

**AGRICULTURAL UNIVERSITY - PLOVDIV**  
**FACULTY OF ECONOMICS**



**Vladan (Dusan) Cogoljevic**

**THE IMPACT OF PERSONAL SELLING STRATEGY ON THE DEVELOPMENT OF SERBIAN AGRICULTURE AND FOOD  
INDUSTRY**

**Author's summery**

of dissertation for awarding the educational and scientific degree "doctor" in the scientific field  
"Organization and Management"

Plovdiv, 2020

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Tutor: Associate Prof. Dr. Teodor Radev

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## INTRODUCTION

Predictions of annual growth in world consumption of agricultural and food products by 2050 indicate that it could be around 1.1%. The main factors that generate growth in demand for agricultural and food products are population growth as well as average income growth, especially in developing countries. Although global population growth is projected to slow, the trend of rapid population growth is expected to continue in some parts of the world, especially in the African continent where they have not yet had adequate nutrition, and the scarcity of available resources for agricultural production (land, water) is becoming more and more pronounced than before. It is estimated that, globally, food products account for 10% of total US \$ 5,000 billion in consumption, and that approximately 40% of the total number of employees are engaged in their realization. The latest environmental studies indicate that the food and agriculture sectors also have a significant impact on the environment (especially in terms of greenhouse gas emissions).

In such a situation, the matter of production in the agriculture and food (human nutrition) sectors comes to the fore. Agriculture and the food industry are becoming a relevant factor. Therefore, research in agriculture and the food industry is gaining in importance.

In the Republic of Serbia, more than 630,000 agricultural households are involved in the sale of agricultural products, while almost 4,000 companies operate in the food industry, employing over 70,000 employees. At the same time, the agriculture and food sectors need a number of inputs, which again represent a significant market for other industries, such as machinery and lumber, plastics and rubber, glass manufacturing, construction and the like. In addition, the agriculture and food industry, as a supplier of food products, has a direct impact on the wholesale and retail sector, tourism, room and board services, while for the textile, chemical and pharmaceutical industries it represents a significant buyer and supplier. Thus, the agriculture and food industry in the Republic of Serbia are not only of great economic but also of social importance.

Hence, this thesis aims to shed light on some matters concerning the agriculture and food sectors in the Republic of Serbia from the strategic aspect of personal selling. In this sense, the research starts from the assumption that the personal selling strategy has (or may have) an impact on the improvement of the development of the agriculture and food industry of the Republic of Serbia. In this way, a well-crafted sales strategy becomes a generator of economic progress.

The aforementioned research is described in more detail below.

### **The subject of the research**

Strategic marketing is a modern marketing management approach, which implies a continuous process of market adaptation, and is implemented as an active implementation of the following key marketing activities:

- analysis of environmental factors,
- analysis of strengths and weaknesses of companies,
- planning marketing activities,
- defining marketing strategies,
- implementing strategies, and
- control and review of marketing results,

and directing and guiding thereof toward marketing goals or changes in the environment.

For the agriculture and food industry in Serbia, when it comes to marketing strategies, the strategy of personal selling is especially relevant, and thus a dedication to the research into its impact on the development of the agriculture and food industry of Serbia is significant. This implies that the business entities of the agriculture and food industry of Serbia shall be subject to analysis from two viewpoints, namely:

— from the viewpoint of marketing ways in which the agriculture and food industry companies of Serbia can improve their business through their strategic positioning in the market and towards the customers through personal sale, so that they can gain certain comparative advantages over competitors,

— from the viewpoint of considering whether (and to what extent) repositioning towards personal sale can (and to what extent) have any effect on the development of the agriculture and food industry of Serbia itself.

## **The objective of the research**

Doctoral thesis research is a meticulous and analytical approach conducted on two economic hierarchical levels – the national macroeconomic level and the strategic level of the business entity. From the national macroeconomic level, the research examines the problems of the economy of the agriculture and food industry within the Republic of Serbia. The strategic level of the business entity examines the sales strategies and marketing mix as well as the contemporary understanding of the use of personal selling as an immanent part of integral marketing communications, including their influence on the development of the said sector. Based on the research presented in this way, the objective of the research can be defined.

