
THE ECONOMIC IMPACT OF THE COVID-19 PANDEMIC IN AGRICULTURE SECTOR OF ROMANIA

Alexandru Octavian Pangratie

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania"
Timisoara, Romania, alexpangratie@yahoo.com

Andreea Lidia Jurjescu

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania"
Timisoara, Romania, andreealidia19@gmail.com

Nicoleta Mateoc-Sîrb

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania"
Timisoara, Romania, mateocnicol@yahoo.com

Abstract: This scientific article is based on the information from the Romanian National Statistics Institute (NSI) which conducted a statistical survey addressed to the managers of enterprises in manufacturing, construction, retail, and services regarding their perception of the prospect of the evolution of the activity of the enterprise they lead during the coronavirus pandemic. The results of the study highlight important aspects such as: the negative impact was higher in April, 2020, compared to the previous month. In the retail sector, the impact of the COVID-19 epidemic on the volume of activity is close to the average for the entire economy, although statistical research was carried out before decisions on the closure of commercial establishments other than food or pharmacy. Thus, the share of economic operators who could not estimate the impact of the epidemic on the volume of activity increased from 20.7% in March to 32.6% in April 2020, reducing the share of economic operators who estimated a maintenance or an impact of up to 50% of the volume of activity. Among the economic operators in the sector that were able to estimate a development for the volume of activity in April 2020, a share of 21.6% envisaged the closure or restriction of the activity by more than 25% compared to 22.1% in March 2020. In the hotels and restaurant sector, the impact of the COVID-19 epidemic was dominated by the same uncertainty in the estimation of future developments and the forecast for total business closure. Thus, of the total economic operators included in the statistical research, a share of 11.7% in March and 27.8% in April 2020 could not estimate the evolution of the volume of activity. The doubling of the share of economic operators with an uncertain view of business was mainly caused by the change in the vision of those who estimated either the closure of their business (a difference of 5.1 pp in April compared to March 2020) or a restriction of more than 50% in the volume of activity (difference of 6.1 pp in April compared to March 2020). Of the economic operators in the sector who were able to make an estimate of the impact of the COVID-19 epidemic on the volume of activity in April, 95.4% foresaw a restriction of activity of more than 25% or closure, compared to 92.9% in March 2020. During this period, consumers all over Romania obviously changed their behaviour during the pandemic. Rising unemployment, staff working from home, people who avoided driving, restaurants and hotels closed by military ordinances adopted by the Romanian Government, children who stayed at home from school and the inadmissibility of frequent food purchases caused the alteration of many agro-food products, which caused significant damage to the owners. Under these conditions, demand also decreased because of greater uncertainty, increased cautionary behaviour, restraint efforts and increased financial costs that reduced the ability to spend. In view of these aspects, the authors of this article suggest some solutions to support agricultural producers. In this respect, in order to support agricultural producers and farmers in the next period, it is important to develop some storage facilities such as agricultural goods reception facilities, where agricultural producers can make use of their products without having to retail. Another measure would be to open up food markets in larger open areas, while ensuring appropriate infrastructure in order to maintain the consumer quality of products and taking into account the need to ensure the food safety of the population.

Keywords: COVID-19 pandemic, economic impact, agriculture.

1. INTRODUCTION

For the beginning, we chose the topic of the COVID-19 pandemic, how this affects Romanian agriculture, as well as Romanian agricultural producers, and the impact of the virus on the economic environment of Romania in March and April 2020. This disease and its continuous spread being actually the most important problem of the moment, a phenomenon which the entire planet is facing.

Why did I choose to study how this pandemic affects agriculture? The answer is very simple. I thought that is belonging to our field of future activity and is being a topic of interest to the entire population. Addressing this topic

is an opportunity to bring in the people attention of all these issues that we face but which we not pay for them enough attention. How we can avoid the food crisis and prevent it from the beginning. The indisputable negative effects generated by the COVID-19 pandemic phenomenon are felt directly on the level of tax revenue receipts, determining significant distortions in the mechanisms of functioning of the market.

2. MATERIALS AND METHODS

As a working method, in order to prepare the article we used the analysis and case study, we looked for the latest statistical information of the National Institute of Statistics, namely the assessment of the impact of COVID - 19 on the economic environment in March and April 2020.

The information was obtained as a result of statistical research addressed to the managers of enterprises in the manufacturing industry, constructions, retail trade and services in Romania, which follows their perception regarding the perspective of the evolution of the enterprise activity they lead in the conditions of COVID-19 pandemic.

