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Competition and incumbency in South Africa’s liquid fuel value chain

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Introduction

There is an ongoing debate in South Africa regarding the transformation of the liquid fuel sector value chain, which has historically been controlled by a handful of large multinational oil companies. The petroleum sector is strategic in terms of its wider impact on consumers, as a provider of inputs into other productive sectors of the economy and as an important influence on the trajectory of economic development. In South Africa, the sector benefited from substantial investments and support from the apartheid government for security of supply and national security reasons, particularly in light of widespread sanctions in the years prior to the democratic transition in 1994. A favourable policy environment over the years has created a sector characterised by a handful of large fuel-importing oil companies with refining capacity in strategic port locations, as well as a national champion, Sasol, producing fuel inland. Importantly, all of the incumbent firms exhibit high levels of vertical integration into activities spanning the entire value chain, including importing, refining, production, distribution and retail.

Following the democratic transition, greater emphasis began to be placed on transforming the sector to be more inclusive at different levels of this value chain, culminating in the attachment of the Liquid Fuels Charter as an addendum to the Petroleum Products Act (No. 120 of 1977). The entry and growth of new, independent wholesalers as part of this process of transformation is of particular importance, as distribution and retail are the activities in the value chain with the lowest level of capital requirements for entry. With time, the goal should be to allow entrants at the wholesale level to develop capabilities that allow for their gradual migration up the value chain, creating competition with the incumbent oil companies.

These goals around transformation are not only important for their own sake. They fit within the context of a growing global body of literature on the significance of inclusive economic growth and broadening economic participation. A central component of achieving this increased participation is removing structural and strategic barriers to new entry at different levels of the economy (see Ianchovichina and Lundstrom, 2009; Spence, 2008). In South Africa and
elsewhere, research highlights the importance of addressing the market power of large and entrenched firms to stimulate economic growth and the key role of competition authorities in this process (see Acemoglu and Robinson, 2012; Makhaya and Roberts, 2013; North, Wallis, Webb and Weingast, 2007; Roberts, 2012). South Africa’s National Development Plan and industrial policy framework also emphasise the importance of creating a dynamic and entrepreneurial economy and addressing high levels of concentration in the economy (NPC, 2013).

Barriers to entry, by creating and reinforcing the market power of large firms, tend to lead to higher prices, lower levels of innovation and a less competitive economy. Incumbent firms have an incentive to lobby and employ strategies to retain high barriers to entry and protect their position in the market. Ultimately, the focus of policy makers should be on creating a market in which firms compete to introduce better prices or products, reduce costs and achieve returns which reward dynamism, innovation and effort, rather than trying to maintain their position by handicapping potential rivals. In a country like South Africa where there are significant unemployment, poverty and inequality challenges, it is particularly important to understand the nature and extent of barriers to entry in the economy in order to ensure that regulatory and policy interventions have a meaningful impact on creating inclusive and shared growth.

Progress in lowering barriers to entry and encouraging transformation has been limited in the liquid fuel sector. While over 1,000 licences have been issued to potential entrants in fuel wholesaling, less than 10% of them are being used effectively by firms that have been able to enter and survive in the industry. Independent wholesale firms are able to enter the market. However, they are typically restricted to supplying less profitable regions and are limited in terms of their expansion as they are highly dependent on the major fuel companies for supply and access to customers.

In this context, this chapter aims to unpack the barriers to entry in the wholesale of liquid fuels in more detail, in order to understand what prevents new entrants from growing into effective competitors to the major fuel companies. The chapter draws directly from a recent study by the Centre for Competition, Regulation and Economic Development on the same subject. As such, all references to industry knowledge and interviews are based on data and information from the broader study. In the remainder of this chapter, we consider literature on barriers to entry before providing an overview of the fuel sector in South Africa and the various barriers to entry that were identified by the study. After concluding, we discuss policy recommendations arising from the findings.

Theoretical discussion of barriers to entry

In economic theory, free entry and exit are important conditions for competition to prevail. When the likelihood of new entry or expansion by existing firms in the market is high, incumbent firms will be constrained by the fear that increased prices would lead to actual or potential rivals expanding their output (O’Donoghue and Padilla, 2006). However, if it is difficult, time consuming or
costly for new entrants to come into a market, incumbents may be able to profitably raise prices without a new firm entering the market and driving prices and profits back down.

