Economist's Note

Can the SIEC test be used to assess effects from buyer power?

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I. Motivation and plan of analysis

The European Commission introduced the 'significant impediment to effective competition' (SIEC) test to close an enforcement gap with respect to oligopolistic markets,[1] and to pave the ground for a more effects-based-approach in merger control.[2] The SIEC test is mostly applied to final goods markets in which sellers set prices to consumers. More recently, the test has also been applied to *intermediate markets*, in which prices are often negotiated between suppliers and buyers. This note addresses difficulties in conducting an effects-based assessment of mergers in such markets, notably with respect to the possible creation and exercise of buyer power (vis à vis suppliers). As currently applied the SIEC test may lead to over-enforcement of buyer power.

Intermediate markets, where firms sell to other firms rather than final consumers, typically require a specific set of analytical tools. However, there is a risk that competition authorities and courts proceed under the misguided presumption that differences are negligible and that buyer power (towards suppliers) could be analysed as a 'mirror image' of the more standard case of seller power (towards consumers). The reality is that buyer power can only be treated as a mirror image of seller power under a specific set of circumstances; otherwise the mirror image can be misleading. What is needed instead is a careful economic analysis of the particular context and a careful assessment of the specific effects that are at work.

This note illustrates the need to conduct a careful economic analysis by example of a recent merger case with reference to buyer power. In this instance, the German (Federal) Cartel Office (FCO) blocked a merger in the German grocery retail market subject to a SIEC.[3] Notably, the decision reasoned, among other, that the merger would not only enhance the buyer power of the two merging retailers but also of other retailers (so-called 'second-round effects'). Although such an argument may indeed be suggested by a 'mirror image' application of the standard SIEC test with regard to seller power, without further analysis, it may be incorrect in intermediate goods markets with regard to buyer power. Before we turn to this specific case in Section III, however, we start in Section II by explaining the basic

Key Points

- Under EU competition law mergers are assessed based on the so-called 'Significant Impediment to Effective Competition' (SIEC) test.
- That test is generally applied to examine market power sellers have towards consumers; but it can also serve to assess the power detained by buyers vis-à-vis suppliers.
- This however may require adaptations as the economics of both settings are different.
- In particular, there should be no untested presumption of so-called 'second round' effects, according to which increased buyer power of merging firms would also increase buyer power of non-merging firms.

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1 For assessments of the impact of the SIEC test in European Merger Control, see, for instance, L-H Röller and M De La Mano, 'The Impact of the New Substantive Test in European Merger Control' (2006) 2(1) European Competition Journal 9–28; N Levy, 'The EU's SIEC Test Five Years On: Has it Made a Difference?' (2010) 6(1) European Competition Journal 211–253 or, more recently, G Federico, 'Theory of harm in unilateral effects cases in oligopolistic markets' (2014), Presentation at Studienvereinigung Kartellrecht Forum on EU Competition Law Brussels, 4 April 2014, <https://www.studienvereinigung-kartellrecht.de/downloads/forum-kartellrecht/2014_giulio-federico.pdf>.

2 See, for instance, OECD Policy Roundtables, 'The Standard for Merger Review, with a Particular Emphasis on Country Experience with the change of Merger Review Standard from the Dominance Test to the SLC/SIEC Test' (2009), DAF/ COMP(2009)21, 2f.

3 Federal Cartel Office (*Bundeskartellamt*), decision of 31 March 2015, B2-96/14—*Edeka/Kaiser's Tengelmann*, <http://www.bundeskartellamt.de/SharedDocs/Entscheidung/DE/Entscheidungen/Fusionskontrolle/2015/B2-96-14.pdf>, (hereinafter, 'FCO Decision, B2-96/14').

economic principles for a proper consideration of buyer power in merger cases. In Section IV we conclude with broader implications for applying the SIEC to assess effects from buyer power.

II. Buyer power in three steps

A. Supplier profits

In final goods markets, there exist various economic reasons why the analysis should focus (though not necessarily exclusively) on consumer surplus. In other words, when firms sell to consumers, focusing on the effects a merger has on the welfare of buyers is a good approach for identifying any adverse effects it may have. However, one cannot derive from this that focusing on the effects of a merger on the profits of those the merged entity trades with is generally a good approach. Specifically, when a merger between buyers shifts profits from suppliers to buyers, these arguments often do not apply.

