

ARTICLE 82 REBATES: FOUR COMMON FALLACIES

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A. INTRODUCTION

The Commission is currently considering a review of its policy on the application of Article 82 EC and has recently published a staff discussion paper setting out a more economics-based line that should stimulate increased discussion of Article 82 rebate schemes.¹

In light of the ongoing discussion on rebates and the almost complete lack of economic literature,² the aim of this paper is twofold. First, it presents a basic framework for calculating the potential foreclosure in a simple individualised rebate scheme. Secondly, four common fallacies presented in the literature on rebates and competition cases are discussed.³ Before discussing the four fallacies, I introduce some general remarks about demand in section C. The first fallacy, which revolves around off-equilibrium assumptions that result in an incorrect assessment of rebate schemes, is discussed in section D. Section E discusses the role that *ex post* evidence should play in the analysis of rebate schemes. Section F

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¹ The staff discussion paper was made available on 19 December 2005 and can be found at http://ec.europa.eu/comm/competition/antitrust/others/article_82_review.html. See also the Report “An Economic Approach to Article 82” of the Economic Advisory Group on Competition Policy (EAGCP) that can be found on the same page.

² “While courts have grappled with the potential exclusionary effects of loyalty rebates, the economics literature until recently has lagged behind somewhat in examining loyalty rebates as a competitive strategy. Thus the backdrop of legitimate pricing strategy against which courts must attempt to discern exclusionary behaviour has been correspondingly murky.” See P Greenlee and D Reitman, “Distinguishing Competitive and Exclusionary Uses of Loyalty Discounts” (2005) 50 *The Antitrust Bulletin* 441, 441. To what extent efficiencies in rebate schemes are relevant from a competition policy point of view will be discussed later in this paper.

³ I am not repeating here the discussion of what I consider to be a fifth common fallacy, namely that the length of the reference period of a rebate scheme matters for an assessment of its potential foreclosure impact. The arguments can be found in FP Maier-Rigaud, “Switching Costs in Retroactive Rebates—What’s Time Got to Do with It?” (2005) 26 *European Competition Law Review* 272.

discusses the question of coverage, while section G questions the general belief that rules in competition policy are incompatible with an economic effects-based analysis and the idea that weighing the competitive harm of a rebate scheme with its efficiencies is a relevant approach from a competition *policy* point of view. In the conclusion (section H) the paper raises some more fundamental questions concerning Article 82 rebate schemes and the role of economics in devising sound competition policy.

B. A BASIC FRAMEWORK

Consider the following simple individualised rebate scheme, where a certain rebate $\alpha \in (0,1]$ is granted retroactively on all units bought if the threshold $x^T \in \mathbb{Z}_{++}$ is reached within the time frame T . Assuming a unit price $p \in \mathbb{R}_{++}$, all units up to the threshold cost p . More specifically, the first $x^T - 1$ units have a price of p , but the extra unit to reach x^T has a price of $p - x^T\alpha p$. From unit $x^T + 1$ on, any consecutive unit will have a price of $p^T \equiv (1 - \alpha)p$, which coincides with the *ex post* average price if the threshold is reached.

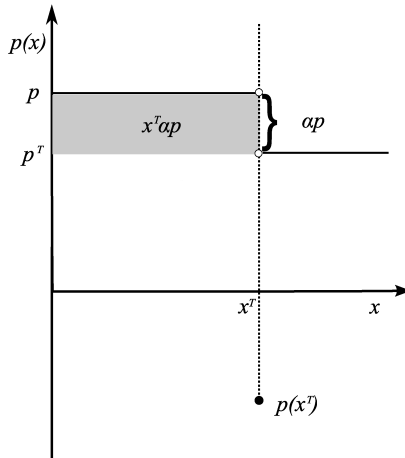


Fig. 1 Typical Non-monotonic Price Schedule

As can be seen in Fig. 1, retroactive rebates by definition result in non-continuous and non-monotonic pricing schedules, that is, marginal price abruptly falls at x^T (potentially below marginal cost or even below zero) and rises again afterwards.⁴

⁴ The non-linearity of the pricing scheme is probably the reason rebate schemes are often treated as being similar to two-part tariffs. Such resemblance is, however, superficial. The crucial feature of

With knowledge of p , x^T and α , and holding demand constant, the impact of the retroactive rebate on the incentive structure of the buyer can easily be analysed. Indeed, the impact of the retroactive rebate depends on α and x :⁵

$$p(x^*) \equiv \frac{p(x^* - \alpha x^T)}{x^*} \tag{1}$$

where $p(x^*)$ is the effective unit price (as opposed to transaction price) that the dominant firm charges for a remaining quantity of x^* up to x^T . As is easily checked by setting $x^* = x^T$, this expression reduces to p^T . The expression can also be interpreted as the incentives the buyer faces not to switch (switching costs) to products from a competitor and consequently the prices a competitor would need to offer for the remaining x^* units in order to match the dominant firm's pricing scheme.

