Grant Schemes Contribution in the
Efficiency of the Beneficiary Farmers' Economy in Kosovo

Vlora Berisha Dranqolli[1], Behrije Ramaj Desku[2], Shkendije Abrashi Sheremeti[3],
Vjosa Hajdari Lleshi[4]

Abstract: The government considers agriculture and rural development to be a priority. Based on the importance of farming and rural development, through this study we have tried to indicate whether the grant application and subsidies have contributed in improving the yield of benefiting farmers. Multiple regression analysis was applied to confirm the main hypothesis. Also, the independent samples t-test showed differences between subsidized and non-subsidized farmers. Based on our findings we have the following results: direct subsidies have had a positive impact on the yield of benefiting farmers. Furthermore, the results of this study further justify that commitment and financial assistance of the Government of Kosovo and many European Community donors have enhanced the farm performance and generally the development of the farming sector in Kosovo.

Keywords: support scheme; rural development; farmers; yield

JEL Classification: A1; Q1; G0; O1

Introduction

In Kosovo, agricultural production is generally low. Small land plots, obsolete technology, and unfair competition have made Kosovo uncompetitive in the market for agricultural products. Regarding the agricultural sector and rural development in Kosovo, there are other difficulties that continue to persist: a low level of farm efficiency, small average area and fragmented agricultural production, low quality of agricultural products, minimum processing of agricultural products, and low household income. In addition, farming dependence is seen as the main source of income in rural areas, where the standard of living is low. Also, the poor physical

[1] Department of Finance and Accounting, University Haxhi Zeka, Kosovo, Address: Rr. UÇK. Pejë, Pejë 30000, Kosovo, E-mail: vlora.berisha@unhz.eu.
[2] Department of Marketing and Tourism, University Haxhi Zeka, Kosovo, Address: Rr. UÇK. Pejë, Pejë 30000, Kosovo, Corresponding author: behrije.ramaj@unhz.eu.
[3] Agricultural Ministry of Kosovo, Head of Finance. shkendijeabrashi@gmail.com.
[4] Department of Business Administration, University Haxhi Zeka, Kosovo, Address: Rr. UÇK. Pejë, Pejë 30000, Kosovo, E-mail: vjosa.hajdari@unhz.eu.

and social infrastructure, the low level of education of farmers, the ages of farmers, etc., are some of the negative premises. EU subsidies and grants continue to have a significant impact on the development of agriculture in Kosovo. By the end of 2014, agriculture accounted for only 0.6% (2.4 million Euros) of the Kosovo budget. An important issue in the development of agriculture is unemployment in rural areas and the need to find new employment opportunities and diversified activities in the farming sector. In order to realize the main agrarian policy goals, policy measures should be geared to: improving infrastructure capacities and social standards in rural areas, supporting farmers financially through banks and other financial institutions with attractive lending lines, and developing advisory services, microfinance institutions, and other services for farmers. Subsidies are presented in the form of a certain financial contribution: farmers or businesses who are beneficiaries of subsidies are not obliged to participate by their own means.

This form of support is done with 100% of the amount foreseen for those who meet the criteria set by the Government. Through EU grants dedicated to the development of agriculture, financial support is provided for various projects in the agricultural sector with co-financing, where participation in co-financing may be in different percentages, depending on the purpose and amount of funds available. Subsidies and grants in Kosovo aim to sustain development of different sectors of agriculture and alleviate unemployment in the rural areas of Kosovo, as well as encourage Kosovo residents to consume the most domestic products. The Government of Kosovo has prepared a plan for the development of agriculture that is expected to have an impact on the reduction of unemployment in the country. For the implementation of this plan, a sustainable infrastructure has been established, bringing together experts from all fields of agriculture. Within this infrastructure, subsidies and grants operated by the MAFRD through the Kosovo Consolidated Budget and through various donors such as the EU, USAID and other donors, are very important. The main purpose of this research is to study the impact of subsidies and grants in improving the yield of benefiting farmers throughout Kosovo.