Intermediate markets, where firms trade with other firms, are often more complex than final markets. The differences exist, for example because terms of trade can be much more sophisticated than in final markets, whilst the effects on final markets need to be considered simultaneously. In this context even the question of whether and how the merger affects the profits of the counterparties of the merging firms, say those of suppliers in the present case, is not a straightforward one to answer. In fact, it turns out that in even the most simple, static analysis, the effect that the formation of a larger buyer has on supplier profits is generally ambiguous. This may happen, for instance, when capacity in the market is relatively restricted. A newly formed larger buyer may have greater difficulty to find an adequate alternative source of supply for its larger procured quantity, which may weaken the buyer's bargaining position rather than to strengthen it.[4] This is, of course, less likely when procurement gains are one of the declared objectives of a buyer merger; and size can indeed be an advantage to a buyer for various reasons. Economics shows that a buyer's ability to extract better terms in negotiation depends on the strength of its best alternative (or 'outside option') and on the weakness of that of its suppliers. Depending on circumstances, the size of a buyer can improve a buyer's own outside options and deteriorate those of suppliers, leading to better trading conditions.[5]

In fact, under certain circumstances, notably when buyers have already much bargaining power, recent formal economic work has managed to generate also for markets with negotiations a close link between standard concentration measures such as the Herfindahl Index, which is widely used as a merger screen, and competition.[6] However, it must be emphasised that this holds under specific circumstances, while generally, as mentioned above, in markets with negotiated contracts, a greater concentration of purchases in few buyers need not always lead to a decrease in profits for suppliers.

After these considerations it is established that buyer concentration cannot simply be assumed to result in an increase in the merged entity's bargaining (buyer) power. The next question is whether and to what extent one should be concerned about any increase in buyer power, provided that it indeed materializes.

B. Welfare effects of buyer power

We now consider effects of buyer mergers on overall welfare or that of final consumers.[7] A merger that raises final prices for consumers typically reduces both consumer welfare and total welfare as it increases so-called deadweight loss: the margin between the final price and marginal cost increases, so that fewer socially efficient trades are realised. This observation creates a tight link between the increase of seller market power and a reduction of both consumer and total welfare.[8]

However, no such 'tight link' exists when we consider the exercise of buyer power in intermediate markets. There are several reasons for this. In what follows we focus on only two: first, prices in intermediate markets can often be changed without having an impact on the amount of trade and output; whereas, second, *if* there is a change in the terms of trade and output, it may be, but need not be, to the better (i.e. welfare increasing).

The first reason has to do with terms of trade. In final markets, a deadweight loss occurs because a seller is often restricted in how it trades with consumers. In particular, the large number of buyers prevents sellers from

4 R Inderst and J Montez, 'Buyer Power and Dependency in a Model of Negotiations' (2014) Working Paper, Goethe University Frankfurt and London Business School, Section 5 refer to this as 'buyer dependency' and derive precise conditions on when this leads to a size disadvantage or when, instead, size increases 'seller dependency' and leads to a discount.

5 For an overview see R Inderst and N Mazzarotto, 'Buyer Power in Distribution', in WD Collins (ed), *Issues in Competition Law* (2008) Vol. 3, 1953–1978.

6 R Inderst and J Montez, cf. FN 10.

7 On the applicability of the various welfare standards see: S Thomas, 'Ex-Ante and Ex-Post Control of Buyer Power' (2015), to be published in: D Takahasi (ed), *Abuse of Regulation in Competition Law – Past, Present and Future,* <http://ssrn.com/author=2397291>.

8 Indeed, this 'tight link' also forms a foundation for the application of the HHI concentration measure in merger analysis (see, for instance, M Motta, *Competition Policy: Theory and Practice* (2004), 123f.)

setting individual terms of trade and, in doing so, to use sophisticated contracts. This may then result in a fixed per-unit price that is valid for most (or large numbers of) customers. However, in intermediate markets, the typically considerably lower number of buyers and independent (and often secret) negotiations can allow sellers to agree different terms with different buyers. When contracts can thus be also more complex, this can allow to transfer profits between buyers and sellers without affecting the *marginal* conditions of trade and thereby output and efficiency. In this context, the exercise of (more) buyer power by one or several buyers can then have an effect on how profits are shared between sellers and buyers *without* affecting welfare. Such a situation is sometimes referred to as one of 'efficient negotiations', as the issue of how much surplus is jointly realised by the negotiating parties is disentangled from that of how surplus is shared.

