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Should Competition Policy Prohibit Price Discrimination?

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Price discrimination – which can be defined simply as a firm charging different prices to different consumers for the identical item – is a pervasive feature of economic transactions. Rather than charge a single price to all consumers, firms often choose to segment consumers based on their willingness to pay and to price discriminate accordingly. This is obviously true for many “business to business” transactions in which prices – including rebates, incentives, discounts, and so on – are individually negotiated, but it is also true of many retail prices that vary by customer group (eg, some cinema tickets), loyalty or other discount programmes, coupons, prices on bundled products, and many other forms of pricing. Indeed, even in situations where prices vary for what may be seen as cost-based reasons, such as volume discounts and risk-based pricing for credit cards or insurance, the price distinctions may reflect differential demand sensitivities in addition to differential marginal costs.

A complication arises in defining price discrimination when different customers impose different costs on the firm. Should we say that price discrimination exists if the price difference between two customers is not equal to the difference in marginal costs imposed by the two customers, or should we instead require that the price mark up (price minus marginal cost divided by price) differs between the two customers? For simplicity, we adopt the first definition in our discussion in this chapter.

The prevalence of price discrimination is not surprising to an economist. It is well known that an individual firm with any degree of market power – even lasting only for a short time, perhaps due to product differentiation, search costs, switching costs, or other factors – will generally have an incentive to price discriminate as long as:

- it can find some way to segment consumers based on willingness to pay; and
- consumers cannot completely “arbitrage” away the price differences via resale from low to high price buyers.

Clearly some degree of (at least short-lived) market power, some ability to segment consumers, and some limitations on resale characterise most markets, making the prevalence of price discrimination a predictable outcome.

Given its prevalence, it is critical that competition policy has a clear view of whether price discrimination should be permitted. Unfortunately, this is not always the case, as price discrimination, while generally permitted (at least in the US), is often viewed with suspicion. In addition, while price discrimination on its own is not a violation of US antitrust law, practices whose sole purpose is to enable price discrimination – such as tying products together to meter usage – can be antitrust violations. In other jurisdictions (including Europe) price discrimination on its own can be an antitrust violation. And some recent academic work argues that due to its short-run and long-run effects on consumer and total welfare, price discrimination (specifically, tying for the purpose of price discriminating) should be considered an antitrust violation.

In this chapter, we explain our view that, as a matter of competition policy, price discrimination (and other practices whose sole purpose can be shown to be price discrimination) should be permitted. Given the change in administration in the US and the continued development of competition policies in other countries such as China, we believe this is an important time to firmly establish that efforts to prohibit price discrimination are misguided.

We proceed in two steps. First, in the second section we compare price discrimination with the simpler practice by a firm with market power of setting price above marginal cost (henceforth “simple monopoly pricing”). We note that both are attempts by a firm to capture a greater share of total surplus in the form of profits, and thus the well-accepted view (under US antitrust law) that it is not an antitrust violation for a firm to possess market power or to set the monopoly price should also guide policy with respect to price discrimination. Next, in the third section we consider possible distinctions between price

discrimination and simple monopoly pricing that one might use to support differential antitrust treatment of price discrimination and explain why these distinctions do not, in fact, support restrictions on price discrimination as a matter of competition policy.

Simple monopoly pricing v price discrimination

Under United States antitrust policy it is neither unlawful to possess market power, nor to use such market power to raise prices above marginal cost. This is true despite the fact that, as a matter of basic economics, setting a price above marginal cost implies that some consumers who value a product more than the cost of producing that product do not obtain it, and thus that static welfare is reduced.

In a simple case, if all of the buyers from a single firm exhibited the same, low price sensitivity, that firm would be permitted to charge them all the associated profit-maximising price, which may be substantially above marginal cost. So the obvious question is, if another firm faces buyers with heterogeneous price sensitivities, why shouldn't it be allowed to implement policies that charge each of them the associated profit-maximising price? As another example, suppose two different firms with market power sell to two distinct sets of consumers with different price sensitivities. Each of these firms would be permitted to set the (different) profit-maximising prices to each set of consumers. Why should antitrust policy distinguish this from the case where a single firm sells to both those sets of consumers and sets the (different) profit-maximising price to each? We see no basis for the distinction.

Consider why antitrust policy permits simple monopoly pricing, despite its detrimental effect on static welfare. We see two primary explanations. First, antitrust policy appropriately does not limit its attention to static welfare, but rather recognises the critical role of dynamic incentives to invest and innovate. Indeed, economic research has demonstrated that the extent of investment and innovation is the most important determinant of an economy's growth rate. In order to create the proper incentives to invest and innovate, firms should be able to profit from their success. For this reason, it is sound policy to allow firms that have legitimately obtained market power to set prices above marginal cost and in some cases

to earn very large profits. It is the possibility of these profits that provides the incentives for innovation. Indeed, this is the reason for granting patents, through which government officials create market power and associated profits to stimulate investment and innovation.

