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Food price inflation and policy responses in Latin America: an assessment of the causes and impacts on local food value chains

This exploratory article focuses on the factors influencing recent food price inflation in Latin America. The onset of the pandemic has significantly heightened concerns regarding food price inflation. Quarantines, mobility restrictions, and uncertainty all occurring in quick succession have led to substantial disruptions in both local and global value chains. Furthermore, the Ukraine-Russia conflict has exacerbated the existing inflationary situation, introducing additional interruptions and disturbances to agribusiness value chains. Drawing upon empirical research, this article examines the impact of the SARS-CoV-2 pandemic and the subsequent Ukraine-Russia conflict on food price inflation in Latin America. It also assesses the policy measures implemented by countries and provides future projections in this regard. Regional food inflation processes have prompted concerns regarding the vulnerability of food security and the weakness of supply chains in the region. It is crucial to consider the relationship between these processes and the overall price level of the economy. The evidence indicates that food prices have experienced more pronounced increases compared to the rest of the economy, suggesting a surge in prices relative to other consumer goods. This has directly impacted agricultural producers and end consumers of food.

Keywords: Food price inflation, Latin America, pandemic, Ukraine-Russia conflict, food security, supply chains

JEL classification: Q11

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Introduction

In April 2023, Chile experienced an annual inflation rate of 10.5% for basic foodstuffs, and indications suggest that this rate will continue to rise in the coming months - reaching approximately 12% per year, before declining in the latter part of the year to around 9.0% per year by December 2023 (Castillo *et al.*, 2021b). This upward price trend is not unique to Chile, but rather a widespread phenomenon observed in most Latin American countries. The process began, on average, in the second quarter of 2020 and intensified significantly in March due to the impact of the Russia-Ukraine conflict (Aminetzah and Denis, 2021).

Initially, the higher food prices witnessed during 2020 and 2021 were attributed to supply-related factors, including logistical challenges that increased transportation costs and insufficient supply of goods, which did not keep pace with the heightened global demand as governments gradually lifted mobility restrictions imposed due to the pandemic (Albacete, 2021). Additionally, during the same period, the strong economic performance of the United States led to a sustained appreciation of the dollar in international markets, causing depreciation of most Latin American currencies and exacerbating domestic price hikes, particularly in emerging economies.

It was anticipated that the easing of pandemic-related mobility restrictions would normalise the supply chain by improving logistics and reducing transportation costs from production sources to various countries. This expectation fuelled the belief that inflation driven by supply factors would be transitory, resulting in a short-duration inflationary process (Cano *et al.*, 2021). However, this expectation did not fully materialise due to the outbreak of the Russia-Ukraine conflict, which was compounded by China's zero-COVID-19 policy. This situation not only led to a renewed surge in international food prices but also accelerated the inflationary process in Latin America. This persistence has been more easily trans-

mitted to other domestic prices, compelling several central banks in the region to expedite interest rate hikes.

In summary, the prevailing evidence indicates that most of the inflation observed in different Latin American economies stems from supply factors generated in the global economy as mobility increased post-COVID as well as due to the recent escalation in international oil, gas, and food prices triggered by the Russia-Ukraine conflict (Aldana Rosillo, 2022). This general assessment is equally applicable to the Chilean economy. Additionally, alongside these factors, there has been a significant and recent spike in international oil and food prices, which constitute new external shocks accounting for a substantial portion of the heightened inflation observed between March and April. This is because over 70% of the goods comprising the food price index are tradeable goods, and thus susceptible to international prices and the cost of raw materials used as inputs in the local industry.

This article is based on an empirical review of the effects of the SARS-CoV-2 pandemic and the subsequent Ukraine-Russia conflict on food price inflation in Latin America. In this context, an analysis of the current inflationary process in Chile is conducted to identify both domestic and external sources that account for the sustained increase in the inflation rate of the basic food basket since mid-2020. Lastly, the policies implemented by Latin American countries to address this phenomenon are presented, along with future projections in this area.

Drivers of food price inflation in Latin America and Chile

Latin America is currently experiencing a significant surge in food prices, which has become a matter of concern for both the public and government. Central banks in the

region attribute this inflationary phenomenon, with global implications, to the rise in international commodity prices, increasing energy sector prices, and the depreciation of domestic currencies against the dollar as the primary sources of external inflationary pressures (CEPAL, 2022). In line with this, the agricultural price index for the Latin American region, as reported by the Food and Agriculture Organisation of the United Nations (FAO), has consistently been on the rise since 2019. By the end of 2020, for the first time in the series, this index – which is linked to industrial or producer prices – reached 105 points. The upward trajectory of prices continued in January 2021, with the indicator averaging 125.7 points, and reaching 135.6 points in the last quarter of 2021. By March 2022, the index had risen to 159.7. At the close of 2022, the index shows that oils and vegetables led the relative index with 229.3 points, followed by cereals (173.4), dairy products (141.6), meat (122.0), and sugar (120.3).