Literature Review and Hypotheses Development

State aid is defined as a form of intervention by which the state transfers assets to a certain part of the economy or to a particular economic entity to stimulate economic activity. For agriculture it can be said that there is a special status in the state aid system as a result of the numerous specifics of this activity deriving from the characteristics of agricultural land, production itself, and the market for agricultural products. Also, is worth mention that the mechanization of agricultural production became widespread with the application of modern machinery (Belane, Kalmar-Rimoczi, and Lenkovics 2016)

Therefore, in agricultural production, compared to the industry, changes in the world market are reflected faster and more strongly (Franic, 2005). Subsidies represent the different income that the country or other donors give to a particular product that enables better production and processing of the product (Ahner, 2000; Lascoumes & Le, 2016). For the first time subsidies have been discussed in Tokyo that has been a special agreement regarding subsidies. In the Tokyo Agreement (12-14 September 1973), efforts were made to ascertain restrictions on export subsidies in order first to formulate criteria for determining whether in the present case contracting parties affected by the export subsidy program and the means available to the states that have experienced the violation of the subsidy program of the other country have been determined. However, the Tokyo agreement has been approved by a few states.

The subject of subsidies was raised again during the discussion in Uruguay. In fact, the main issue of Uruguay's discussion was subsidies. The outcome was two fundamental agreements with clear rules for subsidies. The discussions defined the following elements that should be excited about the notion of subsidies (Kay, 2000).

Common Agricultural Policies (CAP) include a set of rules and mechanisms that regulate the production, trade, and processing of agricultural products in the EU with emphasis on rural development. The main objectives of the CAP are (Fischler, 2001):

- Ensuring food production for the population and self-sufficiency in agricultural products
- Increasing agricultural productivity through the promotion of technological progress
- Ensuring fair standard of living for farmers
- Stabilizing food prices

Standard CAP accounts often are left out of political instruments or are treated as second hand administrative tools, neglecting their capacity as a means to understand the change of policy and government relations.

Impact of farming in the EU economy

Table below presents a summary of the role of agriculture in the economy of some EU countries.

Table 2. The Summary of the Role of Subsides in the Economy of Croatia, Austria and Hungary.

Croatia	Austria	Hungary
The financial package for this country in 2013 was comprised of 373 million per year for direct payments, 27.7 million for rural development, then 10.8 million per year to finance the wine sector, and 9.6 million per year for direct payments intended for agricultural land domineer. The agricultural subsidy system (co-financing in agriculture) is implemented through policy measures in three areas: direct payments (income support), production payments, and specific rural support for development measures.	Rural development is a central element of Austrian agricultural policy. It supports a modern, efficient and sustainable agriculture, but also the regional economy and communities, and defines social accent. Austria, through national programs (2014-2020), benefits from ESIF funding of 4.9 billion Euros. This represents an average of 579 Euros per person. With physical adjustment, the program will be even more appropriate to current agricultural requirements. This is particularly true with the areas of processing and marketing, agro-environment and nature conservation, as well as aid for start-ups for young farmers and compensatory payments for less favoured areas. By 2020, 1.1 billion Euros will be available annually, more than half of which will be funded by the EU. The New Common Agricultural Policy (CAP 2020) entered into force on January 1, 2015. With this CAP reform, direct payments will focus more on specific measures, in particular for climate and environmental protection, areas and beneficiaries. Direct payments now consist of basic premiums, payments for agricultural methods that promote climate and environmental protection (so-called "greening"), and a payment for young farmers and united support.	The level of agricultural income in Hungary is below the average salary. Until 2012, agricultural income had reached two-thirds of the average wage. This is in contrast to EU-N10 and EU-N15 where agricultural incomes are less than half (average wages). Hungarian farmers received 7.4 billion Euros of direct aid. Rural Development Money is spent on agro-environmental measures and 15% more on transforming forests into agricultural land. Hungary provides basic services in rural areas, encourages tourism, supports the creation of new businesses followed by renovation and development, and aids investment to modernize agricultural holdings, accounting for more than two-thirds of spending (68%), followed by schemes after adding the value of the output (14%).

Source: Author's presentation based in: (Franić 2005); (Pravaideja 2017); (Europian Commission, n.d.)[1]; (Szarowska, 2013);(Pap & Kltanics, 2014);

The Role of Agriculture in Kosovo's Economy

Kosovo possesses 577,000 ha of agricultural land[2]. Out of this area (according to the same source), only 272,040 ha (47.1%) are land planted with different plants, while the rest is with meadows, pastures and wasteland. Grains are dominated by planted surfaces. Of all these areas 88.6% is privately owned.