The objective of the research within this doctoral thesis could be summarized as follows:

— to determine, from an economic standpoint, the place, role, scope and importance of the agriculture and food industry in the Serbian economy,

— to determine, from a strategic standpoint (mission, goals, strategy, tasks), the personal selling of legal entities from the agriculture and food industry of Serbia,

— to theoretically and practically investigate what kind of an impact (qualitatively and quantitatively) the personal selling strategy has (or may have) on improving the development of the agriculture and food industry of Serbia.

The agriculture and food industry of Serbia is of particular importance for the Serbian economy, since it represents one of the generators of economic development of the Republic of Serbia, from which it follows that the objective of the research can be classified as both scientific and socio-economic.

The scientific objective of the research is primarily focused on the systematization of economic knowledge in the agriculture and food industry of Serbia and the establishment of models of the impact of personal selling of business entities in the agriculture and food industry of Serbia on its development.

The socio-economic objective of the research is aimed at identifying relevant factors that, from a marketing standpoint of personal selling, can enhance the business of companies in the aforementioned agriculture and food industry of Serbia.

## **General hypothesis**

The general hypothesis ( $H_0$ ) of research within this thesis can be determined by the following statement.

Personal selling strategy is a marketing strategy that has a dominant influence on the development of the agriculture and food industry of Serbia, which is reflected in the intensification of economic activities, primarily in the following areas of business of the said industry, namely:

- increasing sales of agricultural and food products,
- increasing innovation in the sector,
- improving business efficiency.

## Special hypotheses

Special hypotheses, derived from the aforementioned general hypothesis ( $H_0$ ) of the doctoral thesis, could be summarized through the six following statements, namely:

H<sub>1</sub>: The key challenge of current business entities in the agriculture and food industry of Serbia is the lack of implementation of effective and penetrating personal selling strategies.

H<sub>2</sub>: Implementation of personal selling strategies by a business entity in the agriculture and food sector of Serbia may lead to an increase in its economic activities.

H<sub>3</sub>: Digital technologies do not significantly change the strategy of personal selling of Serbian agriculture and food industry companies.

H<sub>4</sub>: A personal selling strategy defines how companies must communicate with their target customers.

H<sub>5</sub>: Organizational structure of the sales function of Serbian agriculture and food industry companies has no significant influence on the change of personal selling strategy.

H<sub>6</sub>: The sales process is becoming more complex and requires companies to have a thorough knowledge of sales skills and techniques.

## Scientific research methods

In the realization of this thesis, several different scientific research methods, applied in the social sciences, have been applied, of which the following could be singled out, namely:

*The method of theoretical desk top research* (desk research), where research is based on literary sources such as:

- scientific sources (monographs, scientific and professional publications, in paper or electronic form, etc.),
- Internet sources (search of relevant data from reports and studies of various expert state bodies),
- national sources (such as statistical reports and newsletters of relevant ministries, institutes, national agencies, etc.)

has been applied in the research of the state of agriculture and food industry in the world and Serbia.

*Empirical research methods*, based on field research that collect relevant data (via face-to-face communication, email, telephone, etc.)

*Mathematical statistics methods* used for the design and processing of empirical research results were used:

- to select a statistically relevant sample of selected respondents (agriculture and food industry companies in Serbia).
- to design a questionnaire that served to operationalize empirical research.
- for descriptive statistics for averaging values, displaying and grouping data, and for generalizing results.
- as statistical tools of EXCEL.

*Logical reasoning methods*, which include implications, inductive and deductive reasoning, were used to compare the subject of research, identify research features, identify functional connections and the impact of personal selling marketing strategy on the development of the Serbian agriculture and food industry, in discussing results, and concluding considerations.

*The historical method* was used to determine and present historical facts and data.

*Methods of analysis, comparative analysis and synthesis* were applied to discuss and compare the subject of research, to identify its characteristics, and to compare historical data.

*The descriptive method* was used to present the research results.

*The analogy method* was used to prove hypotheses, draw conclusions, and discuss the results obtained.

