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ECONOMIC (UN)SUSTAINABILITY IN FOOD SUPPLY CHAINS – AN ANALYSIS OF LARGE RETAILERS' MARKUPS IN CROATIA

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ABSTRACT

The concept of corporate responsibility deals not only with environmental and social sustainability, but also with specific ethical issues of socio-economic sustainability. In this paper, we analyse the causes and the negative effects of unfair trade practises in food supply chains, which have a direct impact on the current inflationary trends. The food supply chains are a relevant source of recent inflationary trends in most countries. Therefore, we develop a case study model to detect the sources of inflation and the unsustainable market relationships between two most significant participants in food supply chains: 1) the small food producer and 2) large retailers. We examined the possible existence, nature and direction of unfair relationships between a small producer and large retailers that have inflationary consequences. The study analyses the relationship between the markups of large retailers and the final retail price for consumers compared to the prices of a small producer on a small market with high retail concentration (Croatia). The analysis of the product price structure in recent inflationary periods has shown that the small producer is in an unfair relationship with large retailers who, due to their size, impose a market model in which small producers and end consumers are negatively impacted, while large retailers add value to their markup and the final retail price of the product. These negative trends in food supply came into focus in 2022 and caught the attention of national legislators attempting to address this issue.

Keywords: *sustainability, food supply chain, small producer, large retailers, markups, inflation*

1. INTRODUCTION

The food supply chain is one of the most important industrial, economic, social and infrastructural global interdependencies. Sustainable cooperation and fair partnerships between all members in the food supply chain should create multiple positive synergies for all and prevent unfair trade practises and inflationary tendencies. Fair collaboration is the foundation for a sustainable global economy, consumer safety, the environment and the overall economic sustainability of the most sensitive members that drive the supply chain. The paradigm of Corporate Social Responsibility (CSR) in the food supply chain is challenged by the existence of ethical relationship between small food producers and large retailers i.e. big shops, supermarkets and hypermarkets (Maloni, Brown, 2006, Chkanikova, Mont, 2015, Freidberg 2017). Large food producers do not usually have this problem because they are also large in relation to the large retailers and can easier meet their operating policies. The extent to which small food producers are constantly on the brink of sustainability is demonstrated by the ever-increasing regulation in the sense of stricter control of relationships between the members in the food supply chain.

In this paper, we analyse the issues of economic (un)sustainability in the food supply chain by focusing on a small food producer supplying large retailers in Croatia. In recent years, it has been noted that small producers are at a disadvantage in relation to large retailers, who often make demands on small producers leading to issues of broader economic unsustainability such as inflation and unfair market practices. We defined the research question within the term of "economic sustainability" in regards to possible unfair market conditions that cause distortions in the food supply chain and burden the whole society. Inflation, logistics disorders and shortages jeopardise the socio-economic wellbeing. Very high retail markups which differ significantly from the original small producer supply price comes to attention. The markup is the value added to the cost price of a product supplied by a small producer to a large retailer, who then covers its overheads and profit from the difference in this value by pricing higher than the small producer. We analysed the structure of markups to determine whether large retailers are destroying sustainable elements of the food supply chain by setting unreasonable prices that encourage further inflationary trends. The objective of this research is to detect the specific issues of long-term (un)sustainability for stakeholders in the supply chain and to propose the solutions for possible unfair trade practices. This is recognised both at the individual EU Member States and EU institutions levels. In 2017, the Croatian Parliament adopted the *Act on the Prohibition of Unfair Trading Practises in the Food Supply Chain* (Official Gazette of the Republic of Croatia, No. 117/17, 52/21, 27/24). This act was later significantly amended to *Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practises in business-to-business relationships in the agricultural and food supply chain*. Since then, there have been few significant market impacts and structural changes due to Covid-19 and global inflation trends. The pandemic has made consumers accept fair and unfair prices, especially when it comes to food. Large retailers play a crucial role in the food supply chain globally and the current inflation is often attributed to them despite existing legal regulations.

In this paper we analyse the price inequalities in the food supply chain between large retailers and their small producer, who is also their supplier. A substantial part of the study deals with imposed costs that a large retailer imposes on the small producer to accept and resell its product in the retail shop. Later, the imposed costs become part of the annual bonus that the large retailer charges the small producer to resell its product. In this way, the large retailer controls the price and forces the small producer to work with it (due to high retail concentration), initiating a potentially unfair and unsustainable cooperation. Consequently, we analyse the possible inflation gaps between the prices of small producer and the markups of large retailers. The research hypotheses are formulated through two premises:

1. The economic fairness and sustainability of a small food producer working with large retailers is not guaranteed in practise, despite existing legal regulations and strict control of retail prices.
2. The legal prohibition of unfair trading practises has not prevented large retailers from devaluing the supply prices of small producer, nor has it prevented them from imposing additional costs during inflation periods.

Fair trade legislation is analysed through its impact on the supply prices and additional bonuses in relation to the supply/retail price of an individual product. Such an analysis is relevant for the current system of price fairness control implemented by the Croatian government due to the euro currency changeover. Our model examines whether the legislation and the government's actions have enabled more price fairness and curbed inflation in terms of markups by large retailers. A specific aspect of this study is the annual demand placed by large retailers on small producer to provide more bonuses – a situation where a small producer has to lower the supply price to large retailers to ensure their own "market survival". This is an important ethical issue as the large retailers demand annual lower (bonus) prices from the small producer for their products while the final price charged to consumer remains the same or even increases. This in turn increases the markups of large retailers and triggers further inflation for consumers. By analysing the above questions, we are dealing with economic (un)fairness as an ethical issue within the CSR paradigm that is strongly based on the sustainability principle.