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[1] Member State(s): Austria, Programme Description.
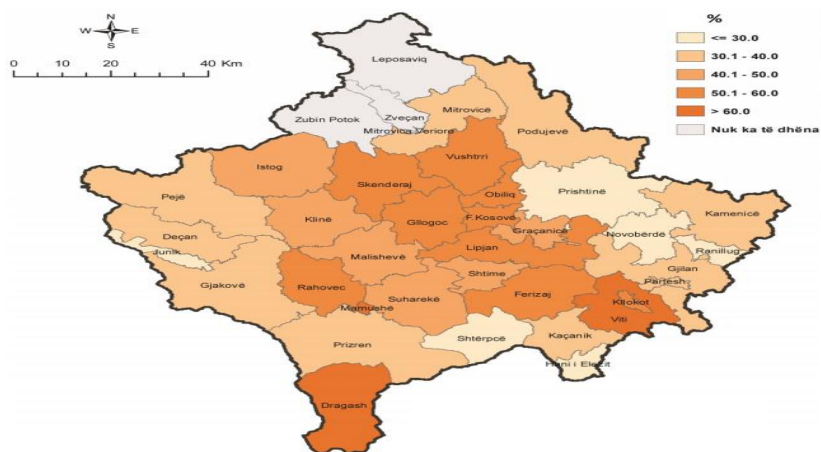[2] Regjistrimi i Bujqësisë, Nëntor 2014, ASK, Prishtinë. 2015,fq, 51.

Figure 7. Structure of utilized agricultural land area, Kosovo 2014. Source: Regjistrimi i Bujqësisë 2014 dhe ASK 2015.[1]

The agricultural economy is an important segment of economic activity in Kosovo. This sector is able to absorb a significant portion of the workforce, especially in rural areas. The importance of the agricultural sector can also be seen through the contribution of this sector to GDP.

Agricultural products market

Most farms in Kosovo are primarily focused on producing for the family's needs. Data from our survey show that agricultural production that is used for personal consumption is 73% for vegetables and 96% for fruits.

Table 3. Comparison between Crop Production for: Own Consumption Vs Market

Crop production	Percentage of production	
	Own consumption (%)	Market (%)
Cereals	90.7	9.3
Vegetable	73.4	26.6
Meadow	89.8	10.2
Vineyards	82.6	17.4
Orchards	96.6	3.4
Forests	94.2	5.8

Source: Author' calculation, from a field survey.

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[1]https://www.mbpzhrks.net/repository/docs/regjistrimi_i_bujqesise_ne_republiken_e_kosoves_2014_ _rezultatet_perfundimtare.pdf.

Table 4. Comparison between Livestock Production for own Consumption and for the Market

Livestock	Percentage of production	
	Own consumption (%)	Market (%)
Dairy cows	89.9	10.1
Specimen	76.3	23.7
Sheep	52.0	48.0
Chickens	94.5	5.5
Goats	90.9	9.1
Horses	99.7	0.3
Hogs	72.5	27.5

Source: Author' calculation, from a field survey

In such a situation, the opportunities to meet the needs of the local market for agricultural products are very limited. The factors that influence this situation are numerous: small farms, very high cost of production, lack of production to meet market demands, lack of investment funds, etc.

Rural households sell agricultural products mainly in local markets. The main sources of information for farmers about the prices of agricultural products that they want to sell are very uncertain. Only about 10% of farmers are interested in obtaining information on prices and other market conditions, from producer associations, cooperatives or the media.

Table 5. Structure of Income Sources of Rural Households (%)

Household income sources	Rural	Urban
Income from agriculture	9.1	1.7
Non-agricultural business income	4.2	17.2
Employee salaries	58.0	64.8
Support from relatives / friends in Kosovo	6.0	2.1
Remittances	14.1	6.4
Assistance from international organizations	1.2	0.9
Pensions, social assistance	7.4	6.4
Total	100.0	100.0

Source: Regjistrimi i Bujqësisë, Nëntor 2014, ASK, Pristine.

