ICN Special Project: Competition in Food and Agriculture markets

ICN Toolkit for Price Monitoring

April 2026

1. Introduction

1.1. In 2023, the International Competition Network (ICN) Conference affirmed the importance of tackling competition concerns in agriculture and food markets. As a result, the ICN Special Project on Competition in Food and Agriculture Markets was initiated to gather lessons on how competition authorities responded to the 2021 – 2023 inflationary episode. The first phase of the special project was a survey to collect information on how ICN members have addressed actual and potential competition law and policy concerns through their research, monitoring, and enforcement activities.

1.2. The survey found that agriculture and food markets are priority areas for most competition authorities globally. At the time of the survey, competition authorities had been called on to respond to the effects of the war in Ukraine and the lingering effects of supply chain disruptions following the Covid-19 pandemic. Both events exposed the vulnerabilities in agriculture and food value chains.

1.3. The survey also found that there was considerable demand from ICN Members for price monitoring mechanisms that may be used to detect early on any anti-competitive conduct and other market failures for a rapid response and resolution. One of the recommendations that came out of the survey was that *"investment in data and research is critical in ensuring access to relevant information required by competition authorities to address challenges in food and agricultural markets".*

1.4. Many competition agencies undertook price monitoring or surveillance in response to the Covid-19 pandemic or the inflationary episode. These experiences form the basis of the toolkit so that other ICN members may have guidance on initiating their own price monitoring projects, particularly young competition agencies in emerging economies. Furthermore, as disruptions from climate change and other external shocks become more frequent, the demand on competition authorities from governments and the public to understand price formation in concentrated markets is likely to increase.

1.5. For the purposes of this toolkit, price monitoring is the periodic tracking of food and agricultural product prices or indices at one or more levels of the value chain. While typically conducted using highly aggregated secondary data, competition agencies may select the data that is consistent with their aims and resources.

1.6. Many competition agencies have conducted proactive research and inquiries into food markets that may not conform with the above definition of monitoring but may nonetheless have features that are relevant to price monitoring. As such, some of the country examples in this toolkit are drawn from research reports, and market studies and / or inquiries.

2. Benefits of Price Monitoring

2.1. Price monitoring is still an emerging work product for competition authorities, which, as mentioned, has been spurred on by several successive supply disruptions experienced from 2020 onwards. While motivation may differ across authorities, there are several benefits that price monitoring could yield for competition agencies and society in general:

2.1.1. Competition enforcement can be backward-looking and dependent on competition agencies receiving complaints from consumers and other market participants. However, in highly concentrated markets (such as food and agriculture markets) where there are few players and entanglements between market participants, finding these cases can prove to be challenging. Pro-active monitoring can assist with finding potential cases without the reliance on an initial complainant.

2.1.2. Food and agriculture markets are often subject to government regulations or the target of public policies with various aims such as increasing farm income and stimulating demand for commodities. Furthermore, these markets are affected by policies in adjacent markets such as transport, energy, and labour markets. Poorly designed or executed policies may have an adverse effect on consumer welfare through high prices or restricted supply. Market monitoring helps competition agencies to identify instances of anti-competitive market distortions and to recommend remedies for consideration by the relevant authorities.