A three-dimensional graphical analysis for real valued quantities is provided in Fig. 2 for $p = 1$, $x^T = 10,000$ and a range of rebate rates ($\alpha \in [0,0.5]$), including a plane at $p(x^*) = 0$. The figure depicts the unit price as a function of x

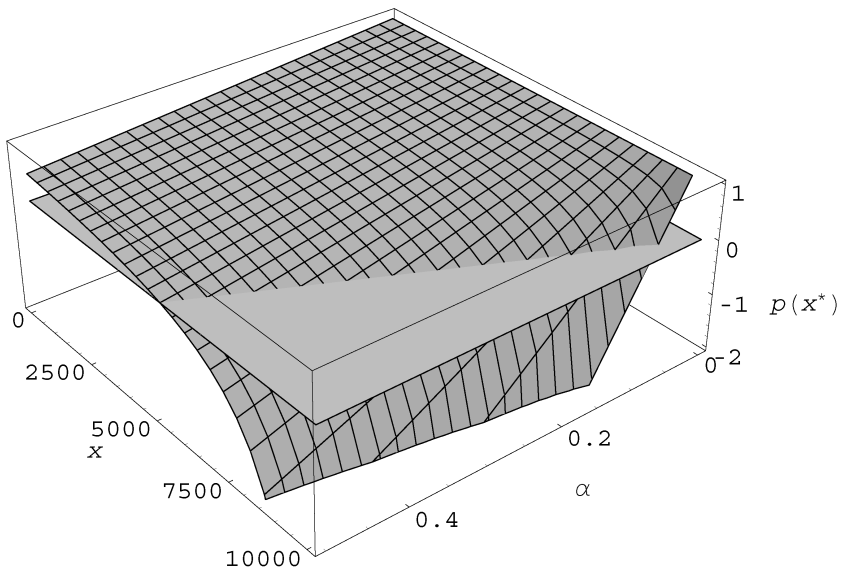


Fig. 2 Suction Effect

rebate scheme pricing schedules is the lack of monotonicity that is not found in other non-linear pricing schemes.

⁵ Where x denotes the amount already bought from the dominant firm and x^* the remaining quantity up to the threshold, so that $x = x^T - x^* \forall x^* \leq x^T$, with $x, x^* \in \mathbb{Z}_+$.

and α , that is, the more units have already been bought from the dominant firm and the higher the rebate percentage, the lower the unit price for all the remaining units will be.

C. ASSUMPTIONS ABOUT DEMAND

In contrast to the analysis presented in the previous section, which focused on the threshold x^T , some literature claims that if demand is higher than the threshold, the effects of the rebate scheme (up to x^T) may be mitigated. Federico,⁶ for instance, is interested in the relationship between x^T and D and therefore relies on the following constellation $x < x^T < D$ in his discussion of retroactive rebates, where, as before, x stands for the amount already bought from the incumbent,⁷ x^T for the threshold level of the rebate offered by the incumbent and D for expected demand.⁸ Expected demand in this context is to be understood as the total expected demand by a customer. If the dominant firm cannot serve total demand, eg if products are differentiated or the incumbent cannot serve total demand for some other reason, expected demand denotes the maximum amount the firm can expect to sell to the customer.

The key assumption made in this literature is that the threshold is systematically set below expected demand.⁹ Motivating $x^T < D$ is difficult because it is not evident that the incumbent would want to set the threshold x^T systematically below expected demand while he would benefit from moving the threshold up to expected demand.¹⁰ In particular, when considering individualised rebate

⁶ G Federico, “When are Rebates Exclusionary?” (2005) 26 *European Competition Law Review* 477. This article was also used as a basis for a presentation at the CRA conference on Economic Developments in European Competition Policy, 15 December 2005, and appeared also as a CRA Competition memo in April 2005. These thoughts were originally developed in an economic report drafted by Lexecon in the context of an Art 82 case. See F Maier-Rigaud and D Vaigauskaite, “Prokent/Tomra, a Textbook Case? Abuse of Dominance under Perfect Information” (2006) 2 *EC Competition Policy News*.

⁷ Typically $x \neq 0$ since the dominant firm has to be an unavoidable trading partner for *ex ante* competition not to be feasible.

⁸ See Federico, *supra* n 6, footnote 10.

⁹ Federico, *supra* n 6, justifies this assumption using *ex post* demand data. See section E for why this is problematic.

¹⁰ This holds under perfect information and also under (symmetric) imperfect information as long as there is no updating possibility for the buyer. Introducing asymmetric information or uncertainty (with updating of beliefs throughout the reference period) is likely to change the result, leading to the threshold being set below expected demand. In fact, such uncertainty introduces a dynamic element into the scheme that requires a stochastic model explicitly incorporating time. Alternatively, the incumbent may also condition the rebate on exclusivity, thereby solving the information problem while also eliminating possible efficiencies such as avoiding double marginalisation. For an enumeration of such efficiencies see JM Jacobson, “Exclusive Dealing, ‘Foreclosure’, and Consumer Harm” (2002) 70 *Antitrust Law Journal* 311.

schemes under perfect information, $x^T = D$ appears to be a better starting point of the analysis because, irrespective of switching costs or efficiencies, it is clear that the incumbent is better off setting the threshold equal to (expected) demand.¹¹ In technical terms, $x^T < D$ violates the incumbent's individual rationality constraint (profit maximising principle) and a justification would need to be given for why the incumbent does not maximise profits when deciding about rebate thresholds. In any case, even if the assumption $x^T < D$ were correct, possible effects would arise for a quantity x^T and possibly also for D or *ex post* demand (see section E and F below), although rebates in themselves will not be capable of directly foreclosing a higher quantity than the threshold.

