable cost functions (e.g., changing due to successful R&D investments) can hardly be adequately considered with this approach. Dynamic models, in which changes in the cost function are declared endogenous, explicitly incorporate this problem. The model used (section B, above) is only a first step in this direction: Both suppliers can affect their cost functions via R&D investments, which means that they reach their decisions on the basis of behavior which is presumed to maximize profits. Thus, this model still cannot illustrate changes in the type of cost function, but the parameters of a given cost function, and thus also the optimal size of the enterprise, are nevertheless made endogenous.

With this backdrop, the older legal precedents can be conceptually described as having a rather static orientation. For example, they do not adequately take into account the fact that cooperative R&D undertakings may also have social welfare-promoting effects when (as illustrated in the economic model) no economies of scope can be realized.

1.2. "Precompetitive Stage" Approach

With regard to the "precompetitive stage", reference is implicitly made in the competition law literature[39] to economic models which (like the model used) work with spillovers in the R&D area. This doctrine indicates that there is also sufficient latitude for autonomous business action in the market when a product has been, in part, jointly developed. This view was also advocated in *obiter dicta* in individual decisions[40]. Individual authors, referring to the dynamic character of com-

18 consid. 27 and 30 et seq.; *Bayer/BP Chemicals* [OJ 1988 L 150/35 consid. 27]; *Synthetic fibres* [FN 27], 22 consid. 28 et seq., esp. 35.

[39] Hollmann H.H., Strategische Allianzen – Unternehmens- und wettbewerbspolitische Aspekte, in: WuW (1992), 293–305, 303; Klaue S., Strategische Allianzen zwischen Wettbewerbern. Einige Bemerkungen zu einem modernen wirtschaftlichen Problem, in: BB 46 (1991), 1573–1578, 1575.

[40] *Shell/Montecatini* [OJ 1994 L 332/48 passim., esp. p. 62 consid. 85]; *Pasteur/Mérieux-Merck* [FN 31], 13 consid. 56 and p. 14 consid. 64; *Du Pont/ICI* [OJ 1992 L 7/22 consid. 47] *Vacuum Interrupters* [FN 25], 1; *Bayer/Gist-Brocades* [FN 25], 17 consid. II/3 lit. a); *Henkel/Colgate* [FN 25], 14; *Superphosphat* [WuW/E BKartA 439].

petition, reject this approach and base their assessment on a pure structure-oriented approach[41].

In assessing cooperative R&D undertakings under competition law, the EC Commission[42] – unlike the FTC – simply focuses on their indirect effects on the product market affected by the R&D[43]. Differentiation by different markets (innovation and technology market) does not suggest itself, so long as the existing interdependencies between R&D and the product market are regularly included in the considerations.

2. Recent Development

Further, the legal precedents primarily consider classical efficiency arguments as justification for cooperative R&D undertakings. More recently, of course, the authorities have had a notable tendency to eval-

[41] "Combined with a free market entry, only autonomous, noncoordinated activity of the market partners guarantees the incentives and at the same time the compulsion for innovations in order to obtain a temporary competitive advantage over current and potential competitors", MEYER (FN 30), 203 [translated]; see also KLAUE (FN 39), 1574. In our model this attitude is best presented by our "tough" regulatory approach. In his criticism MEYER (FN 30), 204 also points out a possible *encumbrance* on the part of the competitors. A certain discrimination *potential* is inherent in all non-competition clauses. This potential must not be *used* for eliminating effective competition (Art. 5 (2) (b) and subsequent C.2.2.). See RUFFNER's reservation (FN 6), 190 et seq., that points out that R&D cooperations must not be abused as a vehicle for camouflaging price cartels, for disciplining cartel members or for increasing barriers that prevent others from entering the market.

[42] *Sopelem/Vickers* [FN 25], 50 consid. II/2 lit. c); *Vacuum Interrupters* [FN 25], 36 consid. 16; *Bayer/Gist-Brocades* [FN 25], 17 consid. II/3 lit. a). The opposite is true for *Beecham/Parke, Davis* [FN 25], 15 consid. 25 in which competition in R&D is called the "engine of the pharmaceutical industry".

[43] Art. 3 (2) R&D-Reg.; in the US the innovation market is considered to be an independent "area of effective competition", sect. 3 NCRA (1993; see 107 stat. 117, 15 U.S.C. 4301–4306); FUCHS (FN 25), 119 et seq., 172 et seq., 292 et seq.; AXSTER (FN 25), 344, 346 consid. III/1; ULLRICH (FN 5), 561 FN 82; critical: ZIEGLER (FN 27), 19; ULLRICH H., Kooperative Forschung und Kartellrecht. Eine Kritik der Wettbewerbsaufsicht über FuE-Gemeinschaften in den USA, der EWG und der Bundesrepublik Deutschland, Heidelberg (1988), 39; TEMPLE-LANG, European Antitrust Law – Innovation Markets and High Technology Industries, Fordham Corporate Law Institute, 10/17/96, http://europa.eu.int/en/comm/dg04/speech/six/en/sp96054.htm, page 7.

uate cooperative undertakings in the R&D area more strictly. This new orientation is visible primarily in the modern high-tech area.

2.1. Long-Term Forecasting

One of the most significant problems in applying the law is that the effects of R&D activities on the future development of markets cannot be adequately and concretely assessed and that an anticipatory evaluation of research projects and their results is fraught with great uncertainties[44]. This problem shows up clearly in forecasting market development in distinct future markets like telecommunications, information technology, biotechnology and gene technology, and in the development of new materials, i.e., in technologies in which knowledge and technical progress play a key role[45]. A reliable forecast would require knowledge of all relevant information with regard to the conditions of competition and their development in not-yet-existing future product markets, and thus remains (to some extent) speculative[46]. The focal point of the official view is therefore generally a weighting of the relative probabilities of realizing various development scenarios. This view is necessarily based on the subjective valuations and indices yielded by an analysis of current market conditions and structures.

This forecasting problem is accentuated by the fact that in practice, there is a tendency to use a long-term forecasting horizon as a basis for consideration under competition law[47]. In the FTC's Novartis decision,

[44] Borer J., Kooperationen und strategische Allianzen, in: AJP/PJA (1996), 876–882, 878; *Eurotunnel* [OJ 1994 L 354/71 consid. 88].

