

THE IMPACT OF COVID-19 ON AGRI-FOOD ENTERPRISES IN THE PELOPONNESE REGION

Eleni Anastasopoulou¹⁴, Dimitrios Petropoulos¹⁵,
Nikolaos Apostolopoulos¹⁶

ВЛИЯНИЕТО НА COVID-19 ВЪРХУ СЕЛСКОСТОПАНСКИТЕ ПРЕДПРИЯТИЯ В РАЙОНА НА ПЕЛОПОНЕС

Елени Анастасопулу, Димитриос Петропулос,
Николаос Апостолополос

Abstract

When the COVID-19 pandemic broke out, it affected the economic and social life of people worldwide. This paper aims to investigate the problems arising from the pandemic in the production process of 405 agri-food enterprises including producers (farmers, livestock farmers, fishermen), processors/micro, small, and medium agri-food enterprises located in a predominantly rural area of Greece, the Peloponnese region. The data were obtained by a detailed online questionnaire survey (quantitative analysis). According to the analysis of the results, it was found that the responses regarding the distribution of products, were almost equally divided between low and high difficulty. Furthermore, despite the increased production costs by implementing sanitary protocols, the agri-food enterprises absorbed it internally and did not pass it through the price of the product. Both the quantity and the quality of produced foodstuffs were practically hardly affected. Also, agri-food enterprises have not been seriously affected by product loss and waste. Furthermore, lockdowns are contributing to labor shortages for agriculture enterprises, particularly those characterized by periods of peak seasonal labor demand. The usage of e-shops was limited and almost half of the enterprises were not satisfied with State funding. The uncertain economic environment creates insecurity among producers and agri-food entrepreneurs for sustainability and future investments. Local and regional authorities together with the State must take relief measures to provide financial support to producers and agri-food entrepreneurs, so that the food supply chain functions properly and we do not face a food crisis.

Key words: agri-food sector, food supply chain, COVID-19, enterprises, producers

JEL: Q13

¹⁴ PhD. (c), School of Agriculture and Food Science, University of Peloponnese.

¹⁵ Assoc. Prof., School of Agriculture and Food Science, University of Peloponnese.

¹⁶ Assist. Prof., School of Economics and Technology, University of Peloponnese.

Introduction

Like any crisis, COVID-19 causes significant changes in the economy, local and global policies, social behavior, and citizens' mentalities. The pandemic has affected the most essential value chain locally and globally, the food supply chain and the changes it brought became a habit.

The food supply chain includes all the processes that start with agricultural or livestock production and end up on the consumer's plate. As part of the mitigation of the spread of the COVID-19 pandemic, governments implemented lockdowns and suspended the transport of products and the movement of workers (Mishra et al., 2021).

In the framework of these policies, the structure of demand and entrepreneurial activity were strongly being influenced as shown by the reduction in labor productivity, the increase in labor costs, transportation costs, and products prices as well as the income shortage for farmers and food deficits (Mastronardi et al., 2020). COVID-19 brought significant changes in the structure of demand and distribution channels (Elleby et al., 2020) more than primary production. Primary production is non-resilient to such external shocks. Local markets and short food supply chains have been shown to respond to difficulties by creating a direct link between producers and consumers. As shown in the research of Mastronardi et al. (2020) in which the short food supply chains were more resilient and showed a greater boost on five farms in central Italy.

Furthermore, online sales have increased significantly (Mastronardi et al., 2020) compared to face-to-face sales. However, it was achieved mostly in areas with strong internet (Phillipson et al., 2020). An example of a free web application is "Save my Local" created by volunteer developers in the UK and Northern Ireland, empowering closed local businesses through online product shopping. However, other countries such as the Netherlands, Belgium, and France have also supported the promotion of agri-food products for rural businesses through online platforms (Lucaci, Nastase, 2020). The more familiar businesses become with the use of e-commerce, the more the smooth functioning of the agricultural supply chain is ensured (Kumar et al., 2020). Of course, lockdowns have created greater problems for horticultural (Mishra et al., 2021) and nurseries (Phillipson et al., 2020) businesses with seasonal labor from third countries (Aday, Aday, 2020). A solution to this problem is to replace them with domestic workers (Bochtis et al., 2020), as the UK did by seeking 70,000 locals to work on farms during harvest season (Aday, Aday, 2020).