Three possible constellations exist. Either $D > x^T$, $D < x^T$ or $D = x^T$. Clearly an incumbent would not set the threshold above expected demand because the rebate scheme would not work. If x^T cannot be reached by the buyer, there is no effect; and if there is no effect, there also is no reason to use a rebate scheme—something that appears to be systematically ignored in many defences when claims are made that the schemes used do not create switching cost while efficiencies continue to be claimed. As with most things in life, one cannot have it both ways. What generates potential efficiencies is typically identical with what generates potential competition concerns.

D. THE AVERAGING FALLACY

Following the line of thought set out in the previous section and assuming, for a second, that the incumbent chooses a threshold that is clearly below expected demand, Federico¹² stipulates that the minimum price a competitor would need to offer increases with an increase in demand, *ceteris paribus*. That is, switching costs decline. This idea that the effects of a rebate scheme up to the threshold quantity may be mitigated if demand is above the threshold is termed the averaging fallacy.

Although the underlying model is not spelt out in his article explicitly, I will introduce it here. In order to keep the analysis as simple as possible, I will start with the case of continuous quantities but present my objections to the approach

¹¹ The assumption is that negative and positive differences between expected and realised demand have a symmetric impact on payoffs, ie multiplying the known distribution of demand with the profit (utility) function does not influence the mean. See M Beckenkamp and FP Maier-Rigaud, "An Experimental Investigation of Article 82 Rebate Schemes" (forthcoming) *Competition Law Review* for technical details on this point.

¹² *Supra* n 6.

using discrete quantities.¹³ The equations used in the following are a general formulation of the underlying model introduced by Federico.

The key equation that supposedly gives the price p_c a competitor would need to offer to make the buyer indifferent between buying the remaining amount $D - x$ from him or the incumbent is:

$$p_c \equiv \frac{(D-x)p - p\alpha x^T - (D-x^T)p\alpha}{D-x}. \quad (2)$$

That is, $(D-x)p$ denotes the total amount that can still be sold at normal price minus $p\alpha x^T$, ie the rebate granted for reaching the threshold minus $(D-x^T)p\alpha$, or, in other words, the savings on all units above the threshold due to the rebate price $p(1-\alpha)$. This term is then divided by $(D-x)$, the total amount of possible sales under discussion to get a unit price.

Simplifying, we get

$$p_c \equiv \frac{(1-\alpha)pD - px}{D-x}. \quad (3)$$

Now consider the case where only one unit needs to be bought from the incumbent before the threshold is reached. Inserting $x^T - 1$ for x and p^T/p for $(1-\alpha)$ we get the discrete case of equations (2) and (3), namely

$$p_c \equiv \frac{p^T D - p(x^T - 1)}{D - (x^T - 1)}. \quad (4)$$

As is easily verified, this term increases in D implying a decrease in switching cost as claimed by Federico. Indeed,

$$\lim_{D \rightarrow \infty} \frac{p^T D - p(x^T - 1)}{D - (x^T - 1)} = p^T, \quad (5)$$

ie the average price p_c approaches p^T as demand goes to infinity. Unfortunately, this mechanically correct calculation makes no economic sense.

Federico argues that the rebate scheme in its most problematic form (namely when only one unit needs to be sold by the incumbent before the rebate enters into force) is not as problematic as it looks because if demand is sufficiently above the threshold, the discount that the competitor needs to offer is reduced because

¹³ Although economists typically favour models with continuous variables for mostly technical reasons, I will present the analysis with discrete quantities for mainly two reasons: first, it is typically not possible to sell non-integer amounts of goods or services; and secondly, integers may facilitate the understanding of the exposition.

“as volumes sold by the rival firm increase, the loss of the retroactive rebate suffered by the customer as a result of purchases made outside the rebate scheme can be absorbed over a larger volume base, allowing the price offered by the rival to converge back towards the discounted price charged by the dominant firm”.¹⁴

Again, the assumptions made—in this case, that a competitor would actually try to sell $D - (x^T - 1)$ units at a price $p' < p^T$ —cannot be justified.

In fact, there are two reasons why this is not just unrealistic but also incorrect. First, the one extra unit (namely the one that the customer would have needed to reach the incumbents threshold) has a negative price. This implies that incurring losses in selling that unit only makes sense if a price higher than the one obtained in the absence of this unprofitable sale can be obtained for the remaining units up to D . The situation described, however, is the reverse. The competitor is assumed to be willing to offer a negative price for this last unit and offer p^T for the remaining units ($D - x^T$), so that in effect he offered an average price of p' for $D - (x^T - 1)$ units. Clearly revenues will always be greater if the competitor forgoes the sale of the $(x^T - 1)$ th unit and sells only $D - x^T$ units at p^T (see Fig. 3).¹⁵ Selling all $D - (x^T - 1)$ units implies revenues of $(D - x^T)p^T$ minus the negative price of the “marginal” unit before the threshold. This clearly violates individual rationality.