### **The thesis structure**

The content of the thesis is structured into eight sections, which are presented and briefly explained below.

The first part, i.e. the *Introductory Considerations* chapter, points to the relevance of the research, briefly presents the research concept, that is, the research subject, objective, hypotheses (general and special), as well as the methodology of scientific research and the thesis structure or summary.

In the second part, that is, in the chapter *Economics of the agriculture and food industry of Serbia*, the economics of agriculture and the food industry in the world is first discussed. Then the focus turns to the economy of the agriculture and food industry in Serbia. In that sense, first comes a brief review of the historical development of agriculture in Serbia, followed by the domain of research, that is, the sector of agriculture and food industry of Serbia, from the standpoint of definition, as well as from the legal, strategic and institutional points of view. Finally, the situation in the agriculture and food industry of Serbia is discussed and the results of a theoretical (desk-top) study of key economic indicators of the agriculture and food industry of Serbia are presented.

In the third part, within the chapter *Sales strategies and marketing mix of companies*, the focus of the research is now on marketing. In this regard, sales strategies are first considered, i.e. the strategy is considered as a phenomenon, and then a special consideration is given to sales strategies. Then, within the marketing mix, the strategies of the business entities indicate the specifics of the marketing communication system and the marketing mix in the function of the sales strategy of the business entities from the said sector. Finally, this chapter points to the direction in which the business entity in the mentioned sector should focus its future marketing and sales efforts.

The fourth part, that is, the chapter *Personal selling of companies of the agriculture and food industry of Serbia*, discusses in detail and from various aspects the personal selling of business entities and the way they should communicate with their target customers, as well as modern ways of communication (digital marketing), including ways to promote personal selling.

In the fifth part, that is, in the chapter *Empirical research of the impact of personal selling strategy on the development of agriculture and food industry in the Moravica District of the Republic of Serbia*, an impact model is built in order to establish the relationship between personal selling strategy on the one hand and the development of the agriculture and food industry of Serbia on the other hand. In this regard, the design of the empirical research is briefly presented first. After that, the results of the empirical research are presented, including a discussion of the results. Finally, an impact model of the personal selling strategy on the development of the agriculture and food industry of Serbia is built.

In the sixth part, that is, in the *Concluding observations*, the research results are briefly summarized, the author's opinion on whether and to what extent the hypotheses introduced were confirmed is presented, the author's own assessment of the scientific contribution of the thesis is given, as well as possibilities for further research in this field.

In the seventh part, that is, in the *Literature* chapter, the references used in the thesis are presented.

The eighth part, that is, in the *Appendixes* chapter, presents the original supporting materials derived from the previous research, such as a created empirical research questionnaire and other relevant documents.

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## EMPIRICAL RESEARCH DESIGN

### Research methodology

The methodology of empirical research applied within this doctoral thesis is a statistical method based on a subjective approach to identifying and measuring relevant status indicators by collecting data on a representative sample of respondents from agricultural holdings and food companies, through a pre-designed questionnaire, covering relevant areas of empirical research. Respondents are represented by one representative of agricultural holdings and food companies, both for sales and marketing managers, or, where this is not possible - competent agents.

The applied methodology of empirical research based on mathematical statistics, in accordance with (Suzić N, 2007), includes the following practical steps, namely:

- defining the questionnaire,
- determining a representative sample of respondents,
- collecting data from respondents,
- statistical data processing,
- statistical analysis.

The practical steps of the research will be discussed in more detail below.

### Defining the questionnaire

The basis of the empirical research model is a tool used for field-based data collection of respondents from agricultural holdings and food companies in the form of a survey. In this regard, a special Research Questionnaire was created for the purpose of this empirical research, which is presented in Annex 2 of this doctoral thesis.

The *questionnaire* integrates relevant areas of empirical research, dimensions, and variables.

The relevant research areas are as follows:

- Identification profile of the food company (FC) and agricultural household (AH),
- Business profile of the business entity / agricultural household,
- Marketing profile of the business entity / agricultural household,
- Strategic profile of the business entity / agricultural household.

