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THE AGRICULTURAL PRODUCTION CONCERNING SUBSIDIES IN HUNGARY IN PERIOD OF 2008-2020

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Study focuses on influences of subsidies on agricultural production, as plant production, animal husbandry, output growing trend, and input growing trend and agricultural gross value added. Price conditions for input and producing price, as output price from agricultural producers paid by purchasers, manufacturing industries, whole traders, retailer traders or possible farmers sell their products directly on local markets – can create considerable influences on economic and marketing background for agricultural production including output growing, agricultural gross value added, gross fixed asset accumulation all. Subsidies accompanying with self-financial capacity of agricultural producers and credits financed by banks create basic financial issues for the agricultural basic material production conditions of producers. Plan production has share as 59-60% of all agricultural production and animal husbandry has share as 33-35%. The case-study uses statistical analyses as Special Program for Social Sciences. There is an import role of gross fixed asset accumulation all without recoverable value added taxes for agricultural production, because this has very strong correlations with gross value added by 0.941 and output growth by 0.934 and input growth by 0.803, also this one has strong correlation with producing price by 0.732. Subsidies should be provided for agricultural producers in order to obtain enough incomes to realize continuous basic agricultural production process, to develop advanced technology for their competitiveness on the markets and finally not to escape from the agricultural sector in order to ensure the supplying food for domestic consumers. Naturally subsidies cannot substitute self-financing capital force of producers.

Keywords: *Gross fixed asset, gross value added, innovation, input, output, producing price*

INTRODUCTION

In Hungary the agricultural production has been consisting of mostly plan production, which is proofed by its considerable share as 59-60% of all agricultural production as agricultural output and animal husbandry by its share as 33-35% and the other rest part was for agricultural and non-agricultural services for the researched period of 2008 and 2020 (Table 1; Table 2; HCSO 2021).

The plant production can be considerable for the Hungarian geographical conditions, providing the basic food-supply for consumers and feeding animals to obtain more value-added products over simple plant production as basic one. Both of plant production and animal husbandry are important to supply food demands of domestic market, to increase raw materials for the food manufacturing and light industries and the export capacity for obtaining more heavy currencies price incomes for the Hungarian economy. All of these conditions provide goal for this research. Also, the study focuses on the influences of the subsidies on the agricultural production, as plant production (Plant1), animal husbandry (Animal2), the output growing trend (OUTPUTG3), and input growing trend (INPUTG4) and agricultural gross value added (GVA7), on the basic price (OUTPUT-INPUT = GVA in agricultural sector).

The price conditions for input (INPUTPrice5) and producing price, as output price (PRODPrice6) from farmer and agricultural producers paid by purchasers even as manufacturing industries, whole traders, retailer traders or possible farmers sell their products directly on the local markets (PRODPrice6) – can create considerable influences on the economic and marketing background for agricultural production including output growing, agricultural gross value added, *gross fixed asset accumulation all (GFAAcc9) without recoverable VAT = value added tax*. The subsidies (Subsidies8) accompanying with self-financial capacity of agricultural producers and credits financed by banks create basic financial issues for the agricultural basic material production conditions of producers (Figure-1; Figure-2; HCSO 2021).

Subsidies for holdings concerning Hungarian fiscal practice, which developed from it, built on the application of non-conventional instruments of active government regulation and fundamentally based on the Fundamental Law (Hungary's constitution) adopted in 2011, particularly its chapter on Public Finances and the cardinal laws pertaining to public finances (see more detailed in Lentner, 2020 and Lentner 2021).