The second reason relates to relative profit maximisation. The first argument clearly showed that it is not profit maximising for the firm to behave in this way in absolute terms. Moreover, even in relative terms (relative to the profits of the

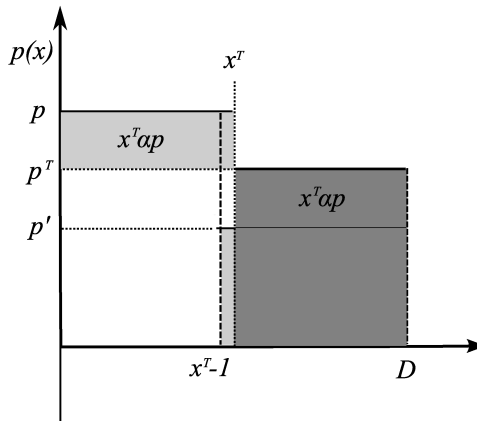


Fig. 3 Price Schedule and Revenues

¹⁴ See Federico, *supra* n 6, 479.

¹⁵ Note that this also applies if the production technology exerts significant economies of scale. Even in the extreme case where that unit can be produced at no cost, the competitor will be better off disposing of the unit than “selling” it at a negative price.

incumbent) it makes no sense to behave like this because, by taking the unnecessary loss of selling the “marginal” unit, the incumbent avoids paying out the rebate. In fact, stepping in with a negative price saves the incumbent from paying out the rebate (the rebate amount, ie the negative price for the “marginal” unit, is: $p - (p - p^T)(x^T - 1)$). So not only does the competitor loose by selling the $(x^T - 1)$ th unit, he also spares the incumbent from having to pay out the rebate, therefore increasing the revenue gap between the two firms.

E. THE EX POST FALLACY

The *ex post* fallacy describes the argument of using *ex post* demand evidence to back up one of the following assumptions: that expected demand is above the threshold ($x^T < D$),¹⁶ that the scheme had a demand expanding effect or that no effective foreclosure existed because the difference between *ex post* demand and the threshold is such that entrants could have easily entered.¹⁷

Using *ex post* empirical “evidence” in one of the ways described above typically cannot be considered meaningful, because it relates to actual as opposed to expected demand. The fact that demand *ex post* deviates from expected demand is irrelevant for the behavioural norm of setting the threshold equal to expected demand *ex ante*.¹⁸

On the question of possible entry based on an *ex post* divergence between rebate threshold and actual demand, the following simple example may be useful. Consider a game where demand is drawn from a commonly known normal distribution (ie a risky decision environment but no asymmetric information). Assume further that there is no resale so that the single buyer is a

¹⁶ See Federico, *supra* n 6, footnote 8.

¹⁷ This seems to be the logic behind the following sentences in the Commission discussion paper

“ . . . the dominant company may rebut the Commission’s preliminary conclusion by showing that the rebate system nonetheless does not and will not have a foreclosure effect, for instance because the individualised or standard volume targets are set particularly low compared to the buyers’ total purchases from the dominant company. The dominant company may thus be able to show that the rebate system does not and will not create a foreclosure effect because most or all buyers can switch to and purchase substantial additional amounts from other suppliers without losing the rebate” (*supra* n 1, 163).

See also A Heimler, “Below-cost Pricing and Loyalty-Inducing Discounts: Are They Restrictive and, If So, When?” (2005) 1 *Competition Policy International* 149, 157.

¹⁸ Consider the following analogy: if one wants to know whether somebody took her umbrella with her or not on a particular morning, it is sufficient to know that the person always takes her umbrella if meteorologists announce rain, ie when the person expects it to rain. Whether or not it does actually rain that day is irrelevant. And an *ex post* analysis that concludes that meteorologists only had an impact on that person (in the sense of inducing her to take the umbrella with her) if it rains would simply be wrong. Indeed, sunshine on any particular day does not represent evidence that no umbrella was taken.

final consumer. There are n capacity-constrained firms upstream, only one of which is dominant, producing a homogeneous product. In such an environment, the dominant firm sets its threshold equal to expected demand, ie the mean of the normal distribution. This is also the quantity the consumer expects to buy *ex ante*. Immediately after the threshold is announced, the buyer decides from whom and what quantity to order.¹⁹ Due to the rebate scheme, the buyer orders the mean value of the product of the utility function and the normal distribution²⁰ from the dominant firm and nothing from competitors who cannot offer that quantity by definition and therefore leave the market.²¹ After that decision the random variable is drawn and the buyer learns its true demand. Assuming that the variance of the distribution is high, the probability that demand *ex post* is substantially above (below) the mean is not negligible. In such a case it is clear that the fact that *ex post* demand is substantially higher (lower) than expected demand (and therefore also the threshold) is irrelevant.

Absent any alternative justification, the assumption $x^T = D$ is the only meaningful way of approaching the problem in the example given. The threshold is set at expected demand and that threshold will or will not have a foreclosure effect irrespective of whether demand *ex post* deviates from its expected value. Whereas observations of entry or increased market shares of competitors may be useful *ex post* checks,²² considering demand realisations *ex post* as such to be meaningful in a competition assessment is incorrect and, by analogy, this reasoning clearly also applies to using *ex post* demand data for “demonstrating” demand expansion.