The sample consisted of 8831 economic agents, a number being statistically representative, at the level of economic sectors and total economy in Romania. The response rate was 71.3%. For the evaluation of the economic impact of COVID-19 pandemic, were used the managers' responses, as well as the turnover of enterprises between January 2019 - January 2020.

The available information is used to estimate the evolution of the volume of activities in the economy between March and April 2020, compared to: 1. the months corresponding to the previous year (2019); 2. January 2020; 3. the monthly average turnover for the period January 2019 - January 2020. In the realization of this article was also used "Turnover in retail trade in April 2020".

3. RESULTS

One of the highlights of the statistical research conducted to assess the impact of the COVID-19 epidemic on the volume of economic activity is the high level of the uncertainty about the future of business between March and April 2020 and its increase in April compared to March 2020.

Thus, if in March 2020 a share of 21.2% of economic agents could not estimate the way of how their business will evolve, in April their share increased to 34.3%. The increase is mainly due to the reduction in the share of economic operators who did not foresee a reduction in economic activity from 12.9% in March 2020 to 6.4% in April 2020 and the share of economic agents who estimate a reduction in the volume of activity with up to 25% from 14.3% in March 2020 to 7.7% in April 2020.

Considering the share of non-responses of 28.6%, both in March and April 2020, it results that more than 50% of economic agents in March and 62.9% in April cannot estimate the evolution of the volume of their activity. On the other hand, the statistical research demonstrates the tendency of aggravation of the impact of the COVID-19 epidemic on the volume of activity of the economic agents that could estimate the magnitude of the activity restriction, with the increase of the time horizon for which the estimates are made. Thus, the share of economic agents that did not provide for a reduction of activity decreases by 8.6% in April 2020 compared to the level of 26.1% in the previous month, while the share of those who estimated a reduction of the activity of up to 25% decreases by 7.8% in April compared to 28.7% in March 2020. At the same time, the share of those whose activity shrinks by more than 25% increases from 33.3% in March 2020 to 45.0% in April 2020, and regarding the activity closure rate increases from 9.8% in March 2020 to 13.8% in April 2020.

For appreciate these assessments, it should be borne in mind that the questionnaire was addressed to economic operators in the period between 17 and 19 March 2020, before the application of other measures to combat COVID-19.[9]

We will focus a little on the retail sector and in the hotels and restaurants sector.

In the retail sector, the impact of the COVID-19 pandemic on the volume of activity is close to the average for the economy, although statistical research was carried out before decisions on the closure of businesses other than those for food or pharmacies. Thus, the share of economic agents that could not estimate the impact of the pandemic on the volume of activity increased from 20.7% in March to 32.6% in April 2020, by reducing the share of economic agents that estimated a maintenance or an impact of up to 50 % of activity volume. Among the economic agents in the sector that could estimate the evolution in the volume of activity in April 2020, a share of 21.6% provided for the closure or reduction of the activity by more than 25% compared to 22.1% in March 2020.

In the hotel and restaurants sectors, the impact of the COVID-19 epidemic is dominated by the same uncertainty in estimating future developments and the forecast for total closure of activity. Thus, out of the total economic agents included in the statistical research, a share of 11.7% in March and 27.8% in April 2020 could not estimate the evolution of the activity volume. Doubling the share of economic agents with uncertain vision on business was

predominantly due to the change of vision. those that provided for either the closure of the activity (difference of 5.1 pp in April compared to March 2020), or a decrease of more than 50% of the volume of activity (difference of 6.1 pp in April compared to March 2020). Of the economic operators in the sector that were able to estimate the impact of the COVID-19 pandemic on the volume of activity in April, 95.4% predicted a decrease of activity of over 25% or closure, compared to 92.9% in March 2020.

