

G:ENESIS



**Self-supply and indirect constraints within
competition analysis**

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1. INTRODUCTION

In most competition cases, the basic methodological approach used to define markets and determine market power is relatively uncontroversial. Markets are defined based on the SSNIP (Small but Significant Non-transitory Increase in Price) test and market power is measured using a range of factors such as market share, barriers to entry and countervailing buying power. However, *wholesale* market dynamics introduce a critical complexity which tends to challenge the analytical border between market definition and market power.

Upstream suppliers will often sell both to independent downstream firms, as well as to their own integrated downstream divisions and sometimes they will sell exclusively to the latter. Though “intra-firm” sales are not sold directly to downstream independents, they might still act as a constraint to upstream firms that do supply the independents. This can happen in two ways. Firstly, if in response to a price increase on the input sold to independents, the integrated firm switches some capacity from “self-supply” to direct supply to the independents, and/ or secondly, if the independents pass the price increase through to their retail customers who in turn switch to the downstream division of the integrated firm.

The issue of self-supply. When considering the first mechanism, the key question is whether the intra-firm sales are “captive” or whether the integrated firm has the *ability and incentive* to switch production capacity from self-supply to supply to the independents within a short enough period of time (usually one year). It should be relatively uncontroversial within South African competition law that the question should at least be *posed* at the market definition stage of analysis. This is because self-supply is really just a special case of potential supply-side substitution and considering supply-side effects at the market definition stage is well established within South African case precedent and regulation.¹

The issue of indirect constraints. Even if it is found that self-supply is captive, the intra-firm sales may still exert a constraint through customer switching at the retail level. These constraints are referred to as “indirect constraints.” The upstream firm is disciplined *indirectly* through switching by the “customers of their customers,” not *directly* through switching by their immediate customers (the downstream independents). And here, the methodological debate becomes more pronounced. In particular, there is lively debate concerning the basic efficacy of indirect constraints, and whether or not they should influence market definition or only market power.

¹ European competition authorities also employ this general approach. In the US, demand-side substitution is used to define markets, whereas supply-side factors are only considered in the identification of the firms that participate in the relevant market and in the analysis of entry.

Outline of this paper. Section 2 synthesises the relevant case precedent on “self-supply” and presents an overview summary of the main factors that require consideration when dealing with this mechanism. In section 3, we evaluate the fundamentally different methodological approaches to indirect constraints. In so doing, we also outline those cases where indirect constraints are likely to be relatively impotent, regardless of the stage of analysis in which they are first considered. Section 4 concludes.

2. SELF-SUPPLY AS A DIRECT CONSTRAINT

2.1. THE MECHANISM

In competition law market boundaries are determined by identifying substitutes which constrain on the price-setting behaviour of firms. Typically, this involves understanding the extent to which consumers are likely to switch to an alternative product following a price increase (demand-side substitution). In some cases, suppliers can easily switch production at short notice to produce a particular product in response to an increase in the price of that product. In this case, consumers will end up switching to the supplier and hence their capacity should be included in the market (supply-side substitution), even when their current form of production is not a direct demand-side substitute. In general, any capacity that is readily available to act as a constraint on prices within a short period of time (usually a year) should be included in the market. If entry takes longer than this or if there exist barriers to entry (such as sunk investments), the producer may be considered a “potential entrant” whose constraining influence is taken into account at the market power stage, not market definition stage.

The question of whether to include the self-supply of integrated firms is really a special case of supply-side substitution. The key difference is that in the case of self-supply, the supplier is already producing a potential demand-side substitute; it is just that consumers (in this case downstream firms) cannot gain immediate access to it as the firms “self-supplies” inputs exclusively to its own downstream subsidiary. This scenario is represented in the diagram below. The relevant question here is whether, in response to SNIPP by upstream firm X, the integrated firm Y would start selling inputs to the wholesale market.

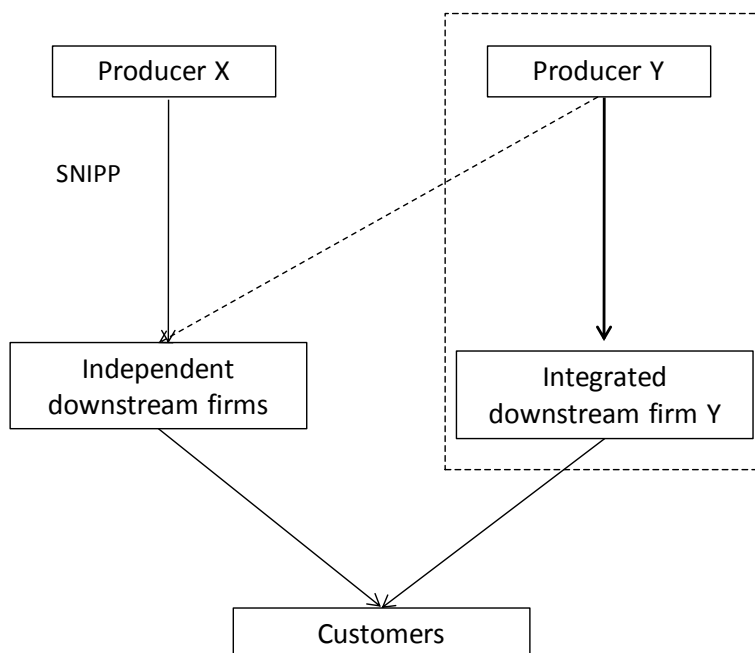


Figure 1. Self-supply of Producer Y.