[45] *Iridium* [OJ 1997 L 16/92 consid. 32]; *Pasteur/Mérieux-Merck* [FN 31], 14 consid. 64; *KNP/BT/VRG* [OJ 1993 L 217/35 consid. 26]; for particularities of high tech markets see Temple-Lang (FN 43), 3–10.

[46] *Pasteur/Mérieux-Merck* [FN 31], 14 consid. 64; *Vacuum Interrupters* [FN 25], 36 consid. 15 where the Commission did not consider the parties to be research competitors but rather primarily as future competitors in a product market that had yet to be established; Fuchs (FN 25), 172; critical: Meyer (FN 30), 197 et seq.

[47] Art. 11 (1)(f) Swiss-MCR presumes a horizon of three years. However, the practice that was studied refers to *mergers* in which R&D activities as a rule are assessed more stringently because, after the merger is completed (contrary to cooperations), it is hardly possible to carry out a deconcentration due to practical reasons.

for example, a time frame of 12 years was included in the assessment[48]:

> "Entry into the gene therapy market can extend up to 12 years […] adding that, given the combination of the Ciba and Sandoz patent portfolios, it is extremely unlikely that any other firm would be able to enter the market to replace competition lost through the merger. While there are other firms capable of competing in the research and development of gene therapy products […] they lack the intellectual property rights for commercialization that this merger would put exclusively in the hands of the merged firm".[49]

This legal precedent is problematic in that it implicitly assumes that the competition authorities can anticipate market development over a very long time horizon. In practice, such an assumption frequently proves to be far from reality, especially since the market participants are necessarily better informed than the state authorities as to the specifics of the market and their own R&D, production and marketing conditions[50].

2.2. Potential Competition

Potential competition based on the simplified assumption of a homogeneous duopoly is not discussed in the context of the economic model used here. In a market with more than two suppliers, however, the problem of cooperative R&D is relative, because the collusive behavior of the cooperating parties is exposed to potential competition so long as they do not succeed in completely isolating the product mar-

[48] NZZ No. 295 dated December 18, 1996, p. 23; the latest FTC practice follows the same course: complaint docket No. C-3685 *Lockheed Martin Corporation*, 9/19/96, consid. 34: "entry into the market for the research, development [...] is difficult, unlikely and would not occur in a timely manner to deter or counteract the adverse competitive effects [...] because of [...] the time and expense required to establish manufacturing facilities, develop the technology needed to produce these products and establish a reputation for high quality products among customers in these areas" (consid. 33–35); complaint docket No. C-3723 *Boeing*, 3/5/97, consid. 22–25; complaint docket No. C-3681 *Raytheon*, 9/3/96, consid. 12.

[49] FTC file no. 961 0055 dated 12/17/96; http://www.ftc.gov./opa/9612/ciba.htm.

[50] Information economy studies this problem from a point of view of "incentive tolerant regulation", see Laffont J.J./Tirole J., A Theory of Incentives in Procurement and Regulation, Second printing, Cambridge, Massachusetts (1994).

ket. If a cooperative undertaking in R&D can produce such market isolation, it comes within the purview of Art. 5 (2) (b) CL, under which the cooperative undertaking may not open up any possibility for the participating companies to eliminate effective competition; as a result, the cooperative R&D is impermissible. Conversely, it must be true that the more heavily exposed cooperative R&D undertakings are to potential competition, the more they can be justified on grounds of economic efficiency. Among other things, this potential competition depends on the possibility of third parties also benefiting from the R&D innovations of the cooperating parties (e.g., through imitation)[51]. Consequently, the extent of potential competition is defined primarily with respect to the scope of industrial property rights: First, with respect to the scope of the power to defend, and second, with respect to the reservation concerning the (antitrust) abuse of industrial property laws ("misuse doctrine"[52]).

[51] In the *X/Open Group* ruling the Commission writes that it is the R&D cooperation that allows third parties to enter the market: "As a result of this, open industry standard [Common Application Environment for Unix Software] application programs may be developed by independent software houses, and possibly by the members, which might not otherwise have been developed because, in the absence of the agreement, the markets to be addressed would not have offered sufficient commercial prospects to make it worthwhile to begin the design work. It is the professed aim of the Group to make available as widely and quickly as possible the results of the cooperation" (*X/Open Group* [OJ 1987 L 35/41 consid. 43]).

[52] For "*misuse doctrine"* see: *Lasercomb America Inc. v. Reynolds*, 911 2nd 970 (4th Cir. 1990) = GRUR Int. (1991), 233; *Eastman Kodak v. Image Technical Services, Inc.*, 112 S.Ct. 2072 (1992) = GRUR Int. (1995), 86. The doctrine does not offer a final clarification as to what extent the "misuse-doctrine" – which was developed in the framework of the exercise of patent rights – is the exclusive problem of the intangible property right or whether it also has relevant implications that pertain to cartel law: the ECJ apparently tends to be of the opinion that the misuse of intangible property rights is relevant to cartel law although the significant ruling "Magill" is unclear with regard to exactly this point (ECJ case C-241 and 242/91P *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd. (ITP)* v. *the European Community Commission* ECR [1995] I 743 et seq., 823 et seq. consid. 50 et seq. (*"Magill"*); also see *Shell/Montecatini* [FN 40], 62 et seq. consid. 88–91]; Temple-Lang (FN 43), 13. Also see the practice of the similar problem of parallel import: ECJ cases C-267/95 and C-268/95 *Merck & Co. Inc.* v. *Primecrown*, [1997] CMLR 83 et seq.; commented by Korah V., Merck v. Primecrown, The exhaustion of Patents by Sale in a Member State where Monopoly Profit could not be Earned, [1997] ECLR 265 et seq.; ECJ case C-191/90 *Generics (UK) Ltd./Smith Kline and French Lab Ltd*, [1992] ECR I 5335; BGE [Decision of the Supreme Court of

This narrowing of potential competition reflects the conviction expressed in Art. 5 (2) (b) CL that markets must be contestable in order to preserve their ability to function. The principle of effective competition is strongly oriented in this respect to the model of "contestable markets" by BAUMOL (1982)[53].