Second, if efficient negotiations are not feasible for whatever reason, then the exercise of buyer power could indeed lead to a lower per-unit price for the respective buyer. However, the similarities to the effects of seller power end when one considers welfare effects. Buyer power does not necessarily mirror seller power in that it would decrease welfare. Rather, if a more powerful buyer benefits from a lower (marginal) input or wholesale price, this is typically at least in part passed on into a lower downstream price, which all else equal, should ultimately lead to higher consumer and higher total welfare.[9]

These two examples show that when a merger increases buyer power, the welfare effects need not be negative, but can be either non-existent (when contracts are sophisticated enough) or positive (when final prices are reduced). The idea that buyer power can be treated as the 'mirror image' of seller power is in this case once again misleading.[10]

C. A first summary

In the preceding discussion we have established that when dealing with a buyer merger in intermediate goods markets, without a careful economic analysis that isolates and, where possible, quantifies the key economic effects at work, a sweeping reference to buyer power being the 'mirror image' of seller power is most likely to be misleading and to result in serious flaws. Specifically, an assessment of the welfare effect of an increase in buyer power following a merger should take seriously the questions of: first, whether the merger has *any* consequences on supplier profits; and second, even when it does, whether the merger has *any negative* consequences for consumer and total welfare.

The economic literature on buyer power provides guidance that helps both to qualitatively assess the likely impact from a buyer merger and to ask the right questions for an empirical analysis. The application of appropriate economic theory in this area is likely to lead to a more case-by-case approach to the assessment of the SIEC test. This is an area where, for the reasons explained above, one cannot simply rely on the intuitions and simplified merger assessment techniques developed for final markets. Assessing what mergers lead to an SIEC because of increases in buyer power requires a careful approach that is highly dependent on the specifics of the case at hand.

III. A 'full equilibrium approach' as a specific application of the SIEC test

A. Our next steps

One way of appreciating the complexities involved in a buyer merger analysis is to consider not only an individual negotiation between a supplier and the merged entity, but to also consider how any change in an individual negotiation's balance of bargaining power, might affect other negotiations in the market. This question was considered in the FCO's decision to block a merger in the German grocery retailing market. We do not conduct a full review of this case and hence we do not assess in any way whether this decision was appropriate

9 One must warn against common mistakes in interpreting the conditions for when a pass-on of lower own costs is higher or lower. When lower costs are enjoyed by all competitors, then the pass-on is typically larger as competition is more intense, though the pass-on can still be substantial even when each firm has considerable market power. And such a monotone relationship between the degree of competition and that of the pass-on no longer applies when only one party, i.e., here a more powerful buyer, enjoys the considered cost advantage. It should also be noted that while typical, a pass-on may not always incur, notably when the respective reduction of costs is only temporary and there are sufficiently high (menu) costs of price adjustments.

10 Admittedly, the *whole* picture is more complex for various reasons. First, in the case of a so-called 'waterbed effect' the wholesale price of a rival buyer may increase, which under specific circumstances could then lead to a higher average retail price of all buyers (cf. R Inderst and T Valletti, 'Buyer Power and the Waterbed Effect' (2011) 59(1) Journal of Industrial Economics 1–20 or P Dobson and R Inderst, 'Differential Buyer Power and the Waterbed Effect: Do Strong Buyers Benefit or Harm Consumers?' (2007) 28(7) European Competition Law Review 393–400). Second, depending on circumstances, the exercise of buyer power can have positive or negative aggregate dynamic welfare effects, for instance through affecting the investment incentives of both sellers and buyers. Various formal economic contributions in the literature allow us to delineate the respective circumstances for when the different effects may apply (e.g., for when the exercise of buyer power can even have positive incentive effects on suppliers, such as in R Inderst and C Wey, 'Countervailing Power and Dynamic Efficiency' (2011) 9(4) Journal of the European Economic Association 702–720 and 'Buyer Power and Supplier Incentives' (2007) 51(3) European Economic Review 647–667).

in its entirety or not. Rather, we consider one particular argument made by the FCO. According to this argument, the merger would lead to a SIEC because (amongst other things) it would increase the power not only of the merging parties, but also that of *other* buyers. The FCO thereby appears to rely on a version of the 'mirror image' view of what we call next a 'general equilibrium effect' of the exercise of seller market power. We discuss this effect first, before turning to the assessment of whether its 'mirror image' application in the context of buyer power has any merit.

