ANOTHER LOOK AT THE ROLE OF BARRIERS TO ENTRY IN EXCESSIVE PRICING CASES

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ABSTRACT   *In this paper we explain that an important screen for the assessment of excessive pricing allegations is the existence of very high and persistent barriers to entry. When this condition is not met, there is no justification for the use of competition law to penalize a firm's pricing decisions ex-post. Most importantly, this is because the market will self-correct, but also because demonstrating to the required standard that prices are excessive is likely to be impossible. When barriers to entry are low, therefore, it becomes undesirable to prosecute excessive pricing. Prosecuting firms for setting prices that encourage entry might chill competition and harm consumers.*

1. INTRODUCTION

The case for intervention against excessive pricing is simple and well-grounded in economic theory: excessive prices distort allocative and productive efficiency. An excessive price has two negative effects on allocative efficiency and, hence, on consumer welfare: first, it transfers value (quasi-rents) from consumers to firms, as every consumer who purchases the goods and services on offer pays

more for them than in a competitive market; second, and most importantly, it destroys value by forcing out of the market some consumers with relatively modest valuations. This last effect results not only in a reduction of consumer welfare; it also reduces total welfare (defined as the sum of consumer welfare and industry profits.) By preventing all gains from trade from being exhausted, such an excessive price distorts the optimal allocation of resources.

When prices are set at a competitive level, production is undertaken by the most efficient firms, i.e., those with the smallest marginal costs of production. Firms with marginal costs of production above the competitive price remain inactive as, otherwise, they would incur losses. The same outcome is not guaranteed when the equilibrium price exceeds the competitive price due to market power. In those circumstances, it is possible that production is undertaken by both efficient and less efficient firms. In short, excessive prices can also distort productive efficiency.

The case *against* intervention in excessive pricing cases can in turn be summarised as follows. Firstly, such interventions effectively set a cap on prices and, therefore, may chill the incentives to invest and innovate by reducing the *ex-post* return to investment. Secondly, identifying excessive prices is an extremely difficult task for both conceptual and practical reasons, which may lead to excessive intervention. Thirdly, excessive pricing should not be a concern in markets with low or modest barriers to entry, because any attempt to set prices above competitive levels will be self-defeating. Thus, intervention should be limited to cases where entry barriers are very high and not in circumstances where the market is contestable, since high prices would ordinarily attract new entrants that would compete away the excessive margins. Because markets are generally quicker and more effective at correcting excessive prices than administrative action or litigation, which takes time and tends to be haphazard, the expected cost of intervention is bound to be greater than that of inaction when barriers to entry are low.[1]

The first two arguments against intervention have been criticised as being overstated or irrelevant. Firstly, it is argued that an objection based on avoiding price regulation is overstated given that such regulations are common in other areas of competition law and consumer law, including Article 102 TFEU (*e.g.*, in margin squeeze cases). Secondly, while the problems of

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1 Another reason to prefer market entry to administrative action is that market competition is likely to yield additional benefits to consumers, if entrants are innovative for example. Competition is not just a way to keep prices down.

measuring costs and profits are real in excessive pricing cases, they are not inherently more complicated than similar exercises conducted elsewhere under Article 102 TFEU (*e.g.*, in predation cases). Margin squeeze, predatory pricing, and conditional rebates typically involve extremely detailed analysis – and, ultimately, if intervention is ordered, regulation – of costs and prices.

Reflecting all the aforementioned considerations, a consensus emerged that intervention under competition law against excessive pricing should be limited to "exceptional circumstances": intervention should be restricted to industries protected by high barriers to entry; where one firm enjoys considerable market power (*i.e.*, quasi-monopoly power); where investment and/or innovation play a relatively minor role; where all benchmarking exercises produce a consistent result; and, where the difference between the prices charged by the dominant firm and the benchmarks used is substantial and persistent. This approach limits intervention to circumstances where the expected costs of Type I errors (false convictions) are small, because innovation and investment incentives cannot be thwarted, and the expected costs of the Type II errors (or false acquittals) are large, because prices are close to monopoly levels and the market does not self-correct.[2]

This consensus is now subject to criticism, in particular as regards the importance of entry barriers as a limiting factor for intervention. In an influential paper, Professors Ezrachi and Gilo argue that excessive pricing is not necessarily self-correcting even in markets without entry barriers.[3] Their primary insight is that entrants will not be concerned with the *pre-entry* (excessive) price but rather the *post-entry* prices, which may be cut upon entry. If the entrant has good information on the incumbent's costs/efficiency, and realises the incumbent is more efficient, it is unlikely to enter, even if pre-entry prices are excessive. This paper considers this criticism and explains why it should not disrupt the existing consensus.