3. No Diffusion of Collusion into the Product Market

The economic model shows that one of the principal problems of the dynamic approach is that collusive behavior in R&D should not be allowed to be diffused into the product market and marketing. Thus, the "black list" set forth in Art. 6 (c)–(f) of the R&D-Reg. provides that the regulation is not applicable if the contracting parties wish to control quantity, price or the geographic or personal division of the product market by agreeing to or coordinating patterns of behavior. This regulation corresponds to the definition of "hard" cartels set forth in Art. 5 (3) (a)–(c) CL. If the cooperating parties enter into arrangements in restraint of competition which carry cooperative R&D into production and sales markets, they risk coming within the purview of Art. 5 (3) CL. In this case, the statute presumes the elimination of effective competition, so that both the cooperative R&D and the questionable arrangement in restraint of competition are impermissible (Art. 5 (2) (b), in conjunction with Art. 5 (1) CL). From a comparative law standpoint, it must be noted that the EC and US authorities quickly assume such "black clauses." These authorities may thus intervene if there was an informal agreement to market products by restricting resale prices or through tie-in transactions in downstream, partly dependent markets[54]. In contrast to the legal situation in the EC, due to

Switzerland] dated 10/23/96 (4C.97/1996) in the matter of *Chanel/EPA* (not yet published); also see: BAUDENBACHER C./JOLLER G., Federal court allows parallel imports, SZW 1997, 91; ULLRICH (FN 5), 563.

[53] BAUMOL W.J., Contestable Markets: An Uprising in the Theory of Industry Structure, in: American Economic Review, Vol. 72 (1982), 1–15. Also see GREEN PAPER (FN 1), 39; JAEGER (FN 3), 451.

[54] *Alcatel/Espace/ANT* [FN 29], 24 consid. 17: "In fact, the cooperation between the parties is not limited to R&D and exploitation of the results, but extends to the marketing of the products. […] This implies, inter alia, that the agreement falls within the scope of Article 6 (d) of that Regulation." US practice: *Monsanto Co. v. Spray Rite Service Corp.*, 456 U.S. 752 (1984); *Eastman Kodak Co. v. Image Technical*

Swiss constitutional law, the existence of a black clause in Switzerland has as a consequence not the nullification of the entire arrangement, but rather only the partial nullification of the black clause (Art. 20 of the Federal Law of Obligations [CO]).

In practice, it cannot be ruled out that the parties to the cooperative R&D undertaking will exchange information which is relevant under antitrust law, which is not related to the project, and which may fall under Art. 5 (3) CL[55]. If necessary, this exchange of information may be used as an indicator that the cooperating parties are also striving for collusion in the product market[56]. As an aid in assessing the antitrust relevance of an exchange of information, it is notable that the exchange of statistical data[57] or feedback[58] is generally unobjectionable from an antitrust standpoint.

D. Checklist for Contract Drafting

In drafting agreements in the R&D area, the following procedure, or checklist, is recommended (see illustration in Appendix 2): There must first be a verification as to whether the CL is actually applicable. If it

Services, Inc. (FN 52), 86; *Jefferson Parish Hospital District No. 2 v. Hide* 466 U.S. 2, 14 et seq. (1984).

55 Information may be exchanged due to personnel or the transparency of the respective markets (narrow oligopoly): *Optical Fibres* [FN 26], 36 consid. 48; *GEC/Weir* [FN 25], 32 consid. II/2 lit. e).

56 Phlips (FN 8), 82. The delimitation between (permissible) parallel behavior and (impermissible) concerted practice is very delicate. In the final analysis this above all is a procedural problem of providing proof, cf. in this regard especially ECJ case 48/69 *ICI* v. *Commission (Dyestuffs)* [1972] ECR 619 et seq. consid. 69 et seq. and ECJ case C-89/85 etc. *A Ahlström Oy and Others v. Commission (Woodpulp II)* [1993] ECR I-1307 at consid. 63 et seq.

57 *Welded steel mesh* [OJ 1989 L 260/35 consid. 161 (structural crisis cartel)]; *Fatty Acids* [OJ 1987 L 3/22 consid. 35 par. 1]; *White Lead* [OJ 1979 L 21/21 consid. 26 et seq.]; Fuchs (FN 25), 200; see Meier-Schatz C.J., Horizontale Wettbewerbsbeschränkungen, in: AJP/PJA (1996), 811–825, 821 FN 92.

58 E.g. experience on the introduction of a R&D result to the market (resonance of demand, possible notices of defects etc.): *Shell/Montecatini* [FN 40], 59 consid. 65/iv; *Sopelem/Vickers* [FN 25], 51 consid. III/1 par. 1; see Art. 4 (1)(g) R&D-Reg; Machunsky (FN 27), 88 et seq.; Bunte/Sauter (FN 29), 463 N 32; Wiedemann G., Kommentar zu den Gruppenfreistellungsverordnungen des EWG-Kartellrechts, Vol. I, Cologne (1989), 245 N 38 et seq.

is, it must be further determined whether there is a relevant arrangement in restraint of competition and whether such an arrangement is justified on grounds of economic efficiency, thus making it permissible. If necessary, the question of market dominance must be reviewed. The individual steps are explained below.

1. Applicability of the Cartel Law (Art. 2 et seq. CL)

The scope of application of the CL is defined as follows: (i) personally: The parties are undertakings within the meaning of Art. 2 (1) CL; (ii) geographically: The factual situation has effects within the meaning of Art. 2 (2) CL in Switzerland; (iii) substantively: The reservations defined in Art. 3 CL are not relevant. If all of these prerequisites are met, the CL is applicable.

The reservations set forth in Art. 3 CL are problematic. Provisions which do not permit competition in the R&D area are relevant in the following significant antitrust respects: (i) The state intervenes in the organization of R&D in individual sectors, e.g., in nuclear energy, via public-law regulation (Art. 3 (1) CL), and (ii) The state itself appears as an R&D actor by carrying out R&D via a public enterprise (e.g., a university hospital) or by guiding public resources into individual R&D sectors via state research programs. While the special legal regulation set forth in (i) does not come within the purview of the CL, state activities within the meaning of (ii) do fall within the scope of the CL.[59]

A further essential reservation in connection with R&D is set forth in Art. 3 (2) CL, under which competitive effects resulting exclusively from legislation respecting intellectual property do not fall under the CL[60]. Discriminatory use of industrial property laws may come within the purview of the antitrust law ("misuse doctrine").

[59] Bunte/Sauter (FN 29), 450 N 9; Wiedemann (FN 58), 197 N 9; cf. Art. 232 (2) and Art. 90(2) ECT.

