

**O 32. SUBSIDIZING AGRICULTURAL PRODUCTS TO PREVENT THEIR REPLACEMENT
IN THE CASE OF CANNABIS LEGALIZATION – THE CASE OF ALBANIA**

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ABSTRACT: This paper aims to analyse if subsidizing agricultural products would minimize the replacement effect of these products with cannabis products. It describes the challenges that the agricultural sector is facing in many aspects, such as environmental issues, declining biodiversity, etc. Moreover, in the last decades, Albania has faced a growing number of illegal cultivations of cannabis in different parts of the country. A law approving and regulating the cultivation, production, and circulation in and outside of the country of cannabis for medical and industrial purposes has been approved this year by the Albanian Parliament. This law and the perspective of legalizing it in the later future also for recreative purposes, has raised not only pros but also cons in public opinion, such as related to the fear of shifting the business objective of farmers toward legal cannabis products. The primary data were collected through a questionnaire and analysed using a logit model with the help of Stata. The findings are of major use for the policymakers, researchers, and farmers, but also for society, as it touches not only a strategic sector like Agriculture but also a sensitive one, like narcotics and pharma business.

Keywords: Agriculture, Subsidy, Cannabis, Legalization, Pharma

1. INTRODUCTION

The agricultural sector has faced many challenges during the last decades in Albania, from environmental changes due to climate change and pollution (Zhllima et al., 2022), declining biodiversity, labour force migration (Belletti & Leksinaj, 2016), and moving from the countryside to the cities (Caro, 2011), to other factors such as a lack of consistent and effectively managed state subventions for these products, etc. (Xama, 2017). Adding to these causes the introduction of other competitive products, such as cannabis, makes it even more difficult for this sector to remain profitable. Moreover, in the last decades, Albania has faced a growing number of illegal cultivations of cannabis in different parts of the country, the effect of which has been seen in many aspects of agriculture in Albania, monitored and reported by many such as Teqja et al., 2000; Kodderitzsch, 1999; Kurti & Alasani, 2021; Xama, 2017; Taylor, 2023; Jelsma et al., 2021; Han & Ng`ombe, 2023; Liperi, 2023, etc. which are further commented in the Literature review section below. The implications are not important only for the agricultural sector but also for the pharma sector, which will face a revolution given the importance that this plant has in modern medicine, deriving from a long tradition that cannabis has had in medicine over 200 years ago (Touw, 1981)) such as in the Ayurvedic pharmacopeia (Dwarakanath, 1965). All these implications, as well as its use in the industry, its social-related aspects, and others, make it a very important factor in the world`s sustainability (Raihan & Bijoy, 2023).

Therefore, the hypothesis of the study is as follows: H1: Subsidizing primary agricultural products decreases their replacement with cannabis products and by-products in case of cannabis legalization for medical and/or recreational purposes. The logit regression is applied in order to check validity of hypothesis. The contribution of the study is that to best of our knowledge, for the first time, we attempt to analyse the legalization of the cannabis in the economic context in the Republic of Albania. After the literature review, the methodology will describe the methods used to gain data and then analyse and interpret them. Afterwards the results and conclusions will follow.

2. LITERATURE REVIEW

Albania has a long history of economic changes due to its transition from a centralized economy before the '90s to a free market after the regime changed into a pluralistic democracy. One of the sectors