To determine that the supplier would in fact shift production in the required time period involves a consideration of the *ability* and *incentive* of the producers to do so.² If either of these are lacking, the self-supply is considered “captive” or at most it is considered only at the market power stage. However, the ability and incentive of the integrated firm to supply to the wholesale market differs from the general supply-side substitution case in two important ways:

1. **Ability to supply inputs to the wholesale market.** With the regular case of supply-side substitution, good X and Y are different goods, whereas with self-supply, the two goods in question are usually demand-side substitutes. For this reason, the ability to switch capacity will tend to be higher in the case of self-supply, given that the integrated firm is already producing the good and all that is required is a switch in buyer.
2. **Incentive to supply inputs to the wholesale market.** However, regarding incentives, it is more likely that these will be lower in the case of self-supply, as switching capacity requires diverting supply from its own downstream subsidiary to competitors of that subsidiary.

² See NERA (2001) “The Role of Supply-side substitution in the definition of the relevant market in merger control” (A report for the DG Enterprise A/4, European Commission) for a discussion of the relevant factors that must be considered with supply-side substitution.

The CRA note that the European Commission always excluded self-supply from the market on the basis that it was “captive”.³ While this may be a coincidence, the CRA observe that this may indicate the Commission’s implicit preference for a *per se* “merchant market rule”, where one excludes from the market all internal sales of the intermediate input and only includes sales made to independent downstream firms. The adoption of this rule has been criticised by the CRA and others for its overly-simplistic and arbitrary approach to defining markets.⁴ A key objection to the use of this rule is that sales under long term contracts or where relationship-specific investments have been made would be included within the market under the merchant market rule, even when some of those merchant sales would be economically equivalent to captive sales.

2.2. ABILITY TO SUPPLY THE WHOLESALE MARKET

One would expect the integrated firm to have the ability to supply third parties given that it is already producing the input for internal use. If the integrated firm is already selling inputs to third parties, this clearly indicates that the integrated firm has the ability to do so. On various occasions, competition authorities have excluded self-supply from the market because the integrated firm did not have the ability to sell the input to third parties. The various factors that impact on a firm’s ability to enter the wholesale market within the relevant time frame are considered below.

Technical constraints: It may be that firms are integrated in such a way or the production process is such that from a technical perspective, the integrated firm could not divert production to the merchant market without incurring substantial costs. This is illustrated in the *Shneider*⁵ merger case. Schneider and Legrand, the parties to the merger, were upstream manufacturers of electrical (panel board) components which are used downstream by installation engineers and switchboard assemblers. The merging parties did not have their own downstream division whereas other upstream suppliers (ABB and Siemens) were fully integrated downstream and exclusively supplied their own downstream divisions. The European Commission ruled that these integrated providers were not part of the general market as engineers and assemblers were unable to switch to their inputs in the event they faced a price increase. Moreover, the intra-firm sales were described as captive and were excluded from the market because their electrical parts were directly integrated into panel boards, which made them unsuitable for supply to independents. The Court of First Instance (CFI) accepted that the self-supply was captive in this case, but overruled the Commission finding on market definition on the grounds of indirect constraints (discussed in Section 3).

³ See CRA International, “Indirect Constraints and Captive Sales,” May 2006 (Report prepared for OFCOM) p.14.

⁴ See CRA International, “Indirect Constraints and Captive Sales,” May 2006, (Report prepared for OFCOM) pp. 10-11 and “The Treatment of Captive Sales in Market Definition – Rules or Reason?” (July 2002), RBB Brief 03.

⁵ CFI Judgement of 22.10.2002 on case T-310/01: Schneider v. Commission (Application for the annulment of Commission Decision C(2001)3014 of 10.10.2001 on case COMP/M.2283 -Schneider-Legrand).

Similarly, in *Alcoa/Reynolds*⁶, smelter-grade alumina of vertically integrated firms was excluded from the market because, among other reasons, it was costly in terms of closure and restart procedures for a firm to alter production levels in the downstream production of aluminium.

Access to distribution: To sell to the wholesale market, it may be necessary for the integrated firm to have access to a distribution network, which may not be readily available and may be costly to develop. This was provided as an additional reason for regarding internal sales as captive in *Shneider*.

Brand reputation: If brand reputation at the wholesale level is important, to enter the wholesale market the integrated firm would have to develop a brand, which is costly and cannot be achieved within a short space of time. This was also recognised in *Shneider*.

Product differentiation: The starting point for an analysis of self-supply is that the input provided for internal use and the product traded on the wholesale market are demand-side substitutes. To the extent that this is not true, consumers would not view the two products as substitutes which would limit the ability of the integrated firm to sell its product to the wholesale market. In *Endemol*⁷, the Commission excluded in-house production by public broadcasters from the market for the independent production of Dutch-language TV and radio programmes because of the qualitative differences in the programming: the public broadcasters produced low-cost programmes which were different from premium programmes produced by the independent production companies.⁸ This decision was upheld by the CFI.

Contractual obligations to supply input to downstream firm: Where a producer is contractually committed to continue producing the original products, supply-side substitution may be more limited.⁹ In the case of self-supply, it may be that the integrated firm is contractually obligated to supply inputs to its downstream firm, which will prevent it from supplying inputs to the wholesale market.

⁶ European Commission COMP/M. 1693 *Alcoa/Reynolds*

⁷ CFI Judgement of 28/04/1999 on case T-221/95: *Endemol v. Commission* (Application for the annulment of the Commission Decision 96/346/EC of 20.09.1995 on case IV/M. 553 *RTL/Veronica/Endemol*)

⁸ The Commission also claimed that the public broadcasters had incurred substantial sunk costs which prevented them from deciding whether to produce a programme itself or to commission it to an independent broadcaster. As noted in the CRA report (p. 31) this reasoning is unclear because once such sunk costs have been incurred; the public broadcaster may still use some of their capacity to produce programmes for other broadcasters. On this issue, the CFI concluded that *Endemol* had not adequately disproved the Commission.