[60] The rulings of the ECJ differentiate between the *existence* and the *exercise* of intellectual property rights. Their specific subject-matter is exempted. Fundamental: ECJ case 102/77 *Hoffmann-La Roche/ Centrafarm* [1978] ECR 1164 consid. 6; ECJ case 158/86 *Warner Brothers Inc. and Metronome Video ApS* v. *Erik Viuff Christiansen* [1988] ECR 2605; ECJ case 402/85 *Basset G.* v. *Société des auteurs, compositeurs et éditeurs de musique (SACEM)* [1987] ECR 1747; ECJ case 19/84 *Pharmon BV* v. *Hoechst AG* [1985] ECR 2281; also see the "Magill" ruling (FN 52).

2. Agreement in Restraint of Competition (Art. 4 (1) CL)

Under Art. 4 (1) CL, the legal form in which cooperation is cloaked generally plays no role[61]. In particular, the following types of cooperation are possible[62]: (i) joint implementation; (ii) joint venture; (iii) individual division between the parties, based on specialization[63]; (iv) joint placement of contracts with third parties.

Three instances of cooperation which are unobjectionable under antitrust law may be distinguished because they do not affect competition[64]: (i) Cooperative undertakings by companies which are neither current nor potential competitors, i.e., which act in substantively different markets (Art. 5 (1) CL *e contrario*). (ii) Cooperative undertakings which make it possible for a newcomer to enter the market. (iii) Cooperative undertakings in basic research, if its use for marketable products is not foreseeable. These are upstream from the market behavior of the cooperating parties to the extent competitive behavior which is relevant under antitrust law cannot generally be sufficiently identified.

[61] Borer (FN 44), 878; Ziegler (FN 27), 72; Gleiss/Hirsch, Kommentar zum EG-Kartellrecht, vol. I, Art. 85 und Gruppenfreistellungsverordnungen, 4th ed. Heidelberg (1993), Art. 85 (1) N 455; Schürmann L./Schluep W.R., KG + PüG, Zurich (1988), 196 et seq.; Schluep W.R., Privatrechtliche Probleme der Unternehmenskonzentration und -kooperation, ZSR NF 92 (1973) II 153 et seq., 506 et seq.; Homburger E., Kommentar zum schweizerischen Kartellgesetz, Zurich, (1990), Art. 2 N 1 et seq.; KG-Schmidhauser, Art. 4 N 32 et seq.

[62] Art. 1 par. 3 R&D-Reg., Meier-Schatz (FN 57), 823; Bunte/Sauter (FN 29), 451 N 10 et seq.

[63] Non-exclusive cross licenses free of fees for industrial property rights; common patents; return or repurchase of patents; interconnection of patent licenses; information on know-how (Art. 2 (d) R&D-Reg.) etc.: it is possible that one cooperation partner is responsible for the production: *KSB/Goulds/Lowara/ITT* [FN 33], 31 consid. 22 par. 2 and 3.

[64] *Pasteur/Mérieux-Merck* [FN 31], 3 consid. 10; *Konsortium ECR 900* [OJ 1990 L 228/33 consid. 2 par. 1]; *Elopak/Metal Box* [OJ 1990 L 209/18 consid. 21 lit. b), consid. 24 and p. 19, consid. 25 par. 3)]; *Mitchell Cotts/Sofiltra* [OJ 1987 L 41/31 consid. 19]; *Optical Fibres* [FN 26], 36 consid. 46; *De Laval/Stork* [FN 25], 15 et seq. consid. II/4–8; (1988), 33 consid. 3; *Wild/Leitz* [OJ 1972 L 61/28 consid. II par. 5]; *ACEC/Berliet* [FN 25], 8 consid. II/1 par. 1; Schluep (FN 61), 507 et seq.; Ullrich (FN 5), 561 FN 84; Phlips (FN 8), 88; Schürmann/Schluep (FN 61), 209 et seq.; Axster (FN 25), 348 et seq.; critical: Fuchs (FN 25), 170 et seq.

3. Relevance (Art. 5 (1) CL)

Art. 5 (1) CL requires that an arrangement in restraint of competition have a "relevant" detrimental effect on the relevant market. This provision corresponds to Art. 6 (1) of the old CL. The legal precedents have developed various criteria in this respect[65]. The controlling standard is the intensity of the detrimental affect[66]. This threshold of relevance is significant primarily for SMU [Small and Medium sized Undertakings]. In contrast to the EC, the Swiss legislature has declined to specifically rewrite this threshold criterion[67].

4. Justification on Grounds of Economic Efficiency

The assessment of the question of whether a cooperative R&D undertaking is justified is guided by Art. 5 and Art. 6 CL. Analysis of the legal precedents has shown that the practice of justification on grounds of economic efficiency generally falls back on the criteria of economies of scale and/or economies of scope. In the future, these will

[65] Result criteria of *quantitative* (BGE 101 II 147; 91 II 313 et seq.) and *qualitative* order (BGE 99 II 228 et seq.; 99 II 513 et seq.; VKK 1980, 218 et seq.), *type* criteria (96 I 302), the criterion of the remaining *leeway for action* (BGE 112 II 276 f.; 99 II 232; 98 II 374; 94 II 337). For the significance of *substitute goods* see: BGE 98 II 375 et seq.; VKK 1986, 83 et seq.; VKK 1973, 89; VKK 1967, 329; VKK 1967, 325 et seq.; Green Paper (FN 1),87 et seq.; Schürmann/Schluep (FN 61), 338 et seq.

[66] BGE 112 II 276; Green Paper (FN 1), 88; Meier-Schatz (FN 57), 817.

[67] In the EC the criterion of "appreciability" (de-minimis-rule) pursuant to Art. 85 (1) EC Treaty is elaborated in the so-called notice on Minor Agreements (OJ 1986 C 231/2, revised by OJ 1994 C 368/20; new draft: KOM (96) 722 final; for the EEA see [1996] 5 CMLR 751; the Commission has published a notice explaining its intentions about amending the notice, see OJ 1997 C 29/3) as well as Art. 3 (2) R&D-Reg.: A market share of 5 % or at least 300 m ECU total sales of the participating enterprises as well as exceeding the 20 % market share barrier in the relevant product market is necessary. Baudenbacher (FN 24 [1994]), 1373; Meier-Schatz (FN 57), 817 are advocates of these clear limitations. For the practice in the EC see: Zäch (FN 22), 70 et seq. Also see the Council's decision dated 11/27/95 with regard to small and medium sized underakings (SMU) and technological innovation (OJ 1995 C 341/3). Medium-sized untertakings are defined in an annex to the Commission's recommendation concerning the definition of small and medium-sized undertakings of 3 April 1996 (OJ 1996 L 107/4). In the United States the decisive market share is 20 % ("safety zone", "safety harbor"); Ullrich (FN 5), 561 FN 87.

also be central to the antitrust assessment of cooperative R&D undertakings (despite inherently inadequate consideration of the market dynamic and its effects on market structure), especially because they are relatively simple to handle. However, if these criteria are handled too restrictively, there is a risk that cooperative R&D undertakings which increase efficiency will be designated as impermissible if they cannot be justified on the basis of these criteria. Models which consider ideal-type external effects (as shown at the outset) complement the classical assessment to the extent they provide additional possibilities for justifying cooperative undertakings. Cooperative R&D undertakings are generally permissible, regardless of structural arguments, when the cooperating parties do not eliminate effective competition in product markets.