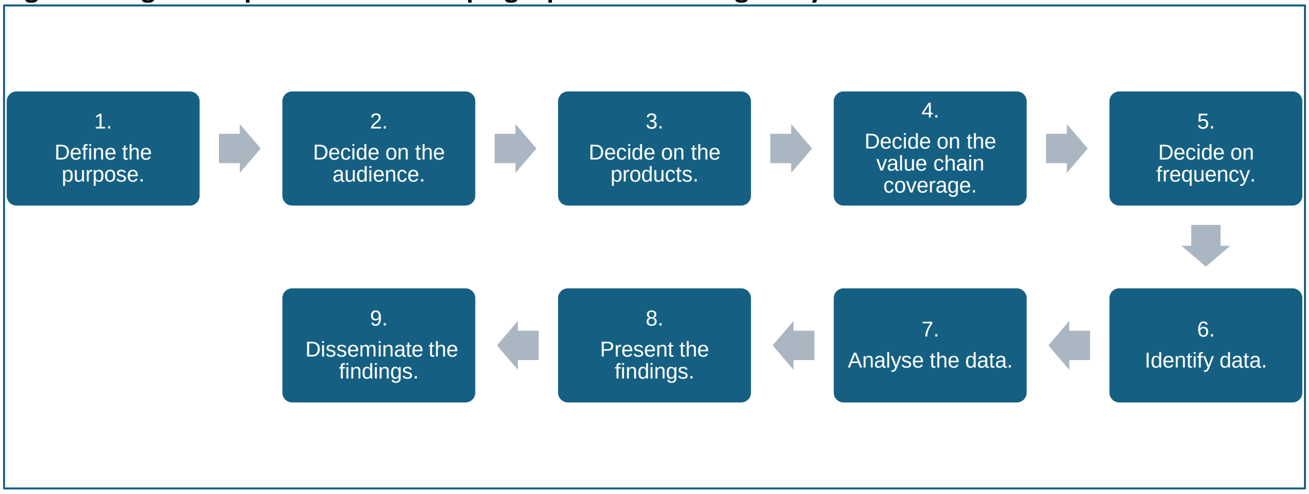
2.1.3. Competition agencies have a unique understanding of price formation and cost build-up throughout value chains. Price monitoring by competition agencies can therefore shed light on price drivers throughout the value chain and, depending on the methods, identify which points exert the most pressure on prices.

2.1.4. The work of competition agencies can sometimes feel far removed from the daily pressures faced by consumers. This is particularly true during periods of high inflation and income pressure. Food and agricultural price monitoring and surveillance have the potential to win some public support for competition enforcement from the public and their representatives as they directly implicate markets with a significant impact on consumer and household welfare.

3. Toolkit

3.1. The purpose of this toolkit is to provide high-level guidance on the steps that an agency can follow when developing a price monitoring project. Competition agencies have differing needs and resources, which evolve over time. As such, the toolkit is not a roadmap for producing a particular kind of price monitoring study or report. Rather it draws on the diverse approaches taken by ICN members to date. The toolkit is arranged into 9 steps, as illustrated in Figure 1. Within each step are options and/or insights drawn from work of ICN Members.

Figure 1: High-level process for developing a price monitoring study.



3.2. Decide on the purpose of the price monitoring.

3.2.1. Competition agencies may be interested in conducting price monitoring for a variety of reasons. Before undertaking a price monitoring project, it is important to clearly define the purpose of the price monitoring as this will have implications for the data inputs required, the analysis to be performed with the data, and the communication and dissemination strategy for the findings. Competition agencies that have initiated price monitoring projects to date have largely been motivated by the following:

- *Price transparency:* Price monitoring can help consumers and other members of society to better understand explanatory factors behind the prices that they observe on retail shelves. Doing so requires accounting for as many prices and costs throughout the value chain as possible. However, it is often unfeasible to access data that covers the full range of production and distribution costs for most foods as this information resides with firms and is commercially sensitive. As such, it is highly unlikely that the public will, through price monitoring by competition authorities, have full price transparency. It is important to note that depending on the market context, conditions, and the nature of the data, transparency may have the adverse effect of allowing market players to coordinate prices, even without an explicit agreement to do so. The market knowledge and judgment of competition agencies should therefore guide the level of transparency that can be tolerated without raising the risk of this or other adverse effects.

- *Assessing the effect of international shocks on local prices:* Many price monitoring projects are initiated in response to international supply shocks such as drought and conflict in major commodity source markets. Supply shocks of this nature have ramifications for prices on international markets that are transmitted to domestic prices. Price monitoring can be used to analyse the extent of this price transmission during the period of the shock when prices are elevated and to check whether prices adjust downwards once the shock has subsided.
- *Identifying indicators of anti-competitive conduct:* Price monitoring may help competition agencies to identify areas in the value chain where anti-competitive conduct could be driving price distortions. Additionally, price monitoring can also help with identifying areas of the value chain where regulatory decisions have had adverse effects. However, the findings of price monitoring are unlikely – on their own – to be able conclusively show that competition statutes have been violated through unilateral or coordinated conduct. In most cases, further investigation will be required. Therefore, price monitoring can only be an initial screening tool for identifying areas where investigation is required and motivating for the initiation of an investigation.
- *Monitoring the effects of government policies:* In many countries, food and agriculture markets are the subject of government policies and interventions. This is particularly salient when market shocks result in

Box 1: Malawi CTFC price monitoring for VAT changes.