According to the FAO, the increase in commodity prices can be attributed to the economic activity restrictions imposed in response to the SARS-CoV-2 pandemic, along with the subsequent recovery of the international economy starting from mid-2021. Additionally, the armed conflict between Russia and Ukraine, which began on February 24, 2022, has had a notable impact on the prices of oils and cereals (FAO, 2022a).

Turning to Chile, from a macroeconomic standpoint, attention is drawn to the increased liquidity resulting from various pension fund withdrawals approved by the Chilean parliament since 2020, as well as the recovery of economic activity following the lifting of mobility restrictions related to the SARS-CoV-2 pandemic (INE, 2022). Looking at the historical context, the annual variation of the Consumer Price Index (CPI) was 4.1% in 2015, which dropped to 2.3% in 2016. In 2017 and 2018, the variations were 1.9% and 1.6%, respectively (Figure 1). However, since the end of 2019, the trend of the Chilean index has reversed, with the effects of

sanitary restrictions on the food value chain becoming more pronounced from 2020 onward. By the end of that year, the CPI recorded a rate of 6.9%. In 2021, the rate closed at 4.8%, while in the first four months of 2022, the upward trend accelerated significantly, with a variation of 9.9%. During the last four months of 2022, prices increased by 3.2%. In summary, the inflation in the Chilean food segment between January 2020 and April 2022 amounted to 24.9%. Figure 1 provides a comparative analysis of the movement of the FAO agricultural price indicator for Latin America and Chilean food prices (CPI).

The reasons behind these trends can mainly be attributed to supply factors resulting from logistical issues that led to increased transportation costs and insufficient availability of inputs for the food industry between 2019 and 2021 (IPEA, 2022). Additionally, during the same period, there was a persistent strengthening of the dollar in global markets, which caused most currencies – particularly those of emerging economies, like those in Latin America, that heavily rely on external markets – to depreciate. This depreciation further fuelled the escalation of domestic food prices in these economies.

At the start of 2022, there was an expectation that the lifting of pandemic-related mobility restrictions would facilitate a normalisation process in the regional supply chain. This assumption was based on the belief that inflation resulting from supply factors would be temporary, leading to a short-lived inflationary period. However, the anticipated cost reduction has not materialised, as logistical problems and stock shortages persist. In this context, significant supply shocks, coupled with the war between Ukraine and Russia, resulted in a steady increase in international commodity and raw material prices during the latter half of 2022. Given the high susceptibility to international prices, this has triggered a cascade of inflationary processes in the domestic prices of tradeable goods, contributing to the continuous rise in monthly inflation rates across various Latin American economies.