4.1. Necessary Clauses (Art. 5 (2) (a) CL)

European law, in Art. 4 et seq. of the R&D-Reg., provides for "white" clauses which are unobjectionable under antitrust law because they are necessary to promote the desired goal of promoting research or disseminating technical or professional knowledge (Art. 5 (2) (a) CL). These are primarily clauses which make the results of the cooperating parties' joint R&D freely accessible. Other permissible restraints on competition include the obligation to maintain secrecy[68] and to provide complete information[69], as well as most favored treatment[70]. As already explained, in view of the conceptual differences in constitutional law, clauses which are unobjectionable under EC law are a fortiori also permissible in Switzerland.

"Black" clauses ("no-no's"), in particular informal tie-in arrangements for products or industrial property rights, restrictions on the utilization of license rights, exclusive commitments of a license or

[68] Art. 5 (1) (b) and (a) R&D-Reg; *KSB/Goulds/Lowara/ITT* [FN 33], 31 consid. 18; *Continental/Michelin* [FN 36], 38 consid. 17; *MAN/Saviem* [OJ 1972 L 31/34 consid. 27 par. 4].

[69] Art. 5 (1) (a) R&D-Reg.; BUNTE/SAUTER (FN 29), 462 et seq.

[70] Art. 2 (1) sub-paragraph 10 TT-Reg.; *Rank/Sopelem* [FN 27], 21 consid. 2/B/b; *ACEC/Berliet* [FN 25], 9 consid. II/2 par. 2.

absolute license grant-backs, are not necessary and are thus impermissible in the EC (and most probably in Switzerland as well).[71]

4.2. Tools to Impede Diffusion into the Product Market

Possibilities for impeding the unwanted diffusion of collusive behavior in the R&D area into the product market are set forth below. In order to optimize R&D investments as extensively as possible, these approaches are also intended to immunize the participating companies against a premature erosion of revenue due to first move advantages.

a. Industrial Property Law Tools

Diffusion may first be impeded by use of industrial property law tools to combat the imitation of industrial property rights and the unfair acquisition of know-how. In doing so, it must be kept in mind that industrial property laws may only be used to safeguard first move advantages. The use of industrial property laws comes up against the limits of antitrust law when it is misused to exclude potential competitors from the market (foreclosure effects). In the Novartis decision, the Commission held:

> "Commission's investigations in the R&D area focused on developments in the field of gene technology and gene therapy in which the parties have a particular strength. […] The two companies [sc. Ciba und Sandoz] could, as a result of holdings in U.S. companies, have *exclusive access to a combination of possible future patents* in the area of particular gene therapies for brain and other tumours *which might result in foreclosure effects*".[72]

[71] Art. 6 R&D-Reg.; *Quantel/Continuum* [OJ 1992 L 235/16 consid. 49]; ULLRICH (FN 5), 559 and 557 FN 34 as well as the restrictions of production and sales (subsequently sub-paragraph 4).

[72] Cited from Competition Policy Newsletter, Summer 1996, p. 31 (the authors highlighted relevant passages); excerpts published in TEMPLE/LANG (FN 43), 30 et seq.; the quite complex *foreclosure* problem is still being discussed in economic theory: "Though market foreclosure is a 'hot' issue among those concerned with antitrust proceedings and with regulation, economists still have a very incomplete understanding of its motivations and effects. Nor can they always successfully explain why a particular tool is employed to achieve foreclosure" [TIROLE (FN 2), 193]; ULLRICH (FN 5), 537 Fn 30 and p. 564; also see, for example, *Crown Cork & Seal/CarnaudMetalbox* [OJ 1996 L 75/47 consid. 61].

R&D partners also may not restrict their freedom with respect to the individual utilization of industrial property rights when they enter into agreements with each other. This is particularly true with respect to the application for and maintenance, extension and defense of industrial property rights against third parties or with respect to licensing to third parties[73].

b. Joint Ventures

Both the diffusion of the cooperation into the product market and the transfer of information, which in practice is difficult to qualify under antitrust law, but which is important, can be most effectively stopped by legal means by separating the R&D project involving the cooperative undertaking into a legally and economically independent, fully functioning JV. According to the common definition, such a JV must perform all the functions of an autonomous economic entity on a lasting basis.[74]

The current R&D results of the respective cooperating parties may be brought into such an R&D JV as a contribution in kind. Nevertheless, in practice, the valuation of this contribution in kind (Art. 628 CO) and the search for a suitable auditor (Art. 635a CO) cause significant difficulties.[75] Under company law the parties participate in the JV via a reciprocal cross-holding. There are various possibilities for recouping the contribution.

[73] Art. 6 (a), (b) R&D-Reg. e contrario as well as Art. 6 (g) version dated 12/23/92 [OJ 1993 L 21/10, Art. 2 sub-paragraph 5]; *KSB/Goulds/Lowara/ITT* [FN 33], 33 consid. 22; *Rank/Sopelem* [FN 27], 22 consid. 4; *MAN/Saviem* [FN 68], 33 consid. 26; *Henkel/Colgate* [FN 25], 15 et seq. consid. II. Licenses to third parties may not be excluded even if the JV is to receive exclusive licenses: *Continental/Michelin* [FN 36], 38 consid. 15; *Beecham/Parke, Davis* [FN 25], 19 consid. 42 par. 2; BUNTE/SAUTER (FN 29), 445 N 2.

[74] Art. 2 (1) Swiss MCR; sub-paragraph 12 of the Commission's notice on the distinction between concentrative and co-operative joint ventures [OJ 1994 C 385/2, subsequently notice 94/C 385/01]; DRAUZ G./SCHROEDER D., Praxis der europäischen Fusionskontrolle, 3rd ed., Cologne (1995), 50 et seq.; WATTER R./ LEHMANN U., Die Kontrolle von Unternehmenszusammenschlüssen im neuen Kartellgesetz, in: AJP/PJA (1996), 855–875, 863 FN 64.

