

## **The Impact of the COVID-19 Pandemic and the Military Conflict in Ukraine on the Business Behavior of Agro-Food Producers in the South-East Area of Romania – Empirical Research**

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### **Abstract**

The COVID-19 pandemic and the war from Ukraine have caused many significant changes in people's behavior, especially regarding agro-food products. This article investigates how these two crises have affected the business behavior of farmers whose activity is producing agro-food products. The article was initiated due to the pressing need for knowledge and understanding of how the manifestation of the effects of two different crises, a medical crisis, and a military crisis, directly or indirectly disrupted, hindered, and affected the production process of agro-food products in Romania, a country that was severely affected by the COVID-19 pandemic and the war from Ukraine. This research is crucial in providing insights into the impact of these crises on agro-food production. The research method employed in this article is the focus group. This is a widely accepted and effective qualitative research method. It facilitates generating new ideas and perspectives from the information gathered, which are valuable to researchers in various fields, including marketing. The article is structured into five parts, each contributing to a comprehensive understanding of the topic. The conclusions drawn from this research provide valuable insights, particularly for marketers, aiding in their strategic decision-making and enhancing their understanding of the crisis impacts on agro-food production.

**Keywords:** Behaviour; Romania; COVID-19; war from Ukraine.

**JEL classification:** M31.

### **Introduction**

The years 2020 and 2022 can be categorized as pivotal years in the history of the world, as they marked the onset of two extreme crises that significantly altered people's lives and behavior to varying degrees. The first crisis, which started in 2020, was the COVID-19 pandemic (March 2020 – May 2023). It produced suffering, fear, and death through its medical, economic, and social effects (Cranfield, 2020; Donthu and Gustafsson, 2020).

The second crisis was and is an ongoing military conflict or war started by Russia against Ukraine, which began in 2022. Like its predecessor, the COVID-19 pandemic, the Russian-Ukrainian war has generated similar consequences, causing suffering, fear, and death (Tong, 2024). Although the manifestation of the COVID-19 pandemic and war from Ukraine, two different crises, it is interesting that they had comune consequences.

One of the consequences of this commune was manifest in the production of agro-food products (Ben Hassen and El Bilali, 2022; Braun et al., 2023; Lin et al., 2023) because from this reason appeared the need to study and understand the behavior of people who produce agro-food products when one or two crises with distinct characteristics occur individually or simultaneously.

Understanding how the COVID-19 pandemic and the war from Ukraine have changed the behavior of food producers is a priority for protecting people and ensuring their right to life. This is also necessary and useful for the realization and initiation of initiatives that make the production of agro-food products economically profitable for producers while at the same time protecting consumers from excessive price increases for the agro-food products.

The present research aims to capture the business behavior of agro-food producers from Romania (Brăila County – South Est Region) during the COVID-19 pandemic (March 2020-May 2023) and the war from Ukraine (February 2022-August 2023). Romanian agro-food producers were chosen as subjects, which is not a coincidence. Romania's perspective is broad because the country on the edge of the European Union is in a process of change and political maturation. It's essential to remember that Romania, which shares a common land and sea border with the country under attack, Ukraine, was once part of the former communist bloc. This meant it had close political and economic ties with the aggressor, Russia.

The research on the business behavior of agro-food producers in Romania materialized by setting up a focus group. The focus group is a complex and appropriate research method for studying people's behavior. As for the research sections, after this introduction follows a section summarizing aspects related to the impact of the COVID-19 pandemic and the war from Ukraine on society and the production of agro-food products; then follows the section where the methodology used is found, and another section containing the results obtained. The final part of the research, the last section, concludes with some conclusions that can be drawn from the existing data, along with a presentation of the research's limitations and a suggestion for future research that can be prepared based on it.

## **1. The impact of the COVID-19 pandemic and the war from Ukraine on agro-food products**

Over time, the frequency and severity of medical crises, such as epidemics or pandemics, have increased in direct proportion to society's degree of development. This can be easily observed by examining the economic, social, or political effects that emerged and manifested at the regional or global level in response to the medical crises caused, especially since the 20th century (Wang et al., 2024). Thus, the Spanish flu epidemic (1918-1919), the Asian flu (1957-1959), the Hong Kong flu (1968-1970), the Severe Acute Respiratory Syndrome-SARS (2002-2003), the swine flu epidemic (2009-2010 ) or the Middle East Respiratory Syndrome-MERS epidemic (2015-2018) (Jernigan, 2023; Phillips, 2020), demonstrated that the damage produced by a medical crisis is much more significant when society is more developed. Also, globalization has been a key factor in the rapid spread and impact of medical emergencies.