The structure of the Questionnaire in terms of research areas, dimensions and variables (number, type) is shown in Table 1.

**Table 1** Structure of the Research Questionnaire /Source: Author/

Research areas	Dimensions	Variables	
		No.	Type
Identification profile	food company (FC)	9	Descriptive
	agricultural household natural entity (AHNE)	11	Descriptive
	agricultural household legal entity, entrepreneur (AHLE)	10	Descriptive
Business profile of the business entity / agricultural household	applied technology in manufacturing	4	Yes/No
	available technical resources	6	Yes/No
	structure of supply of inputs for production	5	%
	structure of people engaged in the business	5	%
	average annual income	1	RSD
Marketing profile of the business entity / agricultural household	structure of the production program	7	%
	structure of marketing activities	7	%
	approach to communication with customers	2	Likert scale (0-9)
	applied product marketing and promotion	8	Likert scale (0-9)
	the way of selling products to customers	3	Likert scale (0-9)
	sales channel structure	8	Yes/No
	the way of promoting product sales	3	Likert scale (0-9)
	creating the public image of the company	1	Likert scale (0-9)
	implementing a direct personalized relationship with an individual customer	1	Likert scale (0-9)
	application of modern IT for advertising	6	Likert scale (0-9)
	structure of quality control and food safety	1	Likert scale (0-9)



	application of the Newsletter	5	Likert scale (0-9)
Strategic profile of the business entity / agricultural household	ideal customer profile	1	Yes/No
	conducting a SWOT analysis	1	Yes/No
	defined strategic determinants	3	Likert scale (0-9)
	the way of penetrating new markets	6	Likert scale (0-9)
	the way of increasing economic activity	6	Likert scale (0-9)
	the impact of digital technologies on communications marketing	1	Likert scale (0-9)
	the impact of the direct form of marketing communication on the way of communication	1	Likert scale (0-9)
	the impact of organizational structure on the way of communication	1	Likert scale (0-9)
	the impact of knowledge of sales skills and techniques	1	Likert scale (0-9)
	sales skills and techniques of employees	1	Likert scale (0-9)
	knowledge of employee languages	4	Likert scale (0-9)
	training employees in sales or marketing	1	Likert scale (1-4)
	factors on which the success of the sales function depends	16	Likert scale (0-9)
	Total	146	

### *Determining of a representative sample of respondents*

#### *Sample location*

For the empirical research of the agriculture and food sectors, the Moravica Administrative District of the Republic of Serbia was selected.

From the state administration standpoint, the Republic of Serbia is divided into 29 administrative districts, Table 2.

**Table 2.** Administrative districts in the Republic of Serbia /Source: (UORS, 2019)/

Administrative districts of the Republic of Serbia	
1. North Bačka District	16. Zlatibor District
2. Central Banat District	17. Moravica District
3. North Banat District	18. Raška District
4. South Banat District	19. Rasina District
5. South Bačka District	20. Nišava District
6. Srem District	21. Toplica District
7. West Bačka District	22. Pirot District
8. Mačva District	23. Jablanica District
9. Kolubara District	24. Pčinja District

10. Podunavlje District	25. Kosovo District
11. Braničevo District	26. Peć District
12. Šumadija District	27. Prizren District
13. Pomoravlje District	28. Kosovska Mitrovica District
14. Bor District	29. Kosovo-Pomoravlje District
15. Zaječar District	

Moravica District, covers the area of Čačak and Gornji Milanovac, Lučani and Ivanjica municipalities. It covers an area of about 3016 km<sup>2</sup> and, according to the 2011 census, had a total population of 212,000.