⁹ NERA (2001) "The Role of Supply-side substitution in the definition of the relevant market in merger control" A report for the DG Enterprise A/4, European Commission, p. 5

2.3. INCENTIVE TO SUPPLY THE WHOLESALE MARKET

Even if the integrated firm has the ability to supply output to the wholesale market, it may not have the incentive to supply inputs to third parties. This is particularly relevant to the case of self-supply where shifting sales from downstream subsidiaries to independent third parties will have implications for the profitability of the integrated firm's downstream operations. The factors that may inhibit an integrated firm from selling to the wholesale market, even if it has the ability to do so, are considered below.

High margins at the retail level: If downstream margins are high, a vertically integrated firm is unlikely to divert upstream production to the merchant market because doing so means that the integrated firm will lose margin at the retail segment. Thus, wholesale prices would have to rise considerably before an integrated firm will supply to the wholesale market. This point was recognised in both *GE/Honeywell*¹⁰ and *Alcoa/Reynolds*. In *GE/Honeywell*¹¹ one of reasons put forward for excluding the self-supply of engine starters by the integrated firm, UTC, was that UTC would not divert its upstream production to the free market as the expected profits in the upstream market would not outweigh the profit loss faced by UTC in the downstream market for engines. Similarly, in *Alcoa/Reynolds*, smelter-grade alumina of vertically integrated firms was excluded from the market because, among other reasons, aluminium is sold at a significantly higher margin compared to that of smelter-grade alumina.

Market structure conducive to foreclosure: The market structure may be such that the integrated would not have an incentive to supply inputs to a downstream firm that it competes with at the retail segment. The integrated entity may therefore choose to withhold supply to the wholesale market with the intention to foreclose its downstream competitors. The point here is not that relative margins are not conducive, but that upstream firms would have a dynamic incentive to foreclose. This was recognised in *GE/Honeywell*, where the Commission argued that should there be a SNIPP by the merged GE/Honeywell entity in the engine starter market, UTC would not increase its production capacity to supply engine starters to the free market because this would benefit a competitor of UTC in the downstream market for engines. UTC's self-supply of engine starters was therefore excluded from the market because both the merged entity and UTC would have the incentive to engage in a foreclosure strategy.

¹⁰ CFI Judgement of 14/12/2005 on case T-210/01 – GE v. Commission (application for the annulment of Commission Decision on 2004/13/EC of 03/07/2001 on case COMP/M. 2220 – General Electric/Honeywell)

¹¹ Two separate integrated markets were defined. The market relevant to the captive sales is the upstream market for engine starters which are used in the downstream market for large commercial aircraft engines.

Brand reputation and consistency of supply. If brand reputation at the retail level is important, it is unlikely that downstream operations will be halted or restricted in order to supply product to the wholesale market, even in response to a large increase in the wholesale price.¹²

2.4. CONCLUSION

This section outlined particular factors that should be considered when investigating whether self-supply should be included in the market. As with any supply-side substitution analysis, this involves a consideration of the ability and incentive of the supplier to divert sales to downstream independents. If the answer to this is affirmative (i.e. the incentive and ability to switch capacity exists) the relevant sales should likely be included in the market. If not, they should be excluded from the market, but perhaps reconsidered at the market power stage (especially if the underlying incentive exists, but the firm would take longer than one year to affect the switch).

3. INDIRECT CONSTRAINTS

Where the intra-firm sales are considered captive, it is still possible that they might exercise an indirect constraint through customer switching in the retail market. The *Schneider* case is a classic example of the danger of ignoring indirect constraints. The integrated providers were excluded from the market on the basis that the sales were captive, and as such the merger appeared to result in a significant increase in concentration. Accordingly it was prohibited by the European Commission. However, they were overruled by CFI who held the Commission had erred in ignoring the indirect constraints posed by ABB and Siemens. Had the merged parties increased prices, the downstream engineers and assemblers would have to pass through the price increase and their customers would have switched to the integrated firm, diverting demand from the merged parties to the integrated providers.¹³

3.1. THE MECHANISM

Indirect constraints are not only relevant regarding the issue of intra-firm sales (as in *Schneider*), but in any case in which downstream firms cannot switch to an alternative

¹² See CRA International, "Indirect Constraints and Captive Sales," May 2006 (Report prepared for OFCOM) p.10.

¹³ The CFI stated: "It cannot be denied that, in the context of such competitive procedures, ABB and Siemens, as integrated producers, compete with their non-integrated counterparts such as Schneider, either directly where the non-integrated manufacturers agree with switchboard assemblers or installation engineers to submit their bids or indirectly where those manufacturers sell panel-board components to a switchboard assembler whose bid has been accepted. In both cases, the prices of the non-integrated manufacturers are subject directly to competitive pressure from the parallel bids made by ABB and Siemens in response to the same invitation to tender." (*Para. 282 of the CFI Judgement*).

supplier. For example, in *GE/Honeywell*, aircraft manufacturers must pre-select an engine supplier before they set-up and invest in their production processes. Once this choice has been made, they are locked-in to their chosen platform and cannot switch to an alternative engine supplier without incurring a significant capital expense. As such, their engine supplier may be able to exploit this position by increasing price once a manufacturer is locked-in and alternative manufacturers will not be able to discipline the price increase. In some cases, the “pre-platform” competition to attract manufacturers may be sufficient to cause the engine suppliers to exert price discipline on each other (if the manufacturer is able to secure a life-long contract) justifying a common market for engine suppliers. However, even where this is not the case, potential customer switching at the retail level (i.e. indirect constraints) becomes relevant: were the engine suppliers attempt to increase prices to the aircraft manufacturers, aircraft *buyers* may switch to aircraft manufacturers who use alternative engine suppliers.

