Introduction to Special Section on competition law and economics

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The new competition policy regime ushered in by the Competition Act of 1998 has stimulated a great deal of intellectual activity. We are pleased to present here selected articles refecting on questions that have been subject to the rigorous analysis and argument that this new regime requires. The separation of the investigation role undertaken by the Competition Commission and the adjudicative one assigned to the Tribunal, coupled with inquisitorial nature of the Tribunal's hearings, means extensive interrogation of the analysis and arguments in competition cases in public sessions.

This issue draws on papers prepared for and presented at the First Annual Conference on Competition Law, Economics and Policy. Held on 21 May 2007, this conference was organised and sponsored by the Competition Commission, the Competition Tribunal and the Mandela Institute, located at the School of Law, University of the Witwatersrand, Johannesburg. The selected papers span the legal and the economic disciplines, reflecting the fact that an important factor in the dynamism of this area of scholarship is the confluence of law and economics. The papers collectively examine a number of the legal tests of economic concepts that are at the heart of the application of competition law, and relate to its main areas: merger evaluation, coordinated conduct (collusion), and abuse of a dominant position.

Mergers

The very essence of a merger, as captured in the Competition Act, is a change in control. However, the application of this concept to a multitude of possible types of transactions raises important questions. Ngcongo, Dingley, Farlam and Marwell examine a situation where a firm extends finance in return for non-voting preference shares amounting to a majority ownership stake. As they note, the position taken by the Tribunal that non-voting preference shares can confer control under the Competition Act has serious ramifications (and may be out of step with the Commission). It may jeopardise the ability of companies to raise funding by issuing non-voting preference shares, potentially chilling certain other types of transactions and business activity in addition to non-voting preference shares. They ask how – keeping within the Competition Act – regulation can minimise any potential costs of adopting a broad interpretation of the jurisdictional and threshold tests for review of notifiable mergers while avoiding establishing such a stringent framework that too few transactions are reviewed.

Charter addresses the related issue of how to treat cross-holdings and cross-directorships in a merger context. An acquisition of a minority equity stake by one firm in a competitor potentially has unilateral effects in that it can reduce the incentives of the firms to compete. The incentive for a firm to increase prices is greater if some of the customers lost through the price increase move to the competitor firm in which there is a cross-holding. To the extent that some of the value of the business is regained through the cross-holding the incentives to increase prices are greater. Common directors across competing firms raises questions of coordinated effects in that collusion requires an agreement or understanding, monitoring of firm behaviour and the ability to punish where there is deviation or 'cheating' by a market player from the collusive agreement. These issues have been highlighted by the Tribunal in several decisions. Nonetheless, in a given merger the analysis must still be undertaken to assess whether the merger strengthens the likelihood of coordination. Charter reviews these questions with reference to several key cases, including the recent Primedia – NAIL transaction through which Primedia acquired a stake in Kaya FM.

Vertical mergers, by definition, mean an extension of control across different levels of a chain of products or services rather than an increase in the control by a company of the supply to any single market. The standards by which such mergers should be evaluated have been one of the areas of greatest contestation in South Africa, as internationally. Saggers reviews the balance between pro- and anti-competitive effects required in the evaluation of vertical mergers with reference to both a key ruling of the Competition Tribunal and the European Commission's guidelines on non-horizontal mergers issued in November 2007. He argues that the framework to be used is relatively clear, and that the South African authorities have followed it but that it requires detailed and in-depth analysis which means these cases pose major challenges to the authorities.

Theron highlights the importance of economic evidence through a case study of the demand forecasts for liquid fuel presented in the Sasol-Engen merger which was prohibited by the Competition Tribunal. This provides an important reality check, where the data used for the application of economic tests determine the outcomes, yet there maybe a high level of uncertainty and disagreement about the data, especially in mergers where by its nature the evaluation has a forward-looking dimension.

Coordination

Moodaliyar and Weeks examine the South African Supreme Court of Appeal's decision on price fixing and its directive to the Competition Tribunal to characterise price fixing before determining whether the particular conduct complained of falls within the price fixing provisions of the Competition Act. Moodaliyar and Weeks explore the legal and economic rationale for characterisation, drawing from a number of cases in the United States which transformed the approach to applying a strict per se rule to price fixing cases. They analyse various methods and frameworks of characterisation which appear to closely match the directive given by the Supreme Court ruling. They argue that the preferred interpretation of 4(1)(b) of the Act - as well of the business of characterisation that the Tribunal must now do - should tend as much as possible towards a *per se* rule and thus towards limiting the information to be brought forward.

Abuse of dominance

Unilateral anti-competitive conduct can be distinguished as exclusionary or exploitative, with practices such as price discrimination and refusal to supply being exclusionary while excessive pricing is exploitative. Hawthorne examines the different provisions dealing with possible exclusionary behaviour, along with provisions such as the prohibition on resale price maintenance which applies to all firms whether dominant or not. He argues that the Tribunal's rulings, and the tests set out in the Act itself, do not adopt a consistent standard to the possible exclusion of competitors. Specifically he argues that, where the provisions appear to be *per se* in nature, such as prohibiting a dominant firm from refusing to supply a customer, the Tribunal has adopted an approach which requires demonstrating a protection or extension of market power on the part of the dominant firm. However, in cases where there is a rule of reason test specified in the Act, such as price discrimination, the Tribunal has, in practice, been harsher on the dominant firm and more favourable to small firms in not requiring anti-competitive harm to be demonstrated (although the main ruling on price discrimination was over-turned).

Interestingly, the Tribunal's excessive pricing ruling in Harmony vs Mittal Steel also illustrates where exclusionary practices may reinforce the exploitative abuse. The Tribunal identified the arrangements for the exclusive export channel as at the heart of the charging of monopoly prices in the local market in the presence of large net exports. As discussed by Das Nair, the excessive pricing charged by Mittal was part of a complex set of pricing practices, based on segmenting the local market. This, together with Mittal's costs and the large net exports of steel products, formed the basis of the tests that Das Nair argues should be used for excessive pricing. While profits may in theory be an important part of the tests, in practice there are many pitfalls in using this as the basis for the evaluation.