There has been a debate over the years about the importance of barriers to entry in determining the level of competition in an industry (see Banda, Robb, Roberts and Vilakazi, 2015). Recent theories highlight the importance of economies of scale, imperfect information and strategic behaviour by incumbent firms in deterring entry, leading to a lessening of efficiency and overall welfare. These theories place particular emphasis on the idea of strategic barriers. Strategic barriers are created when incumbent firms use their dominant position to foreclose or exclude entrants in order to undermine competitive rivalry. Other types of barriers that exist because of factors inherent in the nature of the market are termed structural barriers.

Structural features of the market which influence the ease of entry are sunk costs, absolute cost advantages, economies of scale and switching costs. Sunk costs are investments that must be made on entry (e.g., in technology, marketing, research and development), which the investor will not be able to recoup if the firm exits the market. Such costs obviously increase the risk of entry. Whether or not a cost is fully sunk may not be clear-cut, but will depend on what portion of the value of the investment the firm has a reasonable expectation of recouping, should exit occur.

An absolute cost advantage is present where an incumbent firm has an inherently lower cost of production than an entrant, for example, because it has preferential access to raw materials or technology (Church and Ware, 2000). This may be due to a historical advantage in terms of geographic location, rights to certain inputs or preferential contracts with input suppliers.

Scale economies also represent a type of structural barrier to entry. A firm enjoys economies of scale in the production (and/or distribution) of a product when its average costs fall as output increases (O’Donoghue and Padilla, 2006). In an industry where the economies of scale are very high relative to market demand, a large incumbent firm will have an advantage over smaller entrants, since a new entrant selling smaller volumes than the incumbent will have higher costs and make lower margins than the incumbent. If customer switching is low due to brand loyalty or long-term contracts, for example, then it may be very difficult for a new entrant to win customers initially, and, if combined with economies of scale, this may make it difficult for a new entrant to compete sustainably.

Legal or regulatory barriers may also exist, such as tariffs, licensing requirements or weak or badly designed economic regulations. Licensing, for example, can raise barriers to entry if it is associated with onerous requirements on prospective licensees. Regulatory barriers are an interesting category of entry barriers as they can be influenced by policy interventions. Economic regulation is particularly important as it is explicitly aimed at dealing with a lack of competition. Access regulations seek to ensure that vertically integrated monopolies provide access to essential inputs or facilities to rivals on fair terms. This is usually necessitated when there is a natural monopoly at one level of the value chain but competition is feasible at other levels of the chain. Access regulations
which are inadequate or poorly enforced can allow vertically integrated dominant firms to leverage their market power to restrict new entry, helping them to maintain their dominant position. The other major type of economic regulation which can impact entry is price regulation in that it may limit the margins that can be earned by a new entrant, which then reduces the incentive for new firms to enter the market and makes it difficult for smaller competitors to survive. By contrast, effective economic regulation will encourage entry and competition wherever feasible.

As noted, when an incumbent firm’s conduct creates barriers to entry, these are termed strategic barriers. If the entry of a new competitor is likely to reduce the profits made by the incumbent, either because prices fall or its share in total output is reduced, the incumbent may have an incentive to try to deter entry or ensure that it is unsuccessful. Incumbent firms may employ a wide range of strategies to these ends.

Entry deterrence refers to a situation where the incumbent firm employs a strategy in order to make entry seem unattractive to a prospective entrant. This type of strategy may take a number of forms – for example, pricing below cost or overinvesting in capacity – but always with the aim of persuading the entrant firm that it is unlikely to be successful and that the incumbent firm is strong and committed to fighting any entrant (see Bishop and Walker, 2010; Cabral, 2000; Dixit, 1979, 1981; Motta, 2004). These theories typically rely on the entrant firms’ lack of perfect information about the incumbent’s costs.

Strategic barriers can also arise from the behaviour of firms through practices that raise rivals’ costs and/or induce customers or suppliers not to deal with rivals (reduce rivals’ revenue). Again, there are a number of ways in which incumbent firms can try to create these barriers. They may do so by restricting competitors’ access to inputs or to customers. If the incumbent is vertically integrated, it may be able prevent the competitor from gaining access to a vital input or charge a very high price for it so that the competitor cannot be profitable. Economists have shown that the incumbent firm could have an incentive to do this for a number of reasons, but particularly if it perceives a threat that an entrant may vertically integrate into its monopoly market (Carlton and Waldman, 1998; Rey and Tirole, 2007). Another strategy which an incumbent may employ is to tie up key customers into exclusive contracts so that an entrant cannot acquire sufficient customers to reach an efficient scale of production. An incumbent may employ a combination of these strategies to deter or defeat entry.