In April 2022, the government of Malawi removed Value Added Tax (VAT) on cooking oil. The Competition and Fair-Trading Commission (CFTC) in collaboration with the Ministry of Trade and Industry, conducted market inspections to monitor compliance with the policy and any resulting price effects. Through site visits across Malawi, the CFTC collected prices for 1- and 2-litre cooking oil bottles over a month period. The CFTC's monitoring found that prices remained high despite suppliers complying with the VAT removal. This was because the prevailing global and domestic economic environment continued placing upward pressure on cooking oil prices.

volatile prices. Price monitoring may contribute to monitoring and evaluating the efficacy of these policies particularly regarding their effect on consumer prices and welfare.

3.3. Decide on the audience.

3.3.1. Closely linked to establishing the purpose of the price monitoring is deciding on the audience for price monitoring. With the audience in mind, analysis, value chain coverage, communication and dissemination can be tailored to support the message that the authority wants to communicate.

- *The public*: The public feel the burden of market failures in food and agriculture markets, often through higher prices on the retail shelf making them a natural target audience for price monitoring studies. However, there may be differences in what the public is interested in at any given time compared to a competition regulator. It is important to understand which of the public's needs can be served by price monitoring.
- *Government agencies:* Government agencies have multiple objectives that can be served by price monitoring in food and agriculture markets. For example, price monitoring may be of interest to trade policymakers interested in the effects of their decisions on consumer's overtime. Other government agencies may have an interest in understanding the evolution of farm-level prices and their implications for agricultural industries.
- *Value chain actors:* Value chain actors often have concerns about the pricing practices of other value chain actors, particularly where those practices have the potential to raise input costs, exclude rivals, and ultimately increase consumer prices.

3.4. Decide on the products for monitoring.

3.4.1. Deciding on the products for monitoring is closely linked to the choice of the audience. Not all goods are suitable candidates for price monitoring and agencies must consider their choice of products in light of their mandate; the prevailing economic climate; and government policy objectives.

3.4.2. *Importance to household spending or budgets:* Some food items are more important for households than others. This can be because they are a low-cost and widely available staple product, an affordable source of an important macro-nutrient like protein, because their consumption takes up a large proportion of household food budgets, or because they are required by vulnerable groups. For such food items, high prices and reduced output can have far-reaching consequences for consumer welfare and food security, making them a good priority for monitoring by competition agencies.

Box 2: Colombia's Family Basket.

In Colombia, the Superintendent of Industry and Commerce's (SIC) price monitoring focuses on products that are part of the Family Basket. This is a targeted set of goods and services that are regularly consumed by households and are therefore essential for their sustenance. As such, the items that the SIC tracks for price monitoring are not limited to food and agricultural commodities, but include health, education, clothing, and transportation. In April 2020, the Family Basket items were identified by the Colombian government for intense monitoring (every 5 days) by the Statistical Authority so that the SIC could respond quickly to suspected anti-competitive conduct.

3.4.3. *Food markets where firms may have market power:* Many markets for important foods have features that may support unilateral or coordinated anti-competitive conduct. Common features in food markets include high concentration levels, vertical integration and high barriers to entry. In some markets, asymmetric bargaining power at various points in the value chain. Focusing on markets with these features can help the authorities understand firm behaviour and the role of market structure as driver of pricing outcomes, particularly in times of crisis. Monitoring can also act as a deterrence against firms exploiting their individual or collective market power.

Box 3: Bundeskartellamt's sector inquiry into negotiation outcomes between retailers and manufacturers.

Over a period of three years the Bundeskartellamt has analysed the market structures in the German food retail sector and has focused on the negotiations between food retailers and brand manufacturers. The authority requested information from more than 200 manufacturers and 21 retail companies and carried out a comprehensive evaluation of the answers received. This was followed by an econometric analysis of the determinants of negotiation outcomes between manufacturers and food retailers. This analysis was based on a representative sample of approximately 250 branded products from different product categories. The results show that retailer size, measured by purchasing volume, is the dominant factor: larger retailers consistently achieve better commercial terms, providing strong empirical evidence of buyer power. This effect is only partially offset by the presence of strong "must-have" brands, which can secure more favourable conditions because retailers cannot easily delist them without risking significant sales losses

3.4.4. *Food markets where there is government intervention:* In many countries, food markets are the subject of various forms of government intervention. These interventions may be aimed at supporting prices paid to farmers or by consumers. Interventions could also include those aimed at supporting the domestic and international competitiveness of specific commodities in line with national priorities. These markets may be good candidates for price monitoring as government intervention may influence consumer prices and food security.