[75] For the problem of non-cash capital contributions in JVs see: WATTER R., Die Problematik der Einbringung im Joint Venture, in: Kooperations- und Joint Venture Verträge (ed. Meier-Schatz), Bern 1994, 63 et seq. passim.

The tax situation is complex and, among other things, must be precisely clarified based on the domicile of the participating companies. Depending on the circumstances, there may be tax advantages. The following arrangements are possible: First, with respect to sharing in profits which may be distributed as dividends (holding privilege, holding deduction). In addition, there is the possibility of participating in the economic success of the JV via license fees or management fees for the R&D results contributed; they are unobjectionable so long as there is no hidden distribution of profits within the meaning of Art. 678 CO. The taxing authorities are nevertheless restrictive.

If possible, the JV should be arranged to be concentrative. In particular, a JV is deemed to be prima facie concentrative when both parent companies withdraw from the usual product market which forms the focus of the R&D efforts, and both R&D and the utilization of its results, and thus production and marketing in particular, are transferred to the JV.[76]

From an antitrust standpoint, the concentrative arrangement of the JV offers the following advantages: First, a concentrative JV may benefit from the merger privilege of merger control with its high threshold values and no longer falls under Art. 5 CL as a concentration. If the Competition Commission nevertheless concludes in the introductory proceeding under Art. 32 (1) CL that the JV in question is not concentrative, but is rather cooperative, and therefore does not qualify the JV as a concentration, but rather issues an order proclaiming a lack of jurisdiction, a JV so arranged may nevertheless provide protection from the grasp of Art. 5 CL. The diffusion of collusive behavior in the product market is impeded (because the parent companies have withdrawn from the product market), which is necessary to ensure effective competition and which serves as a prerequisite for justifying the

[76] Sub-paragraph 15 of notice 94/C 385/01 (FN 74). This full transfer is necessary to create a concentrative JV since a JV is not full-function if it only takes over one specific function within the parent companies' business activities without access to the markets, cf. sup-paragraph 14 of notice 94/C 385/01; Drauz/Schroeder (FN 74), 57 et seq. A concentrative JV closest corresponds to the ideal type of the economic model since the spillovers are internalized to a large extent and $\lambda = 1$ applies approximately (ref. FN 10). In this case (contrary to the economic model that is used) it must not be a duopoly since a merger would most likely not be permitted in this case.

cooperative undertaking on grounds of economic efficiency under Art. 5 (2)(b) CL.

c. Ancillary Restraints

When a concentrative JV is established, "ancillary restraints" which will establish the concentrative arrangement of the JV are generally entered into both via contract and via the company's articles. Of particular note is a restraint on competition for the parent companies in the JV's R&D program area to ensure against withdrawal from the relevant product market. All the cooperating parties have an interest here because one party's failure to withdraw from the relevant market, in violation of the agreement, may result in the loss of the merger privilege.[77]

As a further ancillary agreement, the parent companies may also enter into contractually restrictive shareholder agreements with each other which will establish the business strategy for the JV. Such restrictive shareholder agreements are problematic when the behavior of the parent companies must be coordinated via the joint subsidiary.

4.3. No Elimination of Independent R&D (Art. 5 (2)(b) CL)

The participating companies define the limits of a specific project with the cooperative R&D undertaking. Under EC law, the cooperating parties may not relinquish their freedom to conduct independent R&D outside the scope of this program. Relations with third parties must be maintained.

Competition in research may not be precluded.[78] There is a corresponding legal situation in Switzerland in Art. 5 (2)(b) CL. If the par-

[77] Art. 4 (1)(a) and (b) R&D-Reg.; sub-paragraph 3/1/a et seq. of the Commission's publication on collateral agreements for mergers pursuant to MCR [OJ 1990 C 203/5/6 et seq.]; WIEDEMANN (FN 58), 236 N 7.

[78] Art. 6(a) R&D-Reg. as well as Art. 4(a) and (b) R&D-Reg. *e contrario*. A (contractual or actual) renunciation of independent parallel research or a renunciation with third parties is objectionable from a competitive point of view: consid. (2), (4) and Art. 6(a) R&D-Reg. and OJ 1968 C 75/3 or OJ 1968 C 84/14; *Alcatel/Espace/ANT* [FN 29], 23 consid. 14 sub-paragraph 1; *Continental/Michelin* [FN 36], 37 consid. 13 par. 2; *Olivetti/Canon* [FN 27], 58 consid. 42 par. 3; *Beecham/Parke, Davis* [FN 25], 16 consid. 29 et seq.; *Sopelem/Vickers* [FN 25], 50 consid. II/2 lit. a); *Bayer/Gist-Brocades* [FN 25], 17 consid. II/2 lit. a); *GEC/Weir*

ties wish to withdraw from the research, a concentrative JV must be established.[79]

4.4. Impermissible Informal Marketing Arrangements (Art. 5 (3) CL)

The economic model demonstrates that cooperative R&D undertakings may produce positive effects so long as effective competition dominates the product market. What is critical in this respect is that the R&D partners do not enter into any impermissible agreement with respect to utilizing the R&D results.[80] In particular, the following agreements, which affect central parameters of competition, are impermissible:

(a) Price;

(b) Quantity;

[FN 25], 33 consid. III/1 lit. b) and p. 27 consid. II/2 lit. d); *ACEC/Berliet* [FN 25], 9 consid. III/1 par. 1 and par. 3; *Lasercomb America Inc. v. Reynolds* (FN 52), 233. Not relevant is how independent R&D is excluded: *BP/Kellogg* [FN 26], 8 consid. 15 lit. a); *VW/MAN* [FN 27], 13 consid. 17–22; *Carbon Gas Technologie* [FN 26], 18 et seq. consid. II/1; Meier-Schatz (FN 57), 823; Gleiss/Hirsch (FN 61), Art. 85 (1) N 451 et seq.; Bunte/Sauter (FN 29), 466 et seq. N 40; Axster (FN 25), 344.