Characteristics that distinguish the income structure of rural households with urban ones are income from agriculture, remittances, and assistance from relatives in Kosovo. In contrast, business income and employee salaries are higher for urban households.

Support schemes in Kosovo

National support schemes are an instrument that is used to support farmers and agro-businesses, in the form of direct payments to increase production and subsidies in the most important agricultural sectors. Support for farmers is provided through a range of annual support schemes, mainly in the form of direct payments and much less investment schemes. In recent years, actions have been taken to support the promotion of agricultural credit in agro-processing and farm mechanization.

• "Agrarian policies" are state policies, which focus on objectives and measures, operating directly on agri-food markets and farm income.
• "Rural development policy" is a state policy that focuses on the sustainable development of rural areas, their economic and social convergence, and environmental protection.
• "Sustainable agriculture" is agriculture which is economically and socially capable of surviving and which does not degrade the environment for a long period.

Table 6. Support schemes in Kosovo

Year		PEJE /€	KLINE/€	ISTOG /€	DECAN /€
2016	Measure302	175,855.00	48,200.00	136,710.00	69,553.00
	Measure 103	659,802.00		1,489,898.00	
	Measure 101	397,128.00	180,332.00	761,896.00	266,042.00
2015	Measure 302	148,936.00			
	Measure 103				199,288.00
	Measure 101	146,636.00	357,484.00	577,098.00	115,295.00
2014	Measure 302	41,935.00	4,825.00	75,176.00	33,295.00
	Measure 103	271,450.00	105,210.00	269,480.00	32,950.00
	Measure 101	106,683.00	67,590.00	69,034.00	

Source: Authors' Research [1]

As we can see and conclude from the table above, investments in Kosovo have been moving through the years, where 2016 has had higher investments in all the measures set out above (Measure 103, 303 and 101).

The main hypothesis of this study is:

Ho: Government subsidies on agriculture and new investments have no impact on economic development.

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[1] Unpublished reports from ministry of agriculture (authorized).

Ha: Government subsidies on agriculture and new investments have impact on economic development.

Analysis and Interpretation of Results

Methodology

The research of the study is based on literature review and empirical data analysis to assess the impact of support schemes in farmers' yield (economic development). We intend to compare the income of subsidized farmers (treated groups) to similar non-subsidized farmers (untreated groups) in this research.

The database we have used consists of primary data, deduced from the questionnaire analysis. Multiple regression analysis was applied to confirm the main hypothesis. Also, the independent samples t-test showed differences between subsidized and non-subsidized farmers.

First, to prove the main hypothesis, we obtained the data from the questionnaire; the respondents were asked about the importance of subsidies to economic growth and realization of new investments. By, using the independent samples t-test showed the differences between subsidized and non-subsidized farmers.

Multiple Regression Model

$$y_i = \beta0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon_i$$

The description of the dependent and independent variables are:

Dependent variables (y_i): economic development

Independent variables (x_i): new investments (x_1), government subsidies for agriculture (x_2)

Results from research

A summary of the responses from those who participated in the questionnaire are presented:
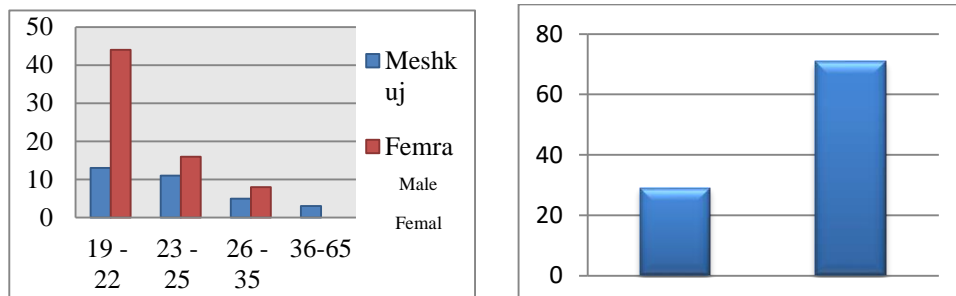
Figure 2. Age and Gender of Respondents.