Effective rivalry between firms to win over customers that have scarce resources encourages firms to produce better-quality goods and offer lower prices. This rivalry requires firms to be more prudent in their use of the resources available to them by eliminating inefficient use of resources, cutting down wastage and thus reducing their costs (Evans and Joekes, 2008). It is therefore not surprising that firms will compete aggressively, and at times unfairly, to prevent rivals from gaining a foothold in the market. Firms can choose to compete on the basis of improved product offerings and investments in improving their capabilities, in which case efficiency, effort and ingenuity are rewarded. On the other hand, firms can compete (unfairly) by leveraging their incumbency
and engaging in practices that seek to raise rivals’ costs and ultimately diminish the significance of rivals as effective competitors. This can also be described as the difference between ‘performance competition’ and ‘handicap competition’ (seeking to handicap rivals) (Gerber, 2010).

Strategic barriers to entry are often relevant where there is a vertically integrated monopolist who has an incentive to protect the rents being earned in the monopoly market through attempting to frustrate entry at another level of the market. This is particularly acute where the incumbent firm or firms have control over key inputs required by entrants. In these circumstances, the incumbent firms may find it profitable to engage in strategies to raise rivals’ costs or reduce rivals’ revenues. They may also choose to accommodate entrants but to attempt to force them into a particular market niche where they can operate at a smaller scale, without threatening the incumbents’ main market.

Strategic entry barriers are also important in concentrated markets, which are prone to coordination among firms. Vertical restraints such as exclusive contracts, exclusive territories, retail price maintenance and restricting supply can be used to support a coordinated agreement by preventing downstream firms from undermining a collusive agreement (Levenstein and Suslow, 2014). Cartels have used vertical restraints to foreclose entrants from access to inputs and to markets (Levenstein and Suslow, 2014). Close relationships between firms, including through historical ties and information exchange, tend to make such outcomes more likely. Thus, strategic barriers to entry may be employed by a group of firms with joint market power as well as by individual dominant incumbents.

Strategic barriers to entry are considerably more difficult to evaluate, partly because there is often more than one possible interpretation of the observed behaviour. For example, exclusive contracts can be an efficient way of incentivising investment by suppliers or their distributors, but they may also be intended to deny a new entrant access to customers. The nature and effects of the conduct therefore need to be carefully assessed and weighed against any efficiencies it generates.

Although the consideration of barriers to entry in competition law is largely technical, the discussion has tried to illustrate the mechanisms by which barriers to entry impact on competition and participation in an industry. The following case study on the liquid fuel sector in South Africa highlights the ways in which these barriers can work in practice.

Case study: Liquid fuel sector in South Africa

In this section we provide background to the liquid fuel sector in South Africa, and then discuss the structure of the market and the main strategic barriers to entry which illustrate the concepts raised in the literature review.

Overview of the sector

The liquid fuel sector in South Africa presents an interesting case study in that it has historically enjoyed protection from the state due to the strategic objective of ensuring security of supply in the country. This has created a market where
there is an established set of incumbent firms and significant barriers to entry for newer entrants.

The sector is governed by two main bodies: the Department of Energy (DoE) and the industry regulator, the National Energy Regulator of South Africa (Nersa). The DoE mostly deals with issues pertaining to licensing and the pricing structure. Nersa sets tariffs for petroleum pipeline operations and approves tariffs for petroleum storage and loading facilities. The Petroleum Pipelines Act (No. 60 of 2003) also gives Nersa the authority to compel operators of pipeline, loading and storage facilities to allow independents access to unused or ‘uncommitted’ capacity, although Nersa is unable to compel the owners or operators to expand their facilities.

The country's overriding concern in the liquid fuel sector has been to ensure security of supply. The DoE’s legislated mandate is ‘to ensure secure and sustainable provision of energy for socio-economic development’ (Department of Energy, 2015). This concern was emphasised even more prior to 1994, as the apartheid government needed to ensure supply of fuel, particularly during the period of sanctions. As such, the government created a protected environment where a small number of oil companies were allowed to grow, acquire key infrastructure such as refineries and depots in strategic locations and thus develop considerable market power. This led to vertical integration across all levels in the fuel sector, from importing, refining and production to distribution and retail, further entrenching the market power held by these few oil companies. The industry is thus characterised by seven oil majors – Total, Sasol, Engen, Chevron, Shell, PetroSA and BP – that still account for about 70% of the retail volumes of fuel sold (Lewies, 2013). The other 30% of the retail volumes sold are by independent players in the retail market. However, even the independent players source their fuel almost exclusively from the seven major oil companies, which, by virtue of their refineries and control of the port and storage facilities, also control the supply of fuel at the upstream level.