F. THE COVERAGE FALLACY

The level of coverage of rebate schemes is a key question in any effects-based analysis. In general, the following view appears to be consensus:

“if the total scale of sales with rebates is limited (in terms of percentage of total market demand they account for), the presence of retroactive discounts should not significantly affect the entry or exit decisions of a rival to the dominant firm.”²³

¹⁹ Note that this implies that there is no updating of beliefs.

²⁰ See *supra* n 11 for an explanation of why such a transformation may be necessary.

²¹ There may be various reasons for leaving (or not entering) the market, as for instance high fixed costs. Although competitors may be able to sell units above the threshold if true demand is above that level (this will happen approximately 50% of the time depending on the transformation) this may not be sufficient to remain profitable.

²² See Heimler, *supra* n 17, 158.

²³ See Federico, *supra* n 6, 478.

This idea often leads to certain coverage thresholds being suggested and possibly even safe harbours being proposed. Unfortunately there is no clear-cut relationship between coverage and foreclosure effect.²⁴ In particular, the problem can arise in two different ways. A low overall coverage may be due to either a low portion of every customer's demand being covered, or to some customers not being covered at all and others (supposedly key ones) fully being covered. Depending on the actual constellation, different examples could be given to demonstrate that a high coverage is neither necessary nor sufficient for foreclosure to arise.

Consider the following example focusing on the first possibility, where a multi-product firm offers products with a cross-price elasticity of 0 denoted by a and b .²⁵ The multi-product firm is a monopolist in market A . All firms in market B producing the homogeneous product b use an identical increasing returns to scale technology. Given fixed cost, there is a minimum viable scale in B , resulting in n firms being able to profitably supply the market.²⁶ A fraction δ , where $\delta \in (0, 1)$, of the customers in market B buy both, a and b in a variable proportion v_j , where

$$v_j \equiv \frac{d_j^A}{d_j^B}$$

and $j \in C$.²⁷ Assume that δ is sufficiently high so that supplying only $1 - \delta$ is below the minimum efficient scale of any individual firm. Assume also that the markets are sufficiently transparent so that the multi-product firm knows demand and v_j . Assume further that although b is homogeneous, the substantial product-specific investments (for instance due to maintenance reasons) exhibiting substantial economies of scale are relationship-specific in the sense that such investments will only be compatible with b s produced by the same firm. As a consequence, there exist economies of scale on both the supply and the demand side.

Consider now a set of individualised *bundled* rebates offered by the multi-product firm to the fraction δ of consumers buying both products a and

²⁴ As WK Tom, DA Balto and NW Averitt, "Anticompetitive Aspects of Market-Share Discounts and other Incentives to Exclusive Dealing" (2000) 67 *Antitrust Law Journal* 615, correctly state:

"there is no magic number below which anticompetitive effects are impossible without regard to the market circumstances. In some markets, products will need to have nearly ubiquitous distribution in order to succeed, and a relatively small foreclosure could have a very large impact. Smaller requirements for distribution will lead to higher thresholds for anticompetitive foreclosure to be found" (624).

²⁵ The assumption of a cross price elasticity of 0 is important for the leverage theory developed below. With a cross price elasticity of $-\infty$, for instance, monopoly leveraging is typically less attractive due to the complementarity of the products.

²⁶ In equilibrium all n firms charge $p_{b,j}^c$, entailing a market share of $1/n$.

²⁷ C is the set of customers and d_j denotes customer j 's demand in the respective market.

b .²⁸ Even if the rebate scheme covers only a fraction of each individual consumer's demand for product b in addition to the demand for a , that is, the multi-product firm chooses the threshold such that only one unit of b has to be bought to reach the threshold, market B may be entirely foreclosed.²⁹ Among other aspects, this result obviously crucially depends on the economies of scale on the demand side, but even without that assumption, rather low market coverage may be sufficient to drive out some or even all competitors in B . As this example demonstrates, the relevant constraint may not be the coverage of rebate schemes but the question of whether competitors can be foreclosed on the first contract. Although other scenarios could be laid out, this example should be sufficient to demonstrate that the importance of coverage is overrated and any minimum coverage requirements are inherently incompatible with an effects-based analysis.³⁰ Indeed, rebate schemes with low market coverage may be all it takes to *indirectly* foreclose all the market and it may not be necessary for firms to offer schemes with a higher coverage under such circumstances.

G. THE CASE-BY-CASE FALLACY

In advocating more economic analysis under Article 82 so called *per se* infringements are heavily under attack. The EAGCP, for instance, is "in favour of an economics-based approach to Article 82" and goes on to say that "Such an approach . . . is based on the examination of each specific case".³¹ The

²⁸ Although not necessary for the result, it is assumed that there exist no consumers only buying a .

²⁹ Note that with the exit of all competitors in B , consumers only buying b can do so at price p_{bj}^M from the multi-product firm, where j indicates that the firm can price discriminate given the information conditions assumed.