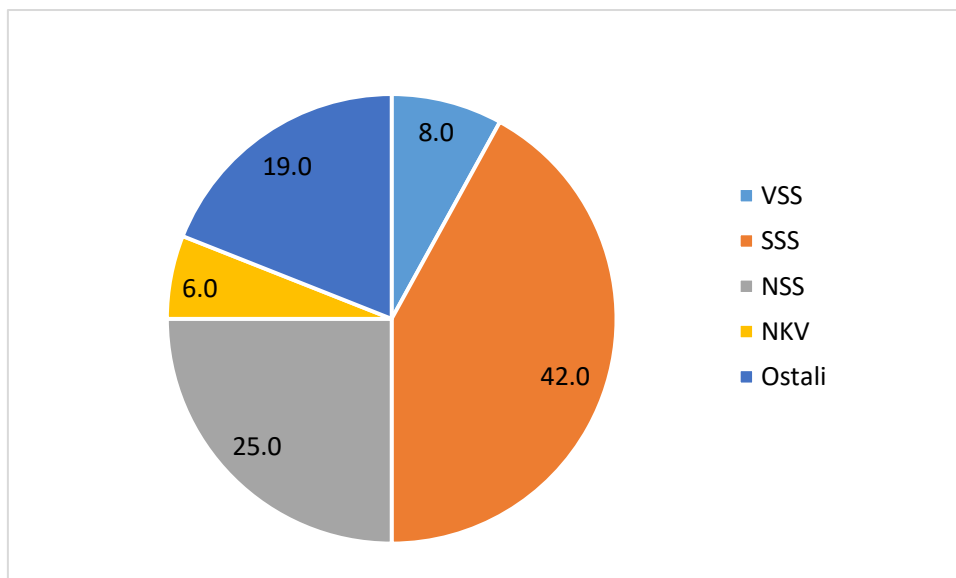
Moravica District has a favorable economic structure, developed private entrepreneurship and a high level of payment operations. There are over 2000 companies and more than 6000 entrepreneurial businesses in the district, with over 50,000 employees.

This district has developed transport infrastructure, agriculture, interesting tourist offer, higher educational institutions, favorable climate and ecological activities for the production of healthy food and good human resources (MUO , 2019).

**Table 3** Moravica District General Data for 2017 /Source: (ORRS, 2018)/

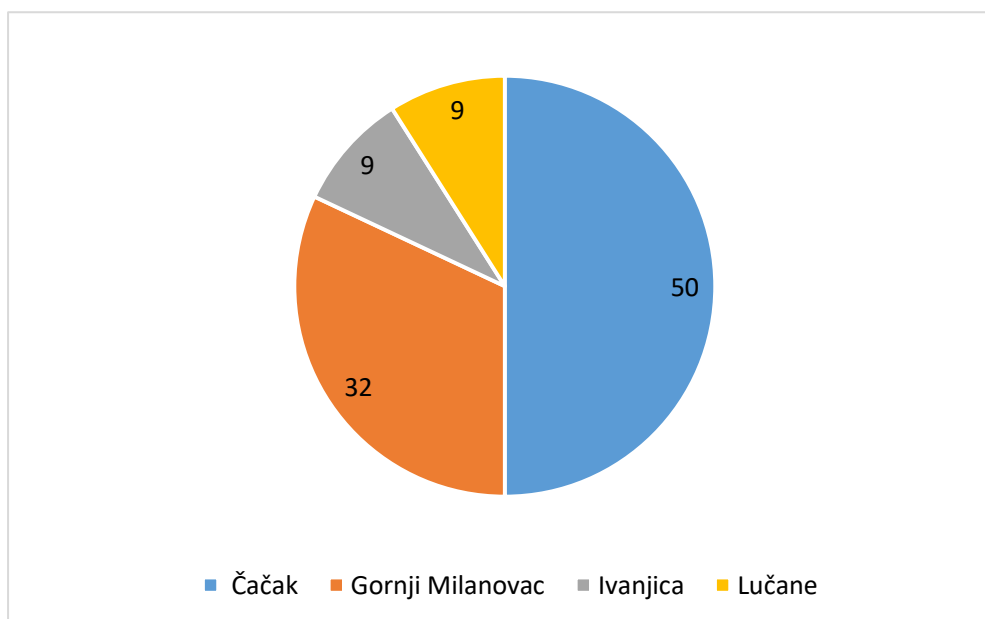
Region District City – municipality	Area <sup>1</sup> , km <sup>2</sup>	No. of settlement s	Population <sup>2</sup> , data June 30, 2017		Cadastral municipalitie s <sup>1</sup>	Registered local communitie s <sup>3</sup>	Local offices <sub>3</sub>
			total	per 1 km <sup>2</sup>			
<b>REPUBLIC OF SERBIA</b>	<b>8849 9</b>	<b>6158</b>	<b>702085 8</b>	<b>...</b>	<b>5822</b>	<b>4120</b>	<b>1134</b>
<b>Moravica District</b>	<b>3016</b>	<b>206</b>	<b>202026</b>	<b>67</b>	<b>194</b>	<b>177</b>	<b>61</b>
Čačak	636	58	111075	17 5	57	69	30
Gornji Milanovac		63	41872	50	61	51	23
Ivanjica	1090	49	30161	28	42	19	-
Lučani	454	36	18918	42	34	38	8
<b>Note:</b> <sup>1)</sup> Data were taken from the Republic Geodetic Authority. <sup>2)</sup> Estimate. <sup>3)</sup> Data are taken from the Statistical registers as of December 31, 2017.							