[79] Notice 94/C 385/01 (FN 74), sub-paragraph 18 par. 1 and 2. Taking the possibility of a spillover preceding, subsequent or adjacent markets into account, the Commission assesses whether the cooperation partners effectively withdraw from the research market and transfer their activity to the concentrative JV; *Newspaper Publishing* [WuW 1995, 82 consid. 10]; *ABB/Renault Automation* [WuW 1994, 648; IV/M.409 consid. 9 et seq.]; *RWE/Mannesmann* [WuW 1995, 74 consid. 9]; *McCormick/CPC/Rabobank/Ostmann* [WuW 1994, 1053 consid. 23]; *Philips/Thomson/Sagem* [WuW 1993, 393; IV/M.293 consid. 17–19]; *Rhône Poulenc Chimie/Sita* [WuW 1993, 37; IV/M.266 consid. 18]; *Elf Atochem/Rohm and Haas* [WuW 1993, 783 consid. 11]; *Ericsson/Ascom* [WuW 1993, 776 f consid. 16–19].

[80] *Quantel/Continuum* [FN 71], 16 consid. 48; *Alcatel/Espace/ANT* [FN 29], 24 consid. 17 par. 2; *VW/MAN* [FN 27], 13 consid. 17; *Italian Cast Glass* [OJ 1980 L 383/24 consid. 2 par. 2]; *Roled zinc products and zinc alloys* [OJ 1982 L 362/49 consid. III/C and IV/3]; *Sopelem/Vickers* [FN 25], 50 consid. II/2/c; *GEC/Weir* [FN 25], 35 consid. IV/2; **Klaue** (FN 39), 1576; Servatius H.G., Koordination internationaler strategischer Allianzen, in: Backhaus/Piltz (edts.), Strategische Allianzen, Frankfurt a.M. (1990), 60 et seq.; Täger C., Technologie- und wettbewerbspolitische Wirkungen von Forschungs- und Entwicklungskooperationen – Eine empirische Darstellung und Analyse, Abschlussbericht, Munich (1988) 16 and 98 et seq.; Meyer (FN 30), 204.

(c) Dividing the market by territories or business partners (absolute territorial protection).

Under Art. 5 (3) (a)–(c) CL, the elimination of effective competition is *per se* presumed when these informal arrangements exist.[81]

E. Summary and Results

This article examines an additional argument for justifying cooperative R&D undertakings (internalization of spillovers in R&D). An economic model shows that cooperative R&D undertakings may be justified on grounds of economic efficiency (regardless of market structure) if effective competition is not eliminated in the product markets. Nevertheless, a prerequisite is that collusive behavior in the R&D area not diffuse into the relevant product market.

The examination shows that, as in the past, the legal precedents for assessing cooperative R&D undertakings are based on the classical efficiency defense, and thus primarily on a static understanding of competition. In addition, the competition authorities have shown a notable tendency to base the assessment of cooperative R&D undertakings on a long-term forecasting horizon. With this narrow interpretation, cooperative undertakings which promote efficiency may be designated as impermissible.

The cooperating parties have various tools available to them to impede diffusion. The industrial property law offers various possibilities in this respect. With respect to supplemental possibilities for justification, the establishment of a concentrative joint venture is recommended.

[81] Green Paper (FN 1), 97 et seq.; Art. 6 (c)–(e) R&D-Reg., proviso remains Art. 4 (1) (f) R&D-Reg.; see *Quantel/Continuum* [FN 71], 16 consid. 49 and 53 par. 2; Meier-Schatz (FN 57), 821, 823. The objective market division with regard to products is not covered by Art. 5 (3) (c) CL since specialization can result in positive effects. The vertical division of areas is permissible per se: *Continental TV Inc. v. GTE Sylvania Inc.* (FN 25), 36; Kirchhoff, Die kartellrechtliche Beurteilung vertikaler Vertriebsverträge, Cologne (1990), 84 et seq.

Appendix 1

Sequential models like this duopoly game are solved in accordance with the principle of "backward induction".[82] This process ensures that a market participant *i* will be able to choose his optimal strategy (given the optimal strategies of the respective players) in each phase of the game. In our case, this means that in a first step (given the R&D-induced cost reduction in the first period), the optimal quantity supplied in the second period must be established for each of the two duopolists.[83] In the second step (taking into consideration the results for the second period), the optimal cost savings in the first period are determined.

In the case of the "tough" regulatory approach, this procedure for arriving at a solution operates as follows (the solutions for the other policy approaches can be similarly calculated):

Step 1:

Both duopolists establish their individual quantity supplied for maximum profit $q_i\,(x_i, x_j)$ for given cost reductions x_i and x_j. This yields the maximization problem

$$\underset{q_i}{\text{Max}}\ \pi_i = [a - bQ]q_i - [A - x_i - \lambda x_j]q_i - \gamma\frac{x_i^2}{2}\,, \qquad \textbf{(A1)}$$

which can be solved as follows: $\partial\pi_i/\partial q_i \equiv 0$ is determined to obtain the "reaction function"[84]

$$q_i = \frac{a - A - bq_j + x_i + \lambda x_j}{2b}\,. \qquad \textbf{(A2)}$$

[82] Provided the game that is to be analyzed has a last period from which the backward induction can proceed. Games with an infinite horizon require different solution processes [see, for example, TIROLE (FN 2), 430 et seq. for the solution of the infinite "Rubinstein" game].

[83] Hereby you must take into consideration that player *i* knows that opponent *j* must solve an equivalent maximization problem and that in turn *j* knows that player *i* knows that player *j* knows that ... etc.

[84] This *reaction function* determines the optimum answer of a supplier in response to the other supplier (for established x_i and x_j).

q_i now replaces q_j in (A2) (the suppliers are presumably symmetrical), thus yielding a Nash equilibrium

$$q_i = \frac{(a - A) + (2 - \lambda)x_i + (2\lambda - 1)x_j}{3b}, \qquad \textbf{(A3)}$$

which is still dependent only on the model parameters and the optimal R&D-induced cost reductions x_i and x_j from the first period.

