

Agenda

Advancing economics in business

Share and share alike? Unilateral effects analysis in minority shareholdings

When a large company decides to acquire the majority of a rival's shares, it may well attract the attention of competition authorities. For minority acquisitions, however, the implications for competition are not straightforward. How can unilateral effects tests, which are increasingly applied as standard in merger investigations, be adjusted to the special case of passive minority acquisitions?

Many companies are owned by multiple investors or entities. The size of each investor's shareholding is central to the ownership structure of these companies; a larger financial interest is typically associated with a greater degree of influence and control over the company's decisions.

If a large company decides to acquire the majority of a rival's shares, it will often attract the attention of competition authorities, since control of the competitor (typically referred to in merger analysis as the 'target' firm) would pass to the firm acquiring the majority stake, and any pre-existing competition between the two firms would be lost. For minority acquisitions, however, the implications for competition are less straightforward, since the company acquiring the shares might not control the strategy of the target firm and has only a minority interest in its financial performance.

In the past, competition authorities have also taken an interest in such minority acquisitions. For example, in 2007 the UK Competition Commission blocked the acquisition by pay-TV retailer BSkyB of 17.9% of the shares in ITV, a large commercial TV broadcaster.¹

This article considers the factors affecting the likely competitive effects of partial ownership, before discussing how simple tests that gauge how prices will change following a full merger can be applied to minority acquisitions.²

Incentives and control

In merger assessments, one of the key questions that competition authorities address is whether the merger will result in the firm having greater incentive and/or ability to raise prices to consumers. In a full acquisition,

the merged firm obtains control over the competitive conduct of the target firm, and is generally expected to use this to maximise total profits across the whole of the merged entity. In other words, the new entity has greater ability (through total control) and/or incentives (through its financial interest) to remove any competition between the two merged parties.

However, in the context of a partial acquisition, the acquiring firm does not necessarily gain control over the target firm. Also, since the acquirer is not entitled to the full profits of the target (since its share of profits is generally in proportion to its financial interest), it is likely to have lower incentives to raise prices.

It is important to make a distinction between the acquiring firm's financial interest in the target firm and its level of control (particularly over variables such as pricing). While a large financial interest tends to be associated with a high degree of corporate control, this is not always the case. For example, the acquisition of non-voting stock can lead to an increase in the acquiring firm's financial interest without any change in corporate control.

In order to understand the potential effect of a partial acquisition on prices and consumer welfare, one first has to assess how the acquisition affects the acquiring firm's control over the target. This assessment needs to be followed by an analysis of how the interplay between expected changes in financial interest and corporate control affects the parties' incentives. Given that there is no determinative link between the two, a range of competitive outcomes can arise.

Below, we focus on the case of a firm acquiring a minority financial interest in a competitor. The stake acquired is small enough not to confer any control over

the target's pricing or other aspects of its commercial strategy. Our objective is twofold: to discuss how this kind of acquisition may affect competition according to economic theory; and to examine whether and how the standard unilateral effects tests can be applied in such cases.

Does a 'silent' financial interest have an effect on competition?

If a minority acquisition in a competitor is small enough such that it can be thought of as a silent financial interest, the acquirer has no control over the target firm's commercial strategy and merely benefits from the target's profitability through the returns on its investment.

Economic theory suggests, however, that these silent interests can have an impact on competition, since they can affect the incentives of the acquiring firm to compete with the target firm. In the absence of a financial interest in a competitor, a prospective acquiring firm maximises its own profits by setting prices at a level where the benefits and costs of a further price increase balance out. However, after the acquisition, it benefits from a portion of the profits of the firm in which it owns the minority share. Some of the profits that would previously have been lost to competitors following a price rise may now be 'recaptured' as some consumers opt for the target's offering instead. Moreover, depending on the dividend structure of the target firm, there may be dividend payments from the target to the acquirer. This means that unprofitable price increases prior to the acquisition may now be beneficial, as the company gains indirectly from its rival's profitability.