³⁰ The gas market offers an empirical example demonstrating that substantial coverage may not be necessary for foreclosure. For almost all gas customers (the exception being the very large gas customers with an annual gas bill of millions of euros) it is economically advantageous to have only one gas supplier. So once an ordinary gas customer has purchased a certain minimum volume of gas from a given supplier, he is very likely to buy all his gas requirements from that same supplier. Foreclosure is therefore particularly easy even if coverage of the instrument used to foreclose is low (per customer). The market for aeroplanes may, due to specialised maintenance, be another example.

³¹ See the report by the EAGCP, *supra* n 1, and, eg G Hewitt, "Loyalty and Fidelity Discounts and Rebates" (2003) 5 *OECD Journal of Competition Law and Policy* 133, or D Ridyard, "Article 82 Price Abuses: Towards a More Economic Approach" (2003) Working Paper, Robert Schuman Centre for Advanced Studies, European University Institute, who claims that there are "no reliable rules that determine whether certain forms of dominant firm discount are abusive" (15). See also D Ridyard, "Exclusionary Pricing and Price Discrimination Abuses under Article 82: An Economic Analysis" (2002) 6 *European Competition Law Review* 286, who only considers a weighing of positive and negative effects to be relevant (296) and states "The first step in reducing the confusion should be to clarify that there can be no *per se* rules that prohibit certain forms of dominant firm pricing . . ." (302).

economist Heimler claims that “the analysis on the exclusionary effect of market share discounts should be made on a case-by-case basis”.

With respect to retroactive rebate schemes, Spector³² writes

“Like most pricing practices, loyalty rebates may be used for pro-competitive as well as exclusionary purposes. In particular, they may in some settings constitute a more effective and cheaper exclusionary tool than predatory pricing. This precludes any general per se rule which would apply to all types of rebates.”

Kallaugher and Sher³³ argue, in contradiction to the limited theoretical literature pointing in the other direction, that

“the fact that all rebate schemes involve a potential benefit in the form of *lower prices* means that prohibiting rebate schemes without proof of likely consumer harm from the scheme in question will itself lead to consumer harm in a significant percentage of cases” (emphasis added).

Federico nicely summarises the typical view in the literature:

“A rigid prohibition would run the risk of discouraging potentially efficient behaviour in those cases where the exclusionary risk is minimal . . . Given the possible welfare benefits (in terms of greater output and lower prices) of retroactive rebates, a blanket prohibition of all such schemes by dominant firms under Art. 82 could discourage potentially efficient behaviour.”³⁴

Although the EAGCP³⁵ rightfully states that “many business practices may have different effects in different circumstances”, jumping to a case-by-case analysis is not as cogent as many may believe. In the context of retroactive rebate schemes, for instance, it is not at all clear that retroactive rebates are indispensable for

³² See D Spector, “Loyalty Rebates: An Assessment of Competition Concerns and a Proposed Structured Rule of Reason” (2005) 1 *Competition Policy International* 89, 108.

³³ See J Kallaugher and B Sher, “Rebates Revisited: Anti-competitive Effects and Exclusionary Abuse Under Article 82” (2004) 25 *European Competition Law Review* 263, 282.

³⁴ See in Federico, *supra* n 6, 477–78. In a sense this can be considered more balanced than the Chicago school, which argues that rebates and similar restraints are harmless and that any anticompetitive harm they do create is generally outweighed by pro-competitive benefits. See, eg R Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York, Free Press, 1978/1993); FH Easterbrook, “Vertical Agreements and the Rule of Reason” (1984/1985) 53 *Antitrust Law Journal* 135; and RA Posner, “Exclusionary Practices and the Antitrust Laws” (1974) 41 *The University of Chicago Law Review* 506. For further evidence of this line of thought not stemming from Chicago, see also JM Lave, “The Law and Economics of De Facto Exclusive Dealing” (2005) 50 *The Antitrust Bulletin* 143, 162, where it is stated that: “Further, although membership and loyalty policies may foreclose competition they should not be condemned as per se illegal because they may also have procompetitive effects.” See also J Temple Lang and R O’Donoghue, “Defining Legitimate Competition: How to Clarify Pricing Abuses Under Article 82 EC” (2002) 26 *Fordham International Law Journal* 83, and D Spector, “Loyalty Rebates and Related Pricing Practices: When Should Competition Authorities Worry?” in DS Evans and JA Padilla (eds), *Global Competition Policy—Economic Issues and Impacts* (Cambridge, LECG, 2004).

³⁵ See EAGCP, *supra* n 1.

achieving the claimed efficiencies.³⁶ From that perspective, the weighing of pro- and anticompetitive effects within a rebate scheme may be unnecessary and the outcome irrelevant.³⁷ The typical comparative statics overlook the simple fact that firms clearly do not have an incentive to pick alternative (non-linear) pricing schemes to retroactive rebates if efficiency gains can be coupled with benefits emanating from foreclosure, especially to the extent that competition policy tolerates this “by-product” foreclosure. In any case, in order to claim that a *per se* rule against retroactive rebates reduces (consumer or total) welfare, it is clearly not sufficient for rebates to have efficiencies.³⁸ Only if rebate schemes provide more efficiencies than other less restrictive alternative pricing schemes can the difference then be claimed as welfare loss in case of a general prohibition.³⁹ Competition policy therefore has to do more than a comparison of the competitive harm with the efficiencies flowing from a certain rebate scheme and may therefore come to the conclusion that a general prohibition is not as economically ill-founded as is fashionable to argue today.⁴⁰ This is, of course, also

³⁶ Despite the absence of any evidence in that direction, and the insight that the question as such may be of importance, some authors have gone as far as claiming that “the integrity of Art. 82 as an instrument of competition policy based on economic principles will be in question” in the absence of a case-by-case analysis of rebate schemes. See Kallaugh and Sher, *supra* n 33, 285.