As illustrated in the figure below, there are three basic steps in the indirect constraint mechanism: first, an upstream wholesaler (wholesaler 1) increases the price of the upstream input, second, the downstream retailer passes the price increase through to the retail product and third, retail customers switch away from these downstream firms to the downstream firms (or divisions) using an alternative supplier who has not increased upstream prices. This has the effect of diverting demand from wholesaler 1 to wholesaler 2.

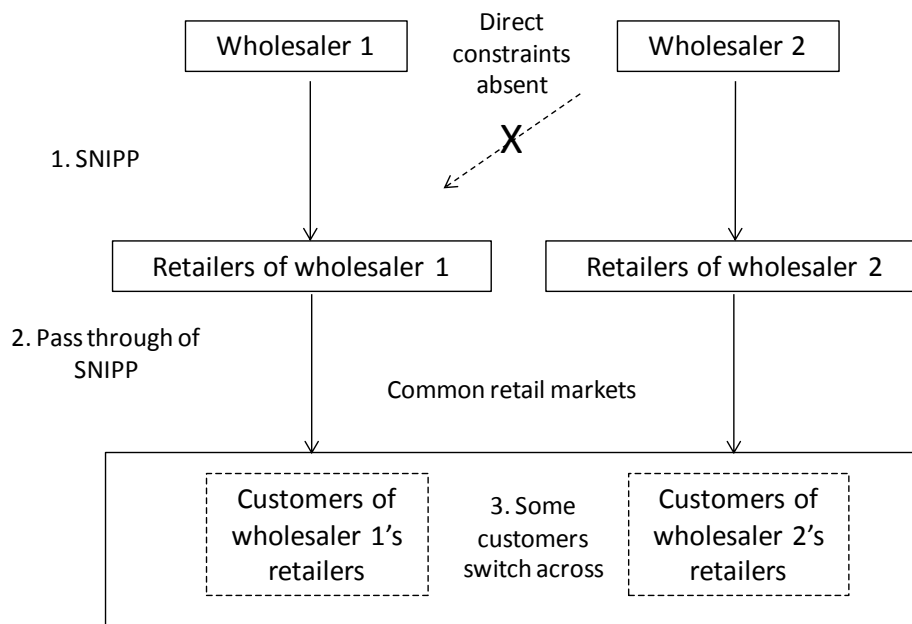


Figure 2: Indirect constraints

3.2. THE DEBATE

In the *Shneider* case, the Commission appeared to have erred in not taking account of indirect constraints *at all*. Though the CFI argued that they should be included at the market stage of analysis, other authorities argue that they should only be taken into account when evaluating market power.

Some argue that the indirect constraint mechanism, which is based on demand-side switching, is robust enough to be considered for inclusion at the market definition stage. In many cases, retail customers will be highly sensitive to price increases (passed through by their downstream providers) and will switch in significant numbers to the integrated downstream provider. It is argued that where such switching is sufficient to render a SSNIP at the wholesale level unprofitable, intra-firm sales should be included in the market definition stage, just as they would be included if the downstream independents themselves were able to switch to the integrated provider. Others suggest that because buyers who actually face the price increase cannot (by definition) switch to the alternative, the alternative is not a substitute in the ordinary sense of the term. Moreover, they argue that the “indirect nature” of the constraints means they are generally less robust than direct constraints and accordingly should only be considered at the market power stage, along with other factors that may constrain market power.¹⁴

The debate has been particularly active in the market reviews of European regulatory authorities in the telecommunications sector. In particular, there is disagreement on whether cable-based broadband products¹⁵ should be included in the same upstream market as wholesale ADSL services. Most of relevant stakeholders agree that these two services do form part of the same retail market. However, the cable providers are fully vertically integrated and do not supply upstream services to any firms other than their own downstream divisions. This means that downstream independents cannot switch directly to cable providers services. Moreover, due either to technological obstacles or unwillingness to supply independents on behalf of the cable providers, the intra-firm sales can genuinely be described as “captive.” If cable broadband constrains the upstream prices of wholesale ADSL services, they can only do through indirect constraints arising in the retail market. Some NRAs, including OFCOM, RTR, BNetzA, ComReg, Anacom have chosen to deal with indirect constraints at the market

¹⁴ Note finally that the mechanism of indirect constraints is not only relevant to intra-firm sales. Whenever a downstream firm cannot switch to alternative supplier for whatever reasons (e.g. they are “locked-in”), it becomes relevant to consider whether the customers of that downstream firm can switch to the downstream firms (whether integrated or not) that use the alternative supplier.

¹⁵ These are products broadband data product offered by cable-TV providers using their cable networks.

definition stage.¹⁶ However, the European Commission has consistently criticised these NRAs for adopting this approach, and, together with NRAs such as NITA, ACREP, NCAH and PTS, have chosen to analyse the indirect constraints (within this context) only at the market power stage.¹⁷

It may be suggested that in theory, so long as the indirect constraints are properly taken into account at one of the analysis stages, the different lines of attack should result in the same conclusions on market power (the determination of which is the purpose of first defining the market). However, in practice it is argued that only taking indirect constraints into account at the market power stage will bias the analysis toward a finding of market power for upstream firms that do sell to independents. It is argued that when evaluating market power, authorities in practice place more emphasis on market share analysis than on other factors considered at the market power stage. In other words, if a firm is found to have high market share (because the intra-firm sales of an integrated provider have been excluded from the market) it is less likely that authorities will find that the firm does not have market power on the basis of indirect constraints considered at the market power level, even when these constraints are generally robust. But the same reasoning can be used by the proponents of market power consideration who point out that if indirect constraints are in fact generally less robust, considering them at the market definition stage risks overemphasising their constraining impact and hence concluding that other firms do not have market power, when in fact they do.