This logic of economic theory can be important for the quantification of unilateral effects. A simple example is useful. Imagine that, before the acquisition, a prospective investor (Alpha Co.) prices its own product (a tub of ice cream) at £2.00, and that it costs £1.40 to produce, pack and distribute through its own high-street shop; profits are thus 60p per tub. An average of 500 customers a day buy this ice cream, resulting in a daily profit of £300. Assume that, if the investor were to raise prices by a small amount, say 10p (5%), it would lose 80 customers; some would buy an alternative brand of ice cream, and others would simply spend their money on something else. This price rise would result in a reduction in profits, since the new profit would be £294: 420 sales, each with a margin of 70p.

Suppose now that Alpha Co. has acquired a 20% share in a neighbouring ice cream vendor (Beta Co.), and is therefore entitled to 20% of Beta Co.'s profits, which Beta Co. distributes regularly to its shareholders. Assume that, of the 80 customers that would have left

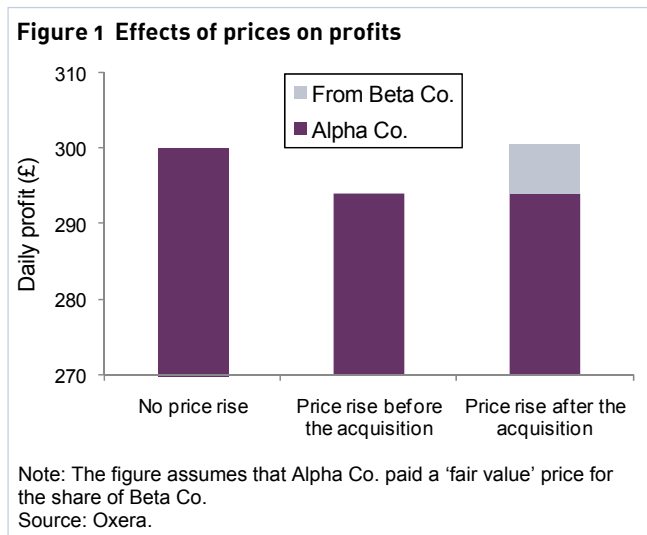
Alpha Co. following a price increase of 10p, 55 would buy ice cream from Beta Co. instead. Since the two firms are operating on the same margin (before any price rise) of 60p, these customers generate to Alpha Co. an additional profit stream, via dividends, of £6.60.³ Therefore, contrary to the pre-acquisition situation, it is now profitable for Alpha Co. to increase its price by 10p (5%); its daily profits increase to £300.60. Figure 1 below illustrates how it pays to increase own prices after the acquisition.

Unilateral effects tests in the case of passive ownership

Competition authorities in Europe and North America are increasingly relying on simple modelling based on the economic logic used in the example above to gauge the potential incentives to increase prices following a merger. However, these tests are normally formulated to be usable in the context of full mergers, and need be adjusted for partial acquisitions.

One commonly used simple model is the gross upward pricing pressure index (GUPPI). This approach centres on the profit-maximising behaviour of the merging parties, which seek to minimise the 'cannibalisation' effect following the merger. In other words, when parties merge, they have an incentive to raise prices because they are no longer keeping prices low to compete for each other's customers. The GUPPI is a simplified test based on some strong assumptions, and is not designed to provide precise price rise estimates. Nevertheless, it has been used by the US and UK competition authorities in a number of recent cases, in part because of its simplicity and its ability to model mergers between multi-product firms.⁴

Willig (2011) provided an explicit generalisation of the GUPPI that allows for partial equity stakes to be taken into account.⁵ His adjusted GUPPI is simply a proportion of its full merger equivalent equal to the



equity percentage acquired. In other words, the estimated price rises are diluted by the proportion of the target firm's equity that is acquired.

Another tool that competition authorities regularly consider is the indicative price rise (IPR) measure, which considers the incentives of the merging parties when setting the prices of their products. In its simplest form, the IPR requires data only on margins and diversion ratios between the merging parties, along with an assumption about the shape of the demand curve faced by the firms.