2. LITERATURE REVIEW

The issue of fair markups in the retail sector has become a topic of socio-economic sustainability due to the current inflationary tendencies and the associated unfair trade practises. Equal sustainability of all participants in the economic supply chain is often neglected in terms of socially responsible behaviour. The concept of *"economic sustainability"* in this paper implies equal opportunities for all participants in the food supply chain to achieve a fair value for their products and services, and thus allowing them long-term economic activity and financial success (Ruiz-Real et al. 2019, Vadakkepatt et al. 2021). The concept of sustainability is appropriate because fair trade principles advocate positive financial and market impacts for all participants in the supply chain and therefore is intensively analysed from a CSR perspective. Brin & Nehme (2019), Caroll (1991), Elkington (1998), Freeman (2010), Correia

(2019), Jeronen (2020) conclude that economic theory in general has not recognised the importance of economic unfairness or unequal distribution of value in supply chains. That the issue of ensuring fair trade relations should be analysed through the CSR paradigm is argued by Nicholls (2002) and Petljak, Štulec & Zrnčević (2015) in their research focussing on consumers and trade in cocoa, bananas and other commodities from underdeveloped countries. Markou et al. (2020) find that unfair trade practises within the food supply chain in Cyprus have a significant impact on participants in food logistics and even on the environment. In this study, the aggrieved participants in the food supply chain were exposed to the effects of unfair trading practises for five years, resulting in a 32% decrease in their revenues.

CSR has advocated for high levels of justice and inclusion when it comes to social aspects of entrepreneurship (Rawls 1971). This approach is generously advocated by Nozick (1974), who argues against state interference in relations between economic actors in the market as long as they act according to the principle of free will. This approach does not take into account the real circumstances and existing gaps in the global economy, and thus may be viewed as utopian and as such has been criticised because not all market participants compete on the same ″playing field″. In the food supply chain, a dominant stakeholder can have an existential influence and control over a range of market products (Shaw, Shaw, 2019) which is not in line with the idea of a free market and leads to large market concentrations in food supply. Smith (2019) in a market study for the USA and Meinen and Raff (2018) in a study for the Danish market have found that direct imports by large retailers have a significant impact on market concentration. Smith & Diaz (2020) find that growth in retail concentration in the US is not accompanied by an increase in prices – meaning that growth in retail concentration does not have a negative impact on consumer purchasing power. However, high growth in retail concentration has a negative impact on domestic production in terms of market share and less favourable sales conditions. Linden (2016) attributes this to economies of scale and argues that one of the basic models for cost reductions is lower input prices that arise from large (bulk) purchases. Large purchases are the main feature of highly concentrated markets and dominant large retailers in the case of food supply. This allows large retailers to compete better in terms of price at the expense of their smaller producer/suppliers.

Fundamental analyses in this field interrelate the structure of retail markups with final profit margins. De Loecker, Eeckhout & Unger (2020) find that profit margins at large US retailers had increased significantly since the 1980s, to an annual level of 20% by 2016, when they even rose to 61%. This research shows that only a small number of large retailers experienced growth and high margins, while others did not experience margin growth and lost market share. This is confirmed in the study by Meinen & Raff (2018), which analyses how direct imports in retail provide cheaper inputs, which, in turn, contribute to increasing retail concentration with higher markups and growing retailer profitability. Anderson, Rebelo & Wong (2020) identified a positive growth trend in retail profit margins. Their calculations indicate a growth in markups of 2% in the 1980s and 3% in the 1990s. Koppenberg & Hirsch (2022) analysed the same problem for the EU Member States in the period from 2010 to 2018 and confirmed significant discrepancies in tracking retail markup growth. Swinnen, Olper &

Vandevelde (2019) show that unfair trade practises in the EU and unfair prices in the food supply chain are the result of growing market concentration. The intention of large retailers to increase their markups at the expense of small food producers in Croatia may cause new inflationary pressures, leading to economic unfairness in the food supply chain (Lukavac, Miljenović & Jakovac, 2023). Blizkovsky & Brendes (2017) introduce the concept of "economic injustice/unfairness" to indicate an unfair distribution of the added value generated in the food supply chain. The importance of this issue has been demonstrated through the EU Directive 2019/633 on unfair trading practises in the food supply chain. As an EU member state, Croatia implements this directive. With the previous national Act on the Prohibition of Unfair Trading Practises in the Food Supply Chain the Croatian government attempted to regulate relations between food producers and large retailers.

3. CONCEPTION OF THE ANALYSIS

The research methodology includes two types of primary data: 1) analysed business data from a small food producer and 2) an analysis of prices set by large retailers. A large retailer is a retailer with an annual turnover of more than EUR 6,636,140.42 according to the Croatian legislation on the prevention of unfair trading practises. The methodology is structured in such a way that its results realistically reflect the state of fair or unfair relations between small food producers and large retailers, while also verifying their responsibility towards other participants in the supply chain. Therefore, beside producer prices, retailers' markups and cooperation policies between those two were also analysed. The data on the small producer's product prices and imposed costs were collected from its accounting database in the period from 2015 to 2021. The retail prices were collected using a field method that included three series of scanning retail prices in stores during 2022 (before, between and after the second wave of price increase). Inflation data for these periods were collected from the Croatian Bureau of Statistics database.

In order to analyse the possible unfair elements in the relationships between a small producer and large retailers we divided our research data into two segments:

1. The data observed from a small producer and 11 large retailers for the period from 2015 to 2021 which includes: a) the average weighted offer price of the small producer, b) the proportion of imposed costs that are mandatory for small producers in relation to the segment turnover of the large retailers.