Figure 7.1 shows the different levels of the value chain in liquid fuel distribution. The wholesaling of fuel takes place once crude oil imports have been refined and distributed (mostly via pipeline) to the different depots and storage facilities in the country. The fuel is then sold on a wholesale basis to commercial customers through three main channels: the oil company’s own distribution, branded marketers and independent wholesalers. Through the first channel, the oil companies sell directly to large-volume customers. In the second channel, the oil companies first sell the fuel to their branded distributors or marketers, who act as contracted agents of the oil companies and sell only in allocated regions. The independent wholesalers have supply contracts with the branded distributors and/or oil companies. However, they do not operate under the brand or policies of the major oil companies and are free to distribute fuel to customers in different geographic areas.

Market structure and competitive dynamics in the petroleum sector

Of particular interest in this sector is how the major oil companies have come to jointly control critical stages of the value chain, and how the vertically integrated
nature of their operations has allowed the incumbents to control competitive outcomes not only at the refinery level, but in distribution and retail as well. The findings of various competition cases in the past decade illustrate the overarching concern regarding the joint market power and intricate bargaining relationships which exist between the major oil companies in South Africa.

In 2005, a proposed merger between Sasol and Engen was prohibited by the Competition Tribunal on the basis of concerns regarding the market power which the merger would likely grant to the merged entity in the context of the structure and history of the sector. At the time, Sasol had 82% of the inland wholesale supply and was a part owner in Natref, whereas Engen had refining capacity at the coast. The inland region represented over 60% of national demand and, through the Main Supply Agreement (MSA), the other oil companies had been required to purchase Sasol’s product in the inland region but Sasol was prevented from entering the retail market. At the downstream level, therefore, Engen had a large network of retail outlets which, together with Sasol’s extensive inland refining and wholesale capacity, would have led to significant control of the inland market in particular. At the time, government was talking about deregulating the retail market and the pipeline capacity from the coast to the inland region was potentially going to be expanded. In this context, Sasol gave five years’ notice of the termination of the MSA in 1998 and subsequently entered negotiations with Engen.

The Tribunal found that there was a credible threat of foreclosure as a result of the merger and that Sasol would have the incentive and ability to foreclose competing retailers inland. The Tribunal considered that it would be some time still...
before increased pipeline capacity came on stream and, in the meantime, Sasol could self-supply and exclude downstream competitors in the inland region. The other oil companies would not be able to retaliate at the coast as Sasol had access to Engen’s Durban refinery. According to the Tribunal, this was likely to result in other oil companies ‘suing for peace’ and agreeing not to compete with the merged entity. In other words, a coordinated outcome was likely. The Tribunal considered that the characteristics of the petroleum industry lend themselves to a collusive outcome:

all the conditions for cartel formation and maintenance pertain: the structure of the markets is oligopolistic; the products are homogenous and technologically mature; entry barriers are very high; cost structures of the various oil companies are similar…the rate of growth in demand is moderate and demand is highly inelastic; there is no countervailing buyer power to speak of; the markets are highly transparent; there is an extensive history of co-operation both at the level of the MSA and also in a range of joint ventures and ubiquitous swap and hospitality arrangements.4

The close contacts between the major oil companies have also been facilitated through various exemption applications, which have enhanced coordination between the companies. In 2005, following a period of fuel shortages, a task team appointed by the minister of minerals and energy recommended that there be increased coordination over issues such as supply lines and shutdowns. The petroleum industry was encouraged to apply for an exemption from the Competition Act through the South African Petroleum Industry Association (SAPIA). An exemption was granted for a period up to 31 December 2015. A short-term exemption was also granted in 2010 to coordinate supply for the World Cup.

In addition to the fact that these arrangements facilitated coordinated outcomes in the sector, an information exchange case involving Chevron, Engen, Shell, Total, Sasol, BP and SAPIA was referred to the Tribunal by the Competition Commission in 2012. The Commission’s expressed reasons for the referral were summed up as follows:

The disaggregated sales information exchanged between oil companies in the case being referred here removed any element of surprise in strategic decision making and functioned as a reliable substitute to direct cartel interactions insofar as it made monitoring of rivals possible. This, together with the history of coordinated behaviour and other characteristics that exist in the petroleum industry, made achieving cartel outcomes post the exemption period possible. (CCSA, 2012)

Together, these cases show the effect of state-sanctioned protection on the competitive dynamics in the sector. Furthermore, they describe a market wherein incumbent operators, through close contacts with one another, have effectively
established a position of joint market power in which rivalry between companies is restricted. This is significant when considering the likelihood of entry of new companies and their ability to eventually expand up the value chain in direct competition with the incumbents. It is also relevant to the question of whether entry at the wholesale level will encourage rivalry between the main suppliers by playing them off against one another. We return to this issue in the discussion below.