Vertical Mergers – The European Guidelines on Non-horizontal Mergers and their relevance for South Africa[1]

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Abstract

There has been a long and heated debate in the world of antitrust about the likely effects of vertical integration on competition and welfare. The publication of the European Commission's Guidelines on the assessment of Non-horizontal mergers in November 2007 has again brought this debate into the spotlight. Competition authorities find themselves faced with the complex task of balancing the potential pro-competitive efficiencies of these mergers against the concerns that, in some circumstances, vertically-integrated firms could use their presence at multiple levels of the production chain to strategically soften competition. This paper outlines the current thinking on vertical mergers as presented in the Guidelines and examines, through an evaluation of a past Competition Tribunal decision, how the South African competition authorities have handled the complexities presented by vertical transactions.

JEL G34, L41

1 Introduction

How vertical mergers affect competition has been a contentious issue in the history of antitrust.

Prior to the 1970s, fears that a dominant firm would use integration along the production chain to foreclose competitors and leverage its market power saw courts and theorists treat vertical transactions with harsh and heavy-handed scepticism. The rise of the "efficiency" oriented Chicago School in the 1970s, with its devastating critique of the prevailing foreclosure theories, brought a reversal in attitude. Concerns that vertical mergers could be used to engineer anti-competitive outcomes were replaced by a presumption that firms engaging in vertical amalgamation could be doing so only with the noblest intentions of realising cost savings and pricing efficiencies that would ultimately enhance competition and welfare. For two decades vertical mergers enjoyed leniency in front of the courts[3].

However, the debate was not over. Over the past twenty years, refinements in the thinking on the strategic interaction of competitors have seen game-theoretic models emerge in which foreclosure and collusion are, in certain situations, plausible motivations for vertical mergers. Therefore, while vertical mergers in general may continue to be seen as pro-competitive, for specific cases involving more concentrated markets the debate has reignited and has as much heat as ever.

It is this quarrelsome past that makes the European Commission's publication of Guidelines on the Assessment of Non-horizontal Mergers in November 2007 so significant. The guidelines themselves are deceptively modest, presenting only the established, and least disputed, economic theories of how vertical (and conglomerate) mergers impact upon consumer welfare. However, their existence is a far bolder statement. Their publication underlines the settlement and convergence of opinion on the likely competitive effects of vertical integration and the market structures and dynamics that create them. Further, their reach extends beyond Europe. These Guidelines offer an excellent overview of the 'accepted' theories and frameworks for analysis. They also offer greater clarity and accessibility than their American predecessor – the US Non-horizontal Merger Guidelines published in 1984. Consequently, they will become an essential reference for antitrust practitioners and the business community both in Europe and in less-developed jurisdictions that look to the US and EU for 'best practice'.

The formation of South Africa's competition authority and its subsequent experience with vertical transactions came at a time when much of the modern thinking on vertical integration had begun to crystallise. The Competition Tribunal's decisions in vertical cases have, therefore, drawn heavily on the Post-Chicago School arguments that form the foundations of the Guidelines. Consequently, the Guidelines are highly relevant to the South African authorities to reinforce understanding, to lead future enforcement and with which to evaluate past experience. This paper will briefly introduce some of the key theoretical insights that are incorporated into the Guidelines (where necessary augmenting these points with references from academic literature). Section 2 will briefly profile the pro-competitive effects of vertical mergers, while section 3 will summarise the ways in which these concentrations can be used to harm competition. Section 4 will highlight some of the challenges and complexities in evaluating vertical transactions through an examination of the South African Competition Tribunal's *Mondi/Kohler* decision. Section 5 draws together the conclusions of the paper.

2 The pro-competitive effects of vertical mergers

Vertical mergers offer substantial scope for the merging parties to reap efficiencies, which may ultimately translate into more lively competition in terms of prices and service for final consumers. When vertically-related producers operate independently, the market externalities created cause the production chain as a whole to operate sub-optimally, to the detriment of both the producers and consumers alike[4]. Vertical integration allows the merged entity to internalise these externalities by aligning the profit-maximising incentives of producers at different levels of the production sequence.

Efficiencies and how they arise in vertical transactions are given only very brief treatment in the Guidelines (in paragraphs 13, 14, 52-57). This is in no way a reflection on their importance or likelihood of occurring. It merely reflects the fact that the impassioned debates surrounding vertical mergers have focused on whether they can be used to strategically soften competition, rather than whether they yield efficiencies – it is accepted that they typically do. In the interests of balance and completeness, it is worth briefly developing the areas in which vertical integration is most likely to lead to efficiencies[5].

- Improved coordination of production

  Due to improved information flow and reduced uncertainty, vertically-integrated firms can realise cost savings through better coordination of their design, production and distribution processes. By bringing different levels 'under the same roof' the vertically-integrated firms can enjoy more accurate production planning, more predictable supply (in terms of both quality of product and timing of delivery) of essential inputs and enhanced likelihood of product innovations due to a better synchronisation of Research and Development (R&D) spending.

- The internalisation of double mark-ups

  The 'double marginalisation problem' is perhaps the most well-known example of an externality arising from vertical interdependence (and is mentioned explicitly in the Guidelines, paragraph 13). When a firm chooses an output level and mark-up over costs, it does so to maximise its own profits. However, the firm's own "selfish" profit-maximising behaviour affects the profit-maximisation decisions of the other firms in the vertical chain. Ultimately, with both the upstream and the downstream firms adding their own margin, the final price faced by consumers is higher than the price that would have been set had both firms 'jointly' profit-maximised (acted as a single overarching monopolist) and chosen a single mark-up. Further, the aggregated profits earned by the two vertically-separated firms would be lower than the overall profit earned by an overarching monopolist. Therefore, vertical integration, through allowing firms to internalise the double mark-up externality, is beneficial both to consumers (as they now face one mark-up instead of two) and the merging firms (that now have greater overall profits). It is, however, important to note that the problem of double marginalisation does not always arise when firms are vertically separated (for example, there would be no double mark-up in the chain if the downstream market was perfectly competitive). Further, the resolving of this problem is not dependent only on vertical mergers, but could also be solved with vertical restraints – for example, maximum resale price maintenance and quantity forcing agreements (Motta, 2004).