³⁷ This is clearly not understood in the literature. See, in addition to the previous quotes, DS Evans and AJ Padilla, “Designing Antitrust Rules for Assessing Unilateral Practices: A Neo-Chicago Approach” (2005) 72 *The University of Chicago Law Review* 73, who propose a weighing of pro- and anticompetitive effects on a case-by-case basis. For a radical position see RA Epstein, “Monopoly Dominance or Level Playing Field? The New Antitrust Paradox” (2005) 72 *The University of Chicago Law Review* 49, who, in the context of predation, exclusive dealing and tie-ins, writes: “The general conclusion is that antitrust law should abandon its attack on these unilateral practices altogether, or at least sharply circumscribe their use” (49). Incidentally, I share the pessimistic view of Epstein with respect to the inherent difficulty of weighing benefits and costs, though with a fundamentally different conclusion.

³⁸ Tom *et al*, *supra* n 24, 629 is an all-too-rare example of authors, considering that the fact that potential efficiencies of rebates “might be attainable through less restrictive but equally practical means” is a crucial question in a policy context.

³⁹ As stated in the guidelines on Art 81(3), OJ 2004/C101, 74:

“... the decisive factor is whether or not the restrictive agreement and individual restrictions make it possible to perform the activity in question more efficiently than would likely have been the case in the absence of the agreement or the restriction concerned.”

There exists no reason for this to be different under Art 82. On the contrary, there may be good reasons to shift the burden of proof so that, in contrast to Art 81, no competitive harm would need to be demonstrated prior to indispensability having been shown by the dominant firm.

⁴⁰ In that sense, the Commission Discussion paper suggests to abandon the prohibition of retroactive rebates under Art 82 and to introduce an efficiency defence with at best anecdotal economic evidence in support. From an economic point of view, it is simply not sufficient to demonstrate that rebate schemes can create efficiencies that outweigh their competitive harm. An alternative to the envisioned approach would be to require dominant firms to demonstrate indispensability prior to engaging in the difficult exercise of weighing pro- and anticompetitive effects. If firms choose rebate schemes for non-exclusionary reasons, it should not be difficult for the dominant firm to reveal the efficiency advantages of the rebate schemes compared with the next best alternative considered while deciding on its pricing strategy. Such an approach would have the advantage of starting with a less burdensome test that may eliminate most of the cases without venturing into what currently is widely unknown territory.

true when applying a predation test in a rebate case. An economically sound way of establishing costs is to consider opportunity costs; that is, the opportunity costs of selling products through a rebate scheme is the price obtained selling the product through a different, possibly also non-linear pricing scheme. If this cost concept is employed, rebate prices will be below cost unless the rebate scheme really maximises profits, ie provides more efficiencies than the alternative scheme but for foreclosure. In that context, the question of efficiencies is irrelevant if it can be shown that the rebate scheme does not maximise profits but for the exclusion of competitors.⁴¹ In fact, only a few papers known to the author attempt a rigorous explanation of the superiority of rebate schemes compared with alternative non-linear pricing instruments. Indeed, Kolay, Shaffer and Ordovery demonstrate nicely⁴² that retroactive rebates may have a business rationale without any exclusionary motive, ie in a situation where the firm offering the rebate is already a monopolist. In such a bilateral monopoly setting, which arguably could be considered outside the relevant competition policy context, they show first that retroactive rebates are equivalent to two-part tariffs in eliminating double marginalisation.⁴³ Secondly, they show that under certain conditions, such as incomplete and asymmetric information, the monopolist will earn more under the rebate scheme due to the schemes superior screening capabilities. This “advantage” of rebates allowing the monopolist a more effective extraction of surplus leads, however, to ambiguous welfare effects; that is, although the monopolist’s profits are closer to full rent extraction under a rebate scheme, total and consumer welfare may be lower than under alternative pricing schemes, depending on the functional form of demand and how risk (ie

⁴¹ It is noteworthy that the restriction of the proposed predation test to cost of an as efficient competitor introduces a quasi-total welfare standard. If a particular rebate scheme is not profit maximising but for exclusion, there is no reason to allow a dominant firm to drive out less efficient competitors. Even an inefficient competitor constitutes a competitive constraint on the dominant firm and thereby is likely to increase consumer welfare. That total welfare may be higher with exclusion of the inefficient rival should be irrelevant under a consumer welfare standard in particular since even under a quasi-total welfare standard an as efficient competitor test may not be appropriate if dynamic effects are properly accounted for. As Eilmansberger writes:

“contrary to the consumer protection goal, it is doubtful whether efficiency gains as such, ie irrespective of the ultimate beneficiary, can be considered an objective of Art 82 EC, or for that matter of the EC competition regime, in the first place. The prohibition of exploitative abuses in Article 82 EC, and the fact that Article 81(3) EC makes exemptions subject to the passing on of efficiency gains to the consumer, both point to the contrary. As a result, such efficiency gains, or evidence of the practice increasing output, cannot be considered a redeeming virtue per se.”