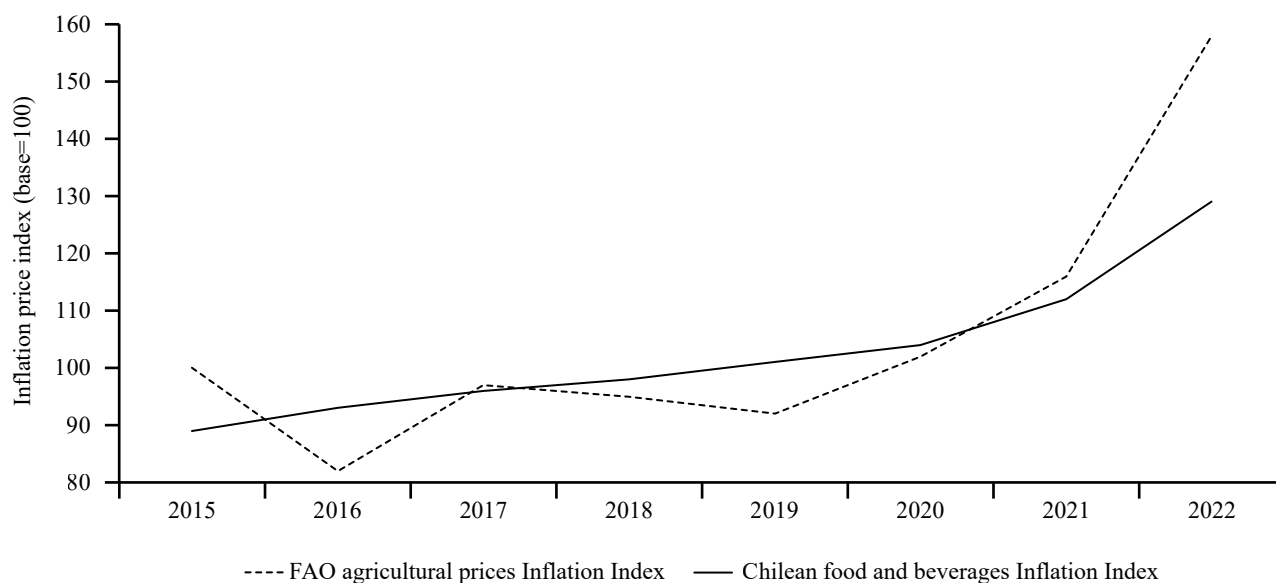


Figure 1: FAO monthly agricultural price index and Chilean food consumer index (2015-2022).

Source: FAOSTAT (2023) and National Statistics Institute of Chile (INE)

Post Covid-19 imbalances and the Russian-Ukraine war: their current effects on food prices

The COVID-19 pandemic followed by the war in Ukraine has created an international crisis, and it is crucial to analyse its effects in Latin America in the context of nearly two decades of external shocks. These shocks, although varying in magnitude and impact from country to country, have eroded the efficiency of agricultural markets, disrupted food supply and demand conditions, and particularly affected price formation processes (IIF, 2022). As depicted in Figure 1, the increase in food inflation as of March 2022 serves as a warning sign for the region's food security vulnerability. Several countries, including Colombia, Paraguay, Mexico, Chile, Brazil, and Uruguay, have experienced double-digit food inflation, despite their lack of recent chronic inflation history. These high figures can be primarily attributed to the transmission of elevated international prices of agricultural commodities (particularly cereals and oils) and raw materials associated with energy and maritime transport (FAO, 2022b). The food industry operates within a highly integrated production system, and persistent disruptions in maritime transportation, such as port congestion, long waiting times for ships, and rising freight rates, have exerted significant effects on the food price formation process due to the inherent vulnerability of logistic chains to external variables (Albacete, 2021).

Furthermore, there has been a widespread trend towards regionalisation, involving strategies such as reshoring, nearshoring, multi-country locations (multi-shoring), and choosing countries considered "friendly" (friend-shoring) to reduce external dependence on industrial inputs and food products (Cano *et al.*, 2020). From a macroeconomic perspective, the current expansionary monetary policies implemented to overcome the global health crisis have stimulated financial and stock markets. This expansion,

coupled with massive support measures to mitigate the economic and social effects of the pandemic, has contributed to the acceleration of food price increases. In this regard, food prices have risen at a faster rate than general inflation in most Latin American countries, negatively impacting not only the poor but also households in the middle and lower-middle income brackets (Castillo *et al.*, 2021a). This is because the proportion of income allocated to food increases as income decreases. According to Niño *et al.* (2022), if the relationship between the annual increase in food prices persists, the poorest quintile would face inflation rates 1.0 percentage point higher than the richest quintile. Similarly, the second and third quintiles would experience a difference of 0.9 and 0.6 percentage points, respectively.

The war in Ukraine has further exacerbated disruptions in key production chains within the food industry, stemming from reduced productive areas and fertiliser exports (Laborde and Mamun, 2022). Firstly, the destruction of agricultural production capacity in Ukraine and the disruption of grain and fertiliser trade with Russia have raised concerns about a potential global food crisis. This directly impacts the process of agricultural price formation in Latin America, particularly for cereals. In 2022, Russia and Ukraine accounted for 28% of global wheat exports, 15% of corn exports, and approximately 60% of sunflower oil exports. Due to the ongoing conflict, about one-third of crops and agricultural land in Ukraine cannot be harvested or cultivated this year, potentially resulting in the disappearance of around 26.4 million tons of wheat, corn, and barley from the markets. The impact could lead to a reduction of exports ranging from 19 million to 34 million tons (Peach, 2022). Secondly, it is estimated that in 2022, Latin American imports of nitrate and phosphate-based fertilisers were 88% sourced from Russia, along with 74% of ammonium nitrate purchases. The region has one of the lowest self-sufficiency rates for this input globally, surpassing only Oceania in this respect (Figure 2). The shortage of fertilis-