– The primary data consists of the total turnover and the quantities of a particular product sold by the small producer in the period from 2015 to 2021. We used the average producer's supply price, reduced by discounts, to determine the level of costs imposed to a small producer by large retailers. The small producer's supply prices data are aggregated and presented as an average value. The final supply price depends on the large retailers' total turnover in their business relation with the small producer. Discount prices of the small producer are analysed through all periods (7 years). Since the parity of the delivery of the individual product to certain large retailers was changed during the observed period, an adjustment was made to the total revenue for the difference in the delivery prices between direct sales and central warehouse delivery options.

Parity is an option of delivering a product from the producer to the retailers' central warehouse or directly to the store. Finally, the calculation is based on secondary data of average annual inflation (CBS, 2022).

2. The second segment of the research data represents the prices of a single product charged by a small producer (frozen food - potato noodles) and the markups added for this product by 7 large retailers during the inflation period of 2022. The prices were observed three times during the 2022 inflation period: 1) before the first wave of price increase, 2) between the two waves of price increase and 3) after the second wave of price increase. In this case, the retail price is calculated based on the level and evolution of the unweighted retail markup.

– In 2022, there were two cycles of product price increases by the small producer. As a result, the year 2022 is analysed based on data for large retailers with significant market shares in these periods. The first period includes April 2022, when the first wave of price increase began, and lasts until May and June 2022. The second period is between the two price increase waves, this is, mid-November to early December when the second price increase occurred. The third period is December 2022. The retail prices analysed were the retail prices valid in all three periods without discounts, always in the same shop format of a specific retailer. These formats divided by size and include:
  1. small stores (market store),
  2. middle size stores (supermarkets) and
  3. stores of the biggest format (hypermarkets).

The objective of the sales analysis and delivery prices for each large retailer in 2022 is to determine the level and the direction of the average (unweighted) markups. The unweighted value refers to the average value based on the sum of the trading markups of a single large retailer divided by the total number of included retailers (7). To calculation of the level of the average unweighted markup of large retailers is based on: 1) producer formal invoice price, 2) producer invoice price adjusted for imposed costs, and 3) producer invoice price adjusted for imposed costs which depend on the parity of direct shop delivery or central warehouse. This enabled to analyse the retail markups of the observed product from the frozen food range with the highest turnover.

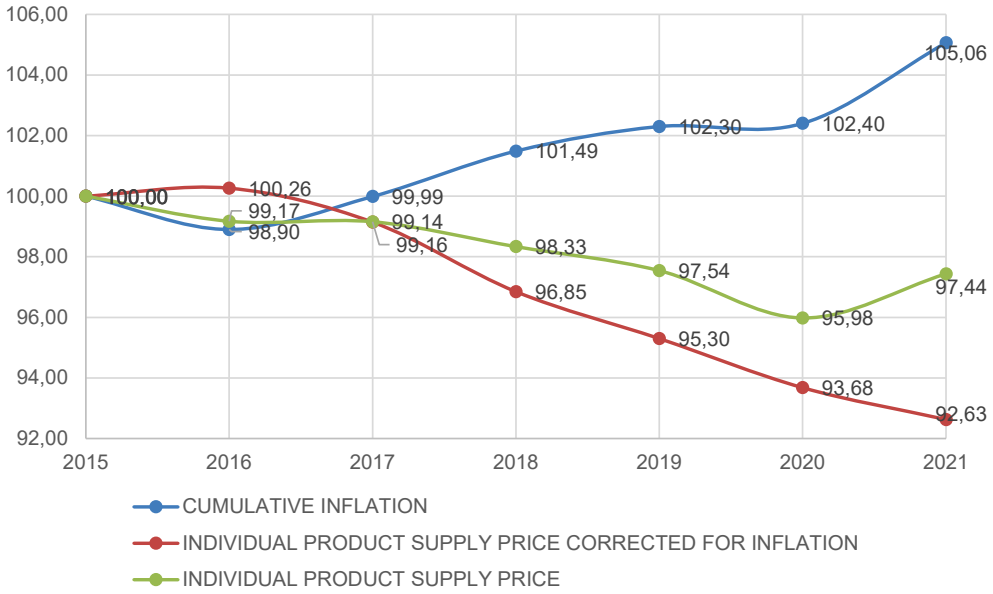
The relevance of imposed costs is seen in them being a part of the large retailers' bargaining power over a small producer. The small producer accepts this costs due to the fact that it uses the retailer's' store infrastructure. The analysis within this research considers the summaries of imposed costs as charges for financial management services like payment control (transfer of administrative costs from a large retailer to a small producer). Penalties for incorrect invoices and non-deliveries are not considered as imposed costs, as they represent the risk carried by small producers. In addition, the sum of intermediation costs, which are also imposed, include annual sales bonuses, assortment bonuses and bonuses for marketing services. Bonuses for marketing services are assessed as a "grey area" by the EU Directive (EUR-lex, 2019/633). The logistics cost is excluded from the imposed cost category since logistics represent a source of

non-competitiveness and a limiting factor for the presence of small food producers' products on the market.

4. EMPIRICAL DATA AND ANALYSIS

The first part of the research included 11 observations of large retailers with significant national and local market shares in Croatia (Figure 1 and 2). This number varies due to takeover trends in the retail sector which resulted in a smaller number of (larger) participants that cooperated with the small producer in the different times of the 7-year period. This time span is appropriate as it refers to the period before the national legislation banning unfair trading practises and after the implementation of the aforementioned EU Directive.