The balance of this paper is structured as follows. In Section II, we explain why prices at or below the *long-run competitive equilibrium price* should not be regarded as excessive. In Section III, we establish our basic proposition: there cannot be excessive pricing in markets with no entry barriers. We also discuss possible objections to this proposition, including that raised by Professors Ezrachi and Gilo. Section IV discusses the implications of our findings for the implementation of the *United Brands* test. In Section V we conclude.

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2 See Evans & Padilla, 2005. See also Motta & Streel, 2006; Paulis, 2007; Jenny, 2018.

3 See Gilo & Ezrachi, 2009. See also Ezrachi & Gilo, 2010.

2. THE LONG-RUN COMPETITIVE EQUILIBRIUM PRICE

Economists define *excessive prices* as those which are set significantly and persistently above the "competitive level." In some industries, that competitive benchmark is naturally given by the price that would apply in a *perfectly* competitive market – one where all firms act as price-takers and set prices at the marginal (or incremental) cost of production. This is because at the perfectly competitive price the market outcome is allocatively efficient – no consumer with a valuation for the good or service above its (marginal) cost of production is left without it; and productively efficient – production costs are minimised.

In many other industries, however, the perfectly competitive ideal is unrealistic. This is the case in industries characterised by economies of scale and scope, network effects, switching or search costs or in two or multi-sided industries. In these industries, pricing at perfectly competitive levels would yield overall losses in the short term and under-investment in the long term. Excessive prices should therefore be defined by reference to the prices that would result in a "long-run competitive equilibrium," where the price for the product traded is such that demand equals supply and there are *no* barriers to entry or exit. In such an equilibrium, all firms in the market recover their costs and obtain an appropriate return for their investment, so no firm has an incentive to exit. Furthermore, no outsider firm has an incentive to enter, because *post*-entry prices would not cover the long-run incremental costs of manufacturing and commercialising the product. In a long-run competitive equilibrium, consumers are protected from exploitation, since free entry prevents excessive rents, and investors are protected from excessive intervention, since the long-run competitive price is set at a level that covers their costs and hence justifies the decision to enter and remain in the market.

The long-run competitive equilibrium price arises when there is free entry and free exit. The so-called "contestability theory", postulated in the 1980s by Baumol *et al.*, claimed that the mere threat of entry by a competitor was sufficient to force a monopolist to set a limit price equal to its own average total cost in order to deter entry.[4] This theory is sometimes referenced in support of the claim that the long-run competitive price should equal the average incremental cost of the dominant firm. However, this theory relies on the unrealistic assumption that entry and exit occur before the incumbent can cut prices and, therefore, the theory cannot be relied upon. Under

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4 See Baumol, Panzar and Willig, 1982.

realistic assumptions about the timing of entry and exit, the long-run competitive equilibrium price will exceed the long-run average incremental cost of the dominant firm, unless market demand is so large that the market could accommodate several competitors with the same efficiency as the incumbent.

In other words, free entry and exit (*i.e.,* contestability) does not eliminate all (infra-marginal) rents in a long-run competitive equilibrium. In such a competitive equilibrium, efficient firms can appropriate the rents that derive from their idiosyncratic efficiencies. To illustrate this statement, consider, for example, a market populated by efficient and inefficient firms, where both types of firms are needed to meet demand. In such a case, the competitive price will be given by the incremental cost of the inefficient firms. Those firms will make zero (economic) profits in the long-run. Instead the efficient ones will obtain a positive margin (equal to the difference between the equilibrium price and their incremental cost) and, therefore, earn positive (economic) profits (*i.e.* a rate of return in excess of their cost of capital).

Prices may fall below the long-run competitive equilibrium price in markets where exit is too costly or is blockaded. This is because those markets are "forced" to operate with excessive capacity and, consequently, prices are kept artificially low. It follows that the competitive benchmark cannot be established using prices observed in markets where entry is free, but exit is blockaded.

3. OPEN MARKETS FEATURE NO EXCESSIVE PRICES

It follows from the above that the price charged in a market with no barriers to entry cannot be above the long-run competitive equilibrium price for very long and, as such, it cannot be considered excessive since it does not *persistently* depart from the relevant competitive benchmark. The criterion of 'persistently' is needed because prices in different open markets need not converge to the long-run competitive equilibrium price at the same speed and, therefore, we may incorrectly conclude that the prices observed in one market are excessive while competitive in another when, in truth, both markets are competitive but in one the effect of entry is felt more quickly than in the other.