Proceeding Book of ISESER 2023

that were dramatically affected by these changes was agriculture, which underwent a series of reforms from large-scale cooperatives to hundreds of thousands of family-operated farms in order to overcome the transitional problems in the agricultural system which were very crucial, such as related to the old production system, farm size, infrastructure, etc. (Teqja et al., 2000). Teqja et al. go on in their research by mentioning the lack of subventions in the policies regarding the development of agriculture and exports of foods, and the lack of import limitation as well as the scarce state involvement in this sector. During the first years of transition the Albanian agriculture faced an increase which was reflected in the agricultural GDP increase of 15 % more than in 1989, even though these levels stagnated in 1995 and on, still this sector remained the major contributor to the country's GDP during these years (55%-65%) (Kodderitzsch, 1999). Unfortunately, today agriculture counts only for 18.4 % of the GDP, despite the fact that it bears 36.4 % of the total employment (Directorate General for Agriculture and Rural Development., 2023). The EU Commission Report on Albania emphasizes some concerns about Albanian agriculture, such as the fact that the agricultural sector has faced high losses in the labor force which decreased by 5.3 %, and that the structure of the economy tends to be more oriented towards industry and services, moving away from agriculture (European Commission, 2022). But it goes on by describing also some positive aspects such as the progress made regarding the registration of farms and the enhancement of the capacity of the administration in favour of rural development. Another problem related to agriculture in Albania is the fact that 95 % of the farms are small mostly family farms, which lack modern skills on managing and new projects, know-how about good agriculture, and other standards such as safety (FAO, 2022). Other concerns regarding agriculture are shown also in other research such as in the study by Zhllima et al. on Agricultural land markets in transition in Albania, which discusses that the market of land sale even after decades of the implementation of Law 7501/1991 on Land continues being very fragile in the country, which impacts agriculture and the national and foreign financing schemes (Zhllima et al., 2021). Regarding grants in agriculture, worth mentioning have been the IPARD projects, like IPARD Like, IPARD II, the EU Commission has raised concerns regarding de-commitment risks due to project delays as well as about the low national budget for agriculture as IPARD should not be seen as a substitute to it (European Commission, 2022). Through the years there have been reports repeatedly on the failure of state subventions for agriculture and the related problems that farmers have to be competitive in an ever-changing market towards a technology-driven industry and service influenced by fast technological development and increased consumerism, as well as price issues in the light of neighbour countries being subsidized more efficiently and not being affected by any entry quota (Kurti & Alasani, 2021). The well-known economic Journal "Monitor" have raised this issue in 2017 about the problematics that this sector which had the most important role in the economic growth, was facing due also to the failed subvention scheme in Albania during those last three years (Xama, 2017). The World Bank Report of Fall 2023 published agricultural data about the 6 Western Balkan countries, according to which Albania held the last place regarding Agricultural budget support, namely only 0.19 % of its GDP (World Bank Group, 2023), despite the fact that this sector holds the highest weight in the Albanian GDP (19 %). The history of fundamental grants in the agricultural sector began with the IPARD Like in 2012, an instrument of the European Union for rural development in the phases before the accession to the European Union (Instrument of Pre-Accession for Rural Development) (SHGPAZ, n.d.). IPA which is the instrument for accession assistance includes the IPA rural development programs (IPARD) (EU Commission, n.d.). After the first phase of support was implemented IPARD II (2014-2020) and IPARD III (2021-2027) (Agricultural Rural Development Agency, n.d.). In 2023 was communicated a temporary suspension of the IPARD II agriculture programme in Albania due to suspicions of corruption regarding the package of 94.6 million euros grant (Amfora, n.d.). Attempts from media have been made to put light on this issue, such as the request for information made by the online media portal Amfora to the Agriculture Rural Development Agency and to the Commissioner for the Right to Information in Albania (Amfora, 2023). Some other media have reported on the matter, such as the economic journal Monitor which reports that IPARD II is under investigation by OLAF which has blocked the funds for Albania for an indefinite time (Hoxha, 2023). There is no official statement about these procedures, apart from a response from the Ministry of Agriculture and Rural Development acknowledging this suspension of funds from DG AGRI and committing to further implement the program (Ministry of Agriculture and Rural Development, 2023). Another serious media, Euractiv, has written about OLAF's investigation on Albanian IPARD II funds (Taylor, 2023). Even though findings are not yet public, the Euractiv source can be called trustworthy