The outbreak of the COVID-19 pandemic in March 2020 set new records in terms of the number of adverse effects produced by a medical crisis in society. Even if it did not result in the highest number of victims compared to other medical crises throughout history, the COVID-19 pandemic has significantly altered our societal fabric, creating more serious economic, social, and political problems than previous medical crises (Sharif et al., 2020; Tison et al., 2020; Umar et al., 2021).

Viewed strictly from an economic perspective, the COVID-19 pandemic has introduced a level of uncertainty that has impacted numerous markets and critical areas. The uncertainty, coupled with rising production and distribution costs, induced panic, the creation of false needs, and unprecedented price volatility of essential commodities, including agro-food products, all contribute to the complexity of the situation (Adewopo et al., 2021; Umar et al., 2021).

Consumers and producers of agro-food products observed all the effects that appeared, including the significant disruption of the agro-food supply chain and the global food system, which inevitably led to high economic and social instability during that period (Urak et al., 2024). When the situation generated by the COVID-19 pandemic, vis-à-vis agro-food products seemed to be somewhat calm, and when it was starting to be relatively predictable, it broke out in February 2022 at the borders of the European Union and on the territory of one of the safest continents in the world, Europe, a war between Russia and Ukraine.

The reasons that led Russia's leaders to initiate a military crisis are incomprehensible. Still, the fact that Kyiv was directly attacked by missiles sent by Moscow's soldiers made the already existing problems generated by the COVID-19 pandemic not diminish but amplify and expand. These consequences have also led to new imbalances in various other fields, including agro-food production (Chang et al., 2020; Urak et al., 2022).

In the case of the COVID-19 pandemic, the production of agro-food products was affected because the human resources involved in the production and transportation processes encountered a series of problems generated by travel restrictions and protective measures imposed to minimize the spread of the SARS-CoV-2 virus (Loske, 2020). The situation was significantly altered in the context created by the outbreak of the war in Ukraine. As a result of the destruction of critical infrastructure for agro-food production, the conversion of agricultural lands into battlefields (Abay et al., 2023), and the significant enlistment of human resources into the army, the agro-food products, their producers, and consumers have suffered substantial losses, highlighting the human cost of the conflict (Urak et al., 2024).

Similar to what happened during the COVID-19 pandemic and the war from Ukraine, the supply chain of agro-food products and the global food system was affected by the actual unfolding of the military conflict and the political and economic sanctions imposed on Russia (Ben Hassen and El Bilali, 2022; Hosoe, 2023; Husain, 2022). Although the sanctions were intended to impact only Russia, their consequences also extended to countries with strong trade relations with it (Jagtap et al., 2022). All the measures taken to destabilize Russia's economy and society led to an increase in the prices of agricultural and food products, as well as many other goods. For example, in February 2022, a ton of wheat costs \$281; a month later, it costs \$490, representing a 57.34% increase (World Bank, 2022). This means that the price of wheat on international exchanges rose more than 50% from February 2022 to March 2022.

What is worse is that the economic effects will not subside or stabilize quickly, as was the case with the COVID-19 pandemic. Some researchers' predictions, such as those by Chishti et al. (2023), Lin et al. (2023), and Xu et al. (2023), suggest that the consequences of the war in Ukraine on the price of agricultural products are more gloomy and pessimistic than those experienced during the COVID-19 pandemic.

They argue that the military crisis in Ukraine, given the role played by the two countries as major producers of agricultural products, is a key factor in the increase in the value of agro-food prices on global markets. The situation is expected to stabilize only when the war ends, underscoring the urgency of the problem (Abay et al., 2023; Jagtap et al., 2022; Urak et al., 2024).

## 2. Research methodology

A focus group is a qualitative research method put into practice through a discussion led by a moderator on a specific topic. The discussion aims to obtain the most truthful and high-quality information; therefore, it involves a well-defined production process, as outlined in a conversation guide and facilitated by a moderator (Cătoiș et al., 2009).