To illustrate this proposition, consider for example two markets where entry and exist is costless. Suppose that in each market there are M potential competitors with the same marginal cost of production, c, and the same fixed costs, F. Suppose further that (a) demand is equal to $A - p$ in the first market,

while it is $B - p$ in the second, where p denotes price; and (b) incumbent firms compete à-la-Cournot (*i.e.*, setting quantities to maximise profits.) For a given market structure – *i.e.,* in the short-term when the number of active firms in both markets is the same, $N < M$ – market prices will differ across countries depending on the size of their respective markets. The (short-run) equilibrium price in the first market equals $(A + Nc) / (N + 1)$, while it is $(B + Nc) / (N + 1)$.

If A is greater than B, *i.e.*, if the first market is larger than the second, then the long-run competitive equilibrium price in the first market will be larger than in the second. This does not imply that the price in the first market is excessive. The number of firms in each of the two markets will keep increasing for as long as profits are positive. If entry takes place sequentially (a few firms at a time), the market price will converge to its long-run competitive equilibrium level, $c + \sqrt{F}$ much more quickly in the second market but it will reach that level in the first market too. This is because the equilibrium number of firms in the first market will be greater than in the second, which explains why convergence to the long-run competitive equilibrium may take more time in the first market. The risk is therefore that one may conclude that prices in the first market are excessive because they are not only above the long-run competitive price but also above those of the second market, when in fact the price differential will disappear as entrants move gradually into the market.

This example explains why prices should not be regarded as excessive unless they exceed the competitive benchmark for a sufficiently long period of time. It also illustrates that, unless entry is not timely, a market with no barriers to entry cannot sustain supra-competitive prices for long. Last but not least, it implies that, while the time evolution of prices may differ from one open market to another where firms operate the same technology depending on the size of the market or the speed of entry, both markets will eventually converge to the same price and, hence, there is no justification for an excessive pricing finding in either of them.

3.1. Uncertain Entry

The simple model above can be modified to investigate the effect of uncertainty regarding the timing (and magnitude) of entry. Consider, for example, a market with a single incumbent. The monopolist understands that a supra-competitive price will trigger the entry of rivals and depress prices. Which price path it selects will depend on its beliefs about the speed of entry

and the relationship between that variable and price. It may decide to set a low price from the start if it believes that entry is unlikely to happen provided the price is low; or it may set a high price and reduce it gradually towards the long-run competitive price if it expects that entry will happen soon regardless the price it selects. One way or the other, provided entry is timely, the implications of these two different pricing strategies on long-run consumer welfare are virtually the same. It would thus make no sense to sustain that the former is legitimate while pronouncing the latter abusive.

The incumbent which sets a high price expecting that entry will happen fast regardless of the price will prove "lucky" if entry is slower than anticipated. Its profits will be higher than expected *ex ante*, but those extra *ex–post* rents do not reflect market power. By the same token, it could have proven "unlucky" if, contrary to its expectations, entry occurred quickly because of the very high price it charged. Furthermore, as stated above, consumer welfare will be the same in the long run whether he proves lucky or unlucky or just right.

3.2. Coordination and Price Leadership

It may be argued that entry, or the threat of entry, will be ineffective if entrants rationally choose to coordinate their prices with the incumbent or, alternatively, they prefer to act as price followers merely matching the incumbent price. This may be valid concerns in markets where entry is possible but restricted as, for example, in US pharma markets where generic entry is restricted for a limited period of time. But they are unjustified in markets where entry is unrestricted. As is well-known, the possibility of unrestricted entry makes (tacitly) collusive agreements unsustainable. Similarly, free entry will undermine the incentives of the incumbent to act as a price leader, since the size of the competitive fringe will keep growing (and the incumbent's market share falling) for as long as its price exceeds the long-run competitive equilibrium price.

3.3. Strategic Pricing

As explained in the Introduction, Professors Ezrachi and Gilo argue that excessive pricing is not necessarily self-correcting even in markets with free entry and exit. They correctly state that the decision to enter a market is not driven by the *pre*-entry, excessive price but rather by the price that is expected to prevail *post*-entry, which may be significantly lower. They then claim that if the entrant anticipates that the incumbent will engage in a price war

post-entry, it will not enter even if *pre*-entry prices are excessive. But if it nevertheless enters, then entry is not driven by the high *pre*-entry price but rather by the expected profitability *post*-entry.[5]

None of these claims undermines our basic proposition that excessive prices are not possible in markets with no barriers to entry, though. In any such market a dominant firm will generally be unable to sustain prices above the long-run competitive equilibrium price,[6] because that is precisely the price that an entrant would normally expect *post*-entry. Professors Ezrachi and Gilo's critique only applies to cases in which the entrant expects *post*-entry prices to be below the long-run competitive equilibrium price. There are few plausible situations in which this could occur and none of them justify intervention under competition law.