Fig. 1 The impact of the COVID-19 pandemic on the retail sector

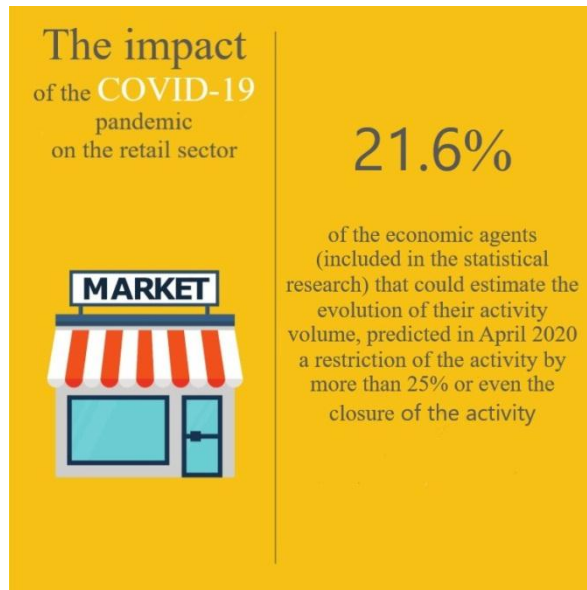
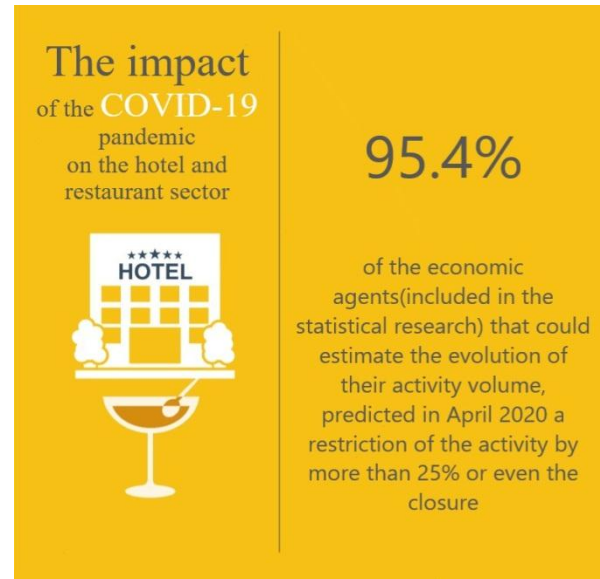


Fig. The impact of the COVID-19 pandemic on the hotel and restaurant sector



During the coronavirus pandemic, the Romanian agricultural system produced a safe and abundant supply of products, we mention the fact that, in the past, Romania was recognized at European level for the wheat production.[7]

The closure of borders, the quarantine established, trade interruptions and restrictions, even the ban on exports of agri-food products by military ordinances issued by the Romanian Government have led to fear of people, the emergence of a food crisis, making large supplies of food imperishable in large quantities.

Obviously the consumers across the country have changed their consumer behavior during the pandemic. Rising unemployment, home-working people, people who avoid driving vehicles, restaurants and hotels closed by military ordinances adopted by the Romanian Government, children staying home from school and the inadmissibility of the purchase frequent food have led to the alteration of large quantities of food and especially of easily perishable ones. Even if the need for food remains constant, the types of food eaten at home, unlike the restaurant, can be very different. Changing the place where food is consumed also changes the products that are sold by supply chains, which leads to logistical problems.[5], [6]

Given the production cycle of agricultural products, the sector is not able to recover quickly and it can not adapt to the major changes in question. If the needs of consumers continue to change as a result of measures caused by coronavirus, agriculture in Romania will go through a difficult transition in order to change the structure of production, adapted to the current needs of buyers. [2]

The number of people going to the work place has decreased considerably as a result of the establishment of the home working system. A number of 250,000 employment contracts were suspended until March 23, 862,000 until April 2, 1,046,527 until April 13 and 634,709 on May 15 (Policy measures taken against the spread and impact of the coronavirus - 28 May 2020. [8] In this situation, schools and universities have moved their online courses.

All these factors have led to a dramatic decrease in consumption in general, according to the data in the following table:

Tab. 1 The retail turnover volume indices (excluding trade in motor vehicles and motorcycles).

The retail turnover volume indices (excluding trade in motor vehicles and motorcycles)		April 2020 expressed as a percentage compared to:		01.01.2020-30.04.2020/ 01.01.2019-30.04.2019 -%-
		March 2020	April 2019	
Total retail trade (except of motor vehicles and motorcycles)	G	80,3	80,5	101,5
	S	77,7	81,5	101,1
With predominant sale of food, beverages and tobacco	G	86,6	95,3	109,4
	S	84,5	95,0	108,0
With predominant sale of non-food products	G	79,5	77,1	99,4
	S	77,7	78,4	99,0
Retail sale of automotive fuel in specialized stores	G	68,6	61,6	91,9
	S	64,9	62,3	92,7

Note: G = Gross series; S= series adjusted according to the number of working days and the seasonality.