As for the aspects related to the actual organization of the focus group, such as the place, duration, number of participants, and date, only the number of participants and the duration are known; the rest (date and place) are determined by the organizers and communicated to the participants in advance (Cătoiș et al., 2009). Thus, between 8 and 12 people who are considered respondents can participate in a focus group. Respondents are selected through an appeal process facilitated by a selection questionnaire, ensuring a fair and transparent selection process. Additionally, the actual duration of the research varies between 60 and 180 minutes, depending on the complexity of the subject and the number of respondents (Cătoiș et al., 2009).

Participation in a focus group is a voluntary and respected activity. While remuneration is sometimes offered, it is always at the discretion of the focus group organizers (Cătoi et al., 2009). Given the distinct characteristics of the crises generated by the COVID-19 pandemic and the war from Ukraine and the fact that both occurred simultaneously for a period (February 2022 – May 2023), these critical events are notable in terms of their common consequences for those who experienced them.

One of the common consequences of both crises is the impact on the business behavior of individuals who produce agro-food products. The purpose of the research is to investigate how the two crises have impacted the business behavior of individuals who produce agro-food products, also known as "farmers."

Thus, the actual objectives of the research are the following, see Table 1.

**Table 1: The research objectives**

<b>The objective number</b>	<b>The content of the objective</b>
<b>Objective 1:</b>	observing how producers of agro-food products perceive a crisis
<b>Objective 2:</b>	obtaining general and specific information about the impact of the COVID-19 crisis on their activity in agro-food production
<b>Objective 3:</b>	obtaining general and specific information about the impact that the military conflict in Ukraine has had on their activity in agro-food production
<b>Objective 4:</b>	identification of crisis prevention and management measures based on previous experience

Source: author's own research

To carry out this research according to the proposed purpose and objectives, participants needed to be farmers, specifically producers of agro-food products.

Depending on the type of activity performed, farmers can be of three types: 1) *farmers who cultivate cereals, legumes for grains, oleaginous plants, tuberculiferous plants etc.*; 2) *farmers dealing with the cultivation of vegetables, fruits, and vines or horticulturists*; 3) *farmers who raise and breed animals to produce meat, milk, or other products that require raw material meat or milk.*

The research analyzed the opinions of two of the three existing categories of farmers. Thus, the focus group consisted of farmers who are in charge of cultivating cereals, legumes, grains, oil plants, and tuberculiferous plants, as well as those responsible for raising and breeding animals to produce meat. The farmers participating in the research were based in Romania, specifically in Brăila County, located in the country's southeastern region.

The recruitment process for participants in the research began with the distribution of a selection questionnaire through an announcement posted on social networks. The role of the selection questionnaire is to sort the registered people according to specific predetermined criteria (age, sex, occupation, etc.) specific to the subject being treated and the proposed objectives and to exclude people who have already participated in research similar in the last 6 months (Cătoi et al., 2009).

After the appeal procedure was completed, the persons who met the established requirements were contacted by phone and/or by e-mail, and other information of interest (place, time, date, approximate duration) was sent to them. Eight farmers, aged 26 to 38 years old, participated in the research. All had higher education, with 6 being agronomic engineers and 2 having another specialization.

All participants are involved in the production of agro-food products. Seven of them are exclusively focused on agricultural activities, while one participant stands out for their versatility. This participant is engaged in both the agricultural and zootenic sectors, cultivating

cereals, oleaginous plants, and technical payments, as well as breeding animals for milk and meat.

The eight participants own the land that forms the agricultural holding of their farms, and the area of agricultural land within the holdings they manage ranges from 20 to 145 hectares. All farms are geographically located in Brăila County. The focus group topic aims to study motivation and the factors that determine consumer behavior, representing one of the themes that a focus group can cover (Cojocaru, 2010:47).

Regarding the research period, it took place in August 2023. The data obtained was the subject of a thematic analysis and content analysis. Additionally, no specialized software was used for data analysis, as the volume of data was relatively small.

Regarding the stages in the data analysis process, it is worth noting that there is no well-established formula for analyzing data (Patton, 2002: 431), as the approach ultimately depends on the researcher. However, even if this particularity exists, the data analysis was conducted through the following steps: *(a) transcription of the data, (b) coding of mixed data, (c) thematic organization, and (d) interpretation of the results.*

### 2.1. Focus group conversation guide

A focus group is a collaborative process that requires implementing a well-defined process outlined in a special document prepared by the research author, known as a conversation guide (Cătoi et al., 2009).