Box 4: Rwanda crop intensification.

The Rwanda Inspectorate, Competition and Consumer Protection Authority (RICA) commissioned a study on the causes and consequences of agricultural and livestock commodity price volatility on consumers and producers in Rwanda. The commodities covered by the study include priority crops under the crop intensification programme namely maize, rice, wheat, beans, Irish potatoes, cassava alongside other key commodities like soybeans, meat, milk, and eggs. The Commodity Intensification Programme includes the following interventions, input subsidies, insurance, strategic grain reserves and infrastructure development.

3.4.5. *Input markets with the widespread downstream effects:* Price monitoring and market surveillance do not need to be limited to final consumer products. Market failures and anti-competitive conduct input markets may have harmful effect on consumer welfare through raising production costs faced by farmers and ultimately prices throughout the value chain. Furthermore, the conduct of input suppliers may also affect entry and the formation of more competitive food and agriculture markets.

Box 5: COMESA Fertilizer Price Monitoring.

The COMESA Competition Commission and the African Market Observatory have a long-standing collaborative in monitoring fertilizer prices throughout Eastern and Southern Africa. In these markets, fertilizer is largely imported by a small number of vertical integrated players. Therefore, prices are determined by import costs and the trading margins applied by these players. The same group of firms also compete with one another and independent distributors in the end market. These market features raise the risk of anti-competitive conduct. As the single largest input cost in the production of staple crops, such conduct will have implications for farm profits, food prices, and food security.

3.5. Decide on the comprehensiveness of the monitoring.

3.5.1. . Food flows through value chains from the farmgate level to manufacturing plants, and ultimately the retail shelf. At each stage there are operational and distribution costs and profit margins that ultimately influence retail prices The general principle to follow for determining the comprehensiveness of the monitoring is that it must be consistent with the purpose of the monitoring as well as intended audience. Competition authorities should aim to assess as many levels of the value chain as possible, depending on the data that is available and their goals.

- *Retail prices:* Retail prices are the prices that consumers pay for goods or services at the retail store and reflect the cost of production, marketing, and distribution for that product as well as the retailer’s margin. These prices are reflective of the competitive conditions throughout the value chain since these are ultimately reflected in retail prices through price transmission.

- *Producer (or ex-factory) prices:* Producer prices are the prices that producers sell their goods and services at the end of the production process. The producer price may also be thought of as the wholesale price reflecting the cost of production and the manufacturer's margin. As with retail prices, producer prices may also be reflective of the competitive conditions in the production or processing market as well as all other levels of the value chain leading to that point.
- *Farmgate (or bulk commodity) prices:* Farmgate prices are the prices of agricultural products when they leave farm and before transportation, processing or wholesale and retail markups. Depending on the product and the market, these prices may be set in an open exchange environment (such as for bulk commodities); in a bidding market (such as for livestock); negotiated between the farmer and the buyer (which is common for fresh produce); determined by traders acting on behalf of buyers or sellers throughout the value chain.

3.5.2. The price of food is influenced by several variables that play out along complex value chains from the farm or primary production to the retail shelf and ultimately the end consumer. Therefore, there are many cost categories that have a material impact on food prices – especially through international transmission – yet they cannot be easily accounted for at the aggregate level, especially using publicly available information. Examples of these costs include energy, chemical inputs, transportation, storage and packaging costs. Monitoring studies should be transparent in their limitations and disclose that these costs, while material and often cited as a reason for price increases, may not be fully accounted for in the analysis. In some instances, firm financial data may disclose these costs and their impact on their firm's pricing policies and profitability.

3.6. Decide on the frequency of the monitoring.

3.6.1. The frequency of monitoring or market surveillance is an important decision that must be taken in the preparatory stages of the project. Below are some factors that an authority might consider when deciding on the frequency of their price monitoring projects.