In spite that conditions for providing subsidies are very strong and depending on the demands for agricultural production strategy at national economic level and production goals at level of farms and agricultural producers, these are very favourable financial situations for producers considered in the agricultural sector. The financial supports for producers focus on the developing gross fixed asset accumulation, and by these one to develop basic agricultural production in main two branches as plant production and animal husbandry by purchasing more advanced machines, improving soil conditions setting up new building for animals and stores for seeds, cereals, also, highly developed equipment for renewing irrigation system. Also, additionally to above mentioned supported fields sometimes the supports can provide for advanced plant and animal varieties, which can be used for many times of agricultural production, which can improve the agricultural technology for the production in this sector. This case study makes clear the correlations among these economic variables mentioned before, by showing out the importance of subsidies for developing agricultural production and its technology to strengthen the competitiveness of national agricultural producers either in domestic market, single EU common market and international markets accompanying with the following the sustainable agricultural development and environmental conservation from point of view of the agricultural sector. The hypotheses can be summarised, which are as follows:

- 1- Animal husbandry (Animal2) has strong contradicted correlations with plant production (Plant1).
- 2- Strong influences and correlations of producing price level (PRODPrice6) on the agricultural branches in cases of plant production (Plant1) and animal husbandry (Animal2).
- 3- Influences of *subsidies* (Subsidies8) from public finance on agricultural branches in order to increase investment gross fixed asset accumulation all (GFAAcc9), gross value added (GVA7) and output growth (OUTPUTG3).
- 4- The *gross fixed asset accumulation all* (GFAAcc9) has strong correlations with gross value added (GVA7) based on the output growth (OUTPUTG3) and input growth (INPUTG4) increasing.

Budgeting is the main tool supporting the management of an *innovative project* being realized by the presented enterprise. Body One of the priorities defined by the European Union Commission in the Europa 2020 strategy is *intelligent development* meaning economic development that is based on knowledge and innovation (Dyhdalewicz 2018; see in detailed in OECD 2015; and Veugelers - Del Rey 2014).

MATERIALS AND METHODS

The case-study uses statistical analyse as SPSS (Special Program for Social Sciences) based on the work of Sajtos-Mitev (2007). The very strong correlations are among economic variables, where the values are more than 0.800 till closed level of 1.000, and the strong correlation are between 0.500 and 0.800. From these value conditions the *subsidies* (Subsidies8) have strong correlations with *gross fixed asset accumulation all* (GFAAcc9) without recoverable VAT by 0.675 and with gross value added (GVA=7)

by 0.638 and with output growth (OUTPUTG3) by 0.583. From these conditions it can clearly be seen, how importance of the subsidies is for the agricultural production (see Table 2; Table 3; HCSO 2021).

STATISTICAL ANALYSIS AND GRAPHICAL PRESENTATION

The role of subsidies has more important than which the SPSS statistical analyse can show and emphasize in this study. Amount of subsidies measure comparably to volume of the gross value added (OUTPUT-INPUT = GVA) was 45% in 2008 and increased to level of 40% as share of GVA in 2020. Some economic variables have very strong correlations among themselves; producing price (PRODPrice6) has very strong correlations with input growth (INPUTG4) by 0.992 values, strong correlation with output growth (OUTPUTG3) by 0.737 and with plant production (Plant1) by 0.727. The gross value added (GVA7) has very strong correlations with output growth (OUTPUTG3) by 0.989, input growth (INPUTG4) by 0.841 and strong correlations with producing price (PRODPrice6) by 0.783 and with plant production (Plant1) by 0.727.

Table 1. Abbreviation of economic variables

Variables Abbreviation	Variable names	Period	Source/Data base
Plant1	Share of plant and horticultural production in %	2008-2020	HCSO, 2021
Animal2	Share of animal production in %	2008-2020	HCSO, 2021
OUTPUTG3	Agricultural output growth	2008-2020	HCSO, 2021
INPUTG4	Agricultural input growth	2008-2020	HCSO, 2021
INPUTPrice5	Agricultural input price index	2008-2020	HCSO, 2021
PRODPrice6	Agricultural producing price index	2008-2020	HCSO, 2021
GVA7	Gross value added on the basic price	2008-2020	HCSO, 2021
Subsidies8	Subsidies, in Million HUF	2008-2020	HCSO, 2021
GFAAcc9	<i>Gross fixed asset accumulation all</i>	2008-2020	HCSO, 2021