The Sasol/Engen merger decision also illustrates the significance of the ownership of key infrastructure by the major oil companies and how that has contributed significantly to the creation of structural barriers to entry and expansion in the sector. The sunk investments made into building the refineries and depots, investing in technology, marketing, and research and development reduce the returns the incumbents need to stay in the market compared to those an entrant needs to invest in entering and successfully competing in the market. The oil majors enjoy economies of scale and absolute cost advantages such as preferential access to fuel and infrastructure, which puts them in a much better position than entrants.

Furthermore, entrants at various levels of the value chain face structural barriers in the form of access to finance as well as environmental and pricing regulation, although some of these factors affect all players in the industry in a similar manner. It is worth noting that although the pricing regulation is in itself not an impediment to entry, it does act as a barrier to growth according to wholesalers in the sector. The current system is known as the Regulatory Accounting System (RAS). It separates all activities in the value chain with a view to compensating investment in all activities by allocating the margins to be earned at each level of the chain. While this assures that independent wholesalers in particular earn a margin for their activities and investment, they are still required to compete with the oil majors, which are vertically integrated at every level of the value chain, as well as the branded distributors of these companies. As such, these major rivals earn margins throughout the value chain (discussed below).

Strategic barriers to entry in the liquid fuel sector
Strategic barriers to entry arise from the incumbent firms’ reaction to entry, which in some circumstances may constitute anticompetitive conduct. As noted above, this conduct could take the form of aggressive post-entry behaviour or entry deterrence, raising rivals’ costs and reducing their revenues. Our study of the liquid fuel wholesale sector found that there are a range of strategic barriers which make it difficult for entrants to compete in the sector. These include a variety of arrangements relating to access to customers, access to infrastructure and facilities, as well as the vertically integrated nature of the sector. This section considers the main barriers identified.

Scale, pricing and access to customers
One of the primary challenges facing wholesalers is that major oil companies provide better discounts and payment terms to customers than smaller rivals are able to. As incumbents with direct control of the input as well as a bigger balance sheet, the fuel majors are able to give much more favourable terms to their
customers, such as longer periods of credit to pay for the fuel. Related to this is the fact that the oil companies also deal with large volumes of fuel, thus enjoying significant economies of scale in their operations.

While this aspect is characteristic of most industries where entrants need to compete with established incumbents, the challenge here is that the major companies are vertically integrated and also control the supply of fuel, and so it is even more difficult for downstream rivals to compete because in most cases they would be competing directly with their suppliers. This is exacerbated by the fact that the major oil companies have established relationships and hold long-term supply agreements with several of their large customers, so that competing wholesalers, who rely on the same companies for supply, are not able to match the terms or discounts in order to compete for these customers. Another difficulty is the majors’ supply agreements with branded marketers, which often give them exclusive rights to distribute within a given region. Independent distributors may have to purchase fuel from these branded marketers, introducing another layer of cost and making it more difficult to compete for customers.

Wholesalers have argued that they are left to compete through deriving efficiencies in their own operations, offering better service to customers than their larger rivals, and offering additional services and support to customers as value-added products. While customers can benefit substantially from this approach, in the medium to long term the ability of these wholesalers to expand their businesses is restricted, at least partly because they may incur additional costs in providing value-added services, and customers in the industry generally remain focused on price as the primary determinant of whom they will source their fuel from.

Control of key inputs (security of supply)

As noted, rivals’ costs can be raised by incumbent firms through various mechanisms. One aspect is through leveraging control of key inputs to increase the input costs or reduce supply to downstream rivals, thus potentially foreclosing them. In the fuel sector, the main oil companies exercise significant control of several key inputs.

The major suppliers generally do not supply product to small new entrants as the volumes they require when starting out are considered to be too low. New entrants are usually directed to acquire supply from branded wholesalers or to first acquire sizeable contracts before they can deal directly with the major suppliers. Once the new entrants establish supply contracts with either the majors or the branded marketers, they are still at a disadvantage because during shortages they are often the last to get access to fuel after the major operators and their branded marketers. The wholesalers generally have limited leverage for negotiating with their suppliers and no real possibility of playing one supplier off against another because of the very transparent nature of costs and pricing in the industry. Information obtained in the study suggests that if a wholesaler competes too strongly or presents a competitive threat to an incumbent oil company, there is a risk that the wholesaler could be foreclosed from supply. Thus, independent wholesalers are kept in a particular market niche.
Control of key infrastructure

