

Food production in South Africa: corporate conduct and economic policy¹

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1. Introduction

South Africa is a case study of sweeping liberalisation of a formerly extensively regulated agricultural sector. It illustrates the problems of not properly anticipating how the large firms that control important parts of the agriculture and food products value chain will respond. In addition, it was anticipated that deregulation would mean greater volatility although it was suggested that use of hedging and derivative instruments by farmers would dampen the impact of volatility somewhat (LAPC, 1994). The direct implications of these policy decisions extend beyond the country's borders as many of the markets extend across the southern African region, as do the main corporations.

Under the apartheid regime, markets for most agricultural products were governed by Control Boards. In addition, farmers received assistance from government through a range of institutions such as the Land Bank, while strong producer cooperatives governed the buying of inputs, provision of storage facilities, and packaging and marketing of products. The liberalisation began under the apartheid government in the late 1980s and early 1990s. The first democratic government took further sweeping steps soon after taking office with the introduction of the Marketing of Agricultural Products Act, No. 47 of 1996. The new Act dramatically changed agricultural marketing including the closure of the Control Boards. And, under the trade liberalisation programme, quantitative trade restrictions on agricultural products were converted to tariffs and reductions were made in the tariffs themselves.

The liberalisation was essentially premised on the expected efficiencies and improved productivity from free markets, with more competitive prices for consumers (Bayley, 2003). The anticipated volatility in the prices of agricultural commodities has indeed occurred as prices are quoted against those in the international market and are also affected immediately by exchange rate volatility. For example, the South Africa Futures Exchange quotes maize prices against both import and export parity benchmarks based on USA Gulf prices adjusted for relevant transport costs.

¹ This is a substantially revised version of an earlier paper written together with N. Chabane and M. Rakhudu, presented at the Development Policy Research Unit of the University of Cape Town Conference, Johannesburg, 27-29 October 2008. The paper is written in the author's personal capacity and the views expressed here are not necessarily those of the Competition Commission.

During times of sharp price increases, such as occurred in 2001/2002 when the Rand underwent rapid depreciation, and again in 2007/08 when international food prices spiked, there have been calls for investigations into possible anti-competitive conduct and speculation. Various studies found that these movements were just due to market mechanisms. However, while commodity prices have fluctuated significantly, the prices of processed food such as bread and milled maize meal have been quick to increase but have been very sticky downwards.

There has indeed been far-reaching restructuring of the agricultural sector. The number of farmers has fallen by around 25% since 1996 with consolidation to form larger farms. There has also been a shift in patterns of production, with the area planted with crops such as maize and wheat falling overall as lower yielding land was no longer planted following the ending of the regulated prices guaranteed to farmers.² Agricultural employment is around 30% lower than the mid 1990s. This has occurred while the government has sought to increase the participation of previously disadvantaged individuals in agriculture, to promote equitable access to markets by emerging black producers and speed up the process of land reform in the country (Department of Agriculture, 1998). At the level of aggregate food production, South Africa has recently moved to being an overall net importer.

In the past couple of years the Competition Commission has uncovered far-reaching collusive conduct and unilateral abuse of market power. This paper draws on these cases to reviews the outcomes of the liberalization in terms of production, pricing and firm strategies through examining several key products, including maize meal, bread and poultry. It also examines changes in key inputs and infrastructure such as fertilizer and silos. It draws on this analysis to explore the possible responses by African countries to the structural change in food prices that higher demand growth implies.

After a brief review of the historical context, we look at the markets at successive levels of the value chains for grain products and poultry in sections 2 and 3. Section 4 examines conduct in fertilizer. Section 5 concludes.

Historical context and policy changes under democracy

The new Union of South Africa, established in 1910, passed a set of policy instruments that set the scene for a comprehensive system of support measures for white farmers. These included the establishment of the Land and Agricultural Bank, and the passing of the Co-operative Societies Acts of 1922 and 1939. These policy instruments governed the state's intervention in agriculture and made provision for a range of supportive measures, including the provision of agricultural finance, extended land tenure, the securing of input supply, and the provision of marketing services for white farmers (Vink and Kirsten, 2000).

The Marketing Act of 1937 became the cornerstone legislation governing not only agricultural marketing but also agricultural policy as a whole. The Marketing Act, when introduced, put in place a system of controls which effectively regulated the movement, pricing, quality standards and marketing supply of the majority of agricultural production in South Africa. The Act also made provision for the establishment of a wide range of

² Department of Agriculture, *Abstract of Agricultural Statistics 2009*, and Competition Tribunal (2009) Competition Commission v Senwes, Case 110/CR/Dec06.

marketing parastatals, as well as a complex set of agency agreements with the different Control Boards.

The main outcome of the Marketing Act of 1937, which was consolidated in 1968, was the development of marketing schemes for individual agricultural products (Kirsten and van Zyl, 1996). All in all, approximately 80% of all agricultural products were subject to the control of marketing schemes. The main aim of these schemes was the stabilisation of prices of agricultural goods as well as the reduction of marketing margins between producers and consumers. To this end, five types of control schemes were put in place (Doyer et al, 2007):

- (1) single-channel fixed-price schemes (the board and minister set a price at which the total production would be purchased, marketed and sold by the Control Board e.g. in the cases of maize and winter cereals);
- (2) single-channel pool schemes (Control Board was the only buyer and seller e.g. in the cases of oilseeds and leaf tobacco);
- (3) surplus removal scheme (in case of a surplus, the government could remove products from the market e.g. red meat and eggs);
- (4) supervisory schemes (e.g. canning fruit and cotton); and
- (5) publicity schemes

State intervention into the agricultural sector continued in much the same fashion over the next few decades, characterised by the tightening of controls over prices and the movement of produce under the Marketing Act; as well as an increase in subsidies to white farmers. The result of this was a large expansion of cultivated farm area, as well as an increase in yields, evidenced in the period between 1950 and 1970 (Vink and Kirsten, 2000).

Deregulation of the South African agricultural sector commenced in the 1980s and gradually changed the structure and responsibilities of the actors in the sector. The aim of agricultural policy changed focus towards promoting self-sufficiency as a country in respect of food, fibre and beverages, as well as the supply of raw materials to local industries at reasonable prices. The White Paper on Agricultural Policy was tabled in 1984 with the sole purpose of ensuring that agricultural policy would be used to ensure the optimal use of factors of production to maintain stability while also contributing to the promotion of an economically sound farming community (Vink and Kirsten, 2000).

Under a democratic government, the industry faced increasing pressure to deregulate. The promotion of the liberalization agenda combined criticism of the apartheid regime as interventionist favouring particular constituencies with an attack on state intervention as such. It did not allow for a reform of the role of the state to meet the development objectives of the democratic government, but instead promoted a wholesale rolling back of the state.

The 1996 Marketing of Agricultural Products Act included the optimisation of export earnings from agricultural products, and the enhancement of the viability of the agricultural sector in its objectives, along with the promotion of efficient marketing of agricultural products, and increased market access to all market participants. The Act also made provision for the establishment of the National Agricultural Marketing Council, which would advise the Minister of Agriculture and the industry as a whole on matters relating to the marketing of

agricultural products (Vink and Kirsten, 2002). However, the main concrete measures were to abolish the regulatory structures.

Apart from the Act, there have been other policy initiatives introduced since 1994 which have shaped the policy space in the agricultural sector. These include policies on land reform, trade policy, labour market reform and rural development. Land reform policies that have been put into place centre around land restitution and redistribution, as well as tenure reform programmes.

2. Wheat, maize, baking and milling

The grain industry is one of the largest industries in South African agriculture producing between 25% and 33% of the total gross value of agricultural production. Grains grown in South Africa include maize, wheat, barley, soybeans, sunflower, groundnuts, oats, canola and sorghum; and end-products include maize meal, bread, starch products, glucose, flour, animal feed, sunflower oil, margarine, peanut butter, etc.

This section focuses on the maize and wheat value chains, as they are the key inputs into the main staple foodstuffs for the majority of South Africans, that is, maize meal and bread.

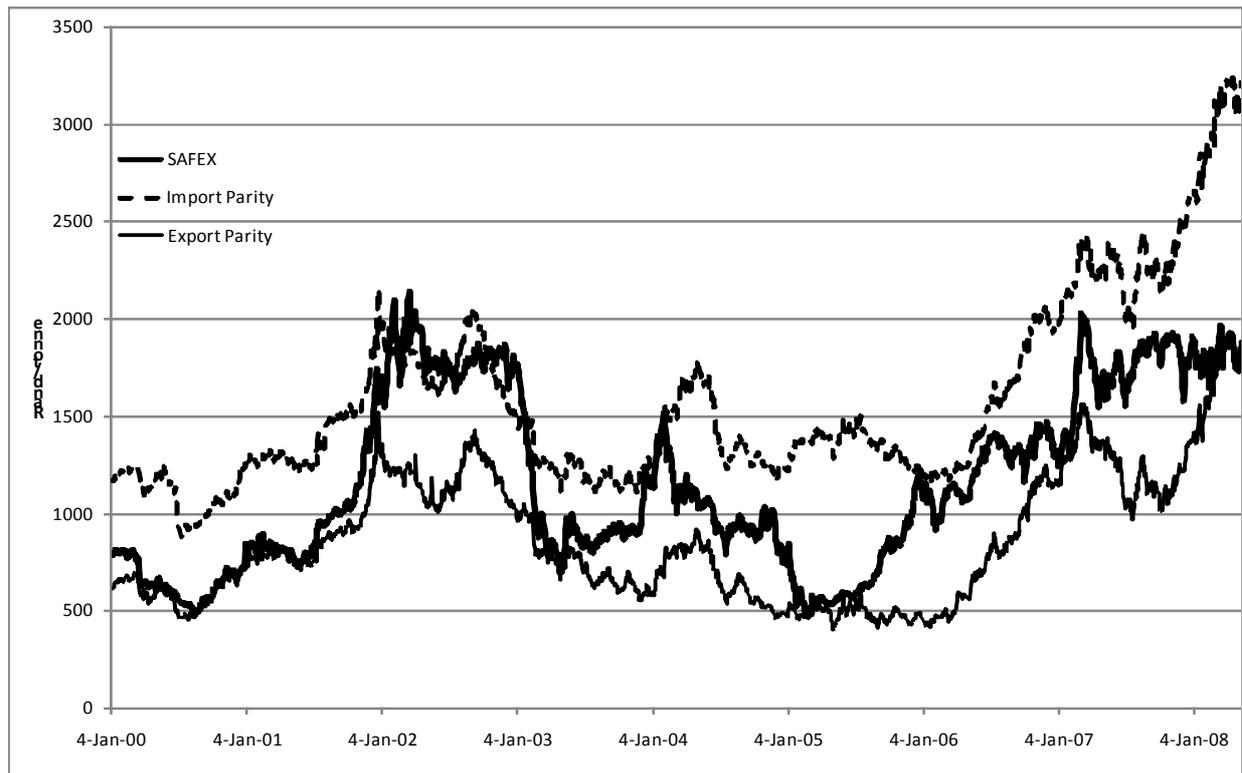
The grain value chain under regulation was relatively uncomplicated, in that the industry operated through a fixed channel system and the Maize and Wheat Boards were the main intermediaries between the farm gate and the processing levels. Various inputs and services were provided by the farmer co-operatives, with high levels of support from the government.

Under liberalization, the former co-operatives have become private companies and have integrated, horizontally and vertically. These are very important entities as they, for example, own the grain silos whilst simultaneously being important grain traders and, in some cases, are also involved in processing. Most if not all of the silos were constructed with state financing during the era of regulation and the cooperatives that managed the silos had precisely demarcated areas of operation. As such, ownership of silo operations is regionally dominated by specific companies. AfgriSA (the former OTK co-operative), Senwes and NWK are the main providers of silo facilities in the inland maize growing region, with each having effective regional monopolies.

With regard to grain trading, the South African Futures Exchange (SAFEX) was established to provide market participants with a price determination mechanism and a price risk management facility through which they can manage their exposure to adverse price movements on the underlying commodity. According to SAFEX, wheat and maize are regarded as the most active and liquid contracts, based on the volumes traded and the value of the commodities. Grain traders act on behalf of clients for a margin and they include international grain traders (e.g. Cargill and Dreyfuss), local grain traders and financial institutions that provide credit facilities. The former cooperatives are also key players in the trading of grain. For instance AfgriSA and Senwes are two of the four major traders of grain on SAFEX and these two companies alone were estimated to account for more than 30 per cent of the grain traded in 2003/04 (Competition Tribunal, 2004).

As South Africa is a relatively small player on the world market and maize and wheat are internationally traded, commodity prices are subject to global price movements after taking account of transport costs, with players generally following the import/export parity calculations to determine prices. Where South African is a net exporter, such as for maize in some years, prices tend to export parity (Figure 1). By comparison, wheat prices are around import parity prices, reflecting the fact that South Africa is a net importer of wheat (of around 30% of local requirements) (Figure 2).

Figure 1. SAFEX White maize prices, Randfontein

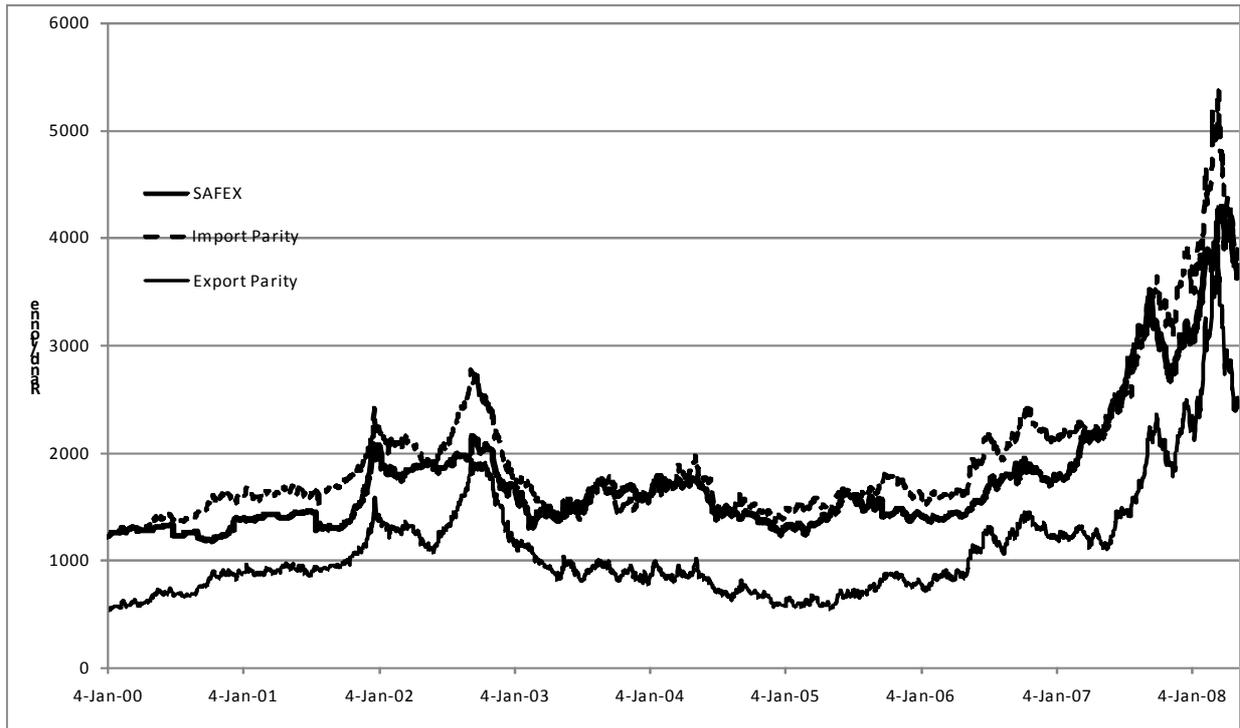


Source: Grain South Africa

Note: prices are given for inland (Randfontein) and coastal (Durban) Only the inland prices are shown here. The difference between inland and coastal prices is due to local overland transport costs, of approximately R200/t in 2007.

The data for wheat and maize reveal the importance of whether the price is closer to the export or the import parity price, and the substantial price increase which can result from moving between these benchmarks. The maize price in South Africa has moved for two main reasons. One is the movements in the international prices, quoted in Rand terms. For example, the Rand depreciation over 2001 led to sharp increases in the import and export parity prices for maize over that year. The second is a move within the band represented by the difference between the import and export parity prices. In 2001 the price increase was sharply increased by the fact that the price of maize traded on the local SAFEX exchange increased from around the export parity price to the import parity price, at the same time as both the international benchmark prices were themselves increasing (see also Chabane, 2002).

Figure 2. SAFEX Wheat prices, Randfontein



Source: Grain South Africa

The fact that maize prices have been close to the export parity prices for much of the period reflects the fact that southern Africa has been a net exporter of maize at these times, reflecting the relatively good conditions for producing maize. At other times prices have moved towards import parity, as might be expected in periods where net imports are required to meet local demand. A very important consideration in maize prices is therefore the conditions affecting production. In addition to weather, these include possible anti-competitive behaviour which artificially increases the costs of maize production and could mean lower planting and yields.

Concerns have been raised by producers that the SAFEX price for wheat has been artificially suppressed below the import parity price, and that the import parity price relates to a lesser quality than is produced in South Africa.³ The transport differential is also a serious concern raised by many grain producers. SAFEX has a pre-determined geographical basis point for calculation of transport costs, Randfontein (inland). The price farmers in the main wheat growing region in the Western Cape receive is the Randfontein price less transport costs, of around R300/t to R400/t, or as much as 25% of the inland price. The concentration of local buyers and collusive conduct between them raises concerns about the exertion of oligopsony power.

Further concerns relate to possible speculative conduct by traders on the system, given the significance of a few traders in trading on SAFEX. In 2002 a single large trading house, WJ

³ Southern African Grain Laboratory (www.sagl.co.za) and Grain SA.

Morgan, was able to substantially affect the price of maize through speculative activities (FPMC, 2003).⁴

Barriers to entry are significant into various different levels of the value chain, from the importance of research and biotechnology in the provision of seeds, and economies of scale in other major inputs such as fertilizer, through to the costs of establishing large grain silos and large-scale milling operations. The requirements of national retailers may also impact on the ability of smaller firms to be effective competitors at the level of milling and baking.

Storage

As discussed above, grain silos were owned and managed by farmer co-operatives. The co-operatives became private companies in the second half of the 1990s soon after the liberalization, meaning that these companies had an incentive to leverage the quasi-monopoly positions in storage in local geographic markets. The Competition Tribunal has recently found this to have occurred on the part of Senwes, one of the big three owners of silos and also the single largest trader of white maize, wheat and sunflower seed.⁵ Senwes pricing practices for storage were found to constitute an anti-competitive margin squeeze to the detriment of other traders. The Tribunal also noted concerns about the ways in which silo storage tariffs were set, which is still under investigation. The concerns about the exertion of market power on the part of the erstwhile cooperatives should not come as a surprise as they were raised with the then Minister of Agriculture in the late 1990s following the liberalisation of agricultural markets. The Minister was apparently advised to consider either nationalising silos or regulating them, but after representations from the industry that they would not abuse their dominance, no steps were taken in this regard.⁶

Milling and Baking

While there are approximately 4 000 – 6 000 grain producers, the milling and baking industries have long been characterised by high levels of concentration, with only four firms controlling approximately 90% of the milling of maize and wheat (van Schalkwyk, 2007). These are Pioneer, Premier, Tiger Brands and Ruto/Foodcorp. The remaining 10% is accounted for by small-scale millers. The big four companies are further vertically integrated in baking and production of other foodstuffs such as maize meal, cereals and pasta, while most of the smaller millers are not vertically integrated.

The outputs of milling include animal feed. To the carbohydrate base which may be of milled yellow maize, oats, barley or wheat is added a range of protein sources and supplements. The most important players include Afgri, Tydstroom (Pioneer), Epol (Rainbow) and Meadow Feeds (Astral, formerly a Tiger Brands subsidiary). These players account for approximately 85% of the market. The biggest consumer of animal feeds is the poultry sector; Meadow

⁴ WJ Morgan was allegedly involved in speculative conduct where it sustained losses of R1.4 billion as a result of over-exposure to the maize market.

⁵ Competition Tribunal (2009) Competition Commission v Senwes, Case 110/CR/Dec06

⁶ See testimony in Competition Tribunal (2009) Competition Commission v Senwes, Case 110/CR/Dec06

Feed, Epol and Afgri produce approximately 75% of the poultry requirement.⁷ These companies are further vertically integrated into the poultry market.

Firm Conduct and Market Outcomes

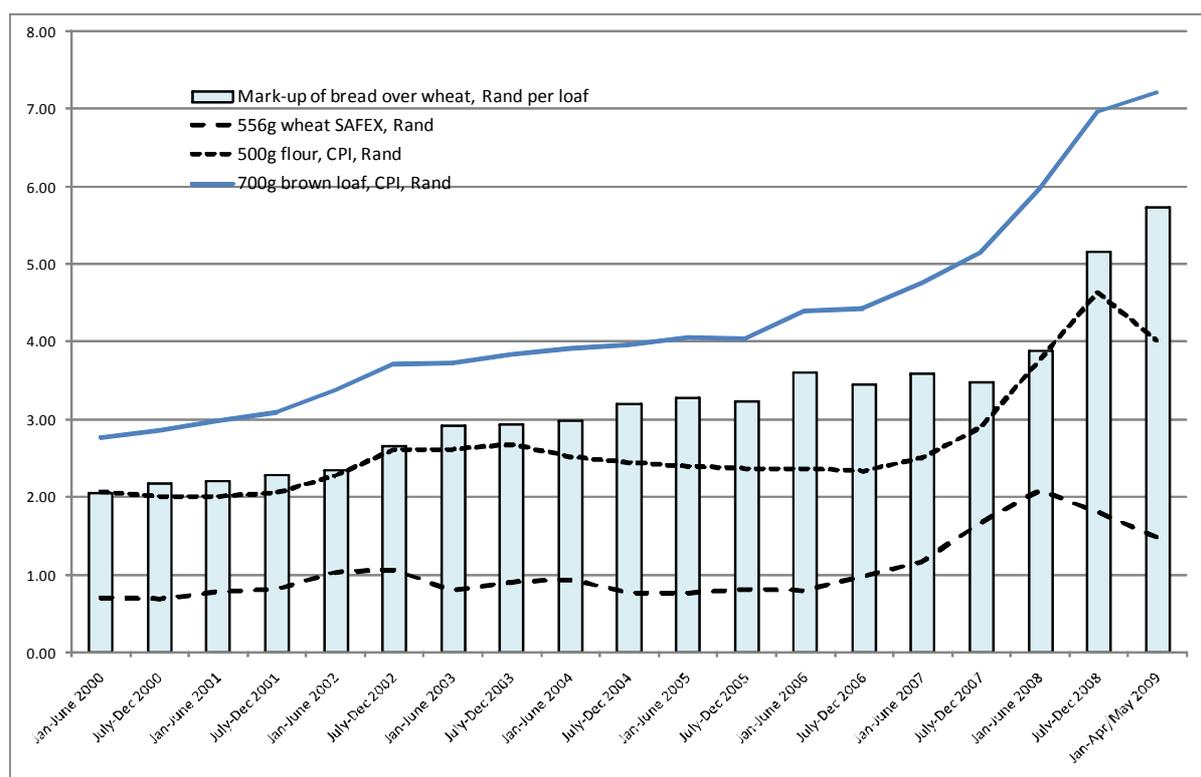
While the concentrated structure of the agricultural value chain has been acknowledged before, previous studies (Vink and Kirsten 2002; FPMC, 2004) have tended to downplay its implications on firm conduct and market outcomes. Evidence from recent competition cases indicates that anti-competitive behaviour is a serious concern, especially on the part of agro-processors, both with regard to buyer power vis-à-vis farmers and market power in output markets. Farmers are price takers however prices may be artificially suppressed by the exertion of monopsony or oligopsony power on the part of processors, especially to the extent that farmers have made substantial sunk investments in their production activities.

The Competition Commission's investigations in the bread and milling industries found that the four major firms dominating the milling of wheat and maize and the production of bread and maize meal have been colluding to set prices through regular meetings and contact from at least 1994 up to 2007. In addition, the investigation found that the bakeries were engaged in market allocation conduct by agreeing to close down certain bakeries in specific areas in favour of competitors. Premier Foods applied for leniency in exchange for information assisting the Commission, while Tiger Brands entered into a consent order agreement with the Commission for the part that they played in the bread cartel. They were awarded immunity in terms of the Commission's leniency for their role in the milling cartel as they provided the Commission with vital information which the Commission did not have.

The cartel investigations illustrate that, despite the deregulation of the maize and wheat value chains, the sectors were effectively privately regulated by the major processing firms (in their own interests). While wheat prices generally fluctuate due to the internationally traded nature of the commodity, bread prices have constantly been on a steady upward trajectory and margins have widened (Figure 3). This is consistent with asymmetries in price transmission found in several studies, associated with concentration (Cutts and Kirsten, 2006). It can be argued that the primary source of asymmetric price transmission in the grain market is the market power by the vertically integrated firms at both the processing and baking levels of the supply chain.

⁷ Whoownswhom Report, Manufacture of Prepared Animal Feeds, 2007.

Figure 3: Wheat, flour and bread prices, six month averages, nominal Rand

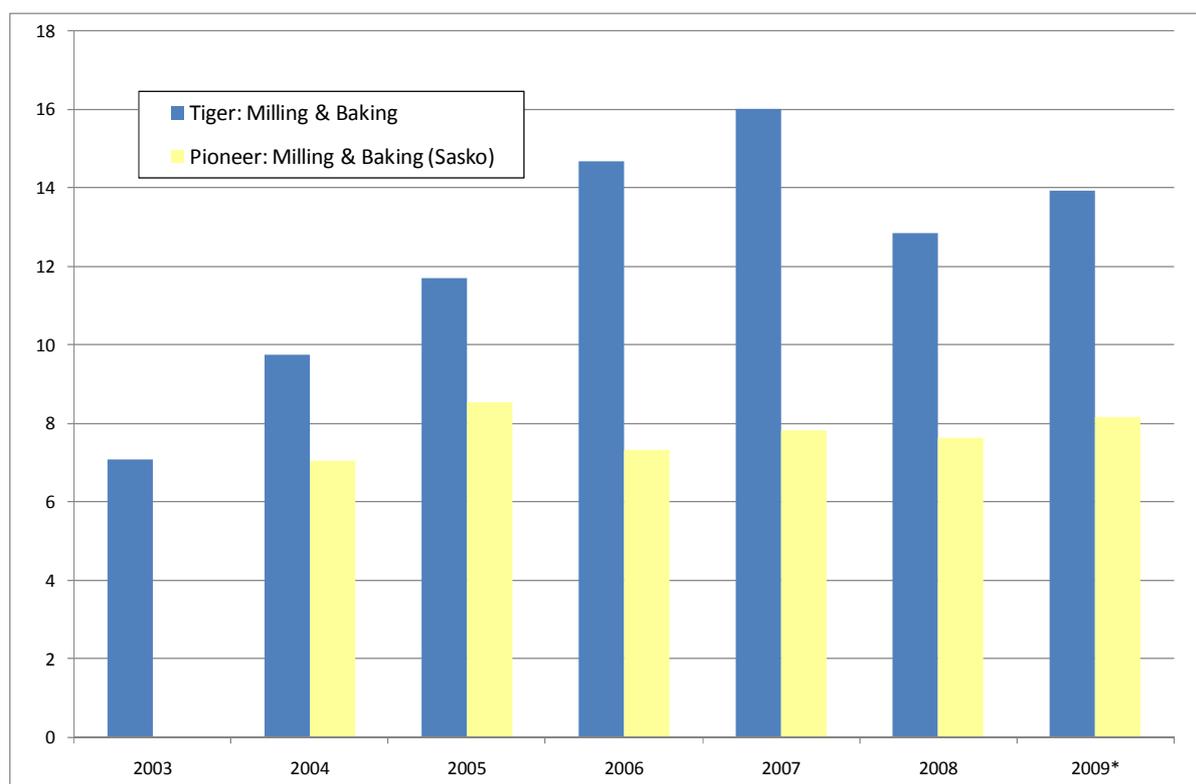


Source: SAGIS and SAFEX

In such an industry entry by new players would be expected to undermine the supra-competitive pricing under collusion. There are relatively low barriers to entry in baking and, indeed, there are many small bakeries. However, to compete in baking requires the procurement of flour and other inputs. The flour will likely be sourced from one of the major millers, also a competitor in the bread market. Competitive outcomes in the future depend importantly on the ability of firms to enter and provide effective competitive discipline. Attention therefore needs to be paid to anti-competitive conduct which is exclusionary.

Traub and Jayne (2006) found that the inflation adjusted margins for maize meal accruing to millers and retailers increased by between 29 and 42 per cent between 1997 and 2003. Other research on South African food prices has found that concentration is associated with asymmetric price transmission mechanisms, whereby cost increases are passed on rapidly in the prices of processed products, but that prices are maintained in periods of cost reduction (Cutts and Kirsten, 2006). When we consider maize milling, it is important to note that the maize price was little higher in 2008 than the previous peak in 2002 (Figure 1). By comparison, the maize meal price in 2008 was some 36% higher than the average 2002 price. Data on margins in milling and baking for two of the big four firms further indicate the ability to maintain and increase margins (Figure 4).

Figure 4. Operating Income or Profit as % of Turnover



Source: Company published financial results (2009 are unaudited results for 6 months to 31 March)

It is notable that these firms are expanding throughout the region through acquisitions and investments.

The outcomes of the far-reaching liberalisation of the grain and milling markets have thus been shaped by the major firms that have effectively 'governed' the markets. These firms have increased their influence through horizontal and vertical acquisitions, both in South Africa and in the region. This high concentration, coupled with low levels of competitive rivalry and collusion, has resulted in supra-competitive prices of processed products while farmers are faced with these major firms in obtaining inputs, services such as storage and when selling their grain. Associated with this are concerns that existing dominant firms are able to create barriers to deter entry and exclude rivals. These have serious consequences for the welfare of the poorest households given the importance of maize meal and bread as the key staple foodstuffs in South Africa.

3. The Poultry Value Chain

There is an important link of maize to the production of poultry, the most important protein source for South Africans. Maize accounts for around half of the costs of poultry feed, while feed is between two-thirds and three-quarters of the cost of a broiler chicken. And, there are overlaps in terms of some of the companies involved. However, there has been a persistent trade deficit in poultry products and there is still tariff protection in this regard.

There are three main levels of the poultry value chain, namely the breeding level, the production and rearing of broiler chickens, and the production and processing of poultry products. The industry is concentrated, with almost all major poultry players vertically integrated along the value chain, even up to animal feed level. In particular Rainbow Chicken Ltd and Astral Foods Ltd are active along the value chain for the poultry industry. Astral Foods was part of the Tiger Foods group until 2002. Rainbow Chickens is controlled by Remgro, one of the largest South African conglomerates.

While feed is one key leg of poultry production, the other is sourcing breeding stock. Two international companies and their local licensors dominate in this area. Great-grandparent stock is sourced internationally from global breeding companies, most notably Aviagen (Ross and Arbor Acres birds) and Cobb Breeding Company. Rainbow and Astral through the Cobb and Ross breeds respectively dominate the local market for the supply of parent stock. While in recent years there have been new entrants, especially in the form of the Arbor Acres breed, the Ross and Cobb breeds have market shares of 41% and 40% respectively.⁸

At the broiler level of the value chain, parent stock chickens produce eggs which are collected daily and sent to the hatchery for incubation. These day old chicks are then sent to broiler farms. Major suppliers of day old chicks at this level include Elite, National Chicks (both controlled by Astral) and Rainbow, as well as a few independent suppliers.

The day old chicks generally spend between 32 to 38 days being reared at broiler farms before they are sent to abattoirs or processing plants for slaughter. Most poultry companies engage the services of independent contract growers who are responsible for the rearing of these chicks into broilers. The poultry company that outsources these functions generally remains responsible for the provision of animal feed and transport services to the contract growers. Major companies involved at this level of the value chain include Rainbow, Astral (through Countyfair and Earlybird), Supreme/Country Bird and Tydstroom (a part of Pioneer Foods).

The processing of poultry products includes frozen products, fresh products, offal and value added products. The market share data available generally does not distinguish between the production of fresh and frozen poultry products, but is usually based on the number of birds slaughtered per week. Rainbow Chicken and Astral are the leading producers of poultry products with market shares of 36% and 27% respectively.⁹ Imports, mainly from Brazil, account for approximately 7% of the market.¹⁰

The major poultry players are vertically integrated, including up to feed level. This, coupled with the entry barriers at the breeding level in terms of access to breeding stock, and at the feed level through links to milling, is important in controlling access to the market. Entry into the feed market is difficult, firstly due to the large economies of scale needed for profitability and secondly due to the high costs for land, infrastructure, raw materials and research and development. The feed market is also governed by various industry regulations, including the Animal Feeds Act.

⁸ Competition Commission (2008) : Country Bird (Pty) Ltd and Supreme Poultry (Pty) Ltd / Astral Operations Ltd and Elite Breeding Farms - Case No. 2007FEB2788

⁹ South African Poultry Association, 2005

¹⁰ Interview with Mr Kevin Lovell of the South African Poultry Association, 21 July 2008

The structure of the poultry industry has evolved substantially over the years, with increased levels of level of vertical integration contributing to the inability of new entrants to enter and effectively compete in the market. Further, significant merger activity has taken place, leading to further concentration in some levels of the value chain. Thus, although there have been new entrants the industry remains relatively highly concentrated and vertically integrated. This gives rise to the possibility of a range of conduct through the foreclosure of smaller players by larger players who they may depend on for the supply of certain input products.

The Competition Commission has recently referred a case to the Tribunal relating to the complaint brought to the Commission against Astral by Supreme¹¹. Astral Operations Limited is involved in the breeding and rearing of poultry across all levels of the value chain mainly through its control of Ross Poultry Breeders (Pty) Ltd, National Chicks (Pty) Ltd, and Meadow Feeds (Pty) Ltd.

The Commission found that Astral had abused its dominant position, especially in the breeding market, by engaging in conduct which was anti-competitive. The conduct involves various strategies, all of which are intended to protect Astral's dominance in the upstream breeding market and entrench its position in the downstream market through inhibiting effective competition in the market, in particular the market for the production of broilers. The exclusionary conduct had the effect of impeding Country Bird and Supreme from expanding within the market for the production and supply of broilers and from entering or expanding into the breeder market.

The types of arrangements and the companies involved operate regionally, not just in South Africa.

4. Inputs – fertilizer

Anti-competitive behaviour in markets for agricultural inputs is likely to be particularly damaging for the economy. Higher input prices reduce the margins in farming and constrain agricultural activity, including the intensity with which land is farmed and the amount of employment. As such, supra-competitively priced inputs undermine the supply response which would be expected to lead to higher food prices. Conversely, fertilizer subsidies by the Malawian government are one factor held to have greatly stimulated food production in that country, although the subsidies may well have been on products supplied until recently by a cartel operating from South Africa and including exports to countries in the region.¹²

Levels of concentration are high in many inputs such as seed, animal feed, fertilizer and farming requisites. We take fertilizer as a case study, because it is the largest single cost of agricultural production for grains such as maize and wheat, and there have been substantial competition concerns relating to the production and supply of fertilizer products.

As with agricultural products, the markets for fertilizer products have historically been regulated. However, the regulations and state-sanctioned price controls applying to fertilizer were removed in the 1980s while regulation of most agricultural products continued. The

¹¹ Case Number: CR/74/Jun08

¹² South African exports of fertilizer (outside of the Southern African Customs Union) have largely been to Zambia and Malawi.

state has also historically played a major role in fertilizer production in the form of Sasol, state-owned until 1989, now the only major local producer of ammonia (the source of nitrogen), and Foskor (still state-owned through the Industrial Development Corporation), the major producer of phosphate. Together these account for two of the three core plant nutrients namely nitrogen, potassium and phosphorous (N:P:K). Potassium has to be imported.

The inputs are processed into the main fertilizer products, which are supplied to farmers along with a range of complementary services such as soil testing and other advice. The production of fertilizer is dominated by three firms, namely Sasol Nitro, Omnia and Kynoch¹³ (now Yara SA), while there are many more smaller blenders and distributors who generally rely on basic fertilizer products from the major firms, as well as imports, to create blended fertilizer products.

The Commission has blocked several mergers which would weaken competition further. In the proposed joint venture transaction between Mila Nutri/Afgri Operations Ltd and Yara, the Commission recommended that the transaction be prohibited due to the finding of exclusive supply agreements that would have strengthened the existing cooperation through explicitly dividing geographic markets. This merger was subsequently withdrawn. A merger of Sasol and Foskor was also withdrawn after the Commission raised concerns. We now discuss conduct in more detail in nitrogenous fertilizer and phosphoric acid.

Conduct¹⁴

The competition cases relate both to monopoly pricing of ammonia and phosphoric acid by Sasol and Foskor respectively, and cartel conduct in the supply of fertilizer products by the three main manufacturers, Sasol, Omnia and Kynoch/Yara. The cartel arrangements include agreement on pricing and discounts together with arrangements governing supply to both South African and regional markets in the 'Import Planning Committee', 'Export Club' and 'Nitrogen Balance Committee'.

Nitrogen is the most important plant nutrient and is supplied in the form of derivatives from ammonia. Following the closure of AECL's ammonia plants in 2000 (for which Sasol allegedly compensated AECL) Sasol is the sole ammonia producer, with around half of its supply being a by-product of its Secunda operations. The ammonia is made into ammonium nitrate by Sasol and Omnia, which is further processed into various fertilizer and explosives products. Another source of nitrogenous fertilizer, urea, is imported after the local plants were closed around 2000.

The competition cases, and the Competition Commission's analysis, indicates that ammonia is priced on an import parity basis by Sasol using a benchmark Ukraine price plus all related transport costs (including overland railage) to determine the price for Sasol's internal 'sales' as well as sales to third parties such as Omnia. Foskor used a similar import parity type

¹³ This is the former subsidiary of AECL, sold to Norsk Hydro, now Yara, one of the world's largest fertilizer producers.

¹⁴ This section is based on cases referred to the Competition Tribunal by the Commission. The consent and settlement agreement between the Competition Commission and Sasol Chemical Industries Ltd was confirmed by the Competition Tribunal in June 2009 and Sasol paid a penalty of R250.7mn.

pricing calculation for its sales of phosphoric acid, although taking into account Foskor's coastal location.

The alleged fertilizer cartel (now admitted to by Sasol) priced ammonium nitrate and derivative products against urea import prices plus a premium of around 15-20%, for sale to farmers in the inland regions (the predominant maize growing areas). This means simply that farmers in southern Africa have been paying substantially higher prices than farmers in Europe for locally made fertilizer from large companies established by the South African government with relatively low cost production and who have received substantial investment incentives and other support over time. Even if the ex-factory price for ammonia sold to coastal customers is compared with the inland import parity price that has been charged then the difference is some 30%. The alleged cartel in fertilizer products, based on the main inputs, added a further anti-competitive margin.

The poor supply response of African countries to the higher food prices has been widely noted, as have the very low yields achieved in many African countries. The supply and pricing of fertilizer is one key component in addressing this. Indeed, without addressing such issues of input costs it is not clear that higher food prices will actually translate into higher farmer margins and an incentive to increase production. The South African case further points to the important links to industrial policy and an ability to assess and engage with the corporate strategy of large international companies in this industry. It should be emphasized that competition policy is not necessarily the answer that it may appear to be a first sight. These competition concerns were raised with the South African Competition Commission in 2002 and 2003. The main case was referred to the Competition Tribunal in 2005 and, notwithstanding the settlement by Sasol of the cartel contraventions, the unilateral abuse of dominance counts are yet to be heard.

5. Some conclusions

The far-reaching liberalization of agricultural and food markets under the 1996 Marketing of Agricultural Products Act was premised on the expectation that deregulated market outcomes would be more efficient and would increase access to all market participants, benefitting producers and consumers. This assumes that the outcomes are not driven by the exertion of market power either by dominant firms and/or through collusive conduct. Our assessment of selected staple food sectors and fertilizer indicates that market power has played a major role. In particular, high levels of concentration at the processing level, and vertical integration of many of these firms, has meant that firms have been in a position to exert market power. Note that there is also a cartel case pending in milk and dairy products, where the Commission's investigations indicate that buyer power has negatively impacted on farmers' margins with corresponding implications for the extent of farming activity in this sector.

Farmers appear to have been subject to market power by both producers of their inputs and services such as fertilizer and silo storage, and in the markets for their outputs. Overall, the squeeze on farmers' margins from such conduct implies that alternative land use is more attractive relative to agricultural activity. At the same time, liberalization has meant much greater volatility in the prices of agricultural products.

The cartel cases imply that producers of several important staple food products have engaged in conduct to maintain prices at supra-competitive levels for an extended period following liberalisation. It remains to be seen whether the understandings reached by the firms in the cartel arrangements continue to dampen competition even after the overt cartels have been uncovered. In addition, arrangements governing information exchange through forums such as the Chambers of Milling and Baking continue. Overall, the picture emerging from the cases studies presented here is one of private regulation by the entrenched large firms replacing the previous system of state sponsored regulation.

The major firms at the processing level are largely those that dominated at the time of liberalization, albeit that some are privatized former co-operatives. Indeed, the maintenance of supra-competitive prices and margins implies being able to prevent new entrants being effective competitors. Lastly, the impacts of such conduct on farmers suggest that the conditions are particularly difficult for smaller farmers and emerging black farmers who are the object of the Government's land reform policies.

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