B. A 'full equilibrium approach' of a buyer merger (with competition in the final market)

Consider a merger of two firms, say firm 2 and firm 3, in a market where there is a single further firm 1.[11] Before the merger, the incentives of firm 2 and firm 3 to raise their respective prices were constrained by the prospect of the diversion of demand not only to firm 3 but also to the other rival. As this constraint is absent following the merger, the merged firm (2 + 3) will, all else equal, increase its price. Economic theory shows that the resulting diversion of demand to firm 1 will typically lead to a price increase being implemented also by firm 1.[12] One could then proceed further with this adjustment process as, by the same logic, the price increase by firm 1 will make a further price increase of the merged firm optimal and so on. These feedback effects will eventually settle prices at the new, post-merger, market equilibrium.

Such a 'full equilibrium approach' to the assessment of the price effects of a merger is what is typically captured through a 'merger simulation' approach.[13] The resulting price effect will typically be greater and therefore lead to greater consumer and welfare loss compared to the 'partial equilibrium' adjustment of the prices of the merged firm, leaving other prices unchanged. This is a relatively established way to consider price effects, at least in certain types of markets and in certain circumstances. We now consider whether there is a basis for a similar approach to be taken in relation to price reductions in an upstream (intermediate) market following a merger between competing buyers.

C. A 'full equilibrium' approach applied to buyer power?

The FCO's argument was that the exercise of buyer power of the merged retailers would lead to a 'second round' effect, through which also other retailers could exert more buyer power,[14] as they become 'more valuable' to suppliers.[15] In the published decision, no further analysis or quantification of such an effect is provided.

The first thing to observe is that for a price increase to extend to competitors of the merging firms, as discussed in Section III.B, demand should be diverted away from the firms that originally increase the price and to its competitors. This would then trigger a profitable price increase also by competitors. The first thing to ask now is obviously whether the post-merger exercise of buyer power would trigger such a diversion of, in this case, supply to other buyers. And the second thing to ask is whether this would there trigger a reduction in prices. More generally, of course, it needs to be asked whether the exercise of buyer power would proceed in a way that is indeed similar to such an exercise of seller power as discussed in Section III.B. As we noted above, however, in most cases the exercise of buyer power should affect first and foremost the individual terms and conditions in a bilateral relationship. In all cases where prices are individually negotiated there is therefore a specific need to establish, first, how such a spillover to the terms and conditions of other buyers could occur at all. Second, if such a spillover exists, one would need to establish why it should have the particular

11 It should be noted that the FCO has used the subsequent argument, i.e. that the SIEC Test could lead to the blocking of a merger between two firms of which neither one is dominant in the market, also in other instances (and thus outside buyer power). See FCO (*Bundeskartellamt*), 'Eine Bestandsaufnahme: Marktbeherrschungs- und SIEC-Test' (2009), Background paper for the conference of the working group on competition law, 24. September 2009, 4f., <http://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Diskussions_Hintergrundpapier/Bundeskartellamt%20-%20Marktbeherrschungs%20und%20SIEC%20Test.html>.

12 This argument was applied, for instance, by the European Commission in the merger between Hutchison 3G Austria and Orange Austria: '… [G]enerally accepted and robust economic theory demonstrates that the profit-maximising response of competitors to a price increase would be to increase prices themselves. […]. The rationale behind this expectation is the following: if the merged entity were to raise prices, some customers would consider switching to one of the other two providers who would not have done so in the absence of the merger. The merged entity will make its calculation balancing this loss of revenue against the higher revenue on the customers who remain. These newly available customers then increase the demand faced by the other competitors, as a result of which they have an incentive also to increase prices themselves. If [the competitors] have incentives to respond to a price increase of their rivals by themselves increasing price, then prices are called 'strategic complements". European Commission, decision of 12 December 2012, Case M.6497, *Hutchison 3G Austria/Orange Austria,* para 367, 369, 371–72.