- *Frequency of data publication:* Competition authorities will often need to rely on price data collected by third parties (such as statistical authorities and market research firms) or generated by ordinary market activities (such as commodity trading). Competition authorities should strive to align their price monitoring with these publication schedules as much as possible to avoid producing and publishing analysis that is out of date or misses disruptive events.
- *Urgency of price monitoring:* Many of the price monitoring activities that were conducted by ICN member authorities were in response to the COVID-19 pandemic and the subsequent disruptions to international food value chains. The onset of the war in Ukraine was cited as another catalytic event for competition authorities. Where consumers experience severe market shocks because of disruptive events, a competition agency may be required to act quickly to guide consumers, policymakers or market actors.

3.7. Identify and gather the data.

3.7.1. There are several sources of data that competition agencies can use to conduct price monitoring and market surveillance. The choice of data will depend on the purpose of monitoring, the availability of the data, the legal framework within an agencies' jurisdiction and the human and financial resources available to the competition agencies.

- **Secondary data** is data that has been collected by another party for a different purpose – it is therefore being applied differently when an agency uses it for price monitoring and market surveillance. Secondary data has the advantage of being cost-effective and time efficient as it has already been collected and, in some cases, cleaned and organised. Sources of secondary data include census data, household surveys, and national price surveys. Commodity and share price data generated through trading activity is also secondary data.
- Secondary data cannot be easily amended or supplemented to answer new questions. As such, if a variable of interest has not been included in the original dataset, it may not be possible to analyse that variable or

doing so will be subject to caveats that limit its explanatory power. Secondary price data is often aggregated; therefore, an agency cannot use it to identify the prices charged by specific firms. Large surveys will almost certainly have some degree of non-response or plainly incorrect information that competition agencies will need to account for in their analysis.

3.7.2. Common sources of secondary data include:

- *National statistical authorities:* National statistical authorities are official government bodies responsible for collecting economic, social and demographic data. As part of their public service mandate, this data is often made available to any part that wishes to use it, apart from instances when it would breach confidentiality. Competition agencies may want to consider entering into formal cooperation agreements with national statistical authorities to access more data than what is publicly available. An important benefit of data collected by national statistical authorities is that it conforms to international standards and best practices, which allow for meaningful comparison overtime and across countries.

- *Administrative data and government surveys:* Government agencies may collect or maintain databases that are relevant to their mandate. In some instances, this data can be used to conduct analysis for price monitoring or market surveillance. However, given that this data is not collected or kept for general research purposes, special permissions may be required to share it with the competition agencies as well as to share it with the public.

- *Market research:* Many firms rely on market research data collected and disseminated by specialized companies to understand pricing trends and make pricing decisions. This data is often highly disaggregated across product lines, geographies, store brands and other relevant variables. Furthermore, it is derived from till or checking points, which means that it is based on actual consumer purchases. However, this data is not readily available to competition agencies and accessing this data often requires costly subscriptions.

- *Industry and trade associations:* Firms are often members of industry or trade associations which act as advocacy bodies for sectorial interests. In many instances, these industry bodies will collect and publish data on the state of the sector, including prices and costs, which agencies can use in their price monitoring. However, agencies should carefully scrutinize this data and how it is used to assess whether it may be part of cartelizing the sector.
- *Financial information:* Publicly traded firms are required to publish their annual financial statements as part of their regulatory obligations. Competition agencies can use this information to analyse the evolution of firm profitability using gross and net margin ratios and calculating returns to assess whether profitability shows signs of growing market power. Depending on how detailed they are, financial statements can also provide insight into the firm's major cost drivers and their impact on pricing and profitability. Lastly, financial statements sometimes include commentary on market conditions including how the firm sees the state of competition. An important consideration, however, is for multi-product firms. In this instance, the level of reporting may be aggerated and include products other than those of interest to the agency. This makes linking financial performance and specific prices difficult. Other sources of financial information that a competition agency may use, depending on their

aims, are share price and local and international commodity price data.

Box 3: United Kingdom's "Food and You" and "Monthly tracking" surveys.

The Food Standards Agency (FSA) in the United Kingdom (UK), collects consumer data on the state of the UK's Food System including knowledge, attitudes, and behaviours. The Food and You 2 Survey also includes questions on consumer concerns about food prices, food affordability and measures of household food insecurity. Similarly, the FSA also commission a monthly tracking survey which collects concerns that consumers may have about food prices and affordability as well as consumer behaviours being undertaken to save money.