Source:

- System of agricultural accounts at current basic prices, in %, in current basic price, in Million HUF, HCSO (Hungarian Central Statistical Office), 2021, Budapest, Hungary
- https://www.ksh.hu/stadat_files/mez/hu/mez0002.html
- https://www.ksh.hu/stadat_files/ara/hu/ara0051.html
- <https://statinfo.ksh.hu/Statinfo/haViewer.jsp?wcf15eb7a36=x>
- <https://statinfo.ksh.hu/Statinfo/haDetails.jsp>

Note:

NPUPPrice5 = Agricultural expenditure price indices [in the same period of the previous year]

Hosts selling products and services to farmers

PRODPrice6 = Farmer price index. Agricultural producer price index, 2015 = 100%, Organizations purchasing agricultural products and producer markets.

The prices paid to farmers for agricultural products purchased from farmers for further sale or processing and sold directly to the general public for consumption (on the market) show changes in the average prices of the base period. It does not include changes in the prices of animals sold for resale (breeding animals) between farmers.

The indices are calculated according to the Laspeyres formula.

GVA7= Output – Input = GVA in agricultural sector

GFAAcc9 = Without recoverable VAT (Value added tax)

Table 2. Changing rates of agricultural production and income conditions in Hungary between 2008-2020 in percent, Million HUF

	2008	2010	2012	2014	2016	2018	2020
Plant1	59	57	58	59	60	58	59
Animal2	33	35.5	35	34	32	35	34
OUTPUTG3	100	-15	110	124,5	131	136	149
INPUTG4	100	-21	-9	117	116	134	148
INPUTPrice5	100	104	102	100*	98,3	105	101
PRODPrice6	100	-5	-4	100*	104**	109.6	122.3
GVA7	100	-20	110	147	158	163	178
Subsidies8	100	117	143	164	137	147	158
GFAAcc9	100	-4	114.5	141	112	172	204

Source: System of agricultural accounts at current basic prices,

HCSO (Hungarian Central Statistical Office), 2021, Budapest, Hungary,

Note: * in 2015, ** in 2017, Estimated data for INPUTPrice5 and PRODPrice6 in 2010 and 2012