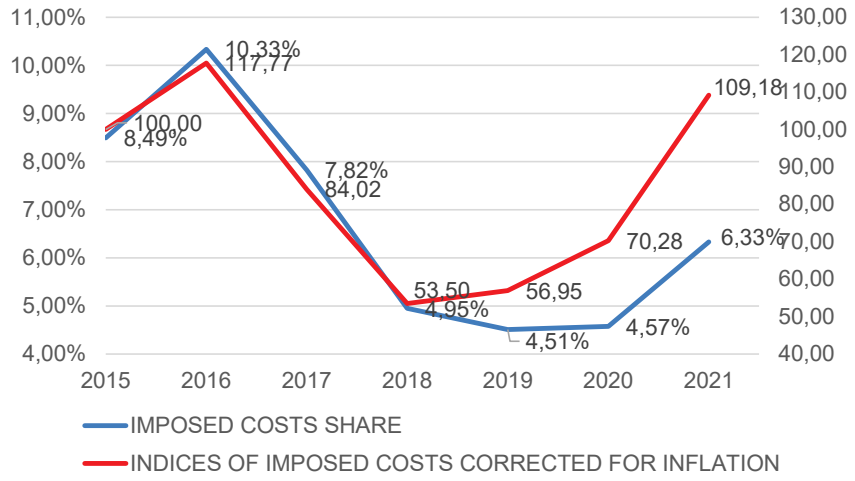
Figure 1. Indices of the small producer supply prices of the individual product and cumulative inflation (2015 – 2021, 2015 = base)



Source: Author's research

Figure 1 shows a decline in the real average weighted price of the small producer's product delivered to large retailers over the seven-year period (green line nominal value – red line real value). In 2021, this price for large retailers was 7.37% lower than in 2015, and 2.56% lower in nominal terms. Figure 1 shows that the small producer did not adjust the product's price over this long period of time, regardless the inflationary trends (blue line is cumulative inflation index). This allowed for the small producer's real price to decrease in the given period, which resulted in an unfair treatment of its market product value in comparison to the large retailers' price which remained the same. Figure 1 shows that the nominal price of the small producer increased in 2021 compared to the previous year 2020 (green line) as a result of increasing prices of raw materials and logistics due to Covid-19.

Figure 2. Inflation-adjusted indices of imposed costs and share of segment revenue (2015 - 2021, 2015 = base)



Source: Author's research

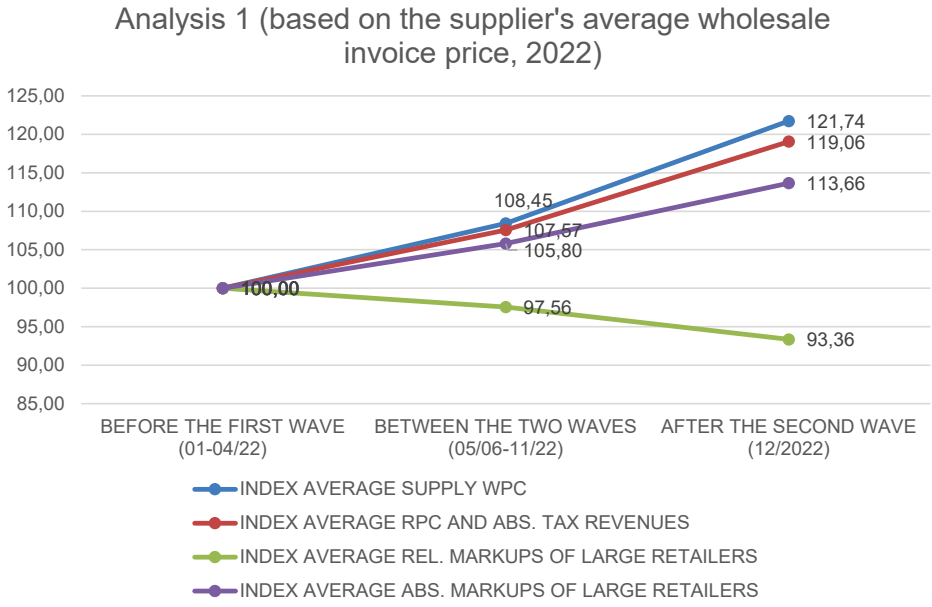
Figure 2 shows that the costs imposed on the small producer for placing its products with large retailers peaked in 2016, when they accounted for more than 10% of the segment revenue generated by the observed small producer. Due to the fact that the regulation of unfair trading practises was introduced in 2017, it can be concluded that it led to a decline in the inflation-adjusted level of costs imposed by large retailers on the small producer. However, the decline was only temporary, as imposed costs rose again in absolute terms in 2019 and were 9.18% higher in real terms in 2021 compared to 2015, i.e. before the adoption of the legislation to improve the position of small producers in the food supply chain. The share of imposed costs in the business relationship with large retailers showed an increase again, although at a lower growth rate. These data show that devaluing the position of small producer through imposed costs is not the predominant behavioural pattern of all large retailers, but of some that do so systematically.