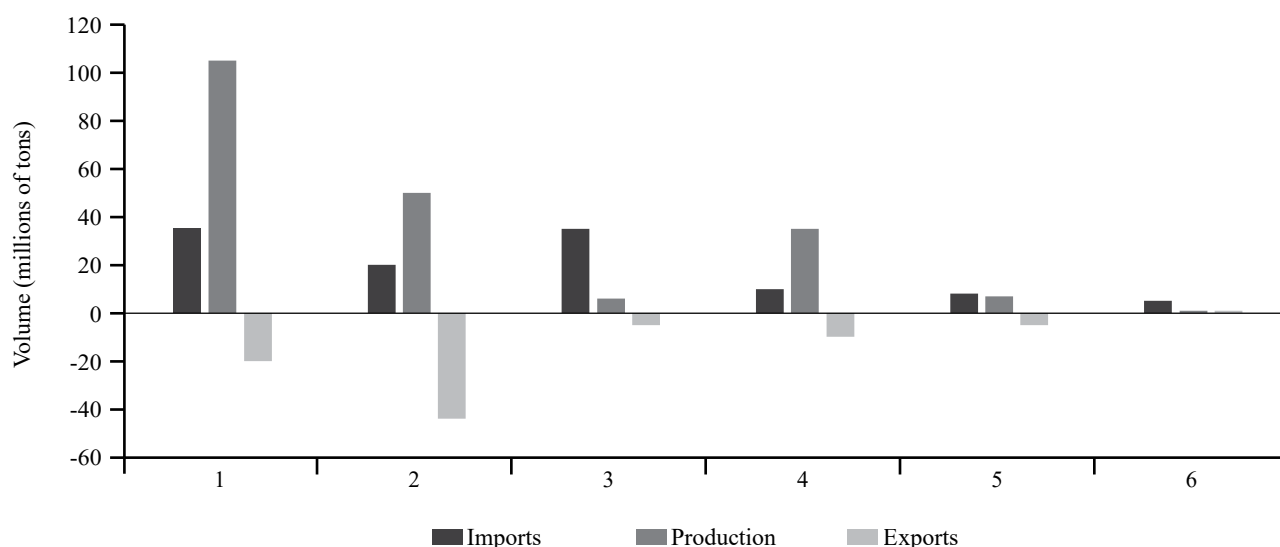


Figure 2: Fertiliser production, imports, and exports, by world region, 2022 (millions of tons).

Source: OECD (2023)

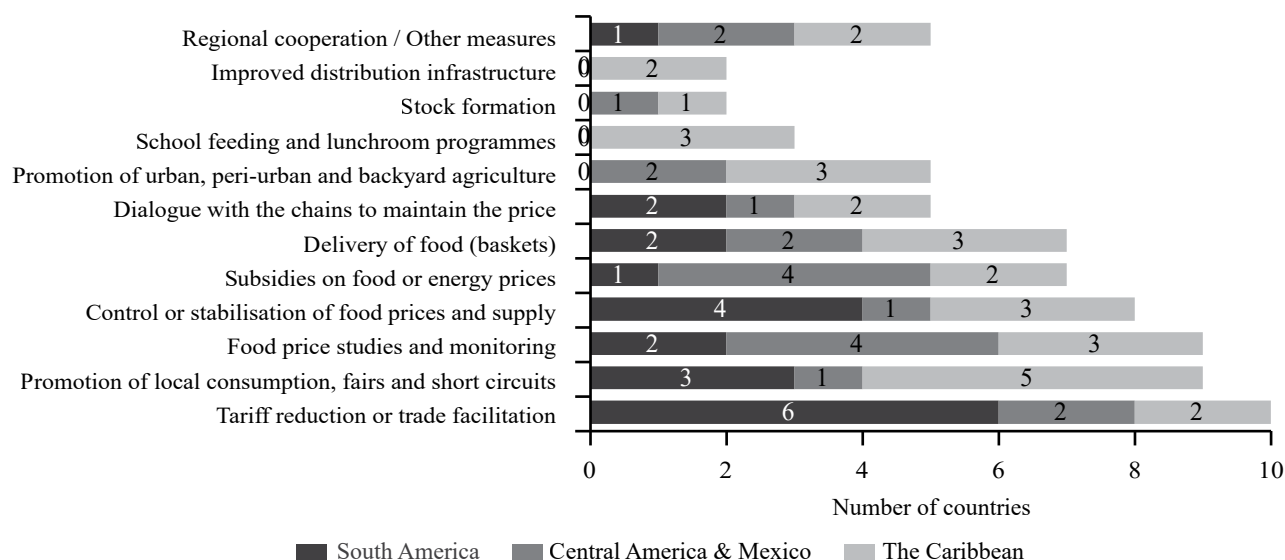


Figure 3. Countries in Latin America and the Caribbean that have implemented measures to address rising food prices, by subregion, January-December 2022.