The conversation guide, a critical tool in the research process, is designed to keep the discussion focused on the established topic for as long as possible. This is to ensure the fulfillment of the proposed goal and objectives (Cătoi et al., 2009).

The conversation guide (see Table 2) includes a total of 12 questions that the moderator asks the research participants.

**Table 2: The questions of the focus group**

Question number	The content of the question
Question 1:	Please introduce yourself and describe your professional role and responsibilities.
Question 2:	When you hear the word "crisis", what do you think of from the perspective of the activity you carry out?
Question 3:	Do you consider that the crises generated by the COVID-19 pandemic and the Ukraine military conflict have significantly changed how you conduct your business?
Question 4:	At this moment, after the COVID-19 pandemic has been declared officially over by the World Health Organization, how do you relate to this disease? Does it still affect your work?
Question 5:	What do you think about the military conflict going on in the neighboring country, Ukraine? What does this crisis inspire you from the point of view of the operation of your business?
Question 6:	What were the most significant challenges you faced during the COVID-19 pandemic and the military conflict in Ukraine, and how did these crises impact your business?
Question 7:	Do you feel that you are also facing other crisis situations, such as the lack of labor in agriculture, climate change, and the various political crises that are happening in our country? If so, how does it affect you?
Question 8:	What preventive measures against future crises will you adopt based on your previous experience, the COVID-19 pandemic, and what you are still going through, the military conflict in Ukraine?
Question 9:	Do you think that today, if crisis situations similar to the COVID-19 pandemic and the military conflict in Ukraine arise, you will handle them differently than you did in previous cases?



<b>Question 10:</b>	As entrepreneurs who play a crucial role in sustaining life, how do you view the support you've received from the Government of Romania and the European Union?
<b>Question 11:</b>	The behavior adopted by you, especially when the pandemic broke out and when the war from Ukraine started or when the other crises caused by these two events started (the fuel price crisis, the electricity price crisis, the food price crisis, etc.) was it expected or was it influenced by fear, anxiety, dread, insecurity?
<b>Question 12:</b>	How do you rate your response today in terms of your behavior towards the crisis you have faced? What would you change and why?
<i>The moderator makes a summary of the answers received to the questions asked. The discussion moderator asks for feedback from respondents about this meeting and invites participants to contribute to improving the research by contributing information about what participants would do differently if they were the moderators.</i>	

Source: author's own research

The 12 questions of the focus group were explicitly designed to keep the discussion focused on the proposed topic, fulfill the set objectives, and facilitate a smooth transition from general to specific questions. They also play a crucial role in managing the research duration and respondent patience, ensuring the most appropriate approach. The division of questions, their roles, and the types of questions used are presented in Table 3.

**Table 3: Details about the research questions**

Question number	Question role	Question type
<b>Question 1</b>	The opening question that "breaks the ice";	In this research all questions are open questions
<b>Question 2</b>	The introductory question that introduces the topic of the discussion;	
<b>Question 3</b> <b>Question 4</b> <b>Question 5</b>	This group of three questions was the transition questions; that is, through them, the moderator led the discussion to the key topic that the focus group was dealing with;	
<b>Question 6</b> <b>Question 7</b> <b>Question 8</b> <b>Question 9</b> <b>Question 10</b> <b>Question 11</b>	These six questions were the key research questions;	
<b>Question 12</b>	The closing research question	

Source: author's own research

It should be noted that before the questions were asked and the focus group began, the research moderator introduced himself to the participants and provided them with all the details of this scientific approach, as well as the rules that such an activity entail.

### 3. The Results Obtained – Their Analysis And Interpretation

The results obtained from the research participants' answers to the focus group moderator's questions are of great interest and provide an interesting perspective on the subject under analysis. Thus:

1) Respondents view a crisis not only as an event that triggers economic problems but also as a window of opportunity within their activities.

More specifically, they believe that economic problems are associated with the increase in the production cost of their products, which leads to a corresponding rise in the selling price of the products, resulting in various price increases. They consider that all these economic changes are caused by financial blockages and/or blockages that appear within the actual activity, blockages generated by uncertainty, and the state of fear in people's minds specific to such moments.

Moreover, respondents see crises as more than just challenges. They believe that if managed and speculated correctly, a crisis can create a favorable environment for economic growth.