The following four diagrams serve to analyse the behaviour of the participants in the food supply chain (the small producer, 7 large retailers, and the state) in 2022, the year characterised by significant inflationary trends. All charts show two waves of product price increases initiated by the small producer due to higher input costs, due to Covid-19 and the war in Ukraine. The primary data collection in 2022 shows that the prices on the market changed before and after the small producer's initiative to change prices, even though the small producer has no influence on setting the final retail price for the consumer. In this case, the retailer has the right to self-determination of the retail price and the prohibition of all vertical agreements under the *Competition Act* (Official Gazette of the Republic of Croatia, No. 79/09, 80/13, 41/21 and 153/23). We consider the price to be structured as follows:

1. input costs + producer markup,
2. logistic costs + costs imposed by large retailers,

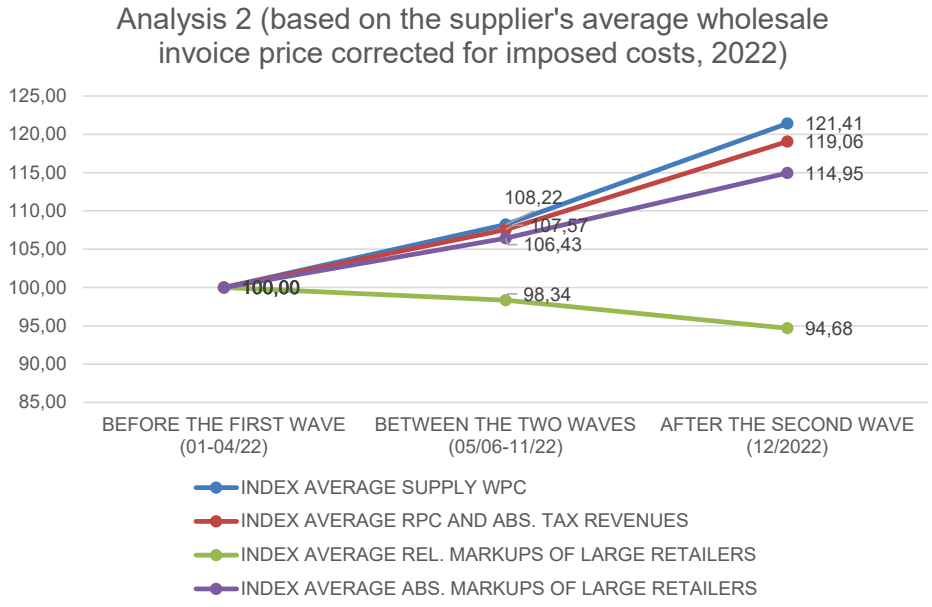
3. large retailer's markup (direct store delivery),
4. VAT.

Figure 3. Trends in the large retailers' retail prices and trade markups (Analysis 1)



Source: Author's research

Figure 4. Trends in the large retailers' retail prices and trade markups (Analysis 2)



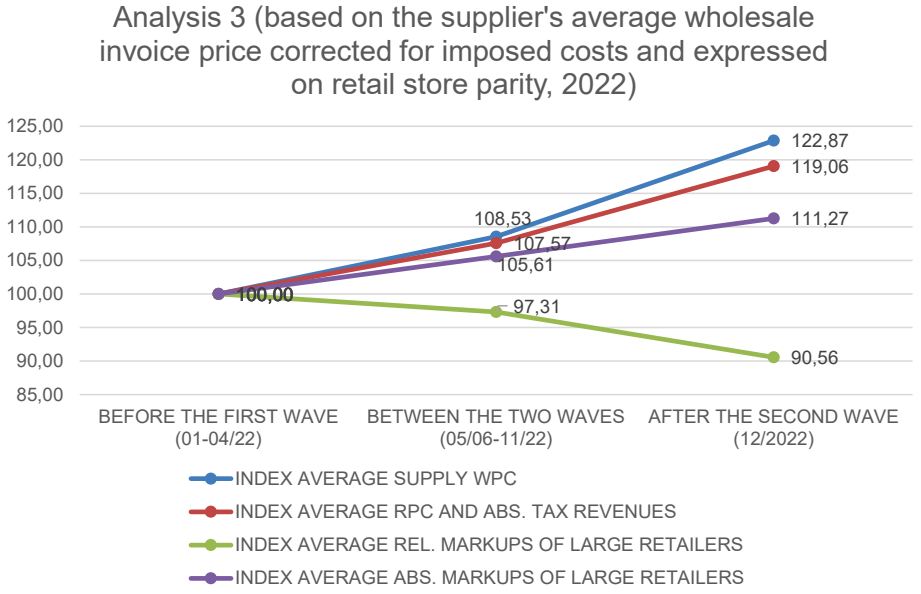
Source: Author's research

In the situation illustrated in Figure 5 below, the invoice price is adjusted for the costs imposed to the small producer by large retailers but also for the retail parity, which means that the small producer is a link in the chain that, in this case, assumes a large part of the additional costs. These are primarily costs of logistics and increased energy prices in the observed period considering that a frozen food product is analysed.

In the analysis of large retailers' markups within the two price increase waves during 2022, the customary prices of logistic services (parity)[1] paid by the small producer for delivery services to the retailers were calculated at parity according to the following:

1. HRK 2.00/kg, i.e. EUR 0.27/kg before the first wave of price increase,
2. HRK 2.26/kg, i.e. EUR 0.30/kg between the two waves and
3. HRK 3.00/kg, i.e. EUR 0.40/kg after the second wave of price increase.

Figure 5. Trends in the large retailers' retail prices and trade markups (Analysis 3)