- **Primary data** is data that is collected firsthand for a specific purpose. As primary data collection is guided by objectives of price monitoring and market surveillance, it can easily be used to address the competition agencies' needs and objectives for price monitoring and market surveillance. Primary data can be tailored to the needs of the agency in terms of timing, allowing a real-time view of pricing and marketing and to act quicker, if necessary. For price monitoring and market surveillance, competition agencies may collect primary data through consumer and firm surveys or sending information requests.
- Primary data collection can be cumbersome exercise depending on the rigor that an agency desires. For example, a nationally representative sample must be carefully designed to account for and capture population level dynamics. There may also be some reluctance on the part of market participants to complete competition agency surveys and data requests. The likelihood of this reluctance may be highest in markets that may raise concerns, such as those with a small number of easily identifiable firms. Lastly, competition agencies must also consider the costs of collecting primary data, especially where lower cost options such as online surveys cannot guarantee a robust sample.

Box 7: Austrian Federal Competition Authority data collection.

The Federal Competition Authority (FCA) of Austria used large-scale primary data collection in their food market inquiry launched in 2022 against the backdrop of rising global and European food prices. The FCA sent out RFIs 700 retailers and to 1,500 suppliers in the food markets. Further, consumer survey among 1,000 persons aged between 18 and 65 was conducted. This data was supplemented by secondary sources from the Austrian Central Bank and price data purchased from a market research company.

3.8. Determine analytical methods.

3.8.1. Competition agencies have analytical methods that they can use for conducting price studies or market monitoring. These methods differ not only in their complexity and data requirements, but crucially in what conclusions can be reliably drawn from them – which has a direct link to the actions that the competition authority may try to pursue in response to their findings. Depending on the purpose of the price study, competition agencies may combine these methods for a single project.

3.8.2. *Final price tracking*

- The simplest way for competition agencies to monitor prices is to track aggregate retail prices or a price index. In many countries, these are published by statistical agencies. Competition authorities may use the insights from these trends to refine their prioritization and select products with significant price changes for further investigation using their formal powers or for a deeper assessment of price formation using data for other levels of the value chain.

3.8.3. *Aggregate spread analysis*

- <u>Aggregate spreads analysis:</u> A common approach used by competition agencies is to compare product prices at different points of the value-chain and how they relate to one another overtime by analysing the spreads between the price points.
    - *Farm-to-producer (ex-factory) spread:* This is the price difference between the farm-value of the commodity used to produce a given quantity of goods and the producer or ex-factory grate price. In the

case of a loaf of bread, the farm value of wheat is the value of the wheat used in that loaf. Farm values are calculated by adjusting the farmgate price by the respective extraction rate for a commodity. The extraction rate is how much a commodity is used in production once the by-products have been removed. The extraction rate may vary according to plant species and growing conditions. As such, competition agencies should strive to find extraction rates that are relevant for their countries.

  - Calculating farm values for livestock follows a similar logic since various cuts of meat are taken from specific parts of the animal. The proportion of these parts is therefore the extraction rate for the cuts produced from that part.

- *Producer-to-retail spread:* This is the price difference between the producer prices and the retail prices. Often, producer prices need to be adjusted to the same quantity as retail prices to make them comparable.
- The benefits of this method are that it is simple to explain to the public and that it captures the major price-cost relationships along the value chain. Furthermore, trends in the spreads can be used to easily identify structural breaks that reflect changes in market conditions or the behaviour of firms. Lastly, this method can be applied to relative changes in price indices where absolute prices are not present, in this case inferences can be drawn from how the indices move in relation to one another.
- However, the spreads do not account for the full range of costs incurred by producers and retailers in their activities and therefore cannot be used to draw conclusions on unfair or excessive prices. Furthermore, spreads are based on aggregate data, which does not identify the behaviour of a firm or group of firms and an analysis of spreads over time does not

establish a causal link between price movements throughout the value chain.

Box 8: Competition Commission of South Africa's essential food price methodology

The Competition Commission of South Africa (CCSA) analysis prices spreads in essential food value chains at the producer level and retail level of the value chain. The methodology compares prices received by farmers to the prices at the manufacturing and retail levels of the value chain. Price spreads at the producer level measure the aggregate contribution of manufacturing costs and margins on factory gate prices and those at the retail level do the same for retail distribution and operating costs and margins. The CCSA has applied this analysis in maize meal, sunflower oil, bread, and beef price analysis.