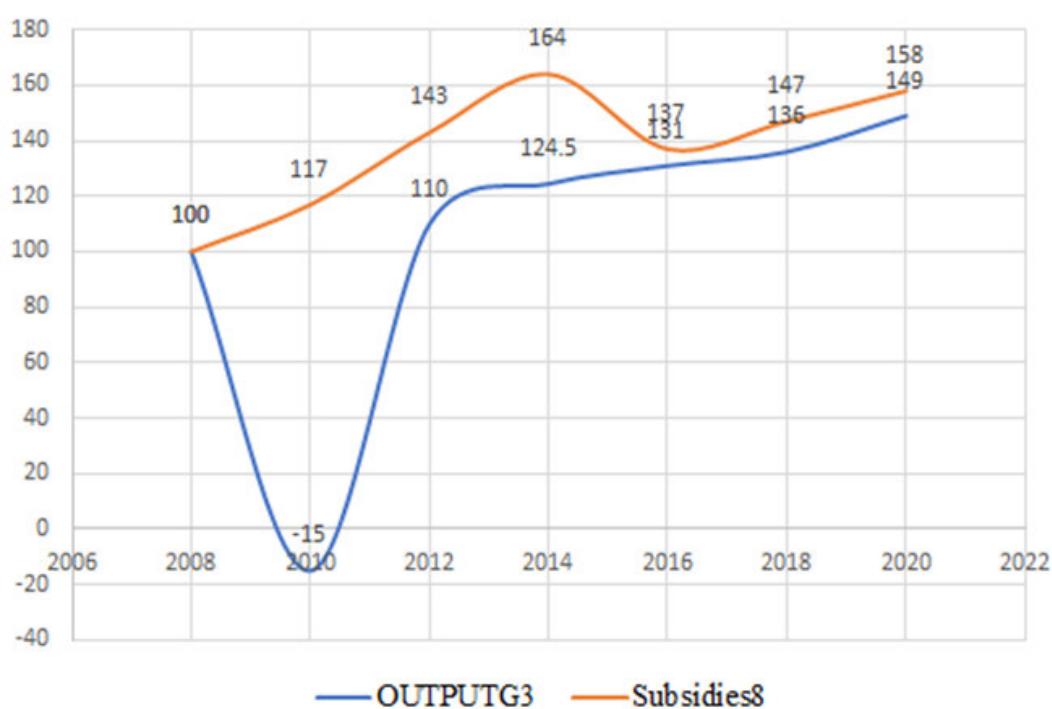


Figure 1. Changing rates of OUTPUT3 and Subsidies8 between 2008-2020 in percent in Million HUF

Source: System of agricultural accounts at current basic prices,

Hungarian Central Statistical Office, 2021, Budapest, Hungary

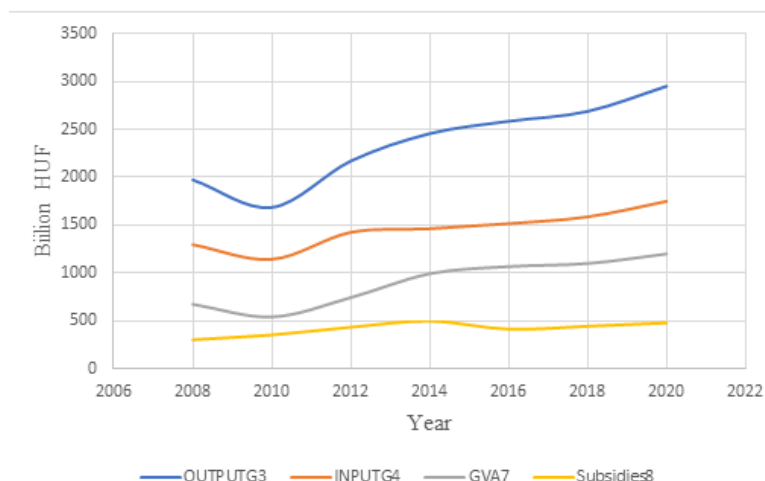


Figure 2. Changes of OUTPUT, INPUTG4, GVA7, Subsidies8 between 2008-2020 in Million HUF
Source: System of agricultural accounts at current basic prices

Note for abbreviations written in the text:

UAA = Utilised agricultural area.

Economic size: The *standard output* (SO) of an agricultural product (crop or livestock), abbreviated as SO, is the average monetary value of the agricultural output at *farm-gate price*, in euro per hectare or per head of livestock. There is a regional SO coefficient for each product, as an average value over a reference period (5 years, except for the SO 2004 coefficient calculated using the average of 3 years). The sum of the entire *SO per hectare of crop* and *per head of livestock* in a farm is a measure of its overall economic size, expressed in euro. *LSU* = Livestock units. One LSU is equivalent to a dairy cow. The number of animals (heads) is converted into LSU using a set of coefficients reflecting the feed requirements of the different animal categories.