To the extent that this question does have practical relevance, it might be decided by reference to whether indirect constraints are as “powerful” as standard direct demand substitutes in their ability to constrain market power. If they are, then they should be treated at the market definition stage to avoid the “risk” that their impact on market power is understated. Similarly, if they are less potent than standard direct constraints, then they should be treated at the market power stage to avoid the “risk” that their impact on market power is overstated. In the next section, we turn to consider the general efficacy of indirect constraints.

¹⁶ See Inderst, R and Valletti, T.M, “Market Analysis in the Presence of Indirect Constraints and Captive Sales,” *Journal of Competition Law and Economics*, Oxford University Press , pp. 1-29

¹⁷ *Ibid.*

3.2.1. HOW CONSTRAINING ARE INDIRECT CONSTRAINTS?

COMMON RETAIL MARKETS

A fundamental requirement for indirect constraints to be considered at all is that the inputs are used to produce services in a common retail market. If this is lacking, retail customers will simply not switch in sufficient quantities to constrain a price increase at the wholesale level.

DILUTION AND PASS THROUGH

However, even if there is a common retail market, it is possible that indirect constraints will be weaker than direct constraints. Two factors in particular are often used to show this are dilution and limited pass through.

1. **Dilution.** The wholesale input will only constitute a portion of the total retail price. As such a SSNIP on the wholesale input (say 10%) will be “diluted” into a lower percentage increase on the retail price (less than 10%), even if the increase is fully passed through. Retail customers will therefore generally have a lower incentive to switch in response to a given SSNIP on a wholesale input relative to the incentive faced by the wholesale buyer who directly faces the full SSNIP.
2. **Pass-through.** Another reason why indirect constraints tend to be less potent than direct ones is a factor known as pass-through. Wholesale buyers who do not operate in fully competitive retail markets may not fully pass through the SSNIP on the basis that their equilibrium price level will generally not increase linearly with an increase in input cost. In various cases, it can be shown that it might be more profitable to absorb (some or all) of the price rise rather than pass it on. Even in the case of perfectly competitive retail markets there may not be an immediate pass through of an increase in the price of the wholesale input if fixed sunk investments are non-trivial.

In response to these arguments it may be argued that indirect constraints should still be considered at the market definition level but that the above factors should merely be included in the analysis. Where these factors are found to effectively remove the indirect constraint, then the infra-firm sales should be excluded from the market. However, where retail customer switching is sufficiently robust to outweigh these factors, then the intra-firm sales should be included in the market.

However, a counter response might be that in most cases, analysts conduct the hypothetical monopolist test as a thought experiment. Where final services are complex or utilise varying input proportions, it will be often be difficult to determine the rate of dilution. Further, estimating actual pass through rates will often be difficult as they are dependent on a host of factors. As such, were indirect constraints considered at the market definition level, their impact might be overestimated.

MARGIN SQUEEZE/ DISCRIMINATION

Another reason why indirect constraints are generally less potent than direct ones is the issue of “discrimination” or “margin squeeze.” The wholesale supplier (who engages in a price increase) may also be vertically integrated with a downstream division which competes at the retail level. In such cases the wholesale supplier may not raise the price to its downstream division (i.e. discrimination) or, having raised the price to its downstream division, elect as the integrated company not to raise the downstream retail price (i.e. margin squeeze). To see the impact of margin squeeze/ discrimination, it is helpful to distinguish between cases where the final retail goods are perfect substitutes (i.e. they are homogenous), and cases where they are imperfect substitutes (i.e. they are heterogeneous or differentiated).

Homogenous retail goods. In the diagram below, the retail services based on input 1 and those based on input 2 are effectively homogenous. Accordingly, customers will consider them to be perfect substitutes. Assume that wholesaler 1 increases the wholesale price by a SSNIP and this is passed through by the independents using wholesaler 1. Customers will then switch away from these independents to either the downstream division of wholesaler 1 or to downstream providers of wholesaler 2 (both of whose retail prices will remain unchanged).