Second, while there may be cases in which the static welfare costs of simple monopoly pricing outweigh the dynamic gains, the cost of attempting to identify these cases and then implement a rule to restrict prices in only those cases is likely to be extremely high. Beyond just the monetary costs associated with study and enforcement, the costs in terms of lost innovation are likely to be substantial. In evaluating the return on investment, potential innovators would have to consider the possibility that their prices would be restricted, as well as the associated legal costs of the associated antitrust processes, and the induced risk and uncertainty with regard to future cash flows. Avoidance of the potential dampening effect on investment and innovation requires a clear policy to permit firms to set profit-maximising prices above marginal cost.

Given these rationales for allowing a firm to set the simple monopoly price, we see no basis to disallow price discrimination. As noted above, individual firms with market power generally have an incentive to price discriminate in order to maximise profits. So the logic of prohibiting or restricting price discrimination would have to be that – in order to create incentives to invest and innovate – firms should be permitted to maximise profits, but only subject to the constraint of no price discrimination. We see no economic basis for imposing this constraint. In addition, the cost of implementing and enforcing such a constraint would be quite high. In this case, there would not only be the costs associated with determining when to optimally permit or prohibit price discrimination, along with the dampening effect on innovation, but also the cost associated with determining whether the observed price differences are due to demand differences rather than marginal cost differences. There could also be substantial costs associated with firms attempting to find alternative, permissible business practices to achieve the same goals and with regulators attempting to identify and police these alternatives.

This logic does not indicate that all behaviour that increases profits should be permitted. Rather,

in our view, the relevant distinction is whether permitting a practice by a given firm or set of firms increases or decreases the incentive and ability of other existing firms and new entrants to compete. Allowing a firm to set the simple monopoly price or to price discriminate to maximise its profits increases the “prize” associated with successful competition in the marketplace and thus increases the incentives for competitors to capture that prize. Prohibiting these practices, then, has the perverse effect of lessening incentives for competitors to compete, the exact opposite of the aim of competition policy. In contrast, competition policy appropriately restricts actions that hinder the ability of rivals to compete – for example, by depriving them of the necessary scale to remain competitive – or actions that generally limit competition, such as price collusion or similar cartel behaviour.

Fallacies in proposed distinctions between simple monopoly pricing and price discrimination

A policy to prohibit price discrimination while permitting simple monopoly pricing would need to rest on a sharp economic distinction between the two, justifying differential treatment. We consider three potential arguments to justify differential treatment of price discrimination, each of which has been suggested in recent literature. First, one could posit that price discrimination reduces total, static welfare sufficiently more than simple monopoly pricing to justify differential treatment. Second, one could focus on consumer welfare alone and argue that price discrimination reduces static consumer welfare sufficiently more than simple monopoly pricing to justify differential treatment. Finally, one could posit that the incentives to invest and innovate are in some sense “correct” under simple monopoly pricing but would be excessive given price discrimination. In the following sections, we explain why none of these proposed justifications is valid.

Effect of price discrimination on total static welfare

The effect of price discrimination (relative to simple monopoly pricing) on total static welfare depends on a number of characteristics of the form of price discrimination and the industry in question. Central among these are whether the price discrimination is “perfect” – meaning that each unit sold is priced at exactly each buyer’s

willingness to pay – and whether the industry is a monopoly or oligopoly. To provide a complete picture, we briefly consider each possibility.

If price discrimination is perfect, the result is well known. Under some mild assumptions, for any given number of firms competing in the market – whether it be a monopoly or oligopoly – perfect price discrimination increases total static welfare relative to simple monopoly pricing. Hence, this possibility provides no basis for a prohibition on price discrimination. If the number of firms is allowed to vary – that is, if decisions to enter are explicitly modelled – then it is true that perfect price discrimination may lead to more entry than is optimal, reducing total welfare. However, while a situation of excessive entry and thus “too much competition” is a theoretical possibility in many oligopoly models, a competition policy that seeks to identify those cases and then limit the number of competing firms would likely do more harm than good in light of the difficulty and likely errors in detecting such cases.

If price discrimination is imperfect – in the sense that consumers are segmented only roughly, so that some do not pay exactly their marginal willingness to pay for each item – price discrimination may improve welfare if output rises. In this case, though, whether price discrimination does, in fact, increase welfare relative to simple monopoly pricing depends on technical conditions regarding the shape of demand curves. For a monopolist, the effect depends on the curvature of the demand curve (how “concave” it is). With some price competition between firms (as in an oligopoly), it also depends on the size of cross-price elasticities – the extent of switching between competitors induced by price changes – relative to the overall industry elasticity. In addition, price discrimination often can bring new consumers into the market through low prices.