The discussion above suggests that wholesalers, and particularly large ones, should seek alternative sources of supply. However, one of the main challenges, particularly with importing fuel directly, is oil companies’ ownership of key infrastructure such as port facilities, depots and storage. The main port facilities for landing fuel in Durban are owned by the major oil companies, including through part-ownerships of refineries and other facilities. Thus, in order to land fuel currently, an independent player would have to negotiate with the major oil companies for access to this infrastructure. Similarly, the existing storage facilities in Durban are mainly owned by the major oil companies and there is no commercial imperative for them to construct more storage capacity than they expect to use. In addition, even when there is apparently spare capacity in their facilities, it may not be practical to rent it out to independents since the major oil companies need to ensure that there is always sufficient available capacity for the arrival of their next fuel shipment.

Independent storage facilities are available through companies like Vopak. However, in general, even the independent facilities are contractually bound to the major oil companies. Based on data from Nersa, only 6% of storage capacity for petrol and diesel at the port in Durban is currently independent (Nersa, 2014). The remaining 94% is owned by the major oil companies. Storage facilities are extremely expensive to build and, in order to get financing, storage companies are usually required to acquire long-term use-or-pay contracts with customers for at least 80% of the capacity to be built. This generally means engaging the major oil companies, which would have substantial volume requirements and the ability to guarantee volumes for five or six years. Smaller companies, by contrast, take on a substantial risk by signing up for a long use-or-pay contract. In addition, storage companies sometimes require guarantees to be paid upfront while the capacity will only come online in 18 months to two years. This is onerous for a small firm and as a result only 1.7% of storage capacity is currently used for independent wholesalers and other rivals to major oil companies, despite efforts by Nersa to force facility owners to have explicit allocation mechanisms for sharing uncommitted capacity.5

There has been a recent effort to increase access to independent storage. In December 2014, Nersa gave approval for an independent company to put up independent storage in Cape Town despite opposition from Chevron. Chevron alleged that putting up another facility would result in loss of jobs as there would be too much storage. Nersa, perhaps realising the benefit to security of supply, approved the construction of the facility (Monteiro, 2014).

Alternatively, independent wholesalers could decide to import fuel from the world market on their own but this is very expensive and often fraught with complications. First of all, importing fuel is a risky endeavour requiring a large balance sheet and well-managed cash flow. A small tanker-load of fuel could take at least three weeks to reach the port, in which time currency and oil price fluctuations may have changed the economics of the deal. Once the fuel has landed, there are often problems with its quality, which is difficult for an independent wholesaler to manage without refining capacity. The major oil companies have
refineries in the country and therefore can fairly easily rectify any deficiencies or changes in the quality of landed fuel. The view of wholesalers is that even if several independents took on the venture collectively, there is still a substantial risk in importing fuel directly from the world market.

If an independent wholesaler were to successfully import fuel through the port and gain access to storage facilities, it would still need access to the fuel pipeline to transport the fuel inland. The pipeline infrastructure is owned and operated by Transnet Pipelines which, as part of its mandate, has to ensure access to this infrastructure. The pipeline infrastructure is particularly important when considering that 60% of fuel demand in South Africa is in the inland regions such as Gauteng, while the remainder is coastal (Naidoo, 2011). The challenge in this regard is that the current pipeline infrastructure is connected to the storage facilities of the major oil companies at the port, which again requires negotiations with the major suppliers that carry far larger volumes. Furthermore, once the fuel is transported by pipeline to the inland region, storage facilities are required once the fuel is offloaded from the various inland pipeline depots. Currently, fuel is transported by road and rail from the depots to the storage facilities of the main oil companies.

There have been efforts to import fuel through Mozambique and then transport it via rail or road. The quality of this fuel, however, is questionable and the channel unreliable. A number of firms have had bad experiences with this channel of supply, including in terms of the reliability and quality of the product. Furthermore, given the costs involved, it is not sustainable to transport this fuel to inland regions other than Mpumalanga and Limpopo.

Pricing and transport

The issue of transportation is especially important in this sector. For wholesalers, the ability to achieve scale in transporting loads of fuel to various customers can determine whether the operator is able to make a profit. Given that margins in the industry are controlled and that wholesalers do not have the control of supply or the scale of operations to afford to obtain fuel at heavily discounted prices, it is increasingly important to be able to reduce costs and derive efficiencies in their operations. Due to changes in the pricing regulation over time, most of the major oil companies have given away less profitable wholesale businesses in peri-urban and rural areas to branded and independent wholesalers. This in fact led to the entry of several firms to the wholesale level of this sector. These areas are less profitable primarily because of the distances travelled to service customers in these markets. However, wholesalers have argued that RAS, the current pricing mechanism, is not calculated based on all the costs experienced in servicing customers in distant rural areas and delivery to small customers requiring small volumes. Instead, the mechanism is said to be based on the costs of an average operator largely based in urban areas where transport distances from depots are less, and demand is higher.