3.8.4. Econometric analysis

- Econometric analysis that relies on the same data used for aggregate spreads analysis can be used to establish a causal relationship between price movements to whether market actors are exploiting their market power in the transmission of costs.
  - The first step is to test whether the individual price series are stationary or non-stationary, since non-stationary prices can produce misleading correlations if analysed directly.
  - Once it is established that prices are non-stationary but integrated of the same order, the analysis tests for cointegration, which indicates whether prices at different levels of the supply chain share a stable long-run equilibrium relationship despite short-run fluctuations.
  - Where cointegration is found, an error-correction framework is used to estimate both the long-run pass-through of prices and the short-run dynamics of adjustment, including how quickly deviations from the long-run relationship are corrected.
  - The analysis assesses the direction and strength of price transmission and identifies which stage of the supply chain tends to lead to price changes. It also tests for asymmetric adjustment,

examining whether upstream price increases are transmitted downstream more rapidly or fully than price decreases.

- The results are interpreted to evaluate whether observed price movements are consistent with cost-based transmission in a competitive market or whether they suggest frictions, delays, or imbalances in market power across the supply chain.

Box 9: Hungarian Competition Authority's use of econometrics in dairy market inquiry.

In its dairy sector inquiry, the Hungarian Competition Authority (GVH) used econometric price-transmission analysis to examine how price changes move along the milk supply chain—from farmers to processors to retailers. The analysis predictably found a stable long-run relationship between them and applied an error-correction framework to estimate both the long-run pass-through of prices and the short-run speed at which prices adjust following shocks. The analysis showed that the increase in farmgate prices is directly and rapidly reflected in the ex-factory prices of processors, therefore the price change of raw milk has a significant impact on dairy prices. Further, the analysis found that ex-factory prices react quickly to both increases in farmgate prices and increases in retail prices. The analysis concluded that manufacturers have benefited from asymmetric price transmission as they passed on cost increases without responding to demand fluctuations.

3.8.5. Benchmarking

- Comparing domestic prices to prices in comparator countries can help competition agencies to rank price levels and price increases across against their peers. This may be particularly relevant for countries that are part of single economic markets. Differences between comparator countries can be explained by structural differences such as population size and income levels and should be accounted for to make robust comparisons. The same applies to differences in market structures, policies, and regulations.

Box 10: Denmark's comparison to other countries.

The Danish Competition and Consumer Authority monitored food prices in Denmark, and in three comparator countries (The Netherlands, Sweden, and Germany) and the European Union as a whole. In its analysis, the DCCA corrects for differences in Value-Added Tax, general taxes, and differences in wealth to make robust comparisons between Denmark and other countries. Throughout their monitoring, Danish prices were found to have increased at a slower rate that in comparator countries.

3.8.6. High-level financial analysis

- Competition agencies may want to consider incorporating financial metrics for firms who are active in their value chains of interest. When doing so, it is important to consider that most firms in food and agriculture markets tend to manufacture and sell a portfolio of products – with grocery stores being a particularly salient example. As such, financial metrics cannot be used to make strong inferences about the state of competition in a narrow product market. Nonetheless, it can provide important insights into general sector profitability and the role of cost pressures. Common and non-exhaustive measures that an agency may assess include:
    - *Gross Margin:* The gross margin is percentage of revenue that a firm keeps from its sales after covering the direct costs of producing or procuring its goods or services. The gross margin is an indicator of a firm's mark-up strategy over the cost of producing and selling goods or services.
    - *Net Profit Margin:* The net profit margin is the percentage of net profit (which may also be called operating profit or trading profit) that a firm generates from its total revenue. The net profit margin is an indicator of the firm's overall performance and accounts for its management costs and productive efficiency in addition to its pricing strategies.