Source: FAO (2023), ECLAC (2023).

ers significantly affects agricultural costs, with percentages of the total cost ranging from around 20% for crops like rice, potatoes, and sugarcane to 40% for yellow corn and coffee (Aldana Rosillo, 2022). This directly impacts food prices, creating a sustained upward pressure that persists to this day.

In general, the supply and demand imbalances that arose following the COVID-19 pandemic have had varied effects on food prices. The aforementioned factors have not only hindered the return of food price inflation to pre-pandemic levels but have also led to ongoing stabilisation or even acceleration processes.

The local characteristics of value chains and their connection with food price inflation

Local characteristics in relation to food price inflation in Latin America reveal a significant concentration of power in the processors-manufacturers segment and particularly in the retail market, dominated by supermarkets and formal wholesalers (USDA, 2021). This concentration reflects a form of “hierarchical market capitalism,” as described by Ross-Schneider (2013)¹, and is often associated with inflationary processes.

Analysing specific countries in the region, Brazil and Argentina demonstrate greater competition at both the processing and retail levels. As a result, the transmission of cost increases to final consumers lags behind the rise in interna-

tional prices of agricultural raw materials. However, in other Latin American countries, the increase in international food prices reinforces the upward trend in domestic prices that began in early 2020, and these price increases are quickly passed on to the end consumer.

Overall, given the concentration levels in the food processing and retail distribution markets, it is highly likely that upward shocks to food prices will persist in the face of an international inflationary scenario.

Regional/local and government/private sector policies implemented to deal with food price inflation

The war between Russia and Ukraine, coupled with the COVID-19 pandemic, must be understood within the context of the crises that have impacted the global economy over the past 15 years. These crises have disrupted global value chains and exerted pressure on food prices, contradicting the trend of globalisation observed in previous decades. Moreover, these crises have resulted in disruptions across various primary and manufacturing production chains, and the rise of protectionism has led to increased trade barriers. The vulnerabilities of supply chains to external changes have been exposed by disruptions in the maritime transport system. In response to these challenges, Latin American countries have implemented diverse measures.

Several countries have focused on reducing the cost of food imports through measures such as tariff reductions and trade facilitation (Rollen and Carter, 2022). Additionally, campaigns have been designed to promote the consumption of local foods, support local fairs and short supply chains, and establish effective systems for monitoring prices and food supply dynamics (Figure 3).

¹ The prevailing scheme in Latin America is characterised by concentrated domestic markets, where economic groups and multinational corporations hold dominant positions, but with low productivity. Additionally, there are a low-skilled labour force and fragmented labour relations. Within this context, hierarchical relations within economic groups and multinational corporations play a crucial role in capital and technology organisation in Latin America.

Caribbean countries have concentrated their efforts on implementing measures like price subsidies, providing fertilisers and other inputs, offering technical assistance, and supporting agroecological production. Central American countries and Mexico are prioritising support for the production and consumption of organic fertilisers, improving input efficiency, and enhancing agricultural insurance.