RAS assumes a benchmark service station through averaging the costs of 50 depots. Wholesalers have argued that service stations located farther from the benchmark station bear higher transport costs, which reduces the margin they
Distributors that are closer to the benchmark station receive higher profit margins than those farther away. It is for this reason that the major oil companies chose to sell off the less profitable sites that were in the rural areas and far from the benchmark station. The major oil companies therefore retain the sites with the highest profit margins. This arrangement affects both branded and independent wholesalers in so far as branded wholesalers have also been allocated less profitable peri-urban and rural areas in accordance with the policies of the oil company that they are contracted with.

Conclusions

The combined effect of the barriers to entry noted above is that while a large number of entrant wholesalers have been licensed, very few are actually operating in the industry and still fewer are operating successfully. Even if a new entrant does manage to secure both fuel supply and customers for the product, the environment remains challenging and most struggle to grow beyond a small scale of activity.

Competition appears to be relatively muted in the industry due to a combination of factors, including the vertical agreements between the major oil companies and their branded marketers and retailers, ongoing coordination between the major oil companies, cost and price transparency and the nature of economic regulation in the sector. The major oil companies have been able to coordinate the supply of fuel to different parts of South Africa through various mechanisms, including an exemption from the Competition Act. Although in theory it is possible for an independent player to import fuel, in practice there are a series of constraints which make this very difficult, if not impossible. These constraints mainly relate to the availability of storage infrastructure.

This results in a situation where new entrants at the distribution level are usually accommodated into the industry by existing players, rather than entering independently and challenging the status quo. For example, a well-established wholesaler may agree to supply fuel to a new entrant if the entrant can deliver a new customer that the established player would not otherwise have served, but would be unlikely to do so if the new entrant plans to compete for existing customers. Similarly, the more established wholesalers do not typically compete with the major oil companies for customers as they are usually tied in to a branded-marketer agreement which dictates the area in which they may trade. Even where this is not the case, it is difficult for wholesalers to compete with the major oil companies for customers when they are dependent on them for the supply of fuel. These dynamics would not matter if there were strong competition between the major oil companies themselves and therefore between the different vertical chains present in the market. However, this does not seem to be the case. Such competition as does take place is typically based on service levels and there is no vigorous price competition in the market.

This may be attributable in part to the economic regulation of the industry. The fact that prices are regulated serves as a further disincentive for competition in the industry. Even though prices are directly regulated at only one level of the
value chain, the price formula includes wholesale and retail margin components, which means that the compensation level for the average wholesaler is common knowledge throughout the industry. Similarly, the return that the average retailer should make is published as part of the formula. The fact that the retail price (of petrol) is regulated means that the total rents available are determined by the regulator. The major oil companies in turn have control over supply so that they generally do not allow wholesalers and retailers any more than these average amounts, no matter whether the wholesaler or retailer in question is located in a high- or low-cost area to service.

The price regulation system may also explain why wholesalers report that they are generally unable to play the major oil companies off against one another, as it provides a focal point around which the major oil companies can easily tacitly coordinate. Coordinated outcomes in oligopolistic markets are the result of repeated games where the market conditions mean that competitors find it more profitable to adhere to the collusive agreement (whether tacit or explicit) than to compete strongly with one another. For this to be the case, firms must have a means of reaching agreement and a mechanism for detecting and punishing deviations from that agreement. This suggests a set of conditions in which coordination is more likely, including high levels of concentration, symmetry between firms, transparency in the market and product homogeneity.

As discussed by the Tribunal and highlighted above, all of these conditions are met in the petroleum industry. Transparency, in particular, is very high in this market as a result of the swap agreements between the major oil companies, the pricing formula used by the regulator and the need to coordinate supply in the interests of security of supply. Market transparency enhances the ability of firms to monitor the behaviour of competitors and detect any deviation from the coordinated outcome. The information-sharing arrangement which the major oil companies were party to until recently would have further enhanced their understanding of one another’s businesses and avoided head-on competition. As noted, the transparent pricing formula published by the regulator provides an easy means for firms to reach a tacit understanding on price.