13 Such an approach is occasionally also discussed in the context of market definition, as the FERM (full equilibrium relevant market) test.

14 The FCO refers explicitly to an 'enlargement of the action space' ('Erweiterung der Handlungsspielräume') of other large retailers, cf. FCO Decision, B2-96/14, para 599f.

15 See FCO Decision, B2-96/14, notably para 601 or para 870. The FCO also notes that this should apply asymmetrically across retailers, so that larger retailers benefit but smaller retailers are ultimately disadvantaged.

'sign', i.e. why a worsening of terms in one relationship should then lead to a worsening of terms in another relationship. Third, one would have to consider (in a way equivalent to what is sometimes done in merger simulations) whether such an effect would be material beyond the effect on individual negotiations, and therefore relevant in its own right to the application of the SIEC test.

There are various reasonable circumstances, such as the aforementioned use of 'efficient contracts', why in intermediate markets with bilaterally negotiated contracts there may be no such externality at all.[16] However, even when we abstract from such efficient contracting, so that the exercise of buyer power affects marginal wholesale prices and total sales, we have to carefully think through how terms and conditions could be affected in the broader market.

This is not straightforward and depends on, for example, the supplier's costs. Consider the case where a supplier has increasing marginal costs. If a powerful buyer manages to extract a lower marginal wholesale price as a result of a merger and is able to also expand the supplied volume, the price paid by other buyers should tend to increase rather than decrease (because the supplier faces increasing marginal costs). When the powerful buyer further passes on some of its cost advantages to gain market share downstream, the reduced volume of other buyers could also further reduce their bargaining power, leading to a so-called waterbed effect and again to a deterioration of their terms.[17] This is just one example of course, and alternative effects are possible.[18] However, this example shows that broader effects on prices cannot simply be assumed or extrapolated from cases of seller power. Instead they rely on very specific ways in which negotiations or the market may react. A 'full equilibrium' price effect cannot be anticipated. The way in which increases in buyer power may be relevant to the application of the SIEC test can only be ascertained through a thorough effects-based analysis. This review should consider in detail price formation in the considered intermediate market, including notably scope of efficient contracting, the costs of suppliers, and the relationships between individual bargaining between sellers and buyers.

IV. Concluding remarks

Mergers can lead to increases in the bargaining strength of the parties. Such increases in buyer power have the potential to affect competition for better or for worse. This means that effects on the buyer power of firms should fall within the scope of the SIEC test.

However, the application of the SIEC test to changes in buyer power is one that cannot be conducted as if one was analysing changes in seller power. First, the set of circumstances where adverse effects arise is likely smaller as there are a many realistic circumstances where welfare effects are likely neutral or benign (as prices decrease and output expands). Second, even when adverse effects are possible, the circumstances in which they can arise are more specific. This means that authorities should not rely on intuitions and approaches developed in final markets. Shares of the market (buyer shares) or full-equilibrium effects are just two examples where intuitions can lead to the wrong conclusions. Indeed, not recognising the specific and context-dependent nature of the analysis of intermediate markets risks leading to wrong conclusions.

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16 For instance, when we consider for simplicity a higher slotting allowance that must be paid to the merged retailer, this needs to be paid regardless of whether more or less is sold through other retailers. A first sight, such a higher payment would seem to reduce the 'outside option' of a manufacturer in his negotiations with other retailers. But as it has to be paid regardless of whether he sells more or less units at a given retailer, it has no effect.

17 See the reference in footnote 13.

18 We do not dispute that there can be other effects at work that could, for instance, support a 'me-too' demand of other retailers when they anticipate or know of improved conditions for the merged retailer. Also, to what extent the merger would have significantly restricted 'alternatives', e.g. for the introduction of new products, and how this could have the asserted effect would need to be analysed both formally and empirically so as to properly assess the validity of such an argument. Finally, a supplier may indeed improve the conditions also for other retailers so as to thereby counteract the (market) power of a powerful retailer, albeit the FCO seems not to have had in mind this channel. For a formalization of such a distribution policy see R Inderst and G Shaffer, 'Managing Channel Profits When Retailers Have Profitable Outside Options', Working Paper, Goethe University Frankfurt and Rochester Business School, derives such an improvement of conditions for retailers in a 'competitive fringe'.