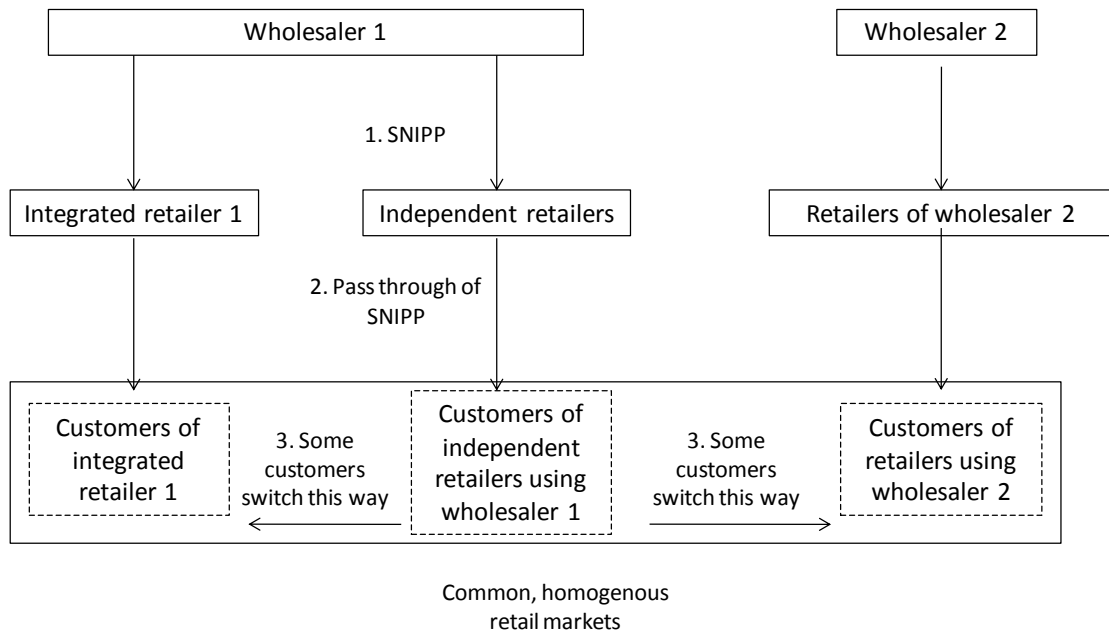


Figure 3: Indirect constraints with margin squeeze and homogenous retail goods

The ability to margin squeeze thus substantially reduces the impact of indirect constraints as the downstream division of the wholesaler who engaged in the SSNIP will now capture some of the customers who switch away from the downstream independents and in addition they will gain the retail margin on these customers. Note that if the independents could themselves switch to the alternative wholesaler themselves, they could take their customers with them when they did even if the wholesaler tries to margin squeeze. So whereas margin squeeze of this type will not reduce the impact of direct constraint, it will do so with indirect constraints.

Heterogeneous retail goods. In many cases, the alternative upstream inputs will generate heterogeneous retail products such that the retail services will *at most* be imperfect substitutes. For example, consider a hypothetical case of BMW versus Toyota motorcars and the existence of an independent car assembler sector (that assembles cars and then sells into a retail market of car buyers). Each car assembler factory will likely have to pre-select either the BMW or Volkswagen platform and they may be unable to easily switch between the two. At the retail level, BMWs may be more expensive than Toyotas, but of superior quality. Nevertheless, it is *possible* that they form a common retail market based on price-quality trade-offs. However, just because Toyota constrains BMW at the retail level does not mean that they do so at the wholesale level.

In fact the indirect constraints arising from this common retail market are likely to be effectively eradicated by the practice of margin squeeze. The retail customers using services based on platform 1 (BMW buyers) thereby reveal a demonstrable preference for the particular price-quality mix provided on platform 1. In the event that their retail provider (the car assembler) increases the retail price (due to on a discriminatory price increase from wholesaler 1, BMW) they will seek to switch to a downstream division of wholesaler 1 as by so doing they can maintain the same price-quality mix they had demonstrably preferred (because the integrated downstream division will not increase the price). They would have no incentive to switch to the differentiated product provided on platform 2. The arrow labelled “3” in the diagram above then only goes one way (left and toward the downstream division of wholesaler 1).

Some may be of the view that the issue of margin squeeze/discrimination should not be taken into account when considering the effectiveness of indirect constraints. This is because it may be argued that competition law can adequately deter margin squeeze behaviour.

This argument, however, can only be investigated on a case-by-case basis. For example, in some cases, a merger may be passed even if there is some possibility of margin squeeze on the basis of adequate protection provided by Competition Law. In other instances, it may be found that this constraint will be insufficient to protect firms from the merged entity. This is because the merged firm can engage in a probabilistic assessment of the likelihood of successful prosecution, and the negative payoff if found guilty (currently a maximum of 10% of only a single year’s revenues). This assessment can often result in a “rational” wholesaler making the decision to margin squeeze. In regulatory cases margin squeeze is often one of the most pressing concerns faced by the regulatory authority in trying to introduce competition into the market. The argument will also be particularly weak when defining a market in a prohibited practice complaint where a firm has been accused of margin squeeze! In all these cases, margin squeeze is relevant, as is its impact on the ultimate power of indirect constraints.

Moreover, even if effective, the constraining impact of competition law should not influence market definition or market power assessment. For both the regulator and the competition courts, the appropriate approach is to consider market definition and market power in the absence of a competition law deterrent. In such an approach, the authority can find that a firm has the power to engage in a margin squeeze because of market power at the wholesale level, but choose not to regulate on the basis of finding that due to an alternative regulatory body, the firm does not have an overall incentive to abuse that market power. The approach of first considering “market power” in the absence of a competition law deterrent is also used

in the European Commission Guidelines on Non-Horizontal mergers. Here, the first question is whether the firm has the *market power* or ability to engage in foreclosure. Then, the question of whether they have an incentive to do is considered, *including a possible deterrence from competition law*.¹⁸

3.2.2. DISCUSSION

THE IMPORTANCE OF MARGIN SQUEEZE RELATIVE TO DILUTION AND PASS THROUGH

The issues discussed above (dilution, pass through and margin squeeze) are clearly of concern to the European Commission. In response to the 2006 OPTA findings, they stated the following:

“The Commission considers that such an indirect competitive constraint should not have been taken into account at the stage of the definition of the relevant market. Moreover, for the theory of indirect pricing constraint to be applied at all, it would have to be shown that i) ISPs do not absorb such a price rise at the wholesale level but were forced to raise prices at the retail level, that ii) even in case ISPs pass on the price increase, all or most of the customers of the ISPs forced to raise prices would switch to retail cable operators and not, for example, to the retail arm of the WBA provider, in particular if the latter does not raise its own retail prices.”¹⁹

However, it seems clear that the issue of margin squeeze is potentially the most serious problem blocking the efficacy of indirect constraints. In fact, Inderst and Valletti²⁰ set aside the issues of margin squeeze and develop a model to investigate the relative effectiveness of direct versus indirect constraints. The issue of dilution is allowed for, and the extent of pass through becomes a function of the equilibrium pricing decision of downstream firms, given upstream prices. They find, perhaps surprisingly, that with respect to homogenous wholesale inputs and homogenous retail goods, indirect constraints may result in an even *lower* equilibrium wholesale price than direct wholesale constraints.²¹ They therefore argue that it is

¹⁸ At this stage, the following issues are considered: a) likelihood of foreclosure being deemed illegal, b) the probability of detection and c) the size of the fines.