Source: Authors' Results

Figure 2. show that the largest number of respondents (57%) fall in the 19-22 year age group, and the majority of respondents were female (71%).

The next question concerns the personal data of the respondents[1], according to five categories: employed, unemployed, self-employed, student and retired.

Figure 3. Category of Respondents.

Source: Authors' Results

Figure 3 shows that out of the 95 respondents, 85% of them are employed. This is a very positive result, in keeping with the low percentage of unemployed (2%). Nine percent of the respondents were self-employed in various activities, 1% were students whose focus was still in education, and 3% were retired.

The educational level of our respondents was varied, but dominated by university education and the end of the high school cycle, while socio-economic status was more variable. This may be influenced by high unemployment among young people with a university education and the inability to influence their standard of living.

Most of the agricultural work in agricultural households is conducted by the family workforce. Managers (mainly the same persons with the supporters) carry almost

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[1] Dealing with agriculture.

half of the agricultural work (46.3%), while the other members of the supporter family carry out the other half of the job (49.5%). Seasonal workers contribute only 3.2%, while the work of regularly employed persons who are not members of the Agricultural Households is almost negligible. 64.2% of the members working in the household are male and 35.8 % are women.

Table. 6. Family Members Working in the Household

Family members working in the household		Frequency	Percent
Valid	Male	61	64.2
	Female	34	35.8
	Total	95	100.0

Source: Authors' Results

Table. 7. The Impact of Subsidies on Economic Development

Subsidies have contributed to economic development		Frequency	Percent
Valid	Has greatly effected	58	61.1
	No significant effect	11	11.6
	Comparatively	18	18.9
	Total	37	91.6
Missing	System	8	8.4
Total		35	100

Source: Authors' Results

From value chain perspective, we assumed that the increase in planted areas will affect the growth of production by farmers which is the object of our study. Other factors may include: the introduction of modern technologies, and providing advice and disseminating knowledge through guidelines and criteria that are based on good agricultural practices, required to be implemented by beneficiaries. On the other hand, the subsidy support policy aims to increase land use. The main thrust has certainly been the impact on production and farmers' income, subject of subsidies.

Independent Samples t-Test

This test compares the sample of the two subsidized and non-subsidized farm groups to see if there are differences in the opinions between the two groups, on the importance of government subsidies and new investments. The hypotheses are given as:

1. H0=μ subsidized farmers ≠μ unsubsidized farmers (there is no significant difference between the two groups of farmers regarding the impact of government agricultural subsidies on economic development);

Ha=μ subsidized farmers ≠ μ unsubsidized farmers (there is a significant difference between the two groups of farmers regarding the impact of government agricultural subsidies on economic development)

2. H0=μ subsidized farmers ≠ μ unsubsidized farmers (there is no significant difference between the two groups of farmers regarding the impact of new investments on economic development)

3. Ha=μ subsidized farmers ≠ μ unsubsidized farmers (there is a significant difference between the two groups of farmers regarding the impact of new investments on economic development)

Table 8. Summary Statistics on Government Agricultural Subsidies

Group Statistics					
	Farmers	N	Mean	Std. Deviation	Std. Error Mean
Government agricultural subsidies	Subsidized	89	2.26	1.344	.143
	not subsidized	6	1.83	.983	.401

Source: Authors' Results

		Levene's Test for Equality of Variances		T-test for Equality of Means							
		F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Differences	95% Confidence Interval the Differences	
									Lower	Upper
Government agricultural subsidies	Equal variances assumed	1.34	.249	.759	93	**.450**	.425	.560	-.687	1.537
	Equal variances not assumed			.998	6.33	.355	.425	.426	-.604	1.454

Indepedent Sample Test

Source: Authors' Results

From the results of the t-test for equality of means we are based on the Sig (2-tailed) result which is (p = 0.425) to confirm the hypothesis raised above. Based on these results with a 95% confidence level, we accept the null hypothesis that there is no statistically significant difference in the opinions of subsidized and non-subsidized farmers.