3.8.7. Incorporating other salient market features.

- Competition agencies should consider how they can account for relevant market features in their price monitoring. The effect of these features may be amplified when there are market shocks. On the other hand, governments may use these features as tools for influencing production and prices. Failure to provide the fullest possible account of market features that carry implications for price formation may produce distorted results or lead to accusation of bias. The following are some of the features that an agency may incorporate into their analysis:
- *International trade*: Many countries rely on imports to supplement domestic food production and to meet local demand. International trade has numerous implications for price formation as it links prices in the importing countries to world prices. Exporting may also influence domestic supply and ultimately prices. Other market features that the analysis can consider include logistic costs, tariff levels, and non-tariff trade measures.
- *Value chain specific regulations:* Certain food value chains are subject to regulation because of the impact that their production and consumption have on the environment. For example, fisheries are often regulated to prevent over-fishing and therefore ensure continuous future supply. The effect of these regulations on supply and prices must be explained by competition agencies as well as their implications for firm strategies.
- *Fiscal measures to support consumers or producers:* Subsidies to consumers or producers influence food affordability and the profitability of production. When there is a sudden increase in food inflation, governments may use fiscal measures such as Value-Added Tax or Sales Tax exemptions or rebates on important inputs (such as energy) to make food more affordable for consumers.

3.9. Presenting and sharing the analysis.

- Once the analysis is complete, the agency must determine how best to present and share findings. Typically, competition agencies have produced reports with their analysis and findings supported by data visualisation for important information. Reports have the benefit of being generally easy to access and share since most users will already have software for accessing them. Below are some tips for producing effective reports.

- *Using data visualisation:* Presenting numerical analysis in graphs allows readers to quickly and easily interpret the key findings of the analysis. This is particularly important for comparison over time or comparisons across firms and countries.
- *Plain language writing:* Competition agencies are staffed by lawyers and economists who are accustomed to writing for a specialized audience of decision-makers and jurors, who are comfortable with economic and legal concepts. While these may also be the audience for price monitoring studies, the nature of these reports attracts a wide range of potential readers. As such, writing should be accessible to outsiders from the field.

Box 4: Competition Bureau of Canada's note on writing.

For its 2023 Retail Grocery Market Study report, the Competition Bureau of Canada deliberately broke from its previous style for writing reports and chose to use plain language. The report included the following statement:

"This report uses language that is different from the Bureau's previous market study reports. Communicating clearly and accessibly with the public promotes transparency and accountability in the Bureau's work. It also encourages compliance with the law and promotes awareness of important issues which may impact consumers and businesses. The Bureau is committed to using plain and accessible language wherever possible."

- *Including industry perspectives:* Many firms publish periodic commentary on market conditions and the drivers of prices and their financial performance. These perspectives can provide important context or explanations for the findings of agency analysis. Including these perspectives allows readers to gain a deeper understanding of how these markets work, especially regarding emerging risks and challenges in a market.

3.10. Disseminate the price monitoring.

3.10.1. The full value of market monitoring depends on its messages reaching the correct actors in markets and society. Competition agencies have deployed various means to ensure wide reach for their work.

- *Make the reports publicly accessible:* Given the importance of food and agriculture markets, competition agencies should strive to make their reports publicly available and accessible. Accessibility extends beyond publishing the report but can include publishing translations in multiple languages where the context requires it, preparing social media summaries, and limiting the reliance on confidential information that cannot be shared.
- *Leveraging the media to spread the message:* Sending the report to the media and taking their questions can assist with getting key messages to the public and starting a debate in society. Where possible, competition agencies should consider making analysts available for media interviews and other engagements such as drafting articles based on the findings of the analysis.

Box 5: Philippine Competition Commission's media engagement on food markets.

The Philippine Competition Commission (PCC) has actively used social media and the press to share its findings on the state of food markets with the public. The PCC posted the following social media materials to promote its research outputs: i) Policy Note 2019-01 (NFA's Policy on Rice Importation: the Key Barrier to Competition); ii) Policy Note 2020-03 (Competition Issues in the Sugar Industry in the Philippines); iii) Issues Paper 2021-03 (Philippine Milk Products Industry); iv) Issues Paper 2021-02 (Philippine Fertilizer Industry).

The PCC has issued the following press releases and press statements in relation to competition concerns in agriculture and food markets; i) Competition lens eyed in Agri sector as PCC, Department of Agriculture (DA) pledge cooperation; ii) PCC probes on onion cartel allegations; iii) PCC Statement on alleged cold storage cartel in the onion industry.

- *Presenting to key stakeholders:* There are many potential stakeholders that may take interest in the findings of the price monitoring studies. These include industry associations, civil society, trade unions and other organizations. Where possible, competition agencies should consider presenting their findings to these stakeholder groups, especially where they include decision makers.