Table 3. Correlation Matrix^a

	Plant1	Animal 2	OUTP UTG3	INPUT G4	INPUT Price5	PRODP rice6	GVA7	Subsidi es8	GFAAc c9
Plant1	1.000	-.935	.710	.706	-.885	.727	.715	.204	.501
Animal 2		1.000	-.464	-.545	.888	-.605	-.462	.134	-.211
OUTPU TG3			1.000	.793	-.401	.737	.989	.582	.934
INPUT G4				1.000	-.351	.992	.841	.403	.803
INPUT Price5					1.000	-.396	-.380	-.023	-.159
PRODP rice6						1.000	.783	.296	.732
GVA7							1.000	.638	.941
Subsidie s8								1.000	.675
GFAAc c9									1.000

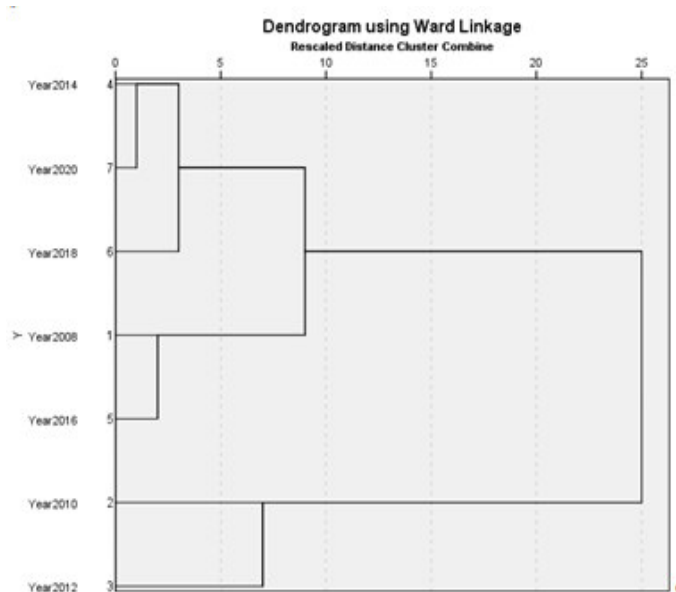
Source: Based on the System of agricultural accounts at current basic prices

Table 4. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.924	65.826	65.826	5.924	65.826	65.826	4.514	50.154	50.154
2	2.031	22.568	88.394	2.031	22.568	88.394	3.442	38.240	88.394

Extraction Method: Principal Component Analysis

Source: Based on the System of agricultural accounts at current basic prices

**Figure 3.** Dendrogram using Ward Linkage. Rescaled of distance cluster combine

Source: Based on the System of agricultural accounts at current basic prices

Table 5. Rotated Component Matrix^a

Variable	Component	
	1	2
GFAAcc9	.970	.114
GVA7	.918	.355
OUTPUTG3	.885	.367
INPUTG4	.792	.464
Subsidies8	.789	-.222
PRODPrice6	.709	.536
Animal2	-.112	-.987
INPUTPrice5	-.054	-.916
Plant1	.422	.896

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization, a = Rotation converged in 3 iterations.

Source: Based on the System of agricultural accounts at current basic prices

RESULTS AND DISCUSSION

Strategy trends of the agricultural industry and rural development

The most difficult condition for the agricultural production is the increase of the food and agricultural price level; because the input prices are increasing which press the output production conditions and the producing price level to be increasing trend. From this point of view the agricultural strategy should focus on the ensuring the possible moderate balance of supply-demand for food and agricultural products on the national market and increase the subsidies for the participant concerned the agricultural sector. The agricultural strategy includes some main aims of subsidies coming from public finance, which are as follows:

- *increase and strengthen agricultural production, food production and food-self-sufficiency as one kind of renewable energy resource;*
- *innovation process for technological development in agricultural industry;*
- *strengthen the integration process within the product channel of food and agricultural production and agrobusiness and food manufacturing industry from soil to table of consumers by vertical and horizontal levels;*
- *strengthen common purchasing input and common selling output from side of agricultural producers including family farms;*
- *ensure enough incomes for agricultural producers, farmers and employee in this sector based on the annual working unit system;*
- *strengthen capital force for producers of this sector by more income possibility, as self-financial force; favourable credit conditions accompanying with subsidies;*
- *strengthen the concentration for inputs used in the agricultural industry mostly in fields of land owned and land used, advanced mechanization technology, equipment;*
- *develop irrigation system accompanying with successful water management;*
- *improving the land use and land cultivation;*
- *extend the free of charge agricultural extension system including tax-calculation and planning of performance with participation of financial, law, mechanical engineering and veterinary experts for the agricultural producers;*
- *prepare network for extension structure coordinated by the Ministry of Rural Development, where one-one expert manages a fixed group of family farmers based on their performance-features until their retiring, beginning of pension period for them;*
- *extend the financial bases for agricultural producers in cases of crisis conditions either economic and natural-geographical;*
- *ensure enough genetic species for plant production and animal husbandry;*
- *extend the environment friendly technology for the agricultural production;*
- *help young farmers to start their performance in agricultural industry.*