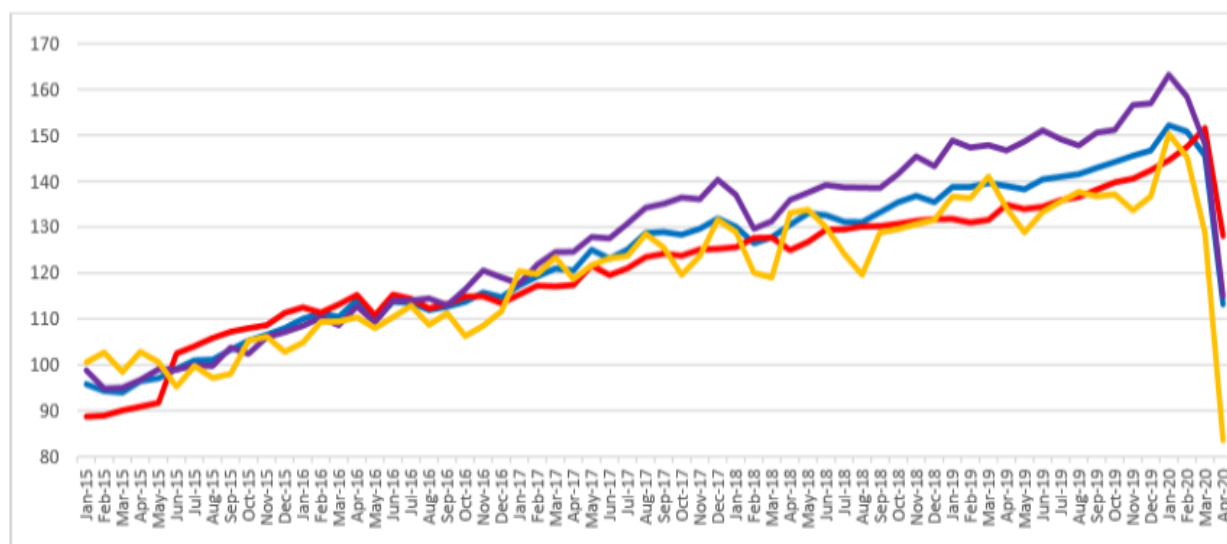
The volume of turnover in retail trade (except the trade in motor vehicles and motorcycles), gross series, in April 2020, compared to the previous month, decreased overall by 19.7% as a result of the decreases in retail trade of fuels for motor vehicles in specialized stores (-31.4%) and in the food sales domain (-13.4%).

The volume of turnover in retail trade (except the trade in motor vehicles and motorcycles), series adjusted for the number of working days and seasonality, in April 2020, compared to the previous month decreased overall by 22.3% as due to decreases in the retail trade of motor fuels in specialty stores (-35.1%) and in food sales (-15.5%).

The volume of turnover in retail trade (except the trade in motor vehicles and motorcycles), gross series, in April 2020, compared to April 2019, decreased overall, by 19.5% due to decreases at the retail trade of motor fuels in specialized stores (-38.4%) and at food sales (-4.7%). The volume of turnover in retail trade (except the trade in motor vehicles and motorcycles), series adjusted according to the number of working days and seasonality, in April 2020, compared to April 2019, decreased overall, by 18.5% as a result of the decreases registered at the retail trade of motor fuels in specialized stores 3/4 (-37.7%) and at the sales of food products (-5.0%).

(Retail turnover in April 2020).[10]

Fig. 3 The monthly evolution of the turnover in the retail trade, according to CAEN



Rev. 2 - series adjusted according to the number of working days and seasonality (January 2015 - April 2020), where the blue line represents the total retail trade, the red line represents the food trade, the purple line represents the non-food products trade and the yellow line represents the trade with fuels.

4. DISCUSSIONS

In Romania, as a result of the events caused by the pandemic, local producers were forced to throw away tons of rotten vegetables and expired perishable goods, daily, due to reduced demand and limited processing capacity of the production obtained.

The demand for the storage spaces with controlled (refrigerated) parameters increased after bars, restaurants and hotels closed, leaving food producers without customers and without places to store their unsold food. Under these conditions, products such as vegetables or meat, which are normally sold fresh, now compete for storage space with frozen products.[2]

Supply chains present a different problem. In Romania, an important part of the cultivated agri-food products were destined for restaurants and in general for the HoReCa sector.[4]

Many of them are closed at present, or having a fractional activity, and they caused blockages in the capitalization of products which in the finally causes financial problems. [1]

In this situation, the delivery of food only in grocery stores has led to a massive reduction in sales, leading even to the insolvency or restructuring of some companies with this field of activity as well as the collapse of the number of newly established companies.[3]

Demand is expected to decline in the coming period due to increased uncertainty, increased precautionary behavior by producers, restraint efforts and increased financial costs that reduce the ability to spend.