Table 9. Summary Statistics on new Investments

Group Statistics					
	Farmers	N	Mean	Std. Deviation	Std. Error Mean
New investments	Subsidized	89	1.53	.813	.086
	Not subsidized	6	1.17	.408	.167

Source: Authors' Results

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Differences	95% Confidence Interval the Differences	
									Lower	Upper
New investments	Equal variances assumed	7.34	.008	1.07	93	.285	.361	.336	-.306	1.029
	Equal variances not assumed			1.92	7.9	**.090**	.361	.188	-.071	.794

Independent Sample t-test

The Sig (2-tailed) score was (p = 0.090) also higher than 0.05. So in this case too, we accept the null hypothesis. From the two results obtained from the independent sample t-test we conclude that both groups of farmers share the same opinion regarding the impact of new investments on economic development.

Regression Results

As mentioned earlier, we will confirm the hypothesis of this paper which is:

Ho: Government subsidies in agriculture and new investments have no impact on economic development

Ha: Government subsidies in agriculture and new investments have impact on economic development.

Table 10. Results of the Analysis of the Impact of Government Agricultural Subsidies and New Investments on Economic Development.

Coefficients [a]

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant) New investments	1.042 -.035	.068 .031	-.114	15.305 -1.121	.000 .265
Government agricultural subsidies	.051	.030	.173	1.700	.093

    a. Dependent variable: Economic development.

Source: Authors' Results

The p-value for new investments is (p = 0.265) which exceeds the p value of .05. So we would fail to reject the null hypothesis. For government agricultural subsidies (p = 0.093) this also exceeds the p value of .05.

But if we rely on the 0.10 signification level within the 90% confidence interval, we conclude that government agricultural subsidies have had an impact on economic development.

The constant value is seen at 1.042 which indicates that if subsidies and investments will be zero, economic growth will increase by 1.042 units. The new investment parameter is -0.035. Increasing one unit in investment will reduce new investments by 0.035 units. While the increase of one unit in government subsidies will increase economic development by 0.051 units.

Conclusions

Direct support of farmers shows that the Kosovo Government has started to work on building mechanisms to address farmers' challenges within the country. Therefore, the direct support of Kosovar farmers helps in increasing their competitiveness in the local and regional market. Despite the fact that the effects of this activity are still limited in the yield of farmers, year-on-year results are more apparent. This justifies government actions that benefiting aid farmers are approaching the yields that farmers reach in the region, within the same culture.

Since Kosovo has favorable natural conditions for the cultivation of many agricultural crops, it is necessary to continue the consolidation of farmers in order to further increase the yield. Moreover, they need to increase the quality and sustainability as farmers in order to compete effectively with producers of crops in the region and beyond. To further enhance crop yield, farmers need to improve the farm management process, and save farm spending. Thus, the obtained results partially support our hypothesis that direct subsidies have had a positive impact on the yield of benefiting farmers. Furthermore, the results of this study further justify the commitment and financial assistance from the Kosovo Government to further increase farm yield.

It should be emphasized that the farm economy in Kosovo, in all its sectors, can operate in its full capacity only if its competitiveness first increases in the local and regional market and then quite possibly the European one. Financial support through rural development grants and direct payments is oriented to the development of existing businesses, namely their modernization and creation of new agricultural and rural businesses, giving priority to businesses that apply new discoveries.

Recommendations

- Through financial and technical assistance, MBPZHR and other stakeholders - agribusiness associations and farmers should support productivity growth for priority sectors, in particular livestock, fruit and vegetables.

- In the context of changing economic policies, for Kosovo it is important to continue with the fiscal incentives for agricultural production. It is recommended to analyze and improve the implementation of VAT and its harmonization with other measures of economic policies as well as those of neighboring countries.

- In the framework of government efforts to promote the development of priority agricultural sectors, consider the opportunities, resources and institutional capacities for the formation of a fund for subsidizing interest rates on lending to the increase of primary production with an impact on increasing domestic market participation and in export growth.

- Taking into account the interests of consumers, consider the possibility of applying a slight seasonal protection to the vegetable production sectors within the allowed limits of the World Trade Organization.

- Determine the criteria for minimum and maximum limits of subsidy allocation.

- To emphasize the composition of the commission according to the number of members, expertise, and gender and at the same time there are committees to deal with issues related to misuse of subsidies or to measure the economic impact of subsidies realized in different sectors.

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