Proceeding Book of ISESER 2023

because as a news website specializing in EU policies, this media has joined the Trust Project which shows its commitment to ethics and transparency (Euractiv, n.d.). According to the International Accounting Standards 20, sometimes grants are also called subventions (International Accounting Standards 20, n.d.), which explains the use of the term subventions in cases of governmental and other like funds to the private in Albania. In all the tumult of the agricultural transition history and the late cramp in which it is involved, adding another external factor such as another competitive product like cannabis would make the situation more difficult to handle with regard to farmers' perspective of investment. Albania is mentioned among the worldwide significant traditional sources of cannabis supply for international markets (Jelsma et al., 2021). Lately, a draft law has been approved by the Albanian Government for the legalization of medical cannabis, which has raised many pros and cons in public opinion. Despite its medical benefits for those affected by specific illnesses, and other economic or crime prevention aspects, it also bears a risk for the fragile Albanian agricultural landscape being dominated in the near future by the fast and lucrative business of opening a medical cannabis (or eventually recreative cannabis if it is legalized later on too) farm rather than investing in primary agricultural products (Monitor, 2023). The purpose of this paper is to analyse if subsidizing agricultural products would minimize the replacement effect of these products with cannabis products. There is evidence from other parts of the world that cannabis crop has been seen as an alternative to other crops, but in positive terms for eg. replacing soybean and wheat because of cannabis profitability, the fertility effect on soil, and its potential as an energy plant, etc. (Han & Ng'ombe, 2023). For many years in many countries such as Morocco, Afghanistan, Cambodia, Mexico, Pakistan, Thailand, etc., growing cannabis illegally has been an alternative for many poor households, therefore the legalization of cannabis for medical purposes could boost agricultural production in terms of raw material and industrial processing (Jelsma et al., 2021). This study ranks Albania next to these countries, as a significant and traditional source of cannabis supply in the world (id.). On the other side, implementing policies and different incentives for enterprises, especially the small and medium ones, would be very beneficial to rural areas to escape poverty towards the value chain (FAO, 2021). Before legalizing cannabis for cosmetic, industrial and medicinal purposes in Morocco in July 2021 (Mahyou, 2023) it was already thought about the importance of assisting farmers in substituting cannabis with other crops, even though it was very difficult to implement in the light of their long history of kif cultivation (Jelsma et al., 2021). Albania has taken the initiatives to learn the willingness of farmers to cultivate industrial hemp (National Albanian Hemp Industry Association, n.d.), while on the other side they still lack competitiveness in their primary products in comparison to neighbour countries such as North Macedonia where e.g. the wages in agriculture are higher (Liperi, 2023), winegrowers are subsidized for fertilizers, working process, etc., which after the CEFTA agreement between the Balkan Countries makes it harder for Albanian farmers to compete with lower prices of neighbour countries (Kurti, & Alasani, 2021). The lack of workers and cannabis greenhouses now after the legalization of cannabis for medical purposes threatens to further shrink the productive land area and the number of workers working in rural areas together with primary agricultural products (Monitor, 2023). There is scarce scientific literature supporting the hypothesis of this study, therefore it will serve as a good reference point for further research in Albania.

3. METHODOLOGY

For the purpose of this study, primary data were used. They were collected from a questionnaire spread to people of different age groups and professions through electronic communication means. As a usual practice in the nowadays digitalized society, the respondents were asked to possibly send their questionnaire to other adults and businesses that they deemed suitable to answer such questions (Mani, et al., 2022). Qualitative data derived from the asked questions about subventions and substituting primary agricultural products with cannabis for medical and/or recreative purposes, which were analyzed using STATA, an easy-to-use software for generating statistical analysis and graphics (Cleff, 2019). The short yes/no answers were coded to 1 and 0. For this reason a Logistical Regression analysis was conducted, as a suitable method for binary outcomes (Mehmetoglu & Jakobsen, 2016). The logistic regression model is as follows:

$$RA_{it} = B + B_{it} + \epsilon_{it} \tag{1}$$

Proceeding Book of ISESER 2023

Where RA is replacement of agricultural products with cannabis for individual i at time t ; vector B contains individual subsidize of agricultural products and ϵ_{it} stochastic component.

The study has some limitations regarding data collection. One of them regards the hesitation to give a personal opinion on these issues, especially about the legalization of cannabis for recreational purposes and their potential to replace primary agricultural products. The lack of funding for scientific research in our country makes it more difficult to reach out to the farmers on site, as well as the lack of access to technology in deep rural areas. Moreover, the lack of scientific literature in Albania about cannabis as a legal crop that would replace agricultural products, and the poor literature about agriculture in general, makes it more difficult to include other components in the independent variable, in order to give more significant results.