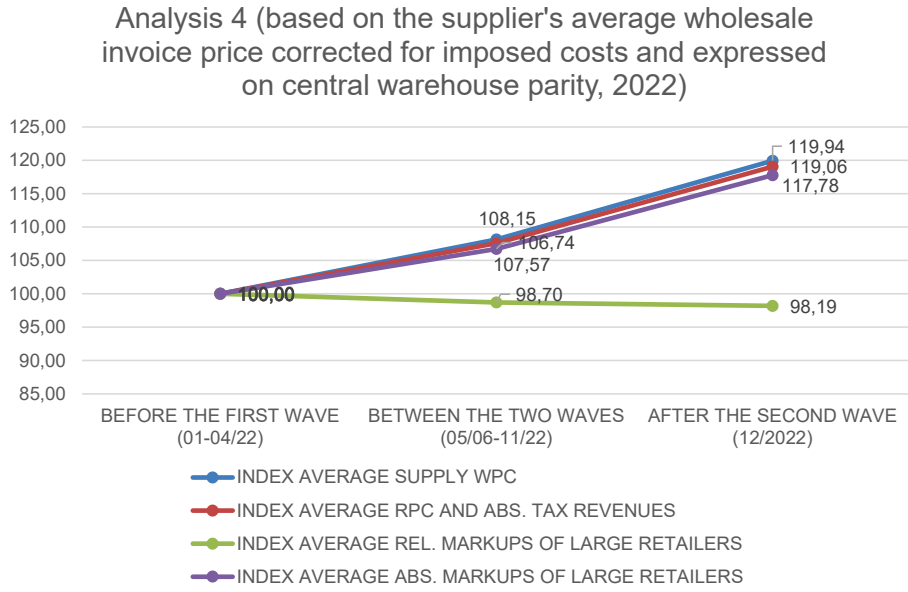
Source: Author's research

The small producer business conduct confirmed that it can almost never combine its deliveries via the central warehouse with deliveries directly to store (parity). This can be improved by implementing the circular logistics model between retailers and small producers to optimise logistics costs (Lukavac, Miljenović 2022). Depending on these two types of product delivery, we have adjusted the prices to the delivery parities for the provision of logistics services. Since this is the only manner in which to ensure a small producer's products market presence, the fee for providing logistics services is not considered as an imposed cost.

[1] A small producer can use either the logistics service of a large retailer or external services to deliver its product to the retail store.

During the inflation waves, the producer-initiated supply price increase in the first wave was 8.15% – 8.53%, while the cumulative supply price increase, in both waves, was 19.94% – 22.87% (Figure 5 and Figure 6 joint data). Regardless of the methodology, there was a decrease in the relative markups of the large retailers from 1.81% to 9.44% with a simultaneous increase in absolute markups of at least 11.27% (Figure 5). The large fluctuation in the relative retailer markups is the result of a significant increase in logistics costs in the frozen food sector.

Figure 6. Trends in the large retailers' retail prices and trade markups (Analysis 4)

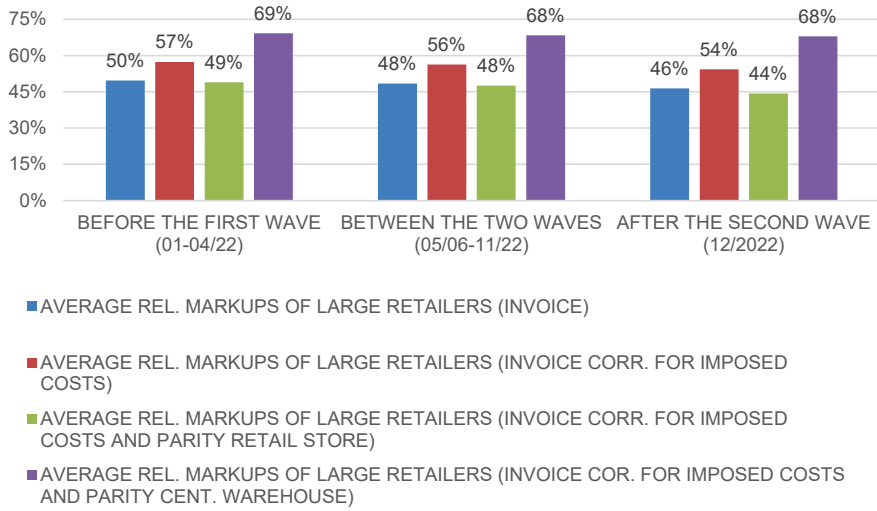


Source: Author's research

When the supply price of a small producer is related to the parity of the central warehouse of large retailers, as shown in Figure 6, the smallest decrease in relative markups and, consequently, the largest absolute increase in markup levels is observed. This trend is justified when one considers that at central warehouse parity, a significant portion of logistics costs are transferred from the small producer to large retailers. This happened at a time when logistics services, as a business segment, experienced the highest price increases due to higher energy prices (autumn 2022).

The data provided indicate how the pressure from large retailers is being passed on to the small producer, which responded with a significant price increase in 2022 in order to maintain its economic position in the supply chain (impact of energy and raw materials crisis). The large retailers have slightly reduced their overall relative markups but increased their absolute markups from 11.27% to 17.78% (Figures 5 and 6). At the same time, the government has increased its absolute budget revenue by 19.06% (Figures 3, 4, 5 and 6) based on the price increase per unit sold. This indicates a relative retail price increase paid by end consumers (7.57% after the first wave, 19.06% cumulative after the second).

Figure 7. Size of large retailers' trade markups in the three observed periods (percentage points)



Source: Author's research

Finally, Figure 7 shows that the large retailers' markups had fallen from 1 percentage point to up to 5 percentage points. By analysing the trade markups of large retailers in 2022, it may be concluded that they were, in overall, extremely high (minimum 44%, maximum 69%). The smallest decline in the markups of large retailers is detected at the price level adjusted for imposed costs and the central warehouse parity. This is due to the significant increase in logistics costs. On the one hand, it should be noted that the largest national retailers work with the small producer on the principle of delivery to the large retailer's central warehouse. On the other hand, local retailers with a significant market share at local level tend to work exclusively with the direct store delivery model. The difference in the level of the relative unweighted markups of the large retailers is significantly dependent on the parity.