Because of the main problems of agricultural producers mainly are lack of capital, land-use system based on the land separation, sometimes lack of knowledge and experiences even in field of adapting the new advanced technologies, therefore agricultural strategy should follow to solve these main problems.

From point of view of the farm structure of agricultural holdings, this means that the holdings less than 5 hectare had their share in 87% in 2010 and it decreased 81.4% by the end of 2016, while the share of holdings more than 100 hectare was 1.3% in 2010, which increased to 2.0% in 2016. *This means that the UAA (Used Agricultural Areas) per holding was only 8.1 hectare, while this increased to 11% in 2016. (Eurostat, ef_m_farmleg, June 2021; Table 3; Table 4; Table 5).*

The EU and Hungarian governmental offices also declared the new developing trend into sustainable development and biodiversity strategy. The European Commission declared about that putting our food systems on a *sustainable path* also brings new opportunities for operators in the food value chain.

New technologies and scientific discoveries, combined with increasing public awareness and demand for sustainable food, will benefit all stakeholders (EC 2021). The Farm to Fork Strategy aims to accelerate our transition to a *sustainable food system* that should:

- have a neutral or positive environmental impact
- help to mitigate climate change and adapt to its impacts
- reverse the loss of biodiversity
- ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food
- preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade

To mitigate the market tensions caused by the overproduction of cereals, there can be five ways of facilitating restructuring: The production of bio-energy could provide a solution for the overproduction on two sides. On the production side, the plantation of fast-growing species decreases the land used for cereal production, while on the market side, the use of cereals for bioethanol production decreases the surplus what was produced (HG 2011, p25.)

There is an import role of *gross fixed asset accumulation all* (GFAAcc9) *without recoverable VAT for agricultural production*, because this has very strong correlations with *gross value added* (GVA7) by 0.941 and *output growth* (OUTPUTG3) by 0.934, and *input growth* (INPUTG4) by 0.803, also this one has strong correlation with *producing price* (PRODPrice6) by 0.732.

Animal husbandry (Animal2) has a very strong contradict correlation with *plant production* (Plant1) by (Minus) 0.935, which means when animal husbandry increases the plant production decreases or opposite to this condition. This trend can be overviewed all over the researched period. Also, the animal husbandry has strong contradicted correlation with *producing price* (PRODPrice6) trends by (Minus) 0.605 in agricultural sector, which means that when the animal husbandry is increasing the producing price is decreasing based on the increasing supply of animal husbandry and animal products on the domestic market. But when *input price* (INPUTPrice5) increases the animal husbandry also increases, therefore, the correlation between two economic variables was by 0.888, as at level of very strong correlations. But when input price increases the *plant production* decreases based on the very strong correlation by (Minus) 0.885. This was resulted by increasing prices of such inputs used in plant production mostly fertilizer, pesticide and water irrigation equipment, soil degradation needing for coast soil improvement based on the water-wind erosion and increasing drought period in wide-side Europe and Hungary. Most of these kinds of costs degraded the efficiency of the plant production and not for animal husbandry. It does not mean that animal husbandry could not suffer from the global warming and its negative influences on this agricultural branch, but considerably less than the other plant branch. Also, the animal husbandry earlier – before the researched period – had less favourable conditions; therefore, the developing trend of the animal husbandry became better at present.