In this context, the long-term exclusive contracts which the major oil companies sign with their branded distributors could also be interpreted as a means of committing to maintain the agreement, as the agreements effectively prevent the firms from undercutting one another to customers and allow them to maintain high margins upstream. This may also partially explain the major oil companies’ decision to disinvest from the wholesale level. Independent wholesalers, on the other hand, are prevented from competing effectively by the control which the major oil companies hold over supply. They have neither the ability nor the incentive to compete strongly on price, as the major oil companies control the price at which they receive the product, and the independent wholesalers are effectively reliant on them for their existence. Unless the independent wholesalers are able to access an alternative source of supply, the major oil companies’ control of the market and ability to extract the majority of the available rents is likely to continue. This ties in with the earlier discussion of strategic barriers raising the costs of rivals and reducing their ability to compete.
The liquid fuels industry is one where there are a number of competing imperatives. In addition to stimulating transformation in the industry, DoE is also concerned with ensuring security of supply and preventing costly shortages of fuel in the country. Furthermore, the goal of ensuring that fuel is affordable to consumers across the country could be thwarted if consumers in outlying areas had to face the full costs of distributing fuel to these areas, which would therefore necessitate some cross-subsidisation. In this environment, competition concerns may be relatively low down on the list of priorities. However, the study has shown that to a large degree the problems with competition and increased participation and transformation in the industry are interlinked, and the constraints in wholesaling are in fact directly linked to the broader market structure, regulatory environment and resulting constraints to greater competition in the industry as a whole.

Recommendations

We consider a set of recommendations, drawn from the study, that not only focus on the wholesale level of the market and the barriers discussed, but also consider aspects of the sector as a whole that affect the wholesale level.

It is clear that developing alternative sources of supply would undermine returns to the incumbent oil companies, which would be expected to adjust their competitive strategies in response to this. Significant benefits would accrue to downstream operators and consumers if distributors could play oil companies off against one another to get better prices and terms. Furthermore, oil companies would most likely have to compete with one another more aggressively, which it appears is not currently happening in the market. In order for this to be possible, however, interventions are required at the transport and storage levels.

In this regard, facilitating access for independent wholesalers to storage infrastructure is critical to enabling alternative sources of supply into the market, and hence to allowing for greater levels of competition in the value chain. In the short term, Nersa should continue to make efforts to enable independents to gain access to existing uncommitted capacity. In the longer term, it is necessary to ensure that there is sufficient uncommitted capacity in the market for independents to use. DoE and Nersa could do this by leveraging storage facility licence conditions to mandate that players set aside a certain proportion of capacity for independents to use. Alternatively, investment in new independent storage capacity can be facilitated, either through providing guarantees or through funding support from the Department of Trade and Industry’s initiatives, such as the Black Industrialists Programme. Nersa should also continue to promote competition through its regulatory decisions, as was done in the recent Burgan vs. Chevron case.⁶

Some interventions could be made in the short term to assist independent wholesalers to be effective competitors. For instance, it does seem that a review of the implementation of RAS would be beneficial and could include consideration of situations where wholesalers are not receiving the full margins recommended.
in the RAS pricing mechanism, and the adequacy of the allocated margins overall. In addition, increased efforts in terms of capacity building and assistance for new entrants could help to address any skills deficiency in the industry, including in the management of finances and on strategies to derive efficiencies in entrant businesses given the current pricing and cost environment.

A long-term intervention could be to address the exclusive and long-term nature of the agreements between the major oil companies and their branded distributors. The agreements between wholesale distributors and the major oil companies serve to restrain competition by specifying geographic territories (in the case of branded marketers) and, in some cases, the customers which a wholesale firm is required to service. In the case of independent wholesalers, the supply relationships with the oil companies would probably not exist if the oil company thought that those wholesalers threatened to compete with them directly. If supply contracts were known to be for a shorter period of time, then it is more likely that oil companies would have to compete to retain those wholesalers as distributors for them in specific areas and especially those that they would rather not service themselves. However, this would potentially be constrained by the fact that oil companies would most likely remove their infrastructure from a wholesaler’s site if they could no longer supply that wholesaler, for competitive and environmental reasons.

It is of course important to keep in mind the issue of security of supply in considering interventions that impact on the sector. However, with well-designed policies, it should be possible to meet the objectives of competition, transformation and security of supply simultaneously.

Notes
3 An inland crude oil refinery.
4 Competition Tribunal, case no. 101/LM/Dec04, para. 526.
6 National Energy Regulator Application.

References
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CCSA (Competition Commission South Africa). 2012. ‘Competition Commission Refers a Case of Collusion against Oil Companies’, 24 October (online document).