The role of government is significant in this crisis analysis and in the implementation of alternative measures to manage risks and overcome financial problems of agri-food enterprises through appropriate funding. In a survey conducted by Popovic et al. (2020) in the Western Balkan countries, it is reported that a large number of small and medium-sized enterprises were significantly strengthened. Another

survey reports that the Turkish government has supported special crop seeds with 75% funding, while imports of cereals are exempted or have reduced customs tax (Hossain, 2020). Also, in Brazil, loans for agricultural producers are being reconsidered or deferred (FAO, 2020). Finally, Hossain's (2020) research showed that the government of China provided 250 million euros for the recovery of the agricultural sector, the expansion of e-commerce, and the export of marketing in the agri-food sector.

This paper aims to investigate the problems arising from the pandemic in the production process of agri-food enterprises located in a rural region of Greece. The Peloponnese region is a predominantly rural area and its agri-food enterprises are at the heart of the economic development. The land of the Peloponnese produces delicious, branded (many of the branded products are organic), quality, and certified agricultural products with significant contribution to National production.

Methodology

A targeted online survey questionnaire was answered, at the beginning of the summer of 2021, by 405 enterprises, including producers (farmers, livestock farmers, and fishermen), processors/micro, small, and medium agri-food enterprises, operating in the agri-food sector of the Peloponnese region, a predominantly rural area of Greece. The questionnaire consists of six questions identifying the respondents' demographics (gender, age, education, business size, agri-food sector, and location) and eight questions on the impact of the COVID-19 pandemic on food production costs, quantity, and quality, selling price, product distribution, and workforce adequacy were sought. In addition, the role of e-commerce on food promotion and the possible support of agri-food enterprises by national and European financial instruments were studied. Each question was measured through a five-point Likert scale range based on (1) Strongly disagreed, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree. All respondents participated in the survey with their own consent. After all the data were collected, they were descriptively analyzed and important conclusions were drawn about the impact of the pandemic crisis on agri-food businesses and producers in a rural area.

Results

The sample of respondents consists of 79.8% males, 8% 18-30 years old, 24% 31-40 years old, 33% 41-50 years old, 24% 51-60 years old, and 11% more than 61 years old. Educational level was found 31.1% Secondary education, 50.4% Higher education, 17.8% Master's degree, and 7% Doctoral degree. Concerning the size of the firm, 9.6% were Small and medium-sized enterprises (51 – 250 employees), 26.2% Small enterprises (11-50 employees), and 64% Very small enterprises (<10 employees). The majority of survey respondents (33.6%) live in Messinia, followed by Laconia with 21% and Corinthia, Arcadia, and Argolida with around 15%.

the number of questions in Messinia is higher because there are more enterprises located there. The sample is representative of the most important Greek agrifood sectors consisting of very small and small firms as shown in Figure 1.

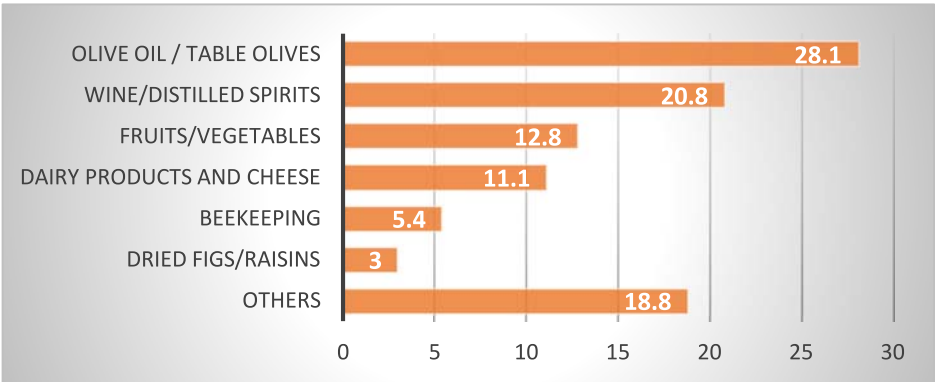


Figure 1. The most important sectors of the agri-food enterprises in the Peloponnese region (%)

The imposition of restrictions on distribution, followed by quarantine has not caused a fundamental problem for agri-food products. The respondents, other than the neutral ones, are split almost 50/50 between disagreed and agreed (Figure 2). Interestingly, this is not related to the export or non-export character of the enterprises.