5. RESULSTS AND DISCUSSION

The results of the provided analysis address multiple issues of fair pricing, inflationary trends and logistical efficiency in large-scale food supply and retail. The case study of a small producer dealing with large retailers revealed the sources of the ongoing inflation. The large retailer model of markup determination in relation to a small producer's prices shows the intention of some large retailers to circumvent the legal aspects related to the prohibition of unfair trading practises. This takes the form of constant pressure from large retailers to lower the small producer's prices or to impose on them additional costs. This was demonstrated by the analysis of the weighted average price of a small producer's product delivered to large retailers and the analysis of the costs imposed in relation to the segment revenue. It is confirmed that large retailers, while nominally respecting unfair trading practises, have developed a model of imposed costs on small producers in which large retailers determine the final retail price

of the product. In this way, the large retailers set in motion further inflationary trends. Such business behaviour in the long-term endangers social and economic sustainability of small producers. Some large retailers had no negative impact on the sustainability of the analysed food producer prior to the adoption of the regulation prohibiting unfair market practices, and there was no significant decrease in the average weighted price in the period from 2016 to 2018. On the contrary, during this period, the amount and proportion of costs imposed by large retailers decreased significantly before gradually increasing again. The results confirm the research hypothesis: the legal ban on unfair trading practises has neither prevented large retailers from devaluing the product prices of small producers nor has it prevented them from imposing additional costs.

In terms of retail prices, it was found that an individual product in a local market store of a large retailer operating in the region cost up to 14.66% less at the end of 2022 than the maximum price found when observing a hypermarket of a large retailer with a nationwide presence. The above makes it clear that the problem of high inflation in 2022, which continued in the first half of 2023, is not only due to the obvious increase in the prices of energy sources and raw materials, but also due to the economically unsustainable situation of producers in relation to large retailers at national level. Therefore, it is certainly necessary to accept the hypothesis that the trade markups of large retailers are high and exceed 60%, given that the level of large retailers' markups still depends on the imposed costs and the supply parity. The results of this study are consistent with the findings of De Loecker et al. (2020) in part where the highest markups are not achieved by all retailers in their aggregate analysis, but only by those who had increased their market share. In the specific case, it is evident that the small producer was forced to drastically increase prices due to supply conditions that can be characterised as economically unsustainable in the long term (Figure 1 of the empirical analysis). In the case of a one-off price increase, the small producer is forced to expect a future price devaluation, at least in the short term. This research provided an explanation for the high inflationary tendencies as a consequence of existing unfairness in the food supply chain. This unfairness is defined as socio-economic unsustainability of small producers under the conditions of low supply prices, high trade markups by large retailers, significant logistics costs and finally the high VAT, which is still 25% for most food products in Croatia.

As the research also included the period of the euro currency introduction, it analyses its impact on retail prices. The average unweighted markups of large retailers decreased in 2022, and, according to the aggregated data, the retailers did not increase prices unjustifiably before the changeover from HRK to EUR. The government's policy in the given period included shifting responsibility for the price increase entirely to large retailers. A closer analysis shows that the government's interference in the food value chain, especially through high taxes, was an aggravating factor for the market sustainability of domestic products. These products, as the one we analysed in this paper, are characterised by their distinctiveness, higher quality and price, which do not lend themselves to achieving economies of scale in the small domestic market. A high VAT sometimes makes products too expensive in relation to disposable income, regardless of their differentiation, which reduces their consumption. Unfortunately,

in the observed periods, the government did not refrain from at least a portion of tax revenue on most food products to maintain stable consumption and economic sustainability in the food supply chain. Instead, the government focused only on monitoring retail prices. This approach also puts pressure on producers and jeopardises their position in influencing supply terms with the large retailers. The large retailers in this situation are not willing to accept price increases as they strive to maintain their high trading markups (just like the government, which does not question its budget revenues). It should also be pointed out that it is not enough to monitor just the retail prices and to be satisfied that the prices are not increasing, but that it is also necessary to monitor the general conditions of supply and imposed costs. The research shows that the lowering of small producer prices only devaluated its position in the supply chain and did not lead to a reduction in the retail price paid by the end consumer.

The 2022 inflation was often attributed to the expansionary monetary policy and government measures during the Covid-19 pandemic, but these factors delayed the critical moment of price increases to a maximum. For the small producer in our case, the low financing costs and the partial co-financing of labour costs, through the Covid-19 job retention measure, meant further acceptance of the large retailers terms of business. This was the reason why the small producer did not react by raising its prices, especially in the HoReCa[2] segment (tourism) during the peak of the pandemic (2020-2021). For this reason, it is not surprising that the average annual inflation slowed down significantly in 2020. A tighter monetary policy and the cessation of the co-financing of labour costs to protect jobs allowed supply prices to rise, while, at the same time, the production calculations by small producers had not been economically sustainable. An additional wave of inflation was triggered by the conflict in Ukraine, which, in combination with the above-mentioned effects, led to an extremely high price increase in 2022. However, government regulations have not prevented the initial switch from gross to net prices, nor the continuous reduction of supply prices directly through the invoice or through higher imposed costs. Instead of focusing on improving communication with the producers and eliminating intensive costs, large retailers concentrated on activities that are more visible to the end consumer. The government's strict monitoring of retail prices during the changeover to the euro currency did not have a major impact on inflation. The main cause of inflation are not the unjustified price increases by large retailers during the currency changeover in Croatia, but the unsustainable relationship model between small producers and large retailers, where large retailers exert pressure on small producers. The government's monitoring was not aimed at comparing the direction of supply and sales prices, which could demotivate individual large retailers in the process of continuously devaluing the market position of small producers.