Some have argued that price discrimination reduces total welfare due to the costs required to enforce the discrimination and prevent resale. This is analogous to saying that firms reduce total welfare whenever they are inefficient, leading to higher costs. While true, competition policy does not generally seek to regulate firms to force them to be efficient. Rather, we rely on competition to solve the problem, as inefficient firms lose sales to competitors. Analogously, we view the threat of competition as the appropriate way to discipline costly price discrimination.

Hence, as a general matter, price discrimination may increase or decrease total static welfare depending on detailed conditions of the pricing practice and the industry. As such, analysis of total static welfare effects provides no clean distinction to justify differential treatment of price discrimination from that applied to simple monopoly pricing. Instead, permitting price discrimination is consistent with the rationale to permit simple monopoly pricing. As discussed above, attempting to implement detailed antitrust rules that identify just those situations in which static welfare costs are high enough to justify a ban on price discrimination is likely to be extremely difficult and costly, particularly after considering the chilling effect this would have on incentives to invest and innovate. These costs are likely even higher for price discrimination than for simple monopoly pricing, given the detailed review of pricing practices and industry characteristics that would be required to assess the effect on total static welfare.

Effect of price discrimination on static consumer welfare

An alternative argument might be that antitrust policy should focus on static consumer welfare, and that, in the case of perfect price discrimination by a monopolist, price discrimination is well known to reduce consumer welfare (by shifting more surplus to the monopolist in the form of profits). We see two main problems with this logic.

First, a standard concern with a focus on consumer (rather than total) welfare is that it ignores the fact that the owners of firms are themselves consumers, perhaps in other markets. Therefore, focusing on consumer welfare in a given market could generate opposition to policies that increase the overall welfare of all consumers in the economy simply because those policies reduce the welfare of the consumers in one particular market. Whatever one's views of that debate, we believe the issue becomes more clear when considering dynamic incentives to invest and innovate. Consumers are clearly beneficiaries of new products, improved products, and general economic growth from innovation. Indeed, a large body of economic research has found that the benefits of innovation to society are greater than those captured by the innovating firm. So, in our view, a narrow focus on static consumer

welfare is likely to actually reduce consumer welfare over the longer term.

Second, the conclusion that price discrimination necessarily reduces consumer welfare holds only if the industry is, and will remain, a monopoly. Otherwise, while price discrimination does increase the profits of any given firm holding other firms' actions fixed, it may also increase the intensity of price competition, with the combined implication of these two effects for profits and consumer welfare varying from market to market. Indeed, in a standard Hotelling model of competitive firms selling differentiated products, price discrimination lowers the equilibrium prices facing all consumers, increases consumer surplus and reduces profits relative to the case where each firm must set a single price. In such a context, prohibitions on price discrimination would eliminate a competitive tool and thereby soften price competition, clearly not the goal of competition policy.

As with total welfare, the bottom line is that price discrimination may increase or decrease consumer welfare depending on market conditions. And just as current antitrust policy does not try to micromanage markets to determine where simple monopoly pricing has enough effect on consumer welfare to justify a prohibition, it should not try to pick and choose particular circumstances in which to ban price discrimination based on static consumer welfare considerations.

Effect of price discrimination on incentives to innovate

A final argument in recent literature is that the incentives to invest are in some sense "correct" under simple monopoly pricing, but would be too high if profits were increased via price discrimination. We see at least three main flaws in this logic.

First, there is no economic basis to say that the investment incentives created by simple monopoly pricing by firms with market power are "correct" in any particular situation. In principle, the incentives may be too high or too low depending on the degree of competition, demand and other market characteristics, and the social returns from investment. But, as with variation in welfare, current antitrust policy wisely avoids trying to control permissible prices in order to micromanage investment incentives. This standard should apply to price discrimination as well.

Second, available evidence indicates that in many industries current incentives to innovate are too low. On the whole, the social return to investment and innovation greatly exceeds the private return to any individual firm. As such, investment incentives are likely to move closer to optimal levels if price discrimination enables firms to capture a larger percentage of the surplus they create.

Finally, the logic that price discrimination should be prohibited in order to reduce investment and innovation incentives also suggests that government agencies should identify other settings where incentives to invest, enter new markets and innovate are higher than socially optimal and seek to reduce those incentives. In our view, this would be a misguided use of competition policy. This is particularly true given the difficulty in predicting

which innovations are likely to be particularly valuable and the potentially long-lasting negative effects of reductions in innovation and entry.

Conclusion

Just as sound antitrust policy does not attempt to stop a firm with legally obtained market power from setting a simple monopoly price to profit from its success, it should not prohibit a firm from optimally profiting via price discrimination. Even carefully targeted prohibitions would prove highly costly to implement and would have the perverse effect of lessening incentives for new firms to compete with those currently possessing market power. A careful consideration of the static welfare effects (total or consumer) of price discrimination also provides no basis to differentiate its policy treatment from that of simple monopoly pricing.

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