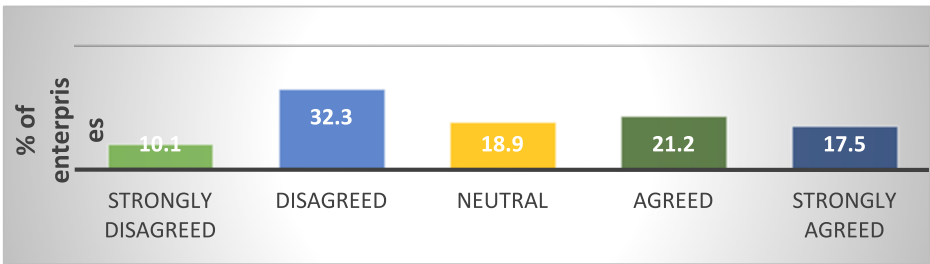


Figure 2. Difficulties in the distribution of agri-food products during COVID-19

COVID-19 containment measures such as hand sanitizer, soap, hand washing facilities, sterile work uniforms, rapid testing of all staff, labor shortages, and social distancing have resulted in a slight increase in operating expenses for enterprises. Overall, the majority of them (60%) have reportedly experienced an increase in operating expenses due to preventive measures instituted by the government to curb the spread of the virus (Figure 3). Only 25% of the enterprises reported disagreeing with the increase in operating costs. However, 68% of the respondents answered

that they did not increase the price of the product and that any cost was absorbed internally (Figure 4).

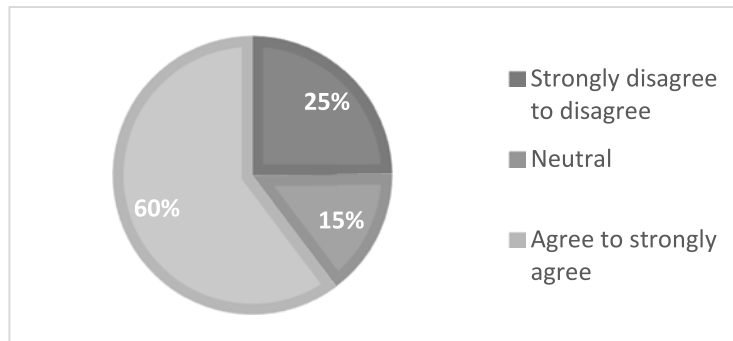


Figure 3. The implementation of preventive measures increased production cost

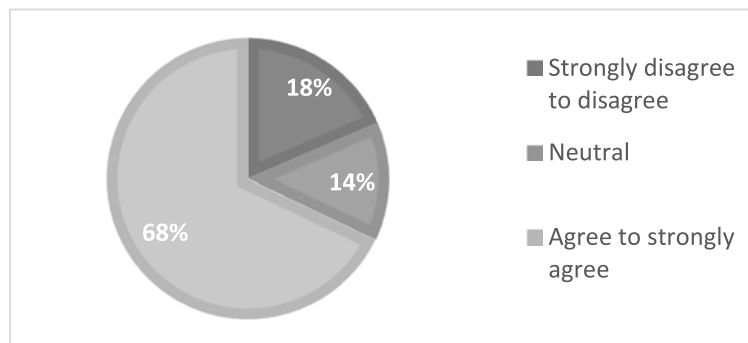


Figure 4. The enterprise did not transfer this cost to the prices of the products

Other worrying concerns include reduced productivity, and quality, as well as more food loss and waste. Although 61.7% of the respondents stated that the containment measures instituted by the government did not cause a further decline in the production quantity, 38.3% of them had led to a decline in productivity due to labor shortages. At the same time, especially in small food chains, the quality of the products is ensured due to the direct link with the producer. Regarding our study almost all the respondents (90.7%) agreed that the quality of products was practically unaffected. Additionally, local producers and enterprises under these measures tackle the issue of food loss and waste. This study indicates that agri-food enterprises (64.4%) in the Peloponnese region were not seriously affected by product loss and waste. However, 35.6% of them had losses and waste, which is in accordance with world literature.

Lockdowns and restrictions in the mobility of workers across borders contributed to labor shortages, mainly in countries that rely on seasonal workers. For many crops, the harvesting season is fixed and a deficiency of labor can result in product shortages in the food market. However, in our study, there are divided opinions on this question. 43.3% of the respondents disagreed and 45.4% of them agreed. The 44% who haven't faced problems, were mainly small family businesses with a small number of permanent staff, while those dependent on third-country workers were affected (Figure 5).