Despite providing valuable insights into the economic (un)sustainability of small food producers within a concentrated retail market, this study has several limitations. First, the research is based on a case study of a single small producer and a limited number of large retailers in Croatia (11). Therefore, the conclusions of the study are based on the proposition

[2] Hotel, Restaurant, and Café

that large retailer's terms of cooperation are standard for all the other small producers. This limitation arises from the confidentiality of business relationships of the specific small producer with certain large retailers, which is why the results in this paper are presented in aggregate. Second, the study relies on aggregated business data and imposed costs reported by the small producer. Although the methodology ensures transparency in assessing markup structures, certain cost components and contract conditions between retailers and producers remain confidential, limiting the ability to conduct a fully disaggregated analysis. Access to more detailed financial and contractual data from retailers would allow for a more precise evaluation of cost distributions and pricing mechanisms. Addressing these limitations through expanded datasets, improved access to retail pricing policies, and comparative studies across different regulatory environments would contribute to a more comprehensive understanding of economic sustainability in the food supply chain.

6. CONCLUSION

This study provides empirical evidence on the economic (un)sustainability of small food producer within the highly concentrated retail market of Croatia. By analysing the markups structure of large retailers and their imposed costs on a small producer, the research confirms that unfair trading practices persist despite legal regulations intended to prevent them. The findings indicate that large retailers leverage their dominant market position to impose additional costs on small producers while maintaining high absolute markups, which contributes to inflationary pressures and distorts fair market competition.

One of the key conclusions is that legal measures prohibiting unfair trading practices have not been effective in ensuring a fair distribution of value within the food supply chain. Large retailers have adapted to these regulations by introducing alternative imposed costs, thereby circumventing the intent of the legislation. This undermines the economic sustainability of small producers, forcing them to either lower their supply prices or absorb additional financial burdens, ultimately threatening their long-term economic sustainability.

The study also highlights the broader economic consequences of these practices, particularly in the context of inflationary trends in 2022. The analysis shows that, during periods of price volatility, large retailers did not significantly reduce their relative markups but, instead, increased absolute markups, leading to higher consumer prices. This suggests that inflation in the food supply chain is not solely driven by external factors, such as global energy crises and raw material costs, but also by structural imbalances in the market power between small producers and large retailers.

Given these findings, the study contributes to the broader discourse on economic sustainability and corporate social responsibility (CSR). It emphasizes the need for stronger enforcement mechanisms and policy adjustments to ensure fairer pricing structures. A potential policy recommendation is the introduction of more transparent supply chain regulations that address imposed costs directly, along with incentives for small producers to strengthen their market position through cooperative models or direct-to-consumer sales channels. A more

correct distribution of the added value created in the food supply chain should be achieved through effective legislation banning unfair trading practises and through short-term fiscal measures, i.e. a reduction in VAT. This will allow small producers to inevitably increase their revenues as they are caught in the impasse of rising costs and limited resources on the one hand and pressure from large retailers on the other.

Future research should expand the analysis to a larger dataset covering multiple product categories and geographical markets. Additionally, investigating the role of government fiscal policies — such as VAT reductions on essential food items — could provide further insights into mitigating economic inequalities in the food supply chain. A comparative analysis of retail market structures in other EU countries could also offer valuable policy benchmarks. Finally, external factors such as government intervention, fiscal policies (e.g., VAT rates), and global supply chain disruptions also influence food pricing dynamics. This study primarily examines the retailer-producer relationship and external shocks of Covid-19 and the Ukraine war. Therefore, future research may integrate different macroeconomic variables, depending on the country, to understand how external shocks impact the pricing power and market fairness.

Ultimately, ensuring a more equitable and sustainable food supply chain requires a multi-faceted approach that includes stricter enforcement of fair trade laws, enhanced producer-retailer collaboration, and economic policies that support small-scale food producers against disproportionate market pressures.

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EKONOMSKA (NE)ODRŽIVOST U LANCIMA OPSKRBE HRANOM – ANALIZA MARŽI VELIKIH TRGOVAČKIH LANACA U HRVATSKOJ

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SAŽETAK

Koncept društvene odgovornosti poduzeća ne bavi se isključivo okolišnim i društvenim aspektima već i etičkim pitanjima koja prate socio-ekonomsku održivost. U ovom radu analiziraju se uzroci i negativni učinci nepoštenih trgovačkih praksi u lancu opskrbe prehrambenim proizvodima, a koji imaju izravan učinak na aktualne inflatorne trendove. Lanci opskrbe hranom značajan su izvor nedavnih inflacijskih kretanja u većini zemalja. U ovom radu je primijenjena metoda studije slučaja kako bi se utvrdili izvori inflacije i neodrživih tržišnih praksi između dva značajna sudionika u lancu opskrbe hranom: 1) malog dobavljača i 2) velikih maloprodajnih lanaca. U modelu se istražuje prisutnost, sadržaj i smjer mogućih nepoštenih trgovačkih praksi između malog proizvođača i velikih maloprodajnih lanaca, a koji za posljedicu imaju inflaciju. Istraživanje je usmjereno na razlike u maržama velikih maloprodajnih lanaca i cijena za kupce u odnosu na dobavne cijene malog proizvođača na malom tržištu sa visokom koncentracijom (primjer Hrvatske). Analiza strukture cijene proizvoda u nedavnom infatornom razdoblju potvrdila je kako je mali proizvođač u nepoštenom odnosu prema velikim maloprodajnim lancima koji mu veličinom nameću poslovni model u kojem mali proizvođač i potrošači snose negativne učinke dok veliki maloprodavači povećavaju marže i cijene proizvoda. Ovakvi negativni trendovi su tijekom 2022. godine postali predmetom antiinflacijskih mjera Vlade i djelovanja zakona za njihovo sprječavanje.

Ključne riječi: *održivost, lanac opskrbe hranom, mali proizvođač, velike trgovine, marža, inflacija*