2) Regarding the consequences generated by the emergence and outbreak of the COVID-19 pandemic (March 2020-May 2023), the respondents identified three major problems, namely:

- **bureaucratic problems** from the lockdown period (March-May 2020) of the COVID-19 pandemic imposed in Romania by the authorities;

- **the medical problems** caused by the SARS-CoV-2 disease affecting human resources working in farms or the logistics sector;

- **economic problems**, such as the considerable fluctuation and instability of the prices of inputs and other materials used in the actual activity; the fluctuation of the marketing prices of the production obtained.

Regarding the consequences generated by the emergence and outbreak of the war from Ukraine, the respondents identified a significant problem, namely:

- the economic problem is generated by the increased prices of inputs and other materials used in the activity (fuels, fertilizers, spare parts, etc.) and by the decreased selling price of the treated finished product.

3) Regarding the interconnection of the COVID-19 pandemic, the war from Ukraine, and the crisis caused by climate change, all participants in the focus group stated that the drought (resulting from climate change) also contributed to changing their business behavior as producers of agro-food products. They had to invest more financial resources to produce the agro-food products. They had to adapt their crop rotation and the technology used in the production process to the effects on the agricultural land, the plants, and the production conditions (such as dry areas or irrigable or non-irrigable areas).

4) Regarding the evaluation of the behavior shown by the respondents in moments of crisis, they consider that the experiences they had following the COVID-19 crisis and the military conflict in Ukraine (2022-present) were beneficial because, in the future, they will know to some extent measure how to approach such situations. Moreover, they have also created a specific protection measures plan.

Regarding the identification of preventive measures against the future emergence of new health and/or military crises based on the experiences gained, the participants in the focus group specified a series of measures by which they can defend themselves against such events.

In this sense, the creation of a reserve fund for such situations, making a more efficient plan to optimize the final costs for obtaining the finished product, making stocks for more extended periods (6-8 months) of inputs or other necessary materials (fuels, fertilizers, spare parts and various consumables) in carrying out the activity; updating the information and

consulting the indications provided by the Romanian Government and the European Union, are the most important and fast safety measures that can be adopted and implemented.

The focus group results show how the behavior of the research participants as agri-food producers in the southeastern area of Romania varied when the medical crisis caused by the COVID-19 pandemic and the military crisis caused by the war in Ukraine began. Their varied behavior generated different adaptation strategies, which can be explained by the Stress and Adaptation Theory proposed by Lazarus and Folkman (1984).

Thus, in the primary evaluation stage, the research participants perceived these two crises as threats that could cause losses or problems, particularly from an economic perspective. Subsequently, in the secondary evaluation stage, the research participants observed that the two crises could also bring them financial opportunities, as well as a unique experience that will be very useful in the future when such situations arise.

### **Research conclusions**

Following the qualitative research, the main conclusions that can be drawn show us some fascinating aspects. After experiencing the individual and/or simultaneous manifestation of the COVID-19 pandemic and the war in Ukraine, the participants, as farmers and business managers, are aware of the impact that a crisis can have.

The participants also identified the primary sectors that are affected and that make it difficult for them to operate their businesses optimally, both economically and in terms of the production process, during crises such as medical crises and military conflicts.

At the same time, the farmers specified precisely the causes of their behavior change, fear, and uncertainty, so they knew what could cause them to make mistakes and behave irrationally. Last but not least, they identified problems that need to be improved both individually and collectively (legislative issues or bureaucratic deadlocks), as well as the fact that moments of crisis can also represent opportunities for improvement.

### **Research limitations and future research**

No research is 100% perfect, and it has certain limitations that contribute to its imperfections. However, this does not mean that the present scientific endeavor is not relevant or worth considering. Instead, it means that there are still areas for improvement, and in the future, researchers conducting such studies must take them into account.

As for the actual limitations of the present research that used a focus group, they are the following: the generalization of the information obtained due to the small selected sample; the constraints caused by the selection of participants (it was complicated to find farmers willing to participate in such research for personal reasons); limitations related to the organization, duration, and logistics of the activity; the limitations related to the interaction within the group (the more extroverted respondents answered much more easily) and the limitations associated with the risk of confirming the opinion of one participant to the opinion of another (the respondents may adopt and use answers, attitudes or opinions similar to those stated, even if I think and see things differently).

Future research based on the results of this study may include quantitative studies on extended samples, longitudinal analyses, comparative studies between consumer segments, case study-type analyses, research using methods such as eye-tracking or biometric analyses, or in-depth qualitative analyses.

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