To derive the IPR for a passive minority acquisition, it is taken as given that both firms continue to set their prices independently. Additionally, the acquiring firm is assumed to set its price so as to maximise the sum of its own profits and a fraction of the rival's expected profits (equal to the percentage of the target firm's equity that it has acquired), while the target firm does not take the profits of the acquiring firm into account.

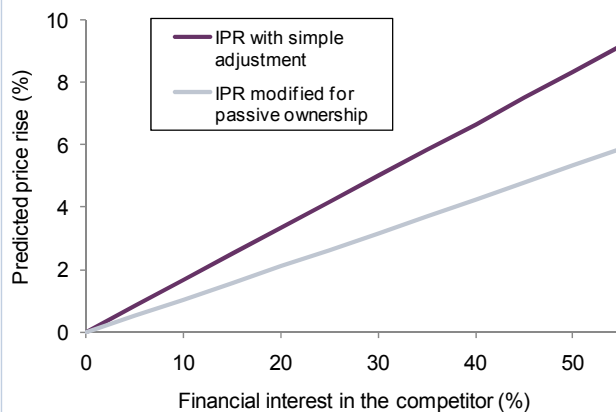
As with the adjusted GUPPI, the partial ownership IPR is smaller than its full merger equivalent for any given

set of inputs. There is an important difference, however. Simply multiplying the full merger IPR with the percentage equity share—as in the GUPPI adjustment—would necessarily over-predict price rises in the case of passive ownership. Figure 2 below illustrates this by plotting predicted price rises for the acquiring firm as a function of the percentage of the financial interest acquired.

Caution therefore needs to be taken when applying the unilateral effects tests to passive minority ownership; the basic adjustment fit for GUPPI is not suitable for the IPR metric, mainly because of the need for the modified IPR to explicitly take into account the fact that the acquiring firm has no control over the competitor's pricing incentives.

To summarise, acquiring a minority ownership in a rival firm tends to give rise to much smaller predicted price increases than a full merger. Furthermore, when the unilateral effects measures explicitly take into account the fact that the acquiring firm has no control over the target's pricing, the predicted price rises are even less significant.

Figure 2 Indicative price rises for the acquiring firm



Note: For expositional purposes it is assumed that the diversion ratios are equal to 40%, pre-acquisition margins are equal to 50%, and there is no difference between the pre-acquisition prices charged by the two firms.

Source: Oxera.

Concluding remarks

It is not surprising that the qualitative and quantitative economic analysis of partial acquisitions is less developed than that of full mergers, since such cases are less commonly examined by competition authorities. The focus of this article has been on the special case of non-controlling, or passive, ownership, and has considered how unilateral effects analysis can be used to gauge price rises. However, it is important to note that neither the proponents nor the originators of unilateral effects tests claim that this approach quantifies the price effects of a merger with precision, or captures all relevant factors. The role of these tests is simply to inform merger investigations just as market concentration analysis has done for decades, and it is clear from this analysis that a passive partial stake would generally be found to have much smaller pricing effects than a full merger.

¹ Competition Commission (2007), 'Acquisition by British Sky Broadcasting Group plc of 17.9 per cent of the Shares in ITV plc', December 14th.

² For more detail, see Oxera (2010), 'Best of Both Worlds? Innovative Approaches to Modelling Merger Price Rises', *Agenda*, May.

³ The additional profit is calculated by multiplying the number of new customers, 55, by the additional profit per customer, 60p, and the minority shareholding of Alpha Co., 20%.

⁴ See, for example, Office of Fair Trading (2011), 'Anticipated Acquisition by Unilever of Alberto Culver Company', March 18th, para 88, and Office of Fair Trading (2012), 'Anticipated Acquisition by Shell UK Limited of 253 Petrol Stations from Consortium Rontec Investments LLP', February 13th, para 83.

⁵ Willig, R. (2011), 'Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions', *Review of Industrial Organization*, 39:1, pp. 19–38.

If you have any questions regarding the issues raised in this article, please contact the editor, Dr Leonardo Mautino: tel +44 (0) 1865 253 000 or email l_mautino@oxera.com

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