¹⁹ Commission staff working document: Accompanying document to the Communication From The Commission To The Council, The European Parliament, The European Economic And Social Committee And The Committee Of The Regions on market reviews under the EU Regulatory Framework (2nd report) (COM(2007) 401 final), p. 325

²⁰ See Inderst, R and Valletti, T.M, “Market Analysis in the Presence of Indirect Constraints and Captive Sales,” Journal of Competition Law and Economics, Oxford University Press, pp. 1-29. See also the technical companion paper available dated September 2006.

²¹ The result is driven by the fact that whereas an upstream wholesale provider will constrain another wholesale provider directly in the upstream market, a vertically integrated provider that only engages in self-supply need not even compete in the wholesale market.

“thus generally misleading to argue that indirect substitution is less effective as its effects are cushioned by additional layers in the vertical chain”.²²

However, the result is model specific and the conclusion can in fact be reversed in the case of only two potential providers at the wholesale level: if one such provider had to integrate downstream and engage in exclusive self-supply, the indirect constraint that they exert on the remaining wholesale provider will be less powerful than if had they continued to provide the direct wholesale constraint.²³ It can also be reversed when dealing with heterogeneous retail goods. *Moreover and critically, despite their findings the authors conclude that the best place to deal with indirect constraints is at the market power, and not the market definition level.* Foremost among their reasons is a concern for “double counting” and the recognition that the market power stage is the appropriate place to consider “the incentives of a vertically integrated firm to “squeeze” out other non-integrated downstream firms.” In other words, given that margin squeeze is itself best dealt with at the market power level, indirect constraints – whose ultimate power is so dependent on (the absence of) margin squeeze concerns – should also be dealt with at the market power level.

THE CRITICAL ISSUE OF CONTEXT

A potential response to the margin squeeze concern may be that even if the upstream provider can margin squeeze downstream independents, they will not be able to exercise market power at the *retail level* independently of the downstream firms using other platforms. For example, even if BMW could margin squeeze on independent BMW assemblers, they will still be price constrained by the Toyota suppliers (as by assumption they form a common, albeit differentiated retail market). It can be further argued that seeing that the final price charged to retail customers is usually the ultimate competition concern, to not take into account the size of sales on the other platform at the wholesale level, is to define a wholesale market that does not reflect the underlying competitive dynamics (even if retail constraints are then considered at the market power level).

This argument is only persuasive if dynamics in the intermediate layer are of no competition concern. However, in many cases the intermediate layer will be considered a critical component of overall competitiveness. For example, in telecommunication markets, being able to enter the intermediate layer (and rely on non-discriminatory upstream supply) is a

When the wholesale provider increases the price to downstream independents, this influences their cost based and the downstream division of the integrated provider secures the cheapest cost base and therefore the greatest retail market share.

²² This quote is from another version of their paper entitled “A Tale of Two Constraints: Assessing market Power in Wholesale Markets,” p. 7.

²³ *Ibid*, p. 18.

critical pre-condition to enter fully at the upstream level. Without this step, suppliers simply cannot build the economies of scale necessary to compete and invest in the appropriate upstream infrastructure.

In these contexts, defining wholesale markets to include firms that only have an impact on the retail markets but cannot prevent wholesale price increases and margin squeeze, would appear to result in markets that fail to reflect relevant underlying competitive dynamics. Though taking into account the margin squeeze at the market power level will suffice to conclude that the relevant firm has wholesale market power, it seems counter-intuitive to include captive self-supply or supply on different platforms, only to exclude these sales when considering market power (because such sales cannot prevent wholesale price rising in conjunction with a margin squeeze). Ultimately, market definition is supposed to clarify, not cloud, the understanding of the constraining forces on a given provider.

Thus, the context of the particular competition concern at play will critically determine whether or not margin squeeze is a concern and, potentially, the appropriate place to consider indirect constraints. It is the competition context in telecommunication markets – where there is an explicit concern with margin squeeze – that perhaps explains why many telecommunication regulators prefer to consider indirect constraints at the market power level. In fact, though CRA favour consideration at the market definition level, the cases considered in their survey of the competition case law do not contradict, and potentially give support to a *context-driven approach*. There were two relevant competition cases that considered the issue of indirect constraints (as opposed to only self-supply).

Schneider case. As noted above, the CFI overruled the commission judging that indirect constraints should be taken into account at the market definition stage.²⁴ However, it is crucial to note that there were no margin squeeze issues arising from this case. The merging parties did not have downstream divisions²⁵ and as such they could not margin squeeze on independents as independents were their only route to market. This case, then, does *not* suggest that indirect constraints should be taken into account at the market definition stage when margin squeeze is an issue. In particular, it does not suggest that the same approach

²⁴ In the *Schneider* case, the Commission did not take indirect constraints into account. The commission may have erred in this case, as they were overruled by the CFI.