See T Eilmansberger, “How to Distinguish Good from Bad Competition under Article 82 EC: In Search of Clearer and More Coherent Standards for Anti-Competitive Abuses” (2005) 42 *Common Market Law Review* 129.

⁴² See S Kolay, G Shaffer and JA Ordovery, “All-units Discounts in Retail Contracts” (2004) 13 *Journal of Economics and Management Strategy* 429.

⁴³ Establishing thereby that as far as this particular and often-invoked efficiency justification is concerned, no negative welfare effects are produced from a per se prohibition.

the uncertainty of demand) is modelled.⁴⁴ Given the limited use and scarcity of the literature, one has to question whether there is sufficient reason to alter the policy on rebates under Article 82. As a result, the case-by-case fallacy consists in the unsubstantiated and possibly dogmatic belief that a per se approach to rebate schemes is incompatible with economic principles.

H. CONCLUSION

Section B introduced a simple framework for analysing individualised rebate schemes. In subsequent sections four fallacies often found in the context of Article 82 rebates were discussed. In setting out these fallacies, standard economic theory⁴⁵ was used to arrive at the conclusions that averaging as laid out in section D is not admissible, *ex post* data may be misleading, high coverage is unnecessary for foreclosure and alternative pricing schemes without (or with less) negative effect on competition may be available, allowing the maintenance of a general prohibition of retroactive rebates without any negative welfare impact.⁴⁶

The observation that, in case of rebates, economically informed rules may have an important role to play in competition policy leads directly to a more general point about the role of economics in competition policy. Traditionally, the role of economics in policy has been to shape policy in order to render it more effective and efficient. In the context of competition policy, the role of economics should first and foremost be to describe what effects are likely to be produced under what circumstances. Only when economics cannot provide general rules based on stylised facts and general considerations should one weigh between a case-by-case analysis and rough (economically imprecise) rules. As a result of such a weighing process, a (prominent) role for case-by-case analysis

⁴⁴ See also the excellent paper by Greenlee and Reitman, *supra* n 2, based on P Greenlee and D Reitman, "Competing with Loyalty Discounts", US Department of Justice, Economic Analysis Group Discussion Paper EAG 04-2 (2004), demonstrating that in a differentiated duopoly context with asymmetric preferences over product space, producer surplus may increase for the firm adopting a rebate scheme in equilibrium—but at the detriment of consumer welfare. In a duopoly context with symmetric preferences over products, producer surplus is reduced and consumer surplus is ambiguous. Finally, the authors analyse the use of rebates for monopoly leveraging. See also P Greenlee, D Reitman and DS Sibley, "An Antitrust Analysis of Bundled Loyalty Discounts", US Department of Justice, Economic Analysis Group Discussion Paper EAG 04-13 (2004), demonstrating that consumer welfare effects are ambiguous and that viewing such rebates as predatory is incorrect. Spector, *supra* n 34, provides an easily accessible overview of some of the relevant academic literature. Unfortunately, the consumer and producer surplus effects of a per se prohibition are neither considered nor investigated in any of these papers.

⁴⁵ As demonstrated by Beckenkamp and Maier-Rigaud, *supra* n 11, non-standard behavioural aspects may play a role in retroactive rebates raising not only consumer protection but also competition issues.

⁴⁶ Alternatively, the current policy with respect to rebates could be softened by allowing the dominant firm to present an indispensability defence.

may or may not arise. Unfortunately, most of the economic input in the Article 82 debate has focused on case-by-case analysis instead of building up some general principles based on which competition rules designed to be as general as possible could firmly be based. A case-by-case analysis may in the end be necessary in many circumstances, but the actual work economists have to do is to reduce these specific circumstances to a minimum. This implies developing a clear understanding under what conditions what type of business practice results in competitive harm, but also—as argued in section G—incorporating these insights into a more general approach. The relevant question that is neither addressed nor even asked in the policy debate is whether rebates can generate *net* efficiencies compared with alternative pricing schemes and whether these net efficiencies are capable of outweighing the *net* anti-competitive effects of the schemes.⁴⁷ Unfortunately the economics profession, to the extent that it has been interested in Article 82, has largely failed in this respect and now appears content to preach a casuistic approach that is neither in the economic tradition nor economical.

In analogy to a remark made by Keynes with respect to classical theory over 80 years ago, one could say that economists once again set themselves too easy, too useless a task if in complex policy matters they can only tell us that we have to do a case-by-case analysis.⁴⁸

⁴⁷ Note that if no net efficiencies exist, the question of competitive harm is irrelevant for a general prohibition rule to be welfare improving.

⁴⁸ The original reads: “Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again.” See JM Keynes, *Tract on Monetary Reform. IV. Collected Writings* (Cambridge, MacMillan/Cambridge University Press, 1923/1971), 65.