One possibility is that the dominant firm may be trying to prevent entry by threatening a price war involving prices below the long-run competitive equilibrium price. However, such a threat will not be credible in most circumstances. Absent informational asymmetries or differential financial constraints,[7] entrants will be able to sustain a war of attrition with the incumbent and, therefore, the incumbent will prefer not to engage in a mutually destructive price war. In fact, the empirical evidence shows that prices are not usually used by incumbents to block entry.[8]

Another possibility is when normal competitive pricing *post*-entry would not enable the entrant to recover its investment cost. This is a well-recognised phenomenon in economics and it has a name: natural monopoly. There is also a well-recognised solution, at least when natural monopolies are large enough to be worth bothering about: *ex-ante* regulation. In most countries,

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5 See Gilo, 2018.

6 The incumbent may be able to limit entry if there is asymmetric information regarding the level of demand and / or the incumbent's costs, or if the entrant is subject to financial constraints due to asymmetries of information in the capital market. Otherwise, absent barriers to entry, including *e.g.* significant consumer switching costs, entry or the threat of entry will keep prices at or below the long-run competitive equilibrium price.

7 See previous footnote. The threat of a price war is not credible for many reasons. First, the dominant firm may not be able to recover some of the customers lost to the entrant, since the entrant will enter with long-term contracts. Second, economic theory shows that the incumbent often finds it optimal to cut prices *post*-entry but rather to accommodate the entrant. This is especially true if the entrant enters with a relatively small scale (see Gelman & Salop, 1983), or when the entrant sinks considerable production costs before competition starts (see Dana & Spier, 2007). Third, the incumbent may not be willing to fight the entrant by cutting prices if the entrant's exit is unlikely to return prices to their *pre*-entry levels due to, for example, buyer power.

8 See Geroski, 1995.

governments do not rely on the threat of prosecution under competition law to deter natural monopolies from pricing above 'reasonable' levels, for good reason. If entry and competition are simply unfeasible, then there is only regulation to turn to, so it should be predictable and transparent. An *ex-ante* system, under which a monopolist is told the rules of the game and can operate and invest in conditions of greater certainty is generally held to be preferable to *ex-post* prosecution. So, in these circumstances too, competition law intervention is not warranted, although other forms of intervention might be (especially those that might bring down barriers to entry: turning a 'natural' monopoly into a competitive market).

It is therefore hard to see circumstances in which intervention against excessive pricing under competition law would be appropriate, in markets with low or no barriers to entry. Indeed, an attempt to do so would run into fundamental methodological problems, as we now explain.

4. THE CHALLENGES OF IMPLEMENTING THE *UNITED BRANDS TEST*

Established case law going back to the *United Brands* judgement[9] requires *inter alia* an assessment of the gap between the prices and costs of the allegedly dominant firm, where cost data are available.[10] As the case law requires that the relevant gap be "persistent,"[11] this exercise amounts to assessing the profitability of the allegedly dominant firm over time. However, this is only straightforward in a static market in which future demand and supply conditions are rather predictable, among other reasons because there are significant barriers to entry. In such a market, a price can provide an incumbent with predictable, stable high profits and a competition authority might be able reliably to demonstrate that consumers would have been better off had the incumbent set a lower price during the alleged infringement period.

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9 Judgment of 14 February 1978, United Brands, 27/76, ECLI:EU:C:1978:22.

10 In the United Brands judgement, the Court of Justice of the European Union ("CJEU") established that the assessment of a potential excessive price infringement requires determining (as "limb 1") "whether the difference between the costs actually incurred and the price actually charged is excessive". Judgment of 14 February 1978, United Brands, 27/76, ECLI:EU:C:1978:22, paragraph 252.

11 The recent judgement of the CJEU in AKKA/LAA made clear that the test requires a demonstration that prices are persistently abusive, i.e. over a period of time. Judgement of the Court of 14 September 2017, *Autortiesību un komunicēšanās konsultāciju aģentūra/Latvijas Autoru apvienība v Konkurences padome*, C-177/16, ECLI:EU:C:2017:689.