4. RESULTS AND DISCUSSIONS

From the results the majority of the respondents were above 24 years old (51.9%), above 50 000 ALL in monthly income (61.1%) and an universitarian education, Bachelor Degree (31.5), Master (53.7%) and Ph.D. or up (11.1%). The majority was also in favor of cannabis legalization for medical purposes (70.4%), whether for recreational purposes were only 46.3 % of the respondents pro. Regarding the question whether or not the Albanian Government should subsidize more the primary agricultural products, 87 % responded with yes, and to the question regarding the possible replacement of these products in case of less subventions, 77.7 % were in favor.

With a number of 864 respondents, we got 864 observations, enough to make the following analysis as it derives from Tables 1 and 2 below.

Table 1. Logit Model

DepVReplaceAgriProdCann	Coeff.	Std. err.	z	P> z	[95% Conf. Interval]
IndVSubventAgriProd	.6161861	.2217878	2.78	0.005	.1814901 1.050882
_cons	-.9162907	.209165	-4.38	0.000	-1.326247 -.5063348

Source: Authors Calculation

The Logistic Regression analysis shows a P-value lower of 0.005, showing a high significance of the independent variable for the proposed hypothesis. With this result, the deviation from the null hypothesis is statistically significant and the latter can be rejected. It might be an unexpected result that the subvention of primary agricultural products does not decrease their replacement with cannabis crops. Nevertheless, there is a positive relationship between subvention for primary agricultural products and replacement with cannabis products. The result rejects the hypothesis that subsidizing primary agricultural products decrease their replacement with cannabis products and by-products in case of cannabis legalization for medical and/or recreational purposes.

Table 2. Marginal effects

variable	dy/dx	Std.err.	Z	P> z	[95% Conf. Interval]	x
IndVSubventAgriProd	.1398176	.04634	3.02	0.003	.048996 .230639	.87037

Source: Authors Calculation

Even Table 2 on marginal effects shows a low standard error and a P-value lower than 0.05, reinforcing the significance of the predictor. According to Table 2 on marginal effects, the result shows that subsidizing agricultural products by the Government of the Republic of Albania is likely to replace with cannabis products by 13%. Moreover, unless the government of the Republic of Albania subsidizes agricultural products, the legalization of cannabis is likely to replace agricultural products by 13%. In addition, after the legalization of cannabis products and subsidizing agriculture, the result shows that

Proceeding Book of ISESER 2023

only 13% will be replaced with cannabis, whereas 87% of agriculture production will continue to produce traditional products. On the other hand, without subsidizing agricultural products, it is likely the figure to be increased much more than 13%. Since the legislation legalizing cannabis for medical and industrial purposes is very recent, the possible results are described as they will happen in the future, because the actual influence of this legalization cannot be measured yet for the moment.

5. CONCLUSIONS

As seen above, besides subvention policies, there are many other factors influencing farmer's decision to engage in legal cannabis cultivation, such as worker's wages, inflation, fiscal packages, migration, the profitability of the cannabis sector, etc. But, as our predictor did show significance for the study, it means that after the legalization of cannabis, a much higher percentage of primary agricultural products would have been replaced with cannabis. Therefore, the Albanian economy needs to reconsider its policies regarding incentives to farmers to increase their agricultural production towards primary products and be competitive in a market full of cheaper goods from neighbour countries. Also, the previously mentioned limitations of the study, especially regarding the hesitation to answer questions about something that has been legal for a very short time (medical cannabis) and has not been legal yet (recreative cannabis), and the poor scientific literature because of which weren't included other factors in the equation, has to be taken into consideration. Moreover, the poor Albanian scientific literature on agriculture and specifically cannabis is also a weak point in the further development of this strategic sector, which needs a better support from academia and the scientific milieu. Further research should be done from academia and further attempts from the government and legislative organs should be undertaken to understand the needs, intents, and challenges of Albanian farmers regarding their productivity, profitability, and competitiveness at national and regional levels. All the efforts on a better implementation of the legislation regarding cannabis and the other areas being affected should go hand in hand with the Sustainable Development Goals (SDGs) of the United Nations in order for our country to better develop towards its inner necessities and the global trends.

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