- Avoiding opportunistic behaviour

  For two firms at different levels of the production sequence to have a successful business relationship, one firm may need to develop or purchase a specialised asset to provide a better service to the other. If, however, there are large sunk costs for one firm when making this relationship-specific investment then there is room for the other firm to act opportunistically and renegotiate the division of rents after the investment is made (Joskow, 2003). Expecting this defection, the investing firm's *ex ante* incentive to invest in the specialised asset is weakened, leading to sub-optimal levels of relationship-specific assets. Vertical integration would align the incentives of the two parties, thereby helping to overcome the underinvestment in relationship-specific assets that may arise from fears of opportunistic behaviour. This would be to the benefit of the trading relationship and potentially the consumer as well.

- Avoiding free riding

  Incentives to "free ride" may arise for firms (in either the upstream or downstream markets) when the benefits of an investment accrue not only to the investing firm, but also to competitors in its market (Motta, 2004; Joskow, 2003). Assume, for example, that a manufacturer sells its product through two downstream distributors and needs these distributors to advertise the products to customers (which will boost the manufacturer's sales). If, however, the benefits from this advertising accrue not only to the firm making the costly investment, but also to the other distributor (whether it invested or not), then each distributor has the incentive to not invest and rather to "free ride" on the other distributor's effort. This leads to an under-provision of advertising from the point of view of the manufacturer and the end consumer. A vertical merger would help solve this problem as the manufacturer would now only sell through one downstream firm, ensuring that all benefits from the investment accrue only to its affiliate[6].

- Lowering transaction costs

  The challenges of aligning incentives of trading partners may force a firm to draw up intricate contracts. The negotiation, drafting and enforcement of these complicated contracts will, however, significantly increase the firm's transaction costs. By avoiding the need for elaborate and expensive contracts, vertical mergers can yield substantial efficiencies to firms by lowering transaction costs (Joskow, 2003; Williamson, 1971).

It is evident that there are several ways in which vertical mergers can yield welfare enhancing efficiencies. The Guidelines make it clear that these efficiencies must be "substantiated" and "verifiable", and must be shown to benefit the consumer (paragraph 21 and 53). The merging parties must also show that the claimed efficiency gains are unique to the merger (i.e., that the cost-savings could not have been achieved through another, less harmful method). The parties may be required to go some way to quantifying the magnitude of the merger-related cost-savings.

Finally, it would need to be established that the post-merger market dynamics are conducive to seeing the claimed efficiencies being passed on to consumers.

3 The anticompetitive effects of vertical integration

The amount of academic literature that has developed on the anticompetitive effects of vertical mergers is vast[7]. However, many of the results in this plethora of studies, while important from an academic perspective, are not illuminating for real-world antitrust enforcement as they rely too heavily on the idiosyncrasies of the models from which they are derived. The Guidelines, therefore, look only at the arguments and conclusions that appear to transcend model specifics and have arisen frequently in practice. These are that vertical mergers can erode competition and welfare if the merging parties are able to foreclose their rivals' access to inputs or customers (thereby raising their rivals' costs or weakening their revenues), and if the merger improves the likelihood of collusion at some level of the production chain[8].

Importantly, the Guidelines begin with making it clear that "Non-horizontal mergers pose no threat to effective competition unless the merged entity has a significant degree of market power (which does not necessarily amount to dominance) in at least one of the markets concerned" (paragraph 23). Evidence of a significant degree of market power is a necessary, but not sufficient, condition for finding competitive harm from a vertical transaction. Indeed, the Guidelines go as far as to suggest that the European Commission is unlikely to find fault with mergers that result in a merged entity with market share of less than 30 per cent or markets with Herfindahl-Hirschman Index (HHI) concentration measures of below 2000[9].

3.1 Foreclosure

The Guidelines define foreclosure as "any instance where actual or potential rivals' access to supplies or markets is hampered or eliminated as a result of the merger, thereby reducing these companies' ability and/or incentive to compete" (paragraph 18). Through input and/or customer foreclosure the merged entity might raise the costs (or reduce the revenues) of non-integrated competitors, thereby eroding rivals' competitiveness and deterring potential entry, and leaving the merged entity with enhanced market power[10].

In assessing whether a proposed transaction is likely to result in anticompetitive foreclosure three questions must be asked (the answers to which are often intertwined):

1. Does the merged entity have the *ability* to foreclose?
2. Does the merged entity have the *incentive* to foreclose?
3. Would foreclosure have a significant detrimental effect on competition?

Only if each of the above questions is answered in the affirmative would there be appreciable concerns about the vertical merger resulting in foreclosure.

- Input foreclosure

  The theory of input foreclosure posits that after a vertical merger the upstream division of the integrated firm may restrict sales of its output to non-integrated firms in the downstream market, preferring to trade with its own downstream division ("to self-deal"). This foreclosure could take various forms, including: outright refusal to deal with rivals; restrictions on supplies (and raised prices) to downstream rivals; and, degradation of the quality of inputs sold to competitors. This places downstream rivals at a competitive disadvantage compared with the merged entity's downstream division which can either grow its market share or enjoy its increased market power and stronger margins on its existing sales (Riordan and Salop, 1995).

  The vertically-integrated entity's *ability* to foreclose depends on whether it has appreciable market power upstream after the merger (giving it the ability to influence upstream trading conditions and, therefore, downstream price and supply). The merged entity will have limited ability to raise the costs of downstream rivals if there exist strong buyers or the possibility for these foreclosed firms to substitute to alternative inputs – from either other suppliers or entrants. The Guidelines note that input foreclosure raises competition concerns only if the foreclosed product is an important and irreplaceable input for the downstream market (being either a critical component or an input that has significant cost relative to the price of the downstream product).

Even if the merged entity can feasibly foreclose inputs, its *incentive* to do so will depend on the profitability of the strategy[11]. Input foreclosure results in a trade-off between upstream profit losses (by reducing sales to non-integrated downstream firms the upstream division sacrifices the margin it would have earned on these sales) against the improved profitability of the downstream division[12]. The entity's downstream profitability is enhanced by the degree to which its rivals' costs are raised, and by factors that augment the downstream division's ability to exert its newly-acquired market power (Riordan & Salop, 1995). For example, if the downstream final products are highly substitutable then the downstream firm can expect to capture a larger number of customers from its foreclosed rivals, making the incentive to foreclose greater.

Finally, with ability and incentive established, the vertical merger would raise anticompetitive input foreclosure concerns only if it were shown that this strategy would significantly harm competition and lead to an increase in prices to consumers. So, it would be necessary to assess whether there were rivals downstream that, in spite of the foreclosure, could credibly maintain competitive pricing (through deploying counterstrategies such as changing their product's input mix or consummating their own vertical mergers).

Only if all three criteria are present – ability, incentive and substantial harm to competition – can input foreclosure be counted as an anticompetitive outcome of the merger. It is also important to remember that pro-competitive efficiencies stemming from the merger may counteract the negative impact of input foreclosure on competition. For example, the very features that make input foreclosure more likely – market power at both levels of the chain – enhance the likelihood that there will be appreciable pro-competitive gains from eliminating double marginalisation.

- Customer foreclosure

A vertical merger may reduce the competitiveness of rival upstream suppliers if the merger removes an important customer from their customer base, as that buyer now deals only with its own upstream affiliate. The weakened ability of upstream firms to compete – through expansion or entry – may result in higher prices faced by non-integrated downstream firms[13]. This weakened position may also reduce their ability and incentive to invest in cost reduction, R&D and product quality (which could potentially force exit in the longer run). So, the merged entity benefits from softer competition upstream, and an improved position downstream as its rival input-buyers may face raised costs.

Customer foreclosure is of particular concern when after the merger there are few remaining downstream firms to which upstream rivals can sell. The Guidelines suggest that customer foreclosure can be pursued "if there are significant economies of scale or scope in the input market" (paragraph 62). When economies of scale (or scope) are present, firms rely on increasing their production levels to achieve unit cost reductions and to become more efficient competitors. Therefore, if a supplier's sales fall due to being subject to customer foreclosure, it will move up its cost curve and become a weaker competitor. So, the likelihood of customer foreclosure is diminished if there exists a sufficiently large customer base, at present or in the future, able to turn to independent suppliers. Further, independent suppliers would not be harmed by foreclosure if they can continue to operate at efficient levels by finding alternative markets for their products without incurring appreciably higher costs.

As with input foreclosure, even if the merged entity has the ability to foreclose upstream rivals, it will have the incentives to do so only if the profits resulting from its enhanced market share and market power outweigh the costs of no longer sourcing inputs from upstream suppliers. These costs are higher when the upstream division faces binding capacity constraints or is less efficient than its rivals. The incentive to foreclose would also be stronger the larger the downstream division, as it would then enjoy its increased downstream mark-up over a larger sales base.

The likely impact on competition of this strategy would depend on the degree to which it augments the market power of the merged entity through disadvantaging rivals and obstructing entry[14]. Factors that undermine the merged entity's market power (for example, the threat of counterstrategies) would erode the probability of the merged firm engaging in customer foreclosure, and the strategy's resulting harm on competition.

3.2 Facilitating collusion

Coordination by competitors to restrict output and raise prices is the very antithesis of competition. Collusive arrangements are, however, inherently unstable – while coordination brings handsome returns for the conspirators as a group, each individual participant has the selfish incentive to undercut its fellow members for its own even greater short-term gain. The sustainability of collusion is enhanced when each participant's incentive to deviate is weakened (which occurs when the expected profitability of defection is limited by the threat of early detection and harsh punishment by other members). Hence, a vertical merger raises concerns about "coordinated effects" if the market configurations and dynamics it creates make it simpler for the conspirators to reach a common understanding, give greater market transparency (making communication with, and monitoring of, other participants easier), allow participants to more accurately and viciously discipline defectors, and neutralise the threat of disruptive buyers or entrants jeopardising the arrangement.

Vertical mergers may make it easier to reach collusive agreement by enhancing the symmetry between players, reducing the number of participants in the market (through foreclosure) and/or removing a maverick player that has a history of undermining such agreements. The merger may also improve communication between the upstream (downstream) conspirators if the vertically-integrated firm's division in the downstream (upstream) market is used as a conduit for exchanging sensitive information (this division can also be used to accurately monitor the behaviour of the other conspirators). However, to enhance the likelihood of collusion, and be of concern to competition authorities, the information exchanged must be "unique" to the merger, meaning that it could not have been gathered in the absence of the merger (Riordan & Salop, 1995). The prices gathered by the vertically-integrated firm's downstream division must also be "projectable" to the prices offered to other downstream firms. If the upstream firms sell products that are highly tailored to the buyer's specifications, then the prices offered to the downstream division by other suppliers may not be comparable for the purposes of monitoring adherence. The projectability of information increases as the products offered by upstream firms become more homogeneous (Riordan & Salop, 1995).

If a vertical merger has the effect of augmenting entry barriers (through a foreclosure strategy), then it aids collusion by reducing the likelihood that a collusive arrangement will be destabilised by entry into the market. Further, the likelihood of upstream coordination may be enhanced if the merger eliminates a disruptive buyer in the downstream market.

One mechanism through which vertical integration can aid upstream collusion is by weakening the incentives of non-integrated upstream rivals to cheat by reducing their number of potential downstream customers – these rivals would not be able to sell to the integrated firm's downstream division during a cheating phase (this is called the 'outlets effect' by Nocke & White, 2005). The magnitude of the 'outlets effect' increases with the size of the 'outlet' lost by the upstream rivals through the merger. The upstream rivals' incentive to cheat is further diminished by the knowledge that the integrated firm can now punish them for upstream cheating by responding aggressively in the downstream market. However, this outlets effect is counteracted by the integrated firm potentially having a stronger incentive to cheat on the agreement. In a non-cooperative equilibrium the integrated firm is earning comparably higher profits than other upstream firms as it incorporates the profits earned by its downstream division. So, the integrated firm has comparatively less to lose than its rivals when they attempt to punish it. The "punishment effect" reduces the merged firm's desire to sustain collusion, and this effect increases with the size of its downstream affiliate's profits. While these two effects work against each other, Nocke and White (2005: 32) use game-theoretic modelling to conclude that under fairly general assumptions "the outlets effect dominates the punishment effect, so that the vertical merger facilitates collusion [in the upstream market]"[15].

It is evident that vertical mergers can facilitate collusion. These instances may be of even greater concern to the authorities if the collusion eliminates the newly-integrated firm's incentive to pass any cost savings or efficiencies resulting from the merger on to the consumer.

In summary, vertical transactions involving parties with market power may under certain circumstances give the merged entity both the ability and incentive to engage in conduct that will be detrimental to competition, competitors and consumers. In these instances, the authorities must weigh these anticompetitive outcomes against the potential efficiencies identified and substantiated by the parties.

4
South Africa's experience with vertical mergers

The balancing of the likely pro- and anti-competitive effects of vertical transactions is a complex task. For the South African competition authorities, however, additional factors make it even more arduous. On the one hand, the country's small markets and history of economic isolation and state intervention have contributed to an economy in which many markets remain concentrated and insulated by entry barriers (Kampel, 2004). As explained in the previous section, these types of market configuration are conducive to incumbent firms using vertical integration as a tool with which to protect or extend their market power. Further, goals enshrined in the *South African Competition Act 89 of 1998* to promote market access to smaller businesses and historically-disadvantaged people mean that the authorities should be very cautious of actions by incumbents – like input and customer foreclosure – that could raise entry barriers and thereby slow economic transformation. On the other hand, vertical mergers could unlock much-needed efficiencies and cost savings for an economy in its developmental phase.

Since the inception of the Competition Act the South African competition authorities have handled a number of merger applications that have been vertical in nature or horizontal with vertical aspects. In these decisions the authorities have clearly embraced the Post-Chicago view that vertical mergers can, in a subset of cases, harm competition. This position is stated in the Tribunal's *Schumann Sasol/Price's Daelite* decision:

> …our analysis will proceed cognizant of, and in general sympathy with, the characteristically permissive approach taken by anti-trust to vertical mergers, indeed to vertical agreements generally. (paragraph 9)

However,

> What the literature does clearly reveal is that, as with much of anti-trust adjudication,

> the impact of a vertical merger on competition is acutely sensitive to the facts of the case. At the level of general principle, it is fair to say that vertical mergers raise fewer competition concerns and generate larger pro-competitive gains than their horizontal counterparts. On the other hand, it may be credibly claimed that vertical transactions in which one or both of the parties dominate their respective markets are liable to raise greater anti-trust concerns than those involving firms with relatively small market shares. (paragraph 13)

To give some insight into the methods used and complexities faced by the authorities in their evaluation of vertical mergers this section looks at one of the Tribunal's precedent-setting vertical merger decisions.

4.1 *Mondi/Kohler*[16]

In May 2002, the Tribunal prohibited a proposed transaction in which Mondi Limited ('Mondi'), an international supplier of paper, board and timber products, would acquire a downstream customer – Kohler Cores and Tubes (KC&T) – which used paper products in the manufacture of cores and tubes. The Tribunal prohibited the merger because it was "likely to substantially prevent or lessen competition in both the upstream and downstream markets" through exclusionary foreclosure and through facilitating collusion (*Mondi/Kohler Tribunal*: paragraph 100). The Tribunal's decision was later upheld by the Competition Appeal Court.

Before examining the authorities' arguments and conclusions in this case, it is necessary to introduce some background on the parties, markets and relationships involved.

4.1.1 Factual background

The Tribunal defined the relevant downstream market to be the manufacture of heavy industrial cores and tubes – spirally-wound paper cylinders onto which products such as paper, board, textiles, steel and plastic are wrapped (*Mondi/Kohler Tribunal*: paragraph 16)[17]. Heavy industrial cores must have a superior 'crush strength' – the ability to withstand the weight of the material coiled around them. This is important because, while the value of a tube is only a fraction of the value of the material wound onto it (for example, aluminium foil), if the tube collapses or crushes, the surrounding material is wasted as it cannot be easily unwound. Cores manufacturers, therefore, purchased specialised core-board specifically designed to build up the wall thickness of the tubes.

The relevant upstream market was defined as "that in which core-board is supplied to manufacturers of cores and tubes" (*Mondi/Kohler Tribunal*: paragraph 39). In South Africa, Mondi and Sappi each had shares of approximately forty per cent in this market, and formed "a long-standing duopoly spanning a significant number of markets within the broadly defined paper products market" (*Mondi/Kohler Tribunal*: paragraph 27). The remaining small portion of the market comprised superior-quality special-purpose board imported from Europe and Asia. Within the core-board market, the local duopoly enjoyed substantial market power:

- Barriers to entry were high, as the duopoly controlled the local supply of raw materials needed for the production of paper and there were significant economies of scale when producing core-board.
- Downstream cores and tubes manufacturers had little countervailing buyer power because both Mondi and Sappi were themselves large consumers of the downstream market (they required tubes onto which to wind their paper products). If a downstream firm attempted to bargain or threatened to substitute away from the duopoly's products, the members of the duopoly could move their custom to another firm. This would severely handicap the renegade firm. Indeed, KC&T had previously attempted to import core-board from Indonesia, but as an extract of the KC&T divisional budget for 2001/02 (as cited in *Mondi/Kohler Tribunal*: paragraph 77) revealed: "We had been importing raw materials at prices well below the local mills' prices. However, the local mills represent 25 per cent of our turnover and Mondi has taken business away from us as a result of the imports. As a result of this we have stopped importing raw materials and are working with Mondi to gain more business".

- Imported core-board placed little competitive constraint on the pricing of the local duopoly. Imports from Europe were very expensive due to their superior quality (and were used only in the most technically demanding cores and tubes). There did appear to be competitively priced, although potentially lower quality, core boards from less-developed countries (for example, Indonesia). However, a number of factors prevented downstream firms accessing these. The most important of these factors was the duopoly's threat to no longer buy cores from a firm that chose to import board. Other factors included: tariffs (although these were scheduled to fall from 8 per cent to 2 per cent over the next two years), freight and storage costs, and the volatility of the exchange rate.

The downstream market was concentrated and sheltered, as importing cores and tubes would not be viable due to prohibitively high freight costs. Within the national market of heavy-industrial cores and tubes, Mondi's target, KC&T, was "overwhelmingly the most powerful firm", with a market share of well over 50 per cent (dwarfing those of other competitors) (*Mondi/Kohler Tribunal*: paragraph 27)[18]. Substantial sunk costs in purchasing industry-specific machinery made entry into this market difficult. Demand for high-quality industrial cores was price inelastic because the value of the core was only a fraction of the value of the material wound around it, meaning industrial consumers were willing to pay a premium for superior cores. Despite these market power augmenting features (and a market HHI estimate of 2502), KC&T described the market as having "flat demand, excess capacity, mature technologies, [and] low returns" (*Mondi/Kohler Tribunal*: paragraphs 38 and 61).

In the production of heavy industrial cores and tubes, downstream firms predominantly used two types of core-board, Ndicore (manufactured by Mondi) and Spiralwind (produced by Sappi). Ndicore, a strong board with exceptional crush strength, was the industry's premier core-board, and was designed by Mondi in 1996 specifically for use in the production of heavy industrial cores and tubes. Ndicore was priced at approximately R3,723 per ton. Ndicore accounted for only 12,000 tonnes of Mondi Cartonboard's 130,000 tonnes of board production (at its Springs mill) each year and was "a relatively low return part of the carton board business" (*Mondi/Kohler Tribunal*: paragraph 11). The competitive product offered by Sappi was less easy to tear than Ndicore, but had lower crush strength. Ndicore cost about 15 per cent more per ton than Spiralwind, but offered a better yield, resulting in an effective price differential of approximately 8 per cent. At the time of the proposed merger, Sappi was in the process of developing a higher 'crush strength' board to compete directly with the superior Ndicore. This innovation was, however, expected to take another three years. Both duopoly members also sold Kraft paper (at prices of between R3,247 and R3,555 per ton), which was used to a limited extent in the manufacture of cores and tubes, but was not specifically designed for this purpose. The Kraft paper produced by Mondi and Sappi was almost identical in terms of quality and price (*Mondi/Kohler Tribunal*: paragraphs 12 and 94).

Lastly, there had been some further developments in the markets at the time of the transaction. First, Sappi had recently announced a policy to purchase only cores and tubes that used Spiralwind. Second, even though Mondi's acquisition of KC&T was not yet complete, Mondi was already at an advanced stage of negotiations in a transaction that would dispose of one of KC&T's three factories (a factory that before the merger supplied tubes predominantly to Sappi) to another downstream firm (the name of the prospective buyer was kept confidential in the decision).

4.1.2 The tribunal's reasons

The Tribunal noted that both levels of the chain had HHI figures in excess of 2000 with structural features that gave participants market power. The Tribunal, therefore, concluded that the merger would cause harm to competition through:

- Aiding collusion between the two upstream suppliers. "We [The Tribunal] are concerned that the transaction is the centrepiece of a strategy designed to facilitate the flow of price and other competition sensitive information between Mondi and Sappi thus cementing the domestic duopoly, indeed cartelising a number of segments of the broad domestic paper manufacturing market" (*Mondi/Kohler Tribunal*: paragraph 86). The Tribunal noted that the transaction also removed the only buyer capable of upsetting collusion upstream.

- Input foreclosure. The Tribunal was concerned that the merged entity would predominantly 'self deal' as a strategy to weaken downstream rivals by leaving non-integrated downstream firms dependent on Sappi for core-board. Sappi could then behave as a monopolist, lifting its prices and, in so doing, raising the costs of the merged entity's downstream rivals. On this foreclosure concern alone, the transaction would have been prohibited.
- Customer foreclosure. KC&T was the only firm with the potential size to attract an international supplier of core-board. Therefore, with the merger removing KC&T from a potential entrant's customer base, entry into the upstream market would be blockaded.

Given these anticompetitive effects, and the parties' failure to present satisfactory evidence of pro-competitive efficiency gains, the Tribunal concluded that the transaction's net effect on competition and welfare was negative and, consequently, that the merger be prohibited.

4.1.3 Evaluation of decision

The market dynamics and configurations were clearly conducive to anticompetitive harm emanating from the proposed transaction. However, some of the arguments underlying the ultimate prohibition appear incomplete and require more in-depth analysis and commentary. It is in this examination that the theories and frameworks outlined in the previous sections are useful.

- Facilitating collusion

  The core-board market, with its symmetric duopoly, stable market shares, high entry barriers, and mature technologies, was ideally suited to coordinated pricing. Indeed, so well suited that, as the Tribunal noted, there was "prima facie evidence that coordination is already the order of the day" as was evidenced by the fact that "the list prices for Mondi and Sappi Kraft were set for the same period and changed at the same time and by effectively the same amount" (*Mondi/Kohler Tribunal*: paragraphs 94 and 96). Therefore, the Tribunal was correct to be anxious that the transaction could reinforce this collusion, but its arguments to reach this conclusion need to be refined.

  The Tribunal's primary argument was that, by using KC&T as a conduit for information exchange, the transparency of the market was improved as was the ability to detect cheating. However, for this "new communication channel" to be of concern to the competition authorities in the adjudication of this merger, the information exchanged must have the characteristic of "uniqueness", i.e., it would not have been exchanged in the absence of the merger (Riordan & Salop, 1995). The market was already highly transparent – pricing changes were announced in advance and there was no evidence presented that there was competitive (or confidential) discounting from listed prices. Further, the duopolists' positions as both suppliers and consumers of the market gave them both a unique vantage point from which to observe the dynamics in the downstream market and to monitor each other's conduct. So, the new channel of communication appeared to be of little *additional* value to the duopoly, and it is only this "unique" information that should count against the merger.

  The Tribunal also cautions that the communication channel could be used to cartelise other paper markets in which the duopoly members interact. Yet, the Tribunal does not explore the duopoly's existing relationships in these other markets. If one of the duopoly members was already vertically-integrated in one of the other paper production chains, then a communication channel between Mondi and Sappi already existed, meaning this merger added nothing "unique" to the exchange of information.

The Tribunal's second argument was that the transaction removed the "disruptive buyer" from the downstream market. KC&T could theoretically destabilise upstream coordination in several ways, including: by threatening to find alternative core board supplies, and by playing Mondi and Sappi off against each other. However, it is not clear that this disruptive behaviour could arise in practice. KC&T's dependency on the duopoly as customers appears to prevent it from successfully and *repeatedly* employing disruptive strategies without risking being discovered and then permanently losing two irreplaceable clients[19]. So, with KC&T unlikely to behave disruptively in any event, the argument that the transaction would remove a disruptor is weak in this case.

An argument that the Tribunal could have developed was how the transaction affects the incentives of Sappi or Mondi to cheat and their ability to punish defection. Through acquiring KC&T, Mondi would substantially reduce the number of downstream "outlets" to which Sappi could sell its product during a defection. Therefore, the incentive for Sappi to cheat on a collusive agreement would be weakened, as the profitability of defection is reduced. This "outlets effect" is counteracted by the "punishment effect", which strengthens the incentive of the merged entity to cheat. The magnitude of the "punishment effect" depends on the acquired downstream firm's pre-merger profits, and, as KC&T was earning low returns prior to the transaction, the "punishment effect" would be small, meaning that the merged entity's incentive to cheat would not increase significantly (*Mondi/Kohler Tribunal*: paragraph 61). Further, Sappi's policy to only buy tubes manufactured with Spiralwind would reduce Mondi's incentive to cheat. Thus, it appears that in this transaction the "outlets effect", which would be substantial given KC&T's size, is likely to dominate the 'punishment effect', meaning that the merger would enhance the likelihood of successful collusion upstream.

The core-board market appeared ripe for coordination and the proposed merger could enhance the likelihood of this outcome. But, the Tribunal needed to present more detailed theoretical arguments as to how this occurs. Particularly, the proposed merger cannot be wholly blamed for aiding collusion if collusion already existed and appeared likely to continue irrespective of whether the vertical merger occurred. Therefore, the Tribunal needed to address the evidence of existing collusion more directly – something that it did not do.

- Input foreclosure

The transaction immediately raised concerns of input foreclosure given the size of the merging parties in their respective markets. However, "self-dealing" is not necessarily done with anticompetitive intent – for the merged entity to realise certain efficiencies from the merger (for example, lower transaction costs), it can be expected that its upstream division will attempt to satisfy as much of the downstream affiliate's demand as possible. It is only when self-dealing is done to strategically increase input costs for downstream rivals that it is anticompetitive. Yet, the presence of an alternative upstream supplier – Sappi – apparently thwarted any ability to successfully foreclose. The Tribunal responded to this correctly by arguing that once Mondi began to self-deal, Sappi would become a monopolist over the remainder of the market, and could, and would have the incentive to, raise its prices. With the costs for downstream rivals of the merged entity now higher, the integrated entity would earn greater profits downstream while Sappi would earn increased profits upstream. Therefore, despite the presence of an alternative supplier, the merged entity would still have the ability to foreclose.

However, as explained in the EU's Guidelines, not only must the authority show the ability to foreclose, but also both the incentive to foreclose and that this foreclosure will be appreciably detrimental to competition – two things that the Tribunal failed to satisfactorily address.

The profitability of foreclosure depends on the extent to which the foreclosure raises downstream rivals' costs. However, given the significant degree of market power upstream, core board prices were potentially already near monopoly levels, making it unclear that the costs of inputs for downstream rivals would rise much further if foreclosure was pursued. Thus, the incentive to foreclose may be weak.

For the Tribunal to determine the potential harm of input foreclosure, it would need to estimate the degree to which the post-foreclosure core-board price would rise compared to the pre-foreclosure price. However, a challenge facing the Tribunal is that the "appropriate" pre-foreclosure price may not be the price prevailing in the market at the time of the proposed merger, as this price may already be distorted by existing anticompetitive conduct in the market. If explicit collusion did exist upstream, then it would be perverse to conclude that input foreclosure would not be profitable or harmful and that therefore foreclosure should not be a concern – the upstream collusion may collapse in the future, meaning that the vertically-integrated firm could then harmfully foreclose. However, if the prices pre-foreclosure are high because of appreciable "natural" market power (i.e., market power that exists because of the structures and dynamics and not because it has been artificially augmented by anticompetitive conduct), then the authorities would be correct in viewing the existing price level as the appropriate pre-foreclosure price and the conclusion that foreclosure would be less likely to arise (and if so would not be harmful) would be valid.

Therefore, to overcome this challenge the Tribunal would need to gain a detailed understanding of upstream dynamics to come to an "appropriate" price benchmark – the price level that would prevail if the price was not being held at artificially high levels by proscribed anticompetitive conduct. The authorities must, therefore, attempt to examine the effect of the foreclosure in an environment in which the existing anticompetitive behaviour has been removed, as the existing anticompetitive conduct distorts how harmful the foreclosure appears to competition. In this case, the Tribunal clearly needed to investigate the evidence of upstream collusion in greater detail if it was to understand the likely injury potential input foreclosure would cause to competition.

- Customer foreclosure

  The high entry barriers into the upstream market meant that the only potentially viable entrant would be a large international core-board supplier. Yet, the additional feature unique to this case, that Mondi and Sappi were both large consumers of the downstream market (and could, therefore, discipline a downstream firm for sourcing inputs from elsewhere) makes entering the upstream market an almost impossible task. In halving the customer base for a potential entrant, the Tribunal was correct in arguing that the transaction would blockade entry, although the incremental effect on entry barriers would be small (given their height prior to the merger).

4.1.4 Conclusions about Mondi/Kohler

The above commentary suggests that in this particular case, the authorities would have benefited from a more rigorous analysis of upstream market dynamics and a more thorough investigation into how the theories of foreclosure and collusion apply in this setting. The economic justifications underlying the Tribunal's decision were valid – the proposed merger did appear to improve the likelihood of foreclosure and coordination. However, the extent to which this likelihood was improved, and the resulting harm to competition, was perhaps not as great as the authorities claim.

The unique feature of this case, that the upstream duopoly was at the same time a supplier and significant consumer of the downstream market, makes the analysis of likely competitive outcomes of the transaction more difficult to understand. The duopoly's "supplier-and-buyer" relationship with the downstream market so impaired the competitive process already that the anticompetitive consequences emanating from the proposed merger appeared relatively small. Indeed, the net effect on competition of this merger would have been entirely different had Mondi and Sappi not enjoyed this "supplier-and-buyer" position. Without this relationship, the duopoly would have had less room to discipline downstream firms that sourced core-board from overseas. Consequently, the upstream market would have been wider and more competitive, potentially making it difficult for the duopolists to behave anticompetitively before or after the vertical integration.

The outcome of the merger application could also have been changed by the parties providing satisfactory evidence of efficiency gains. There are potentially many areas in which this transaction could have realised cost savings – market power at both levels of the chain suggest savings from removing double mark-ups, and repeated transactions between the parties (given that they are both a buyer and a supplier to the other) suggest substantial savings from lowering transaction cost. However, the parties' apparent failure to identify and substantiate these (*Mondi/Kohler Tribunal*: paragraph 61), means that no resistance to the authorities' evidence of anticompetitive effects was offered.

5 Conclusions

The EU Guidelines on Non-horizontal Mergers provide an excellent summary on the theories and frameworks that should be used in evaluating vertical mergers. Given that the South African competition authorities have clearly embraced the Post-Chicago School of thinking on the competitive effects of vertical transactions, the EU's Guidelines will provide a useful reference with which to inform and formalise future investigations and analysis of vertical mergers in South Africa. The South African authorities should certainly draw heavily from these Guidelines if they wish to draw up formal guidelines of their own.

The *Mondi/Kohler* case was an important, but complex, one for the South African authorities. It gave the authorities the opportunity to lay out how they would evaluate foreclosure and collusion concerns emanating from a vertical transaction. However, the idiosyncrasy of the case, namely that the upstream duopoly was also an important consumer of the downstream market, made understanding the likely anticompetitive effects of the proposed transaction more difficult. There are areas of the authorities' analysis that could have been refined. The case particularly highlights a problem that is likely to face the South African competition authorities in a number of cases – that existing anticompetitive behaviour in the market may make understanding the effects of vertical mergers more complex. It would not be appropriate for the authorities to be lenient on an anticompetitive act because a previous anticompetitive action had made it appear less harmful to competition. To overcome this problem, the competition authorities would need to do highly detailed investigations of market dynamics. The authorities may, as a result, require greater time and resources to evaluate vertical cases.

Endnotes

1 This paper was originally written for the First Annual Competition Commission, Tribunal and Institute Conference on Competition Law, Economics and Policy in SA at University of the Witwatersrand in June 2007. At that time the European Commission had published only a draft version of the Guidelines on non-horizontal concentrations for public discussion. The paper has since been updated to reflect the finalised Guidelines published in November 2007.

2 The author is sincerely grateful to Robert Stillman, Ragvir Sabharwal, Rameet Sangha, and Simon Roberts for their comments and advice. The author thanks also two anonymous referees for their recommendations.

3 See Riordan and Salop (1995), Riordan (2005), and Bork (1978).

4 Externalities can arise out of the individual producers in the chain failing to appreciate that their own profit-maximising decisions (with respect to output, price, research, quality, etc.) affect the supply decisions and profitability of producers at other links in the chain. See Joskow (2003); Motta (2004); and Williamson (1971).

5 Bishop *et al* (2005) gives an in depth analysis of the various efficiencies that can result from non-horizontal mergers. See also Riordan and Salop (1995).
6 Vertical restraints (for example, exclusive territories or exclusive dealings agreements) could also solve this externality (Motta, 2004).
7 See, for example, Church (2004) for a review.
8 See Riordan and Salop (1995) for a review of other, more specialised ways (for example, to avoid pricing regulation at one level of the chain) in which vertical mergers could be used to adversely affect competition.
9 While these levels provide "safe-harbours" for small non-horizontal mergers, the Commission states that the thresholds are only reference points and should not be interpreted as a presumption that a merger falling below these levels will not be scrutinised and possibly prohibited (paragraphs 25-27).
10 Entry barriers might be raised, for example, if, on account of foreclosure preventing the entrant access to sufficient customers or inputs to achieve minimum efficient scale levels of production, the entrant is forced to enter both markets simultaneously, at greater capital requirements and cost (Pitofsky, 1997).
11 The Guidelines note that a monopolist may have the incentive to integrate and foreclose to 'restore' a monopoly profit that it was failing to extract because of, for example, a commitment problem (paragraph 44). Analysis of this branch of the foreclosure debate is beyond the scope of this paper. The interested reader is directed to Rey and Tirole (2007), Riordan (2005), and Church (2004).
12 The Guidelines note that, all else being equal, the profitability of foreclosure will increase the lower the margins upstream and the higher the margins downstream (paragraph 41). It is important, however, to note that margins may change as a result of the merger (for example, because of efficiencies). Therefore, focusing only on the "pre-merger" margins may lead to incorrect conclusions.
13 Input prices could rise on account of the merged entity having increased market power, the foreclosed upstream suppliers moving up their cost curves (and passing a portion of these cost increases onto customers) or the higher entry barriers surrounding the upstream market (resulting from the customer foreclosure) making the market more susceptible to a collusive outcome.
14 The concern about foreclosure obstructing entry "is particularly relevant in those industries that are opening up to competition or are expected to do so in the foreseeable future" (Guidelines: paragraph 75).
15 Vertical mergers can also increase the likelihood of a collusive outcome in the downstream market. Chen and Riordan (2003) show how an upstream firm can use a vertical merger to encourage non-integrated downstream rivals into accepting exclusive dealing arrangements, thereby cartelising the downstream market.
16 The analysis of the *Mondi/Kohler* case in this paper is based solely on the arguments and factual background given in the non-confidential written decisions on the matter published by the Competition Tribunal (Case No. 06/LM/Jan02) and by the Competition Appeal Court (Case No. 20/CAC/Jun02). There may have been additional information confidential to the authorities (and not expressed in the written decisions) that determined their decisions.
17 The Tribunal explained that there was a separate market for the manufacture of light cores and tubes (like toilet rolls). Producers in these separate markets require different qualities of input and place little competitive constraint on each other (*Mondi/Kohler Tribunal*: paragraph 36).
18 The Tribunal stated KC&T's share of the market for all cores and tubes (both heavy and light industrial) as 45 per cent (with the second largest competitor, Framen, at 11 per cent). Within the market for the manufacture of heavy industrial cores (the relevant market), the market into which KC&T focused its cores and tubes production energy, KC&T would have a share greater than 50 per cent (although a precise share was not calculated in the decision).
19 In fact, KC&T had attempted to import core board on one occasion. This led to a rapid and forceful punishment by Mondi and KC&T's quick retreat from its disruptive position. So, the Tribunal is incorrect in proclaiming this example as evidence of an active disruptive buyer downstream. Rather, the outcome of this example may show that KC&T (and other firms that observed the duopoly's response) had learnt to avoid behaving disruptively in the future.

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