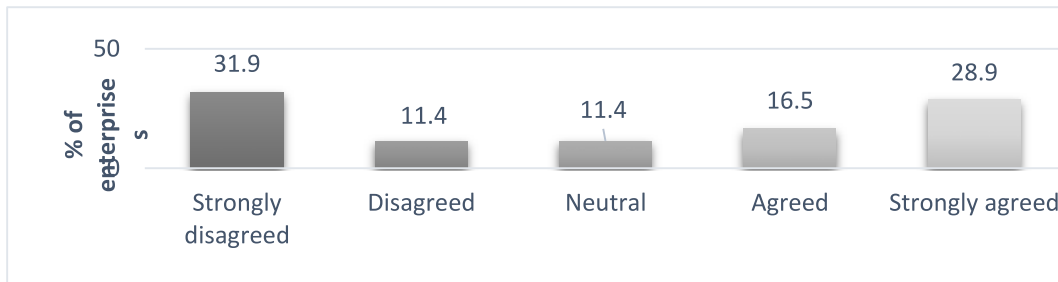


Figure 5. Seasonal labor shortages can result in production shortages

The survey has also investigated the role of e-commerce in the distribution and sale of agri-food products. E-commerce uses electronic systems, such as computer networks and the Internet. It has become one of the preferred ways of shopping by users, since its ease and convenience. Our analysis of the e-commerce variable has allowed us to find that, despite progress in e-commerce, it has a low implementation of mechanisms for online selling products, online payment services, construction of e-shops, websites, and applications. Probably, the lack of familiarity with digitization in rural areas did not help the agri-food enterprises, during the pandemic period, to exploit e-commerce to increase their sales.

SMEs in the agri-food sector could be prioritized for early support, when the COVID-19 pandemic broke up, given the vital nature of their product to people's lives. Government programs could strengthen the primary sector and agri-food enterprises. The Greek Government has taken important measures to support producers and SMEs affected by COVID-19. Among these was the financial support package of €40 million to producers of Kalamata olives, premature watermelon, spring potatoes, and greenhouse crops in Crete. Especially, the Peloponnese Region supported SMEs with €40 million, including agri-food enterprises and restaurants meeting specific criteria. However, in our study, almost half of the respondents (52%) argue that was not supported by state funding, while 33% (1/3 of them) utilized state funding (Figure 6). The uncertain economic environment creates insecurity among producers and agri-food entrepreneurs for sustainability and future investments. Therefore, it is obvious that a large percentage of respondents (68,4%)

are very affected by the uncertain future and the unknown consequences of the pandemic and do not even think about future investments.

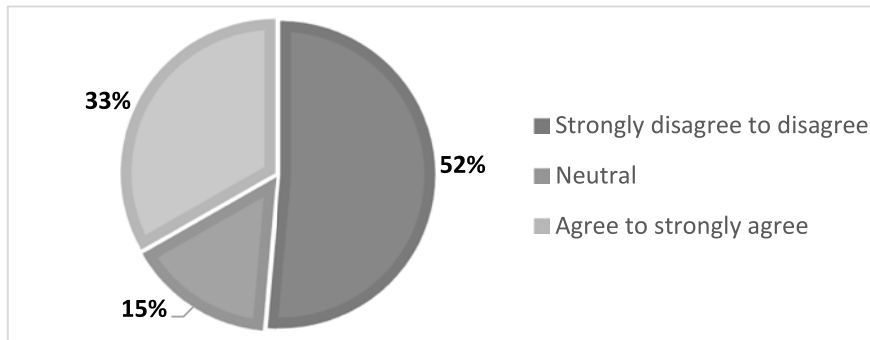


Figure 6. Percentage of support to enterprises from State funding

Discussion – Conclusion

Pandemic COVID-19 limits important activities of society, causing a reduction in income for a large proportion of the population and major disruptions in the normal functioning of the public and private sectors. Through our own research, it was found that rural agri-food enterprises were moderately affected by the impact of the pandemic COVID-19. It is worth noting that while they incurred additional costs for the specific implementation of sanitary protocols they did not increase the final cost of the produced products and did not deteriorate their quality. One of the main risks of lockdowns is that the shelf life of products that are not disposed of in time may expire, resulting in their economic destruction. It is positive that serious losses and wastage of products were not observed in the enterprises in our study. Shortages of seasonal labor are most noticeable in firms characterized by periods of peak seasonal labor demand. While at the same time more than half of agri-food enterprises were not satisfied with government funding.

Local and regional authorities together with the state should take relief measures to provide financial support to agri-food producers and entrepreneurs. It is recommended that specific support packages for the agri-food sector be designed and implemented to transition to a more sustainable food system that will strengthen their resilience to future pandemic threats, natural and other external shocks. This study is under further analysis as the COVID-19 pandemic has brought to the surface the gaps and weaknesses of the agri-food sector of a predominantly rural region of Greece, the Peloponnese region.

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Contact person information: Dimitrios P. Petropoulos, Associate Professor, School of Agriculture and Food Science, University of Peloponnes, e-mail: d.petropoulos@uop.gr