The data base shows that the change of plant production (Plant1) has grown by 48% for the period of 2008-2020 (2008= 100), while change of animal production (Animal2) has grown by 55.7%, therefore, the change of all agricultural production has grown by 49.5% for the same period. This can provide proof that plant production could be more efficient and income-able based on its producing price increase than production of animal husbandry, where the producing price level decrease (Table 3). In spite that the animal husbandry could result higher trend in its production, but it could not more profitable than the plant production, because the producing price level decreases the real income-able and profitability for the agricultural branches. Also, it is true that the plant and feed production has not increased as well as the animal husbandry needed for plant and feed yields for animal keeping.

From point of view of the development trend of the plant production, this branch has strong correlations with *output growth* (OUTPUTG3) by 0.710 and *input growth* (INPUTG4) by 0.706 and also with *gross value added* on the basic price (GVA7) by 0.715. This means that the *enough increase of the producing price level can ensure enough market price incomes for agricultural producers* to realise acceptable output and input growth resulting a *quite good gross value-added increase* and to make a satisfactory balance *against strong input price increase for plant producers*. When the input price increase was so higher the plant production decreased, but this decreasing was not considerable for longer time and was not general for all parts of the plant production (Table 3; HCSO 2021).

The Table 3 also shows that the *plant production* (Plant1) has considerable contradict very strong correlations with the *animal husbandry* (Animal2), which can be explained by the *less favourable economic conditions for the animal husbandry*. Because the animal husbandry was pressed by the *decreasing trends of the producing price level*, which enough cannot stimulate to increase of the gross value added (GVA7) based on the moderate decreasing output growth and input growth.

Fortunately, in case of animal husbandry not the considerable increase of the input price resulted the decrease of the gross value added, but the *unfavourable decrease of the producing price*. Probably the producing price level of animal husbandry was decreased by increasing production cost level and decreasing purchase power capacity based on the relatively larger supply side of animal husbandry on the domestic market.

The basic issue is *the producing price level for either plant production or animal husbandry*, because of the increasing producing price level of plant production and decreasing producing price level of the animal husbandry make sharply considerable contradict correlation by (Minus)0.935.

Sometime the *structure of the plant production cannot be satisfactory for the structure demand of the animal husbandry*, for example the feed production level. Also, many animal husbandry producers do not have enough production capacity for feeding their animal, therefore they have to purchase feed for animal from other producers by highly price level of feed. This can result more expansive animal products for the domestic market, which decreases market conditions for their selling.

Also, the input growth (INPUTG4) has closed to very strong correlations with output growth (OUTPUTG3) by 0.793 mostly closed to 0,800, which means that the increasing level of input can result more output volume based on more increasing producing price level leading to increasing more gross value added by 0.989 (Table 3; Table 4; HCSO 2021).

The Table-3 shows 88.394 values, as 88.4% according to the cumulative of initial Eigenvalues for the total variance explained. This means that two components of this SPSS analyse are explained by 88.4%, which are more than 60%, therefore, the data base (HCSO 2021) are completely enough for statistical analysing correlations among economic variables.

The Table 5 (HCSO 2021) shows the rotated component matrix consisting of two main components based on the Extraction Method: Principal Component Analysis and Rotation Method: Varimax with Kaiser Normalization, where the *first component* includes GFAAcc9, GVA7, OUTPUTG3, INPUTG4, Subsidies8 and PRODPrice6, while the *second component* includes Animal2, INPUTPrice5 and Plant1. The values of the economic variables show the value of each economic variable as measure of its importance in this analyse. The Minus symbol means that the given variable has contradicted correlations with other economic variables, as well as these are shown by the Table 3 (HCSO 2021).