In the structure of the population in terms of education in the Moravica District, Chart 5.1, secondary professional qualification SPQ (42%) dominates, followed by lower professional qualification LPQ (25%), then higher professional qualification HPQ (8%), unskilled workers UW (6%), and Other (19%).



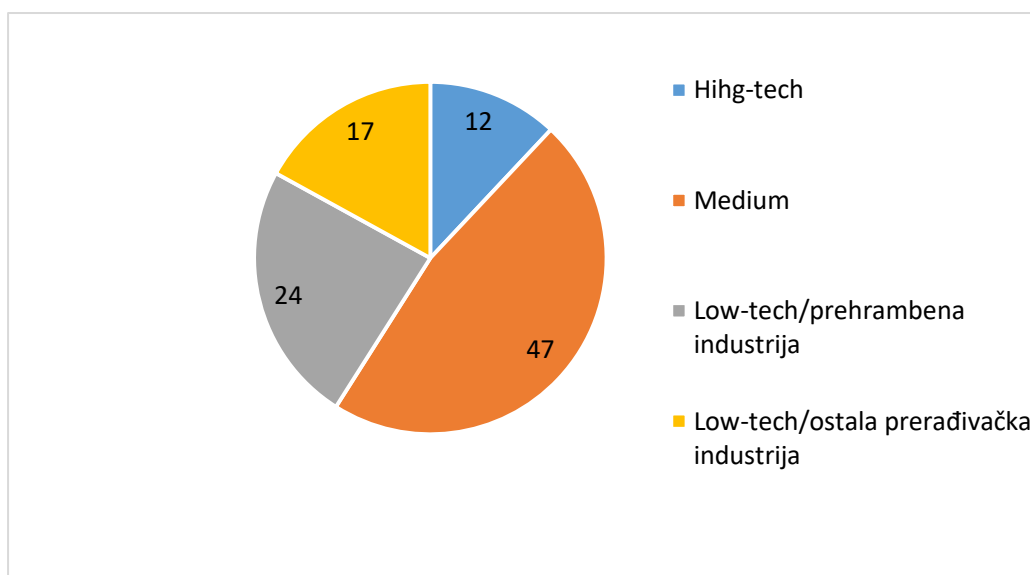
**Chart .1** Structure of education of the population in Moravica district in % /Source: (SEA, 2015)/

From the standpoint of the contribution of municipalities and cities to the gross value added in the Moravica District, Chart 2, the largest share is in Čačak (50%), then in Gornji Milanovac (32%), while Ivanjica and Lučane have 9% each.



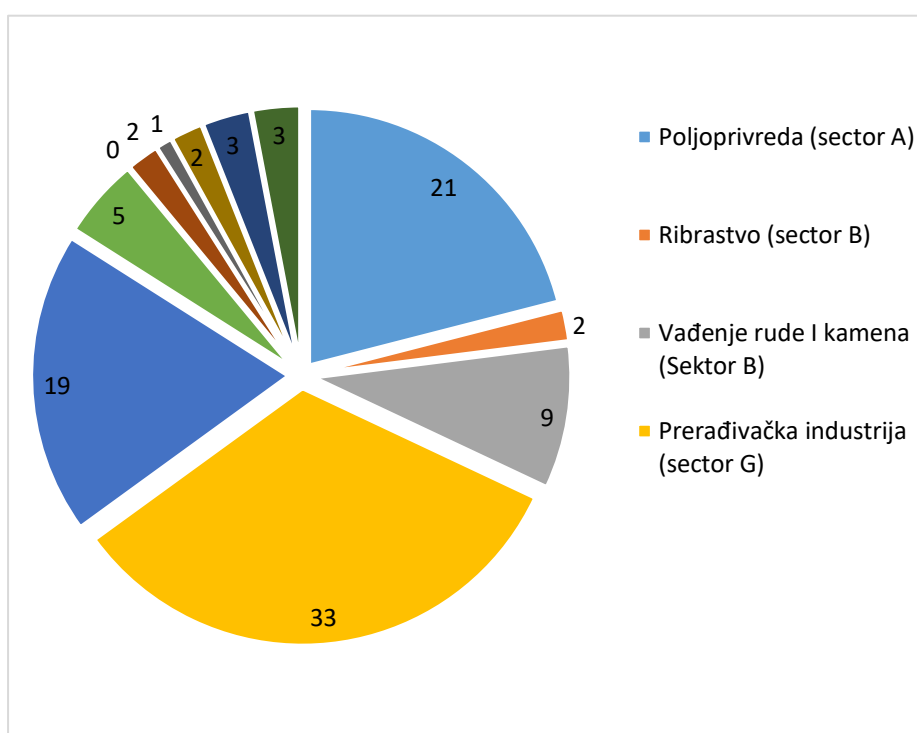
**Chart 5.2** GVA contribution structure for municipalities and cities in the Moravica District in % /Source: (SEA, 2015)/

From the standpoint of the technological level of industry in the Moravica District, Chart 3, most of the companies belong to the Medium-tech sector (47%), then Low-tech/food industry (24%), Low-tech/other manufacturing, and lastly High-tech companies (12%).



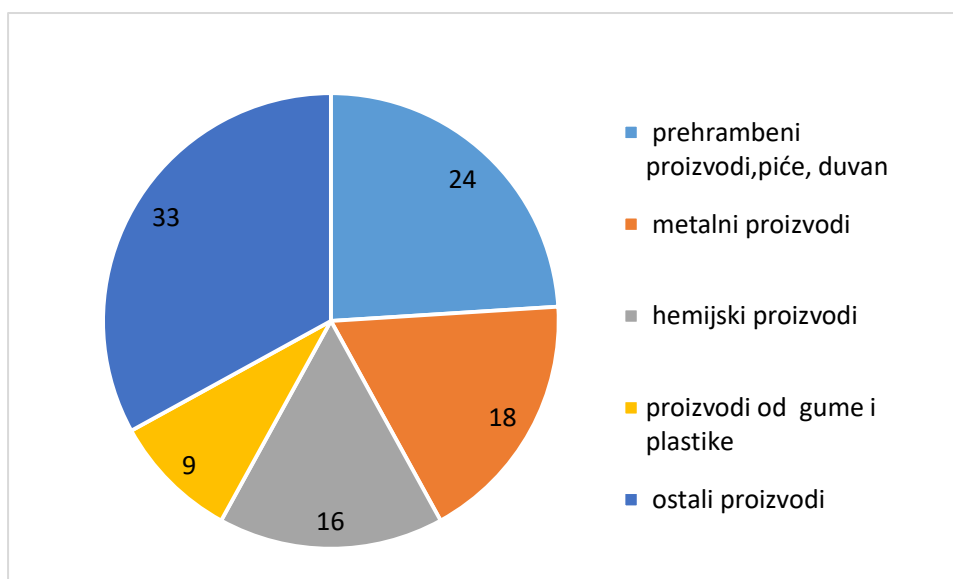
**Chart 3** Technological level of industry in Moravica District in % /Source: (SEA, 2015)/

When it comes to economic income by activity in Moravica District, chart 4, the situation is as follows: 33% Manufacturing industry (sector G), 21% Agriculture (sector A), 19% Energy production and supply (sector D), 9% Mining and quarrying (sector B), 5% Construction (sector D), 3% Healthcare and social work (sector U) and Other utility, social and personal services (sector M), 2% Fisheries (sector B) and Real estate and renting (sector I), 1% Traffic and supplies and connections (sector Z).



**Chart 4** Structure of economic income by activities in Moravica District in % /Source: (SEA, 2015)/

Within the GVA of manufacturing industry in the Moravica District, Chart 5, the most represented are food, beverages, tobacco (24%), then metal industry products (18%), chemical industry products (16%), rubber and plastic products (9%), while all others are represented by 33%.



**Chart 5** Structure of GVA of manufacturing industry in Moravica District in % /Source: (SEA, 2015)/

In 2018, the farmers in Moravica District had a total of 109360 hectares of agricultural land, on which there were 28078 agricultural holdings, with 65978 annual work units, Table 4.

**Table 4** Land, livestock, labor and standard value of farm production according to legal status and size of utilized agricultural land for Moravica District /Source: (RZS U4, 2019)

		2018				
Territory	Legal status	Agricultural land utilized [Hectare]	Holdings [number]	Livestock units [number]	Annual work unit [number]	Economic size of the holding [EUR million]
REPUBLIC OF SERBIA	Total	3475894	564541	1933840	645733.12	4861
	family household	2916125	562895	1651568	627406.28	4205
	legal entity	557866	1373	276370	17576.92	644
	entrepreneur	1903	272	5902	749.92	12
Moravica District	Total	109360	28078	65978	44030.66	170
	family household	106186	28040	65515	43900.78	168
	legal entity	3174	37	463	129.48	2
	entrepreneur	0	1	0	0.4	0

#### Sample size determination

Sample size determination was performed based on Yamane's simplified formula for calculating sample size (n), according to (Israel G, 1992), with the following assumptions introduced:

- confidence level 95% and  $P=0.5$ ;
- error  $e=\pm 10\%$ ;
- population size: 800 agricultural and food industry companies in the surveyed district

The sample size n according to the Yamane's simplified formula was calculated as follows:

$$n = N/[1+N*(e)^2] = 800/[1+800*(0.1)^2] = 89 \quad ]$$

Based on the presented formula, it is calculated that the representative sample size is  $n = 89$  representatives from agricultural and food companies in the surveyed district.

#### *Data collection, processing and analysis*

##### *Data collection*

Collection of empirical research data was done through the Questionnaire, defined under Chapter 5.1.1.2. Data collection covered the time period from November 2018 - April 2019.

The collection of empirical research data from business representatives was carried out in a combined manner, through personal contact and via e-mail. Although the total number of inquiries sent to business entities was larger than the planned sample size (89), the total number of realized business entities surveyed is still smaller (72), because a significant number of business entities, especially those whose data were planned to be collected via e-mail, did not respond to the query. Finally, 59 queries were obtained personally and 13 more queries were e-mailed.

##### *Data processing*

In order to further process the data of business entities collected via the Questionnaire, a special database was created in Excel, which first included all the collected data.

The processing of the collected data was carried out through the following steps:

- logical data control,
- quantitative (descriptive statistics) data processing, and
- qualitative analysis of data processing results,
- elaboration of the results.

Logical control and quantitative (descriptive statistics) data processing was done within the Excel database, and based on the processing results, a qualitative analysis of the data processing results was conducted.

##### *Qualitative analysis of results*

Qualitative analysis of the results was done by logical inference based on the results of the described quantitative (descriptive statistics) data processing.

##### *Elaboration of the results*

After data processing was complete, all results were elaborated within Chapter 5.2. IMPLEMENTATION OF EMPIRICAL RESEARCH, which is presented below.

## IMPLEMENTATION OF EMPIRICAL RESEARCH

### **Characteristics of the sample used in empirical research**

During the processing, the data concerning the key characteristics of the surveyed agricultural producers in the sample were first processed, and these included:

