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CRISIS CARTELS

Contribution from Mr. Steve McCorrison

-- Session III --

This contribution is submitted by Mr. Steve McCorrison ((Professor, University of Exeter, United Kingdom) under session III of the Global Forum on Competition to be held on 17 and 18 February 2011.

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CRISIS CARTELS IN THE AGRICULTURAL/FOOD SECTOR

-- Contribution from Mr. Steve McCorrison --

1. Introduction

1. Crisis cartels are typically associated with economic downturns, falling prices and excess capacity. Faced with difficult economic circumstances, firms may have an incentive to coordinate their reductions in capacity or to engage in price-fixing to limit the negative impact of economic and financial crises on profits. This has implications for anti-trust policy and raises the question as to whether competition authorities should take a more lenient view of potential anti-competitive practices in such circumstances as firms adjust or alternatively, explicitly sanction the use of a cartel. Industry restructuring may also represent a justification for a more lax application of competition policy. These issues generally feature in the discussion over the justification for crisis cartels. Against this, the counterview is that a lax approach to such anti-competitive practices may inhibit (the more competitive) firms' ability to adjust and hence prolong the economic downturn; in turn, the strict enforcement of competition principles will benefit consumers and the economy in general and aid economic recovery.

2. Recent events in agricultural and food markets suggest a different set of circumstances in which competition authorities have to gauge the behaviour of firms. Against the background of the global economic downturn and the fall-out from the financial crises, the late-2000s witnessed a surge in world commodity prices which resulted (to varying degrees) in high retail food prices across many countries and, overall, high rates of food price inflation. Specifically, the surge in world agricultural prices in 2007-2008, lead to concerns by governments and international institutions about the impact of food price rises on consumers, particularly the poor who spend a high proportion of their income on food. With the expectation that world agricultural prices will, in the future, be higher than price levels that have been experienced in the past two decades, food security has emerged as a major issue.

3. However, while these factors are different from those currently associated with crisis cartels, agricultural and food prices will also likely be more volatile. Related to this is also the exposure to more frequent commodity price spikes. Hence the links between competition issues and agricultural and food prices should centre on the transmission of price shocks to consumers and whether less competitive markets reduce price volatility. Price surges will also affect firms as spikes impact on their costs and may give rise to additional problems as prices fall from their (often short-lived) peaks (particularly if other costs do not reflect the decline in agricultural/food prices). While these issues differ from the usual discussion of competition policy in times of crisis, they have also been ignored in more general discussions on economic policies to deal with price surges and price volatility.

4. The recent crisis in agricultural and food markets worldwide raises challenges for competition authorities. With specific reference to the issue of "crisis cartels", the crisis that faces the agricultural and food sector has less to do with falling prices and declining demand but one of higher and more volatile prices. In this context, there are two broad issues that competition authorities have to address. One issue relates to whether the overriding concerns about ameliorating the impact of price spikes and promoting more stable prices, cartels can be justified. The second issue is whether firms take advantage of commodity price spikes and higher variability to coordinate over price fixing or, given the nature of commodity price

spikes is that they are often short-lived, that cartels may emerge to prevent the subsequent decline in the prices that consumers would be expected to pay.

5. In this report, we discuss various aspects of the recent crisis in agricultural and food markets, an issue that has again raised concerns over the latter half of 2010 and at the beginning of 2011. We overview briefly emerging competition issues in the food sector and highlight some examples of cartel activity, including some examples of cartels that have emerged over the last few years. We then turn to the issue that whether, in the context of the recent crisis, there can be any justification for the use of cartels. We start by placing our discussion of crisis cartels in a more general context.

2. Economic crises and crisis cartels

6. The issue of crises cartels are typically associated with recession and/or financial crises. Fiebig (1999) defines a crisis cartel as “agreements between most or all competitors in a particular market to systematically restrict output and/or reduce capacity in response to a crisis in that particular industry” (Fiebig, p.608). The context which firms aim to address the crisis they face relates to declining demand such that firms have to deal with industry-wide excess capacity. The implication for competition authorities is that when firms face economic downturns and have to address the issue of “structural” excess capacity, should there be a more lenient approach taken to the coordination among firms or, indeed, that cartels should be explicitly sanctioned?

7. In an historical context, the issue of the appropriate role for anti-trust policy in the context of economic crises, reference is often made to the US in the 1930s. Crane (2008) for example, documents the political and economic context in the dampening of competition policy principles in the US during the 1930s. Academic research on this issue suggests that lax application of competition law prolonged the recession in the US in the 1930s while research on the economic downturn in Japan suggests that government intervention to restrict competition in structurally-depressed industries prolonged the recession in the 1990s (Porter *et al.*, 2000). More detailed overviews of crisis cartels in an historical context are provided by Evenett (2011).

8. Research on the timing of the formation of cartels has focussed on the effects of business cycles and has reported that cartels are more likely to be formed during periods of falling prices (Levenstein and Suslow, 2006). Lyons (2009) also notes that crisis cartels are more likely when prices drop and firms are interested in price-fixing to prevent this.

9. Given the historical experience of crisis cartels and the likelihood that severe economic and financial crises increase the incentive for cartel activity, many commentators advocate for the continuation of the strict application of competition policy principles and increased vigilance to the rise of cartels during recessionary periods. See Fingleton (2009) and Vickers (2008) representing these views.

10. These issues do not seem commensurate with recent developments in agricultural and food markets which have witnessed strong demand growth, supply shortfalls and rising prices. However, with higher expected prices in the future, prices will also be more volatile. Thus, while high price levels may raise concerns by competition authorities about how firms respond in an environment of increasing prices, there is also the issue on the links between competition and price volatility. In this context, it is worth noting that on Evenett’s list of motives for state-sanctioned cartels (Evenett, 2011), he lists “promoting consumer welfare” and “price stabilisation” both of which are issues of concern as governments aim to deal with the crisis in agricultural and food markets and the longer term issue of food security. One should note that “price stability” has appeared as a motivation for permitting crisis cartels in Korea (Evenett, 2011). Yang (2009) notes that, against the background of the commodity price boom in the early 1970s, cartels could be permitted to ensure price restraint and promote short-term price stabilisation. Kinghorn

(1996), in a review of cartels in late 19th century Germany, also highlights the stability-promoting nature of cartels and that the experience in the coal, iron and steel industries was not necessarily associated with the standard output-reducing, high price outcomes typically expected of cartel behaviour.

3. Crisis in commodity markets

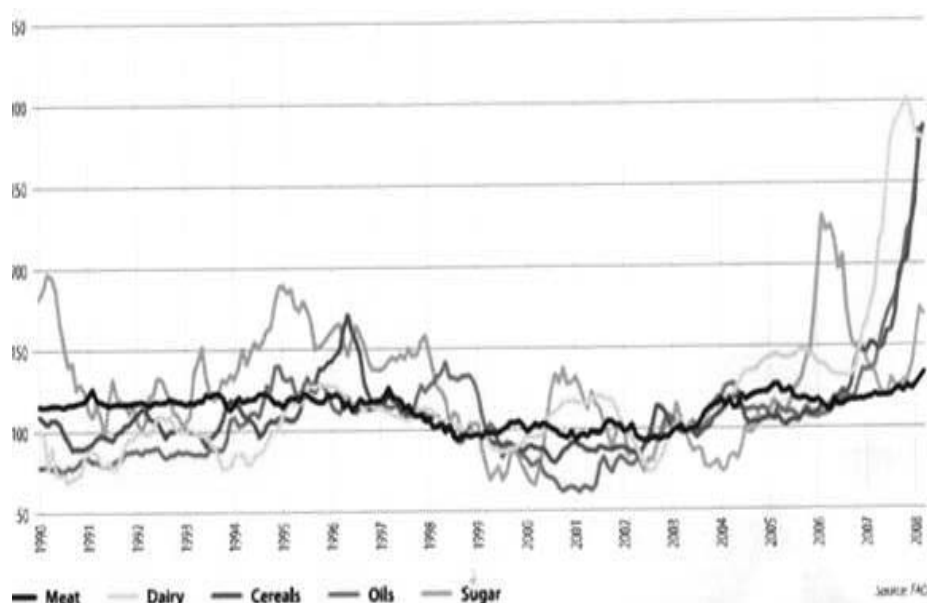
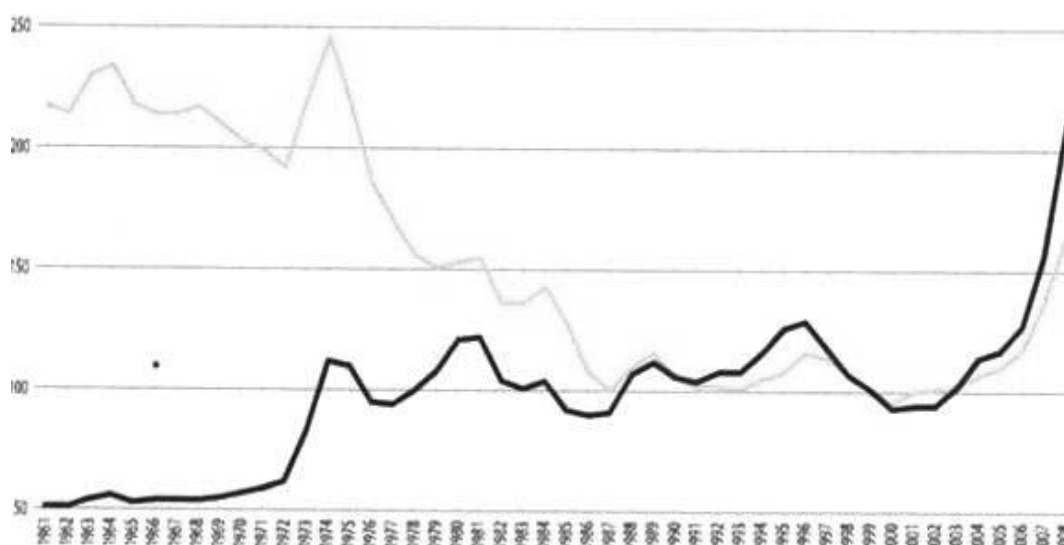
3.1 Price surges on world markets

11. Over the past 30 years or so, reference to “crisis in commodity markets” would, by and large, reflect prolonged periods of low prices against a background of a sustained decline in the commodity terms of trade. For example, Maizel’s (1992) book on world commodity markets entitled “Commodities in Crisis” documents the challenges faced due to persistently low prices and how producers and commodity-exporting countries should address this issue. The challenge on how governments have dealt with price cycles in agricultural markets, promoted reliable supplies, raised prices from relatively low levels and raised incomes for producers has, of course, a much longer-history¹. Domestically, governments have pursued a range of policies much of which centred around direct intervention in agricultural and food markets; in broad terms, developed countries used price support policies to raise prices and, in turn, farm incomes, while in developing countries, the overall characterisation of policies were aimed at providing prices below world market levels reflecting concerns about the cost of food (particularly staples such as cereals and rice) to consumers. In the case of both developed and developing economies, as well as the direct instruments associated with agricultural and trade policy, market manipulation by directly affecting market structure has also been used. Direct manipulation of international markets has also been a feature of dealing with depressed and volatile prices involving inter-governmental agreements on quotas to raise prices and keep them within specified bands.

12. One potential solution highlighted by Maizels was direct control of commodity markets in the form of international commodity agreements with the overall aim of increasing prices and the revenues received from commodity exports. Several of the international commodity agreements that were motivated by low prices, excess capacity and high levels of stocks aimed to control commodity markets via the use of export controls and quota arrangements among member countries. The experience of responding to commodity crises via the use of international commodity agreements has not been regarded as wholly successful, at least over a sustained period of time (see Gilbert, 1996) but it was not that long ago that the perception of the main challenge in agricultural markets was that of relatively long-lived periods of low prices. There was also direct manipulation of domestic market structures through the use of state trading enterprises and parastatals that gave monopolistic and monopsonistic control over procurement and distribution (both domestically and with respect to trade).

13. Recent attention related to agricultural and food markets has, however, been associated with price spikes. . Figure 1 documents the 2007-2008 price spike in the context of world food prices since the early 1990s. Though the commodity price spike of 2007-2008 was, in real terms, not as high as that recorded in the 1972-1974 period, the recent surge in world market prices came against the background of sustained low prices dating back to the late 1980s (see Figure 2).

¹ The issue of how price developments affect the aims of government policy is long-standing. The Depression of the 1930s and the issues associated with “security of supply” following the Second World War, have framed the environment for much of the agricultural and trade policies that have been applied over the last half-century or so. This is also true of the use of commodity agreements to directly manipulate world market prices.

Figure 1: World Food Price Index (Nominal Prices): 1990-2008**Figure 2: Real (Yellow) and Nominal (Black) Food Price Index: 1961-2008**

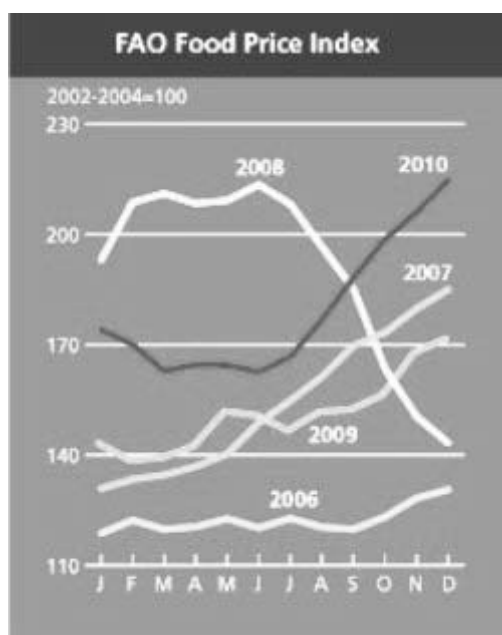
14. The causes of the 2007-2008 surge in world food markets have been well-documented. Sumner (2009) provides a summary of the main drivers and in essence, these can be categorised into demand, supply and policy factors, with a further distinction arising in what are long-term or trend effects and what are short-term or “spike” effects (Sarris (2008), Trostle (2008)). Long-term effects include demand growth in emerging economies, the rising costs of agricultural production, low stocks and the trade policy environment. Short-term or spike effects include exchange rates, speculation, droughts and trade policy measures designed to respond to the high prices.

15. The FAO predicts that over the medium to long-run, world agricultural prices will be lower than the peaks recorded in 2007-2008 but will remain higher than higher than the average levels of the past two

decades. In large part, these expected high prices will be driven by strong demand growth (particularly from emerging economies such as China and India), constrained supply and the delays necessary to build up and coordinate stocks to deal with unexpected shocks. Hence the background to the crisis in agricultural and food markets is one where prices will be relatively high and where the issues relate to the impact on food security. There are also macroeconomic challenges associated with these effects with the potential consequences of high world commodity prices being reflected in high levels of domestic food price inflation impacting on general inflation which may impede economic recovery in many countries (see below)². The crisis faced in agricultural and food markets is therefore different in nature to that the economic and financial crisis impacting on other sectors as the issue is not directly associated with declining demand and excess capacity but rather how to deal with high prices and (possibly recurring) price spikes, on the ability of governments to ameliorate the effects of price spikes on the most vulnerable, to deal with food security issues and for agricultural importing countries to cope with the price spikes that arise on world markets.

16. Though much attention in agricultural and food markets has been directed at the causes and consequences of the 2007-2008 price spike, in mid- to late 2010/early 2011, rising world agricultural prices has again attracted attention. Though agricultural prices had fallen back from the price spike of 2007-2008, agricultural prices have once again started to surge, raising the issue of food price inflation across many countries (*Financial Times*, 30th December, 2010) while the risk of another general agricultural and food crisis has also been highlighted (*Financial Times*, 5th January, 2011). Figure 3 documents the recent rise in world agricultural prices.

Figure 3: Recent price developments in world agricultural markets



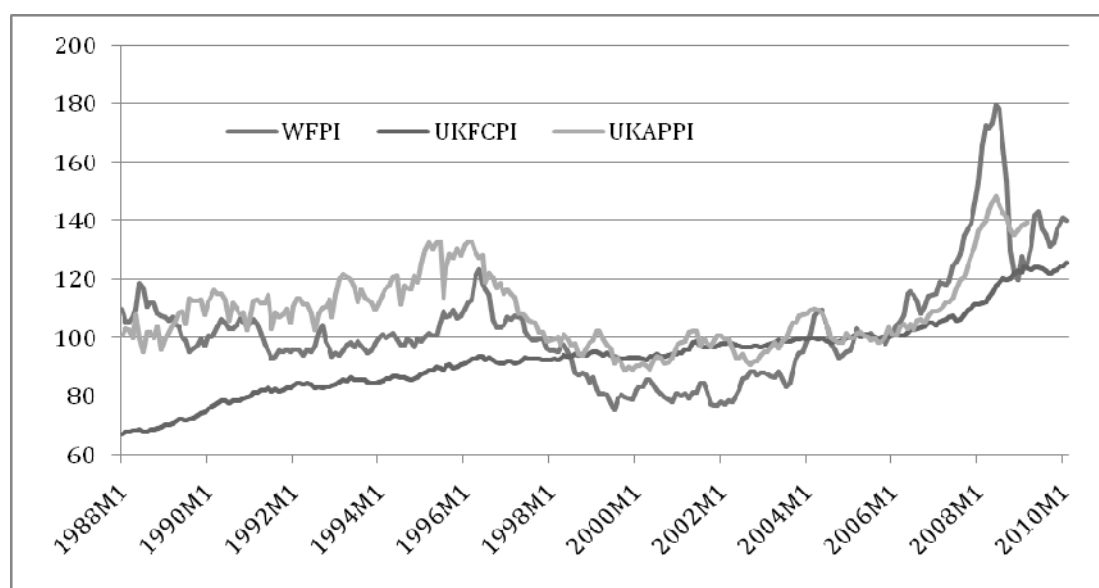
² Price shocks can impact on inflation which underlies some of the concerns associated with recent events on world and domestic food markets and hence generates a macroeconomic context in which policy makers address the issue of high food prices. There are two aspects to this. First, price increases develop over a period of time such that even a price surge can develop over a period of several months. Second, the duration of the shock in world prices can also take several months to feed through to domestic prices with the cumulative impact of these effects being reflected in the rate of domestic food price inflation. As is noted below, that the macroeconomic consequences of high food prices has been the setting against which some competition authorities have addressed concerns associated with price fixing and coordination between firms.

3.2 World agricultural prices and domestic retail prices

17. The price surge in world agricultural markets in 2007-2008 and the recent rise in prices over late 2010 serve as background for considering how competition issues in the food sector relate to the recent events on world markets. There are several dimensions to price developments in the agricultural and food sectors that impact on how competition issues should be addressed. First, there is the price of the raw agricultural commodity that countries directly export or import; however, the prices of raw commodities directly affect firms in the downstream food sector so in considering the impact on firms' costs and the impact on consumers, it is also important to consider domestic issues. Specifically, since in large part competition issues are national in scope, it is also important to consider how domestic food prices have responded to recent developments in world markets. As detailed below, the data for domestic food markets (particularly at the consumer end) across many developed and developing countries suggests that the experience has varied considerably.

18. Figure 4 shows an example of how the behaviour of domestic food prices may differ from developments in world markets. The data relates to the UK from 1988 to 2010 and compares world agricultural prices with the prices received by domestic agricultural producers and domestic retail food prices. While domestic producer prices track developments on world markets, domestic food prices behave rather differently. In relation to the 2007-2008 spike in world markets, though domestic food prices rose, the rise was considerably less than what was observed on world markets.

Figure 4: World and UK Domestic Producer Prices and Retail Food Prices, 1998-2010

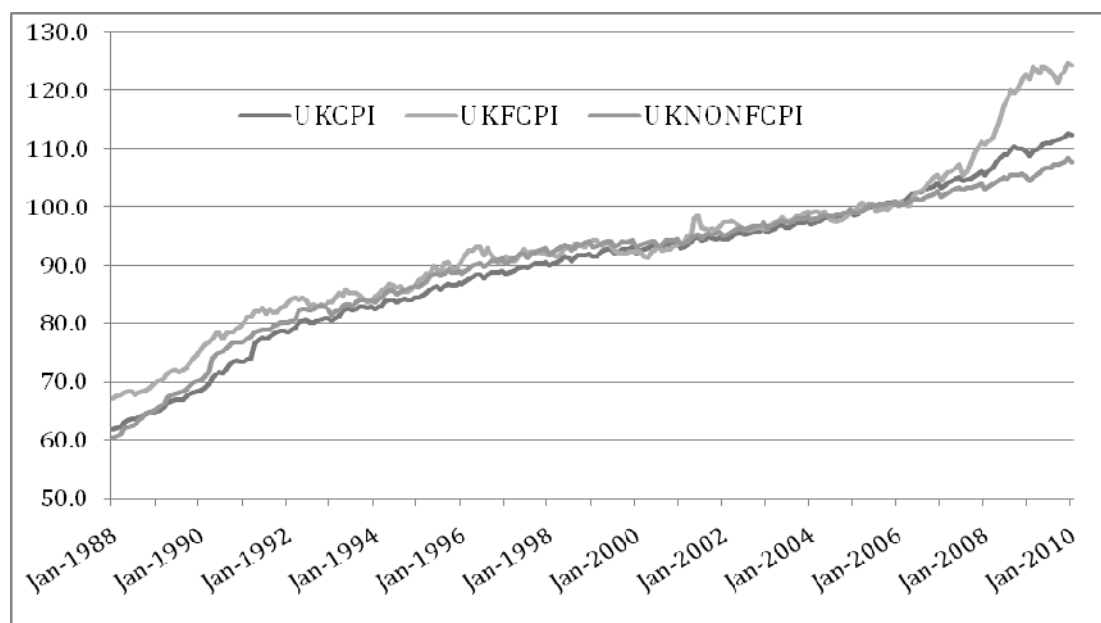


19. The behaviour of domestic consumer prices relative to price developments on world markets has, however, varied across countries. The FAO noted that the transmission of the commodity price spikes varied considerably across many developing countries. For example, the pass-through from world market prices to domestic prices was often less than 50 per cent. Similarly, when differentiating between the changes in domestic producer prices from consumer prices, the latter changed by considerably less than producer prices for a wide range of countries and across many commodity sectors. Similar variation can be found across the EU. Specifically, while the average food price change for the EU as a whole for the period from mid-2007 to late 2008 was around 5-6%, in many EU states the change in domestic consumer prices for food was 4 to 5 times the EU average (Bukeviciute *et al.*, 2009). In addition, the change in domestic consumer prices for food typically, but not always, was less than the change in domestic producer prices.

The EU average for EU producer price changes over the same period was 1.5 times greater the EU average for domestic consumer price changes for food. In some cases, the opposite was observed. For example, in Hungary, against the background where consumer prices rose by more than producer prices, the change in domestic consumer prices was almost three times the EU average (for consumer price changes) while the change in producer prices was only twice the EU average (for producer price changes).

20. Notwithstanding the different behaviour between world agricultural prices and domestic retail prices, domestic food price inflation has, in many countries, risen faster than general inflation. Figure 5 compares domestic food price inflation non-food price inflation and it is evident that prices in domestic retail food markets have risen faster. The FAO also report the same phenomena for a number of developing countries (FAO, 2008). For example, in Egypt, the domestic CPI rose by 15.4 per cent between January 2007 and January 2008 while food prices rose by 24.6 per cent. Jones and Kwincinski (2010) also report increases in domestic food price inflation across a number of emerging economies. While the OECD average of the rate of food price increases was 3.9 per cent for the 2006-2008 period (up from 2.1 per cent for the 2003-2006 period), the recorded rate of inflation was much higher across a number of countries: Chile, 9.8 per cent for the 2006-2008 period (up from 1.2 per cent in the earlier period); South Africa, 10.5 per cent (up from 2.5 per cent); China, 12 per cent (compared to around 6 per cent).

Figure 5: Domestic Food and Non-Food Price Inflation: 1988-2010



21. Understanding how domestic food prices behave relative to developments on world agricultural markets is a challenge for competition authorities especially when there is a concern that (the lack of) competition in the food sector can impact on the level of domestic food prices and the transmission of shocks emanating from world markets. Given that raw agricultural inputs may represent a relatively small share in the costs of supplying a processed food product at the retail level, the retail price of food will be determined by a range of different factors including exchange rates, labour costs, general economic conditions and government policies among other factors.

22. The experience of several competition authorities is interesting in this regard. Two examples serve to highlight this. First, the Competition Commission of South Africa, in face of rising food prices, made the domestic food sector a priority sector for investigation. As noted in OECD (2009), the Commission highlighted the importance of disentangling anti-competitive behaviour in the food industry

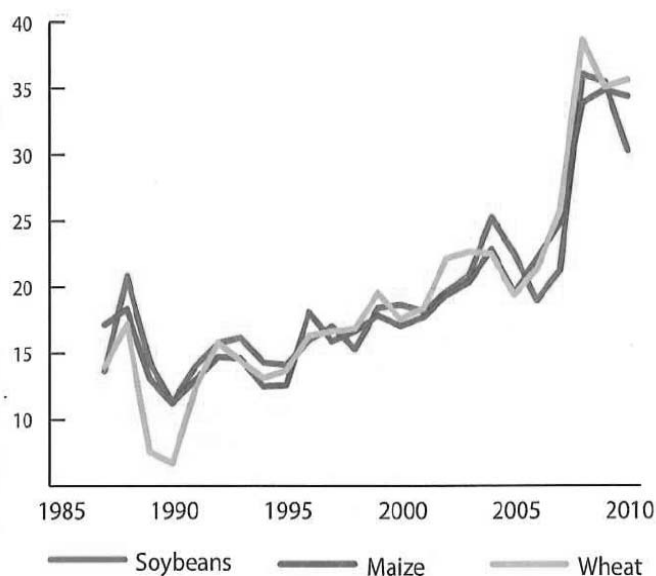
from other determinants of food price increases. Nevertheless, against the background of de-regulation in the post-Apartheid regime, the existence of cartels has been identified across the food sector in South Africa covering bread and milling, milk and fertilisers. Second, and more recently, rising food price inflation has served as the background for cartel investigations in the Baltic States. These examples highlight the sensitivity of domestic food price increases and the attention it subsequently attracts from competition authorities.

3.3 Price Volatility

23. In addition to higher price levels that are expected to continue in the future, there is also the concern of price volatility. This has been predicted to be a key feature of agriculture and food markets in the future. Gilbert and Morgan (2010), based on commodity price data since 1990, have explored whether the conditional volatility has increased since 2007. They show that the estimated increase in price volatility has increased for a large number of agricultural commodities including major grains and vegetable oil products. Figure 6 also highlights concerns associated with increasing price volatility on agricultural markets in a recent brief from the FAO (FAO, 2010); the data shows a sharp increase in implied volatility for several key agricultural commodities.

24. There are several factors that contribute to rising price volatility and are largely related to the factors that have caused the recent price spikes and relate to increased supply fluctuations (e.g. weather and crop failures) and demand fluctuations (e.g. macroeconomic factors in emerging economies, the financialisation of commodity markets) against the background of relatively low levels of stocks for many commodities. Of course, following on from the discussion above that the distinction should be made between world price shocks and domestic prices for food, the caveat should be added that higher world market price volatility may not necessarily be reflected in similar levels of price variability in domestic retail food markets.

Figure 6: Implied price volatility for selected agricultural commodities (in %)



Source: FAO (2010)

Note: Implied volatility represents the market's expectation of how much the price of a commodity might move in the future.

25. In sum, the recent crisis which characterises agricultural and food markets is very different from the circumstances that may face other industries. In agricultural and food markets, there is strong demand growth, underinvestment in agricultural production, high prices, increased price volatility marked by occasional price spikes. The impact of this relates to domestic food price inflation and the impact of high prices for the poor and greater exposure to food price fluctuations. In light of this, does the competitive nature of food markets impact on the effect of high and more volatile prices. In terms of Evenett's list of factors that may, in principle lead to arguments in favour of crisis cartels, specifically the reference to "promoting consumer welfare" and "stabilising prices" (Evenett, *op. cit.*), can crisis cartels be justified?

4. Competition Issues and Cartels in Agricultural and Food Markets

26. Agricultural and food markets represent a complex, vertically-related structure such that the raw agricultural commodity prices serve as an input passing through the vertical food chain such that the retail price of food will be determined by a range of different factors (such as labour costs, marketing services, other inputs) with the consequence that the behaviour of retail food prices can be very different from the behaviour of world agricultural prices, as we have noted above. In this vertically-related structure, competition issues can arise at any horizontal stage (e.g. food processing or food retailing) or vertically, for example through the use of vertical restraints of alternative forms or the terms and conditions of contracts. Note that in this vertically-related system, the impact of competition on procurement not just sales to the subsequent stage is also an issue in determining the overall competitiveness and efficiency of the food sector (McCorriston, 2008).

27. One of the features of the food sector across many countries has been the increase in concentration at all levels of the food sector in both developed and emerging economies. High and increasing levels of concentration, coupled with the increase in mergers and acquisitions (both domestic and cross-border), competition authorities across many countries have taken an active interest in competition issues in the food sector (McCorriston (2008))³. In a domestic context, with increasing concentration throughout the vertically-related food sector, there are a wide range of anti-competitive issues that may arise that have horizontal and vertical dimensions (see McCorriston (2007) for a broad overview). In this context, there is the possibility of cartel behaviour. There are several dimensions to cartel activity in the food sector: one is domestic where downstream food firms are exposed to the price of upstream raw agricultural commodity inputs; the second is an international dimension where there is coordination of activities for those firms to coordinate their activities directly with respect to world markets.

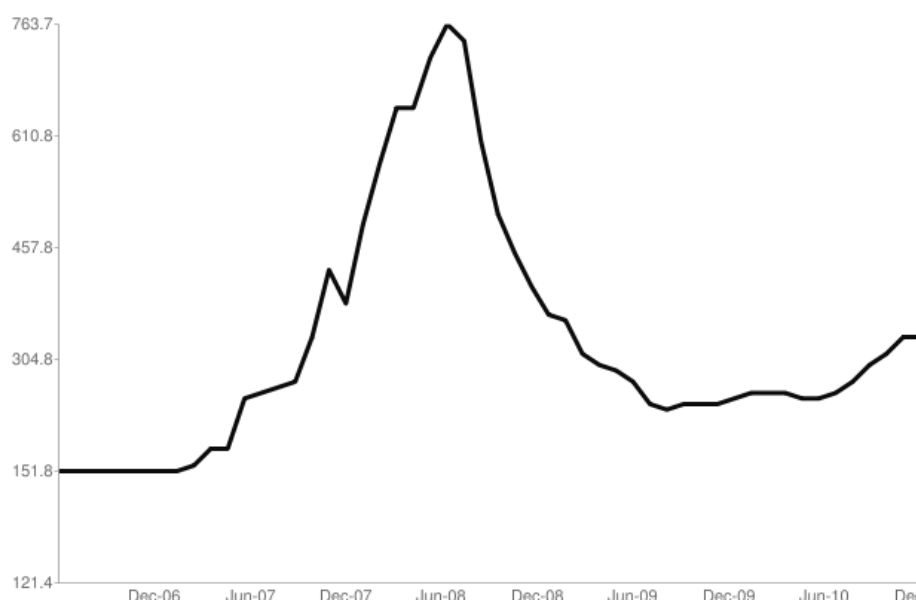
28. Some examples highlight these issues, some of which pre-date the more recent crisis and others which relate (either directly or coincidentally) with recent events. Two examples relating to domestic issues which pre-date the recent surge in prices. First, is the reference already made to cartel activity in the South African food sector: against the background of rising food prices, the Competition Commission of South Africa made the food sector a priority for investigation. Though the Commission made the point of disentangling anti-competitive behaviour from other determinants of food price increases, they nevertheless identified the existence of cartels in the bread and milling, milk and fertiliser industries (OECD, 2009). Another example relates to the Irish meat packing sector and would be more likely be associated with the traditional use of the term "crisis cartels". In 2002, with a view to reducing capacity in the processing sector, Irish beef processors established the Beef Industry Development Society. Against the background of over-capacity, the purpose of BIDS was to coordinate a 25 per cent reduction in capacity where those firms who decommissioned capacity would be compensated by the remaining members of BIDS and where there was a two-year non-compete clause. The case went to the European Court of Justice

³ Herger *et al.* (2008) discuss the issue and determinants of cross-border mergers and acquisitions in the global food sector.

(following a rejection of the Irish High Court's rejection of the case made by the Irish Competition Authority). The European Court ruled that the case that the negative effect of a reduction in capacity were insufficient to outweigh any positive effects.

29. From an international perspective, state-sanctioned cartels have also been identified in the context of the recent crisis. In this context, recent developments in the structure of the world fertiliser market highlight concerns over cartels that are part of the vertically-related food sector⁴. As concerns over agriculture and food prices have emerged in recent years, attention has also turned to developments on fertiliser and oil markets. Figure 7 shows fertiliser prices also surged during the 2007-2008 period (and as of the beginning of January 2011, there were renewed concerns over oil exceeding \$100 a barrel).

Figure 7: World Fertiliser Prices, 2006-2010. (Dollar/mt)



Source: World Bank

30. The role of OPEC in the world oil market is well-known though less attention has been given to the structure of the world fertiliser market. Potash (potassium carbonate) is a key plant and crop nutrient. The world potash market is dominated by a small number of players with the world's potash reserves being mainly found in Canada and the former Soviet Union. In this context, Canada has sanctioned a potash export cartel, Canpotex Ltd, whose membership comprises of three companies (Potash Corp, Mosaic and Agrium) and controls about 40 per cent of global trade in potash. Recent attention on the role of Canpotex arose when BHP launched a hostile bid for Potash Corp with the expectation that the export cartel would not survive if the BHP bid was successful and that production capacity would be expanded and world potash prices would subsequently fall. The legal status of this cartel has raised issues about the links between cartels and the food crisis, and the obligations of countries to ensure more improved cooperation on competition issues on international markets (*Financial Times*, 31st August, 2010).

⁴ International cartels involving private firms have also been identified in the food and related sectors. In their review of international cartels identified over the 1990s, Evenett *et al.* (2001) report several arising in the agriculture and food sector or agriculturally-related sectors covering a range of commodities including sugar, vitamins and lysine.

31. 31. Continuing the international theme and the issue of state-sanctioned cartels, against the background of the tripling of world rice prices in 2007-2008, Thailand suggested the possibility of forming an OPEC-style rice cartel and planned to discuss plans with Laos, Burma, Cambodia and Vietnam. The idea that countries who have market power over the export of key agricultural commodities is not new. Following the upheavals in commodity markets in the 1970s, and given the small number of countries that accounted for a large proportion of international trade in grains, there was discussion about the possibility of grain export cartels (see, for example, Schmitz *et al.*, 1981).

32. The surge in agricultural and food prices in 2007-2008 as has been documented above has also served as background for more recent cartel investigations. The nature of price spikes themselves gives rise to concerns about competition and specifically the possibility/desirability of cartel behaviour. By definition, the obvious characteristic of a price spike is that prices rise sharply but then they subsequently fall (typically after a relatively short interval). But this may result in firms seeking to prolong high prices in the face of the recent spike and prevent the subsequent decline in prices. An alternative interpretation of the impact of a price spike is that, the rise in raw commodity prices impacts on downstream firms' price-cost margins. So, the face a negative input shock that may not be fully passed on to consumers (see below). As such, firms face difficult times and may seek to remedy the situation by coordinating over prices and market shares. With these possible incentives associated with price spikes in mind, there are some more recent examples of cartel activity in the agricultural and food sector that have emerged:

- In August 2010, the Competition Commission of India ordered an investigation into possible price fixing in the sugar sector. Against the background of a substantial slide in retail sugar prices if around 40 per cent, sugar millers were suspected of price fixing to stem the fall of sugar prices and to stop them falling below the cost of production.
- The Federal Cartel Office in Germany carried out dawn raids in January 2010 against firms engaged in the sweet, coffee and pet food markets. The specific allegation relates to coordination between manufacturers and retailers regarding retail prices.
- In 2009, Italy's anti-trust authorities fined 26 pasta manufacturers for collaborating in a cartel operating over the period October 2006 to March 2008 where retail prices had risen by over 50 per cent. Subsequently, in January 2010, five of the main pasta producers in Italy were accused of forming an illegal cartel.
- In autumn 2010, Estonian competition authorities launched an investigation into possible cartel behaviour in the dairy and bread industries following an increase of milk prices by 25 per cent in September and bread producers announcing plans to increase prices by between 10 and 20 per cent.

33. As noted above, the domestic price of food will be determined by a range of different factors, not just the world price of agricultural commodities and as such competition authorities who have taken an interest in competition in the food sector in the wake of the recent crisis have to discriminate between the wide range of factors that may cause food prices to rise and anti-competitive behaviour. Indeed, in relation to many of the examples listed above, the defence often made was that prices were driven up by other factors rather than coordination over prices by firms. This of course is not to justify the emergence or persistence of cartels but the task of addressing anti-competitive behaviour is made more challenging when industries are faced by multiple and coinciding shocks.

5. The Agricultural and Food Crisis and Crisis Cartels

34. The characterisation of recent events in agricultural and food markets and the likely future developments that have been outlined above are different from the environment usually associated with crisis cartels: demand growth is strong and likely to remain so; there is a need for more investment though supply may be affected by temporary disruptions; agricultural prices will be affected by a range of factors emanating from outside the food and agricultural sector including speculation in commodity derivatives, developments on world oil markets, demand and supply shocks and so on. These variables translate into higher prices than have been recorded over the past two decades, occasional price spikes and more volatile prices for key commodities. For policy makers concerned with inflation and food security issues more generally, what are the potential links between the extent and nature of competition on markets and these characterisations of price developments? If “consumer welfare” and “price stabilisation” fall under the motivation for crisis cartels, can they be justified in light of recent developments in agricultural and food markets?

35. The links between the extent and nature of competition in markets (and, by extension, the appropriate role for competition policy) and the impact of shocks and price volatility has not been addressed in various surveys on the potential measures that governments can employ to deal with price shocks and food security issues. From a competition perspective, the issues concerning anti-competitive practices typically focus on static effects or on the best way to ensure greater efficiency in an industry (for example, by reducing excess capacity). However, in the context of agricultural and food markets, the issue is the linkage between competition and the transmission of price shocks and whether or not competitive markets promote price stability. In other words, it is not the static effects of anti-competitive practices that are important *per se* but the impact of market structure on the first and second moments of the distribution of prices.

36. Consider the transmission of price shocks emanating from world markets and consider first of all the case of a supply shock impacting on agricultural prices. From a static point of view, a competitive market will produce greater output than a less competitive market but, under fairly general conditions, an increase in input prices will lead to a lower commensurate increase in retail prices if markets are less competitive. Moreover, recalling that agricultural and food markets are more appropriately characterised as a series of vertically-related industries, as the number of vertical stages increase and with imperfect competition being a feature of each stage, the impact of upstream price shocks on retail food prices are further dissipated. More directly, as markets become less competitive at any or all stages of the vertical food chain, the impact of shocks to agricultural prices on retail food prices becomes weaker. McCorrison (2002) gives some details on this issue. This observation belies the importance of making a distinction between world agricultural prices for a product that enters the vertical food sector at an upstream stage and the price of food at the retail end of the food sector.

37. With these effects in mind, it is then perhaps not surprising that the rise in retail food prices around the 2007-2008 period that has been referred to above has been less marked than the price surge on world markets for raw agricultural commodities that have received much of the attention from policymakers and the media. Of course, other factors would also have been important (e.g. responses by governments, the existence of trade barriers that cuts the links between world and domestic prices and so on) but notwithstanding these factors, less competitive markets dampen the impact of supply shocks.

38. However, the other side to this is that firms’ price-cost margins are reduced. As their input prices rise, if their selling price rises less than proportionately to the increase in costs, the price-cost margin falls. Thus, while price transmission can be less when markets are imperfectly competitive, firms have to take the “hit”.

39. If less competitive markets dampen the impact of a price shock on retail prices (the first moment), how do less competitive markets impact on price variance (the second moment)? Not unsurprisingly, as agricultural prices come back down from the peak of the spike, with less competitive markets the fall in the retail price for food will be less than that arising in competitive markets. As a consequence, taking over a period of time, we should expect retail prices to have less variance than agricultural prices and, more generally, that imperfect competition to promote more stable prices. There has been some evidence of this in the economics literature. Carlton (1986), Domberger and Fiebig (1993) and Slade (1991) provide empirical evidence that prices tend to be less volatile in more concentrated industries.

40. This empirical evidence relates to the links between competition and price volatility but has set aside the issue of stocks. One of the factors contributing to the price spike of 2007-2008 was the low level of stocks for key commodities, as noted above. Thille (2006) has explored the issue linking market structure to the level and use of stocks. He shows that the issue is a complex one and depends on specific conditions: less competitive markets have lower price variance and, while inventories per unit of production are lower in more competitive markets, producers are more willing to use them in response to random events.

6. Conclusion

41. This paper argues that the crisis in agricultural and food markets is different in nature from the economic downturn and the financial crises that have impacted on other industries. Prices have been rising, demand growth is expected to be strong, and there are a range of demand and supply shocks that can be expected to impact on the agricultural and food sectors in the future. Hence higher prices, occasional price spikes and greater price volatility can be expected to characterise the food sector in both developed and developing countries in the future.

42. In the context, governments seek a range of policy options to cope with price surges and price volatility. Jones and Kwiecinski (2010) and Thompson and Tallard (2010) provide a summary of different policy options. These include the use of trade policy instruments, fiscal policy, domestic agricultural policies and so on with the aim of lessening the impact of higher food prices on the most vulnerable, to address the problem of inflationary pressures and, over the longer term, to improve food security. With rising and more volatile food prices, what is the appropriate role for competition policy? If policymakers are concerned with “consumer welfare” and “price stabilisation”, can crisis cartels be justified? Should the concerns also relate to “producer welfare”? If the longer term concern of policymakers is to promote food security, how do cartels (and other aspects of anti-competitive practices) impact on the incentives of agricultural producers to invest in new technology and increase production in the agricultural sector? In terms of ameliorating the impact of price shocks and price volatility, to what extent would crisis cartels be a better (or worse) instrument of policy than other instruments? Finally, even if a case for crisis cartels could be made to deal with the crisis in agricultural and food markets, to what extent would they impede the effectiveness of other policy instruments, for example, the promotion and use of risk management instruments?

43. The observations made above that market structure can impact on the transmission of price shocks and be associated with potentially more stable prices does in itself justify a more lenient approach to competition policy in general or to advocate cartels as a means to promote price stability. Other policy options may provide a more direct, transparent and flexible means to promote price stability and ensure that the most vulnerable are not adversely affected by high and more volatile food prices. The following list highlights alternative means via which policy can be targeted to the overall aim of promoting food security and ameliorating the impact of volatile prices.

- The use of trade policy instruments: for example, for importing countries, trade barriers can be reduced to encourage cheaper imports; for exporting countries, controls over exports may be a more acceptable alternative to the creation of a state-sanctioned cartel.
- The build-up and coordination of stocks of staple commodities will help reduce the exposure to adverse developments on world markets and reduce the likelihood that price spikes will arise.
- The use of market-based risk management tools will help deal with more volatile world prices and volatile exchange rates that influence the pricing of key commodities (as these are typically priced in US dollars).
- To ameliorate the impact of high and volatile prices in domestic markets, there are a range of options including stock release, consumer safety nets (e.g. cash transfers, public distribution system to direct food to the most vulnerable, suspension of VAT and other taxes).

44. This list of policy alternatives is not intended to be exhaustive but rather to highlight that governments have a range of policy alternatives that can deal with the impact of price spikes and more volatile prices. The extent of competition on markets can, as discussed above, impact on the extent of price transmission and the variance of prices but this does not in itself make the case for cartels to deal with crises that arise in agricultural and food markets. Alternative policy instruments do exist that are likely to be more direct, transparent, flexible and predictable and that avoid diluting the principles and application of competition policy.

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