²⁵ The merging parties sold (final and distribution) panel board components to installation engineers and switchboard assemblers, but they “non-integrated” in that they did not sell these downstream services. The fact that the merging parties were not integrated is also confirmed in the Inderst and Valletti paper, discussed above: “While *Schneider* and *Legrand* were not vertically integrated other firms competed only through self-supply at the retail level.” Inderst, R and Valletti, T.M, “Market Analysis in the Presence of Indirect Constraints and Captive Sales,” *Journal of Competition Law and Economics*, Oxford University Press, pp.4-5.

would have been followed if margin squeeze was an issue, as is in fact revealed by a closer analysis of the other key case cited by CRA.

GE/ Honeywell. There were two relevant competition concerns in the GE/Honeywell merger. Regarding the first concern, both the Commission and the CFT found that “second level” competition - which was based on indirect constraints - meant that GE and Honeywell were in the same wholesale market.²⁶ However, once again there was no possibility that taking indirect constraints into account would run the risk of ignoring the ability for the engine manufactures to margin squeeze or discriminate as has been described. This is because these suppliers did not have their own aircraft manufacturing divisions.²⁷

It is then particularly interesting to note, that in the second competition issue²⁸ of the very same case, the issue of margin squeeze was a concern. As described in Section 2, both the Commission and the CFI found that UTC’s self-supply of engine starters was effectively captive and should therefore be excluded from the market for engine starters, where Honeywell therefore had an effective total monopoly. Critically, neither the CFI nor the commission considered the issue of indirect constraints, *even though they had just been taken into account when evaluating the first competition concern discussed above.*²⁹ In the case of the second concern the Commission and the CFI recognised that both Honeywell and

²⁶ Both GE and Honeywell supply aircraft engines which are used in the manufacture of large “regional” aircraft. The Commission and the CFI found that GE and Honeywell did not compete directly for the supply of aircraft engines, as aircraft manufacturers (who purchase the engines of Honeywell and GE) make a decision as to which engine supplier to use, and then develop their aircraft platforms accordingly. Although there may be competition before the aircraft manufactures decides on a platform, once a platform is chosen, manufactures cannot switch between engine suppliers. Though pre-platform competition was not taken into account, the Commission and the CFI found that there was a “second level” of competition at the stage when aircraft buyers purchased from manufactures. If either GE or Honeywell to engaged in a SSNIP on their engine supply, this would be passed through to the price of aircrafts (on the effected platforms) and aircraft buyers would accordingly switch to the alternative aircraft platform, thus disciplining the wholesale SSNIP.

²⁷ Ibid, CRA, p. 12. CRA confirm that neither GE nor Honeywell were involved in the downstream market for the manufacture of aircrafts.

²⁸ Besides for the downstream market for large regional aircraft discussed above, there was a separate downstream market for large “national” aircraft. GE was dominant in the market for the provision of aircraft engines to this market but Honeywell did not offer these type of engines (hence there was no horizontal overlap).

²⁹ Even if UTC would not divert supply to the effected engine manufactures (who had faced a SSNIP from Honeywell) the aircraft buyers (further downstream) could switch to aircraft that had not been affected by the SSNIP (i.e. the aircrafts built with UTC engines). CRA emphasise throughout their survey, even if sales can truly be described as “captive” and therefore cannot be included as a direct constraint, they may nevertheless exert indirect constraints. As CRA state: “truly captive sales will have no *direct* effects on the pricing of intermediate inputs supplied on the merchant market. However, captive sales may have *indirect* effects on the pricing of intermediate inputs in the merchant market through the competitive pressure that they may represent when used as inputs into final products. If a competition or regulatory authority wishes to consider only direct effects at the market definition stage (the first approach outlined in the discussion of indirect effects above), captive sales should be excluded from the market. If the authority would instead prefer to consider direct *and* indirect effects at the market definition stage (the second approach outlined above) then a second step in an assessment of captive sales is to consider whether these sales impose an indirect constraint on the wholesale merchant market.” CRA, pp.14 -15.

UTC would have the incentive to foreclose on downstream competitors (manufacturers of large aircraft engines other than GE and UTC). As such margin squeeze was a direct concern in this case, and accordingly the CFI agreed with the Commission's definition of the market which excluded the intra-firm sales of UTC.

It is also worth noting the CFI in fact ruled that, ultimately, there would be no foreclosure concern *because* they believed that ex-post competition law would be sufficient to prevent any such behaviour. Therefore, even though the CFI believed that competition law would in fact be sufficient to prevent a margin squeeze in this case, they did not hold that this should influence the market definition or the finding that the merged entity had the market power and ability to foreclose. Rather, the ex-post competition law would act as a deterrent against this ability, and this influenced the optimal interventions in this case. But in so far as the market definition, indirect constraints had no role to play.

4. CONCLUSION

This paper considered the appropriate methodologies to apply in dealing with the issues of self-supply and indirect constraints. We found that self-supply was a special case of supply-side substitution, where the ability to switch capacity would likely be greater but the incentive to do so might sometimes be lower. Section 2 outlines the particular factors that should be considered when investigating this issue as gleaned from a range of case precedent.

The general impact and appropriate analysis point of indirect constraints was then considered. We found that indirect constraints suffered from issues like dilution, pass through and especially margin squeeze which substantially reduced (in homogenous case) or eradicated (in heterogeneous case) the constraining impact indirect constraints have on wholesale prices. Regarding the appropriate analysis point for indirect constraints, the issue is to a large extent one of form, not substance. So long as market definition and market power analysis is done properly, the resulting finding on market power and regulatory intervention should be the same regardless of where indirect constraints are taken into account. To the extent that there is a practical bias or a choice just needs to be made, the issue of margin squeeze might prove decisive and suggests market power may be the appropriate analysis point. Ultimately, however, we suggest that each decision should be judged on a case-by-case basis paying careful attention to the particular context at hand.