Step 2:

The Nash outputs $q_i(x_i, x_j)$ resulting in (A3) can now be used to calculate the optimal R&D cost reductions x_i and x_j for the first period. To this end, q_i is again used in (A1) to obtain, after several transformations, a modified maximization problem in which neither q_i nor q_j appears:[85]

$$\underset{x_i}{\text{Max}}\ \tilde{\pi} = \frac{1}{9b}[(a - A) + (2 - \lambda)x_j]2 - \gamma\frac{x_i^2}{2}. \qquad \textbf{(A4)}$$

Now you proceed as in step 1: The *reaction function* $\partial\tilde{\pi}_i/\partial x_i \equiv 0$,[86] is calculated and then is solved in accordance with the Nash Equilibrium for R&D cost reductions. Following the "tough" regulatory approach, the final result for the optimum R&D cost reduction is

$$x^t = \frac{(a - A)(2 - \lambda)}{(9/2)b\gamma - (2 - \lambda)(1 + \lambda)}. \qquad \textbf{(A5)}$$

Now it is possible to calculate q^t by inserting value x^t *for* $x_i = x_j$ in (A3). The result is

$$q^t = \frac{(a - A) + (1 + \lambda)x^t}{3b} = \frac{(a - A)(9/2)\gamma}{3[(9/2)b\gamma - (2 - \lambda)(1 + \lambda)]}. \qquad \textbf{(A6)}$$

This means the market price is

$$p^t = a - 2bq^t. \qquad \textbf{(A7)}$$

[85] Due to the symmetry of the suppliers the following applies: $Q = 2q_i$.

[86] The following is obtained for the reaction function:

$$x_i = \frac{(a - A)(2 - \lambda) + (2\lambda - 1)(2 - \lambda)x_j}{(9/2)b\gamma - (2 - \lambda)^2}$$

A note with regard to the calculation of the solution for regulatory approach "*mixed*": In this case the duopolists collude in the R&D phase. This is why they are not maximizing the individual but rather the *common* profit ($\tilde{\pi}_i + \tilde{\pi}_j$). This simplifies the calculation to the extent that it is possible to insert $x_i = x_j \equiv x$ in (A4) and to obtain x^m directly via $\partial\tilde{\pi}_i/\partial x \equiv 0$ (see table 2). Then x^t in (A6) is substituted with x^m in order to determine q^m.

The "*first-best*" solution maximizes the social welfare $W(Q)$ that we define as the sum of the consumers' surplus and the producers' surplus (for $x_i = x_j \equiv x$, and $q_i + q_j \equiv Q$):

$$W(Q) = 1/2(a - p)Q + (a - bQ)Q - AQ + (1 + \lambda)xQ - \gamma x^2. \quad \textbf{(A8)}$$

By solving $\delta W(Q)/\delta Q \equiv 0$ for Q, inserting again in $W(Q)$ and differentiating for x, the result is x^{fb}[87]. The following is obtained (see table 2):

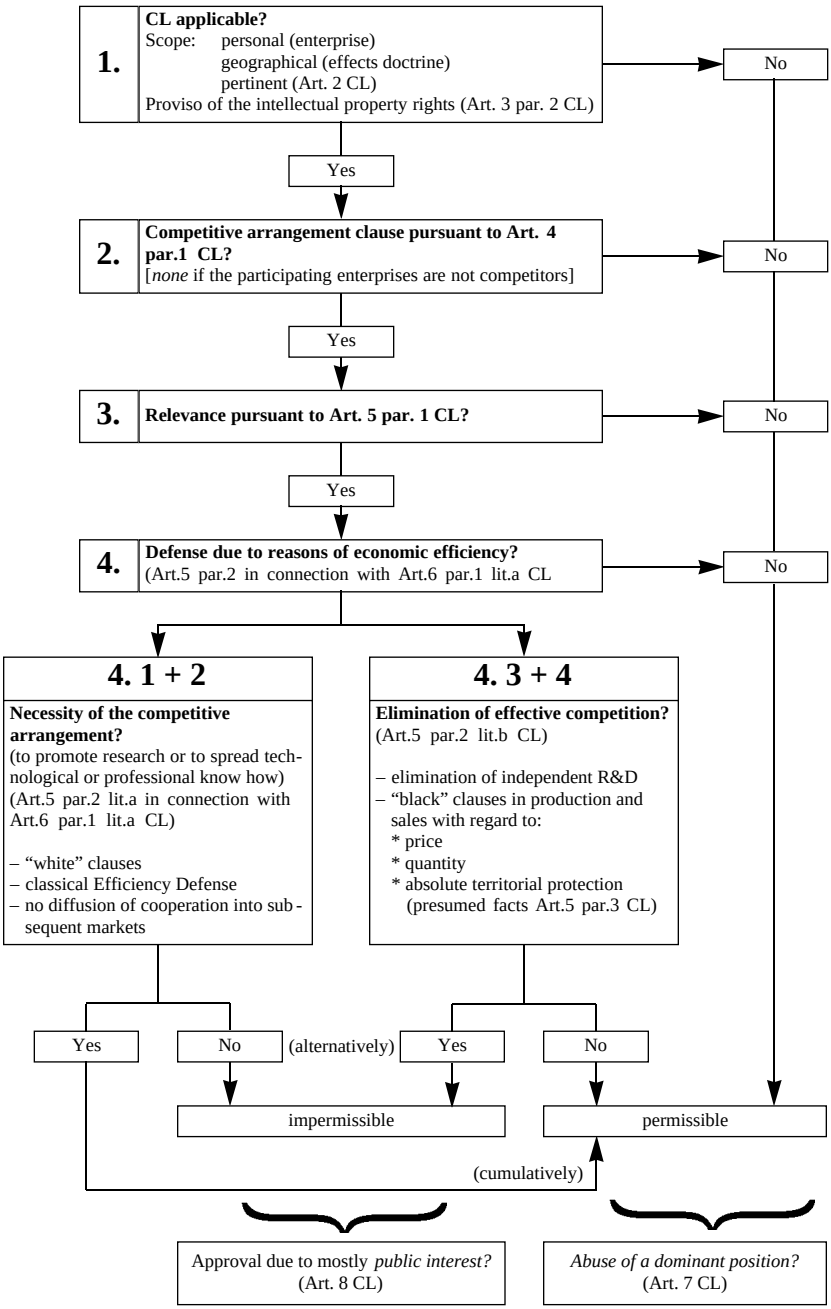
$$x^{fb} = \frac{(a - A)(1 + \lambda)}{2b\gamma - (1 + \lambda)^2} \quad \textbf{(A9)}$$

Now q^{fb} is calculated by inserting x^{fb} into the term for Q (and by dividing the result by two). This means that for q^{fb} the following is obtained (see table 2):

$$q^{fb} = \frac{(a - A)\gamma}{2b\gamma - (1 + \lambda)^2} \quad \textbf{(A10)}$$

[87] The result for Q then is: $Q = \frac{(a - A) + (1 + \gamma)x}{b}$

Appendix 2: R&D Cooperation Checklist



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