In South America, policy initiatives have centred around income transfers to farmers, tariff reductions, soft credits, price monitoring, multi-stakeholder roundtables, and support for domestic fertiliser production. At the country level, Argentina announced an increase of 50% in the cash transfer programme aimed at low-income families, facilitated through the *Tarjeta Alimentar* (“Food Card”). This increase was preceded by an extraordinary payment to cardholder families, varying from 9,000 to 18,000 pesos (approximately US\$76 to US\$153) based on the number of children in the household. The government also proposed a special payment of 12,000 pesos (US\$101) for retirees, pending congressional approval (Poy *et al.*, 2021). Brazil extended the *Auxílio Brasil* (“Help Brazil”) programme in May, which provides cash assistance to low-income families, covering 18 million households (8.5% of the total population). Alongside the extension, the minimum transfer amount was increased from 400 reais to 600 reais (US\$111) per month until December 2022 (PMA, 2020). Chile announced the expansion of cash transfers to recipients of the Sole Subsidy for Families (SUF, *Subsidio Único Familiar*) and Family Allowance (AF, *Asignación Familiar*) through the *Canasta Básica Protegida* (“Basic Household Goods Protection”) programme. This programme aims to reach over 3 million individuals (16% of the population) with an additional monthly payment of 6,410 pesos (US\$17) until the end of 2023, subject to adjustments based on the evolution of the price index of a basic basket of goods. Additionally, the Chilean government planned a gradual increase in the minimum wage starting from May 1, 2022. In Guyana, the government provided a one-time payment of G\$25,000 (equivalent to US\$120) to each of the 32,000 households in coastal and inland communities in May. They also announced the allocation of G\$1 billion (US\$4.8 million) for the purchase of fertiliser to distribute free of charge to farmers. The Dominican Republic has implemented various measures to help households cope with escalating inflation. This includes a 10% subsidy for basic food items (such as corn, wheat, soybeans, flour, and vegetable oil) announced in March. Moreover, under the terms of the *Programa Superate* (“Programme ‘Overcome’”) social protection strategy, the government plans to incorporate 300,000 new households into the nutrition component of the *Alimentate* (broadly, “Feed yourself”) cash transfer programme, aiming to reach approximately 1.65 million households by the end of 2022. The transfer amount will increase from 825 Dominican pesos to 1,650 Dominican pesos (US\$30) per month. Similarly, 400,000 new households will be included in the *Bono Gas* (“Natural Gas Subsidy”) component of the cash transfer programme, benefiting 1.4 million households with monthly payments increased from 228 Dominican pesos to 470 Dominican pesos (approximately US\$8.5) per household.

Outlook in terms of food prices in Latin America; perspectives for 2023/2024

In 2023, food value chains in Latin America face many challenges. The external context, characterised by a slow-down in economic activity and international trade even before the onset of the war, has been further complicated by the conflict between Russia and Ukraine, the persistence of COVID-19, and the rise in energy and food prices. These factors have made it even more difficult to restore the levels of efficiency seen before the pandemic.

As the severe impacts of the pandemic begin to subside, most Latin American countries have gradually begun to increase mobility, generating a strong demand for food. It is expected that by 2023/2024, there will be a normalisation of transport and logistical costs, which would help alleviate upward inflation pressures in almost all Latin American countries. Consequently, external factors are expected to become the main drivers of these inflationary processes. However, the conflict between Russia and Ukraine has emerged as an externality that has triggered price increases in raw materials and food, including oil, gas, cereals, and vegetable oils. As a result, inflationary processes, which had been showing a downward trend, have experienced a resurgence this year (FAO, 2022b).

Given the current circumstances, the rising prices of fertilisers are of particular concern. Globally, these prices have reached levels comparable to those observed in 2008, which contributed to the food crisis of 2007-2008. The potential impact of the war in Ukraine on the fertiliser market is particularly worrisome. Russia is one of the main global producers of fertilisers and a key supplier to many countries in the region. Therefore, close monitoring of the evolution of the war and its effects on the agricultural value chain, especially where these relate to the formation of food prices, is of the utmost importance.

Conclusions

The beginning of inflationary episode in the food segment in Latin America can be traced back to 2019, with the regional backdrop being characterised by the beginning of the first SARS-Cov-2 outbreaks and subsequently by the beginning of the containment measures in each of the countries. This situation resulted in disruptions in global value chains, creating pressures on food prices that went against the globalisation trend observed in previous decades. On the other hand, in the economic sectors, these crises led to various primary and manufacturing production chains fragmenting. An examination of the structure of food sector markets in Latin America reveals a greater oligopolistic concentration, or little competition, in the processor-manufacturer segment and, above all, in the supermarket retail market. This situation also triggers higher levels of inflation, since asymmetric structures or behaviour are generated along the value chains, limiting the capacity for arbitrage among the agents involved. Currently, this scenario has been reinforced by the

effect that the war between Russia and Ukraine has had on global food commodity prices. This conflict represents a new global disruption in supply chains and international trade. Both Ukraine and Russia are major producers and exporters of commodities such as cereals and vegetable oils, which are inputs to many everyday food preparations. Russia is also a key supplier of fertilisers globally. Thus, the conflict may generate a further acceleration in food inflation rates while slowing the pace of recovery. It will be very important to continue monitoring and evaluating the different policies applied by the countries as they attempt to face this situation and reduce the effect on consumers and participants in the value chain of the food industry in Latin America.

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