It is noted that the production of certain types of food has been under the pressure due to work restrictions.

To prevent the widespread of COVID-19 pandemic, farmers and agricultural producers adopt social distance measures between workers and set up hand washing and disinfection sites, equipping staff with protective masks and gloves. They distance as possible the employees at work by staff rotation or shift work.

All these imposed rules contribute to the decrease of labor productivity and to the increase of production costs.

5. CONCLUSIONS

The COVID-19 pandemic has become a pervasive economic and social phenomenon. The magnitude it has taken is worrying because in the absence of control measures it may threaten the future of the stability of the national economy.

In order to support the farmers and agricultural producers in the next period, it is important to develop some storage spaces such as agri-food reception bases, where agricultural producers can capitalize on their products without having to go to market and sell them directly to consumers.

Another measure would be to open up food markets in open spaces and more larger places, while ensuring an adequate infrastructure to maintain food quality and safety.

Final consumers should be encouraged by the authorities to purchase food from local producers by offering to them shopping vouchers for purchasing of staples food, thus helping both romanian agricultural producers and the entire population which on this crisis times has obviously been equally affected just as much.

From a fiscal point of view, the measure that would come as a mouthful of oxygen for all agricultural producers during this period would be to accelerate VAT refunds for the entire agricultural sector.

From a fiscal point of view, a measure that should be taken by the authorities that would come as a mouthful of oxygen for all agricultural producers during this period would be to accelerate VAT refunds for the entire agricultural sector.

REFERENCES

- Alexandri, C. Mateoc-Sîrb, N. și alții. (2017). *Agricultura și spațiul rural. Evaluări la 10 ani de la aderare*, Ed. Academiei Române, București/ ISBN 978-973-27-2860-4.
- Brînzan, O., Drăgoi, M. Bociort, D. Țigan, E. Mateoc-Sîrb, N. Lungu. M.(2020). *A market-based economic instrument to better use water in agriculture*, Sustainability, EISSN 2071-1050, Volume 12, Issue 4, 1473doi:10.3390/su12041473.
- Florea, A. Dascalu, I. Mateoc, T. Manescu, C. Mateoc-Sîrb, N. (2017). *Evolution of agricultural farms as basic elements of rural development*, SGEM, Volume 17, Environmental economics, Issue 53, pp. 377-384, ISBN 978-619-7408-10-2, ISSN 1314-2704.
- Oțiman, P.I. Mateoc-Sîrb, N. și alții. (2006). *Dezvoltarea rurală durabilă în România*, Editura Academiei Române București, ISBN (10)973-27-1461-1 ISBN (13)978-973-27-1461-4.
- Oțiman, P.I. Mateoc-Sîrb, N. și alții. (2011). *Alternativele economiei rurale a României: Dezvoltarea agriculturii sau Insecuritate alimentară și diversificare rurală severă*, Editura Academiei Române București, ISBN 978-973-27-2066-0.

- Oțiman, P.I. Mateoc-Sîrb, N. Mănescu, C. (2013). *Economie rurală*, Editura Mirton, Timișoara, ISBN 978-973-52-1304-6.
- Mateoc-Sîrb, N., Oțiman, P.I. Mateoc, T. Manescu, C. (2018). *Evolution of romanian village since the great union of 1918*. TRANSYLVANIAN REVIEW•VOL. XXVII, SUPPLEMENT NO. 2, Print ISSN: 1221-1249.
- European Commission. Directorate General. Economic and Financial Affairs. *Policy measures taken against the spread and impact of the coronavirus*. (2020, May 28).
https://ec.europa.eu/info/sites/info/files/coronavirus_policy_measures_28_may_0.pdf
- Institutul Național de Statistică. *Evaluarea impactului COVID – 19 asupra mediului economic în lunile martie și aprilie 2020* (2020, April 15). https://insse.ro/cms/sites/default/files/cercetare_impactul_covid-19_asupra_mediului_economic.pdf.
- Institutul Național de Statistică. *Cifra de afaceri din comerțul cu amănuntul în luna aprilie 2020* (2020, June, 4).
https://insse.ro/cms/sites/default/files/com_presa/com_pdf/com_amanunt_04r20.pdf.