Figure 1 shows *changing rates of OUTPUT3 and Subsidies8* between 2008 and 2020 in percent, where 2008= 100. Figure 1 provides a scheme that the subsidies (Subsidies8) have somehow consequently increased by 58% since 2008, but there was a little decline in trends of subsidies from 64% in 2014 to the level of 37% of 2016, after 2014. Even subsidies have not become over the level of 2014 by the end of 2020. The output trend was unfavourable, because this declined very considerably by 15% and output of agriculture has been over the level of 2008 only by 10% by the end of 2012. Generally, it can be declared that the subsidies coming from public financial resources have consequently increased and become over the trend level of the output. This trend of the subsidies shows that the role of the subsidies had been considerable important for increasing the output of agricultural producers, which means that the increase of the output could ne be realised without subsidies of public financial resources (HCSO 2021).

Figure 2 (HCSO 2021) shows that the OUTPUTG3, INPUTG4, GVA7 and Subsidies8 in Billion HUF have mostly been changing in direction of prosperity since 2010, but value of output sharply changed from lowest level in 2010 after influence of the economic world-wide side crises. Value of output increased more than the other economic variables INPUTG4, GVA7 and Subsidies8. The difference became wider between output and input values in 2020 comparably to data of 2010 even in 2012. This means that the agricultural production in Hungary became more efficient by the end of the researched period than in 2012. In spite that the subsidies from public finance have not changed so much since 2012, the value of the gross value added (GVA7) little more increased than the value of the subsidies. Naturally the subsidies are needed for development agricultural production even for gross value added, but the unified subsidies could lead to more result in field of gross value added after 2014. These changes also show that the agricultural sector could come out from the crisis period resulted decline of the world economy in 2008. Figure 3 (HCSO 2021) shows the Dendrogram using Ward Linkage and Rescaled of distance cluster combine, which clustered the different years within the researched period into five clusters based on the results of agricultural production. Therefore, it can be seen that the results – even of which gross value added based on the subsidies of public finance – were closed to each-others in 2014 as well as in 2020.

CONCLUSIONS AND RECOMMENDATIONS

Sustainability development strategy to follow recycling production process according to the agricultural production and food manufacture in order to use by-products for the following production phases. This recycling method helps efficiently to manage using by-products, as raw materials. Also, the biodiversity in field of the agricultural production can stimulate the using more species of plants and animals, which can make structure of agricultural production be more flexible relevant to the structure of the agricultural and food consumption. Based on the results of the analyses it can be declared that animal husbandry (Animal2) has really strong contradicted correlations with plant production (Plant1). Also, there are strong influences and correlations of producing price level (PRODPrice6) on the agricultural branches in cases of plant production (Plant1) and animal husbandry (Animal2). It was proofed that influences of *subsidies* (Subsidies8) from public finance on agricultural branches could increase investment in field of gross fixed asset accumulation all (GFAAcc9), gross value added (GVA7) and output growth (OUTPUTG3). Finally *gross fixed asset accumulation all* (GFAAcc9) has strong correlations with gross value added (GVA7) based on the output growth (OUTPUTG3) and input growth (INPUTG4) increasing. Also, the vertical integration provides possibility for participants concerned in product channel to produce, manufacture and sell final products from soil to the table of consumers. Also, the vertical integration strengthens agricultural producers / holdings to make wide-side cooperation to make the basic agricultural production and services are more efficient and profitable or income-able. *Gross fixed asset accumulation* based on increasing capital force of agricultural producers or holdings can ensure the further innovative production accompanying with using advanced technology, biodiversity and environmental conservation strategy. Also, this capital force of agricultural producers can be strengthened by the subsidies coming from public finance. The subsidies should be provided for agricultural producers in order to obtain *enough incomes* to realise continuous basic agricultural production process, to develop advanced technology for their competitiveness on the markets and finally not to escape from the agricultural sector in order to ensure the supplying food for domestic consumers. Naturally subsidies cannot substitute self-financing capital force of producers.

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