However, neither the incumbent nor the competition authority can be so sure about future demand and, especially, about future supply conditions in a dynamic market that is not characterized by high barriers to entry. In such a market, the dominant firm does not know when setting its prices whether they will result in sustained high profits or just a short period of high profitability before increased competition from entry makes the market less profitable again. That is, because entry becomes endogenous to pricing decisions, it becomes virtually impossible to establish the expected profitability of the products under enquiry at the time prices are set.

Note, in particular, that when barriers to entry are low, establishing which costs are "actually incurred" over a sustained time period is far from being straightforward. Sunk costs are recovered over multiple years. As a matter of economics, therefore, they should be spread over the entire period over which the products under enquiry are profitable. But future profitability is uncertain: one of the most disruptive risks to a firm's profitability is competitors' entry. Higher prices yield higher margins in the short run, but also increase the chances of facing new competitors and/or accelerating their entry, leading to reduced margins and volumes, in the future. As profitability is lower after entry, the recovery period for sunk costs becomes shorter and margins, both before and after entry, smaller. When entry barriers are low, establishing which costs are "actually incurred" in a given period may thus be extremely challenging. This brings the question as to whether we can really assess profitability over a "persistent" period when firms do not benefit from exclusive rights or legal monopolies?

Given these uncertainties a meaningful price-cost comparison will be difficult, if not practically impossible. Realistically, it would require an exhaustive exercise that takes into account all possible hypothetical market developments and identifies a material price cost gap under any possible hypothetical.

Assessing prices and costs *ex-post* – i.e. when all uncertainties are resolved – may unfairly and inefficiently condemn a firm which set reasonable prices because demand and supply evolved favourably. Out-turn profitability is not a reliable guide to what might have been expected when those prices were decided. Indeed, as explained above, the dominant firm may expect to obtain a reasonable return by setting a price given its expectations on entry and then find that its profits are much higher (if entry did not take place as early as expected) or much lower (if the prices chose triggered immediate entry).

Therefore, examining historical margins does not provide a satisfactory account for the risks and uncertainties listed above, as it may only show how

these have resolved over time. It may lead to finding a firm liable for having adopted a "reasonable" *ex-ante* pricing strategy (given its information and expectations) only because, *ex-post*, these risks and uncertainties eventually resolved favourably to the firm. This approach would disregard the fact that the same risks and uncertainties could also have plausibly resolved the other way around. Such an *ex-post* assessment cannot have proper deterrence effects and may cause firms to price inefficiently to minimize the risk of penalties.

A competition authority that condemns an episode of high prices followed by entry risks hurting consumers, since consumers could be better off if a short period of high prices induces entry and price competition than they would have been had the incumbent kept prices somewhat lower and no entry took place. From a policy perspective, consumers may be worse off if prices are set at a level that does not attract entry ("limit pricing") than they would be with high prices first but entry and lower prices in the long term. Prosecuting a firm for excessive pricing in the context of low barriers to entry and therefore when entry is endogenous to the pricing decisions of the allegedly dominant firm, may thus easily result in the prosecution of pro-competitive and welfare enhancing practices. This is not to say that excessive pricing can never be demonstrated to a reasonable standard of certainty. It can, but only in markets where there is little if any threat of entry.

5. CONCLUDING REMARKS

In this paper we have explained that an important screen for the assessment of excessive pricing allegations is the existence of very high and persistent barriers to entry. When this condition is not met, there is no justification for the use of competition law to regulate a firm's price *ex-post*. Most importantly, because the market will self-correct, but also because demonstrating to the required standard that prices are excessive is likely to be impossible. When barriers to entry are low, therefore, it becomes undesirable to prosecute excessive pricing. Prosecuting firms for setting prices that encourage entry might chill competition, harming consumers.

This conclusion remains valid when the prices being investigated follow from a significant price increase, because consumers cannot be harmed if that increase triggers entry. Furthermore, even if entry is delayed, there is no reason to prohibit prices increases when, as in this case, *post*-increase prices are in line with the prices set for "comparable" products and, importantly, pre-increase prices were not profitable.

According to the European Commission, "*enforcement action against excessive prices has only been considered as a last resort in markets where high prices and high profits do not have their usual signalling function to attract entry and expansion because of very high and long-lasting barriers to entry and expansion. This recognises that, even though prices may be temporarily high, due to a mismatch of demand and supply or the exercise of market power, it is preferable to give market forces the time to play out and entry and expansion to take place, thereby bringing prices back to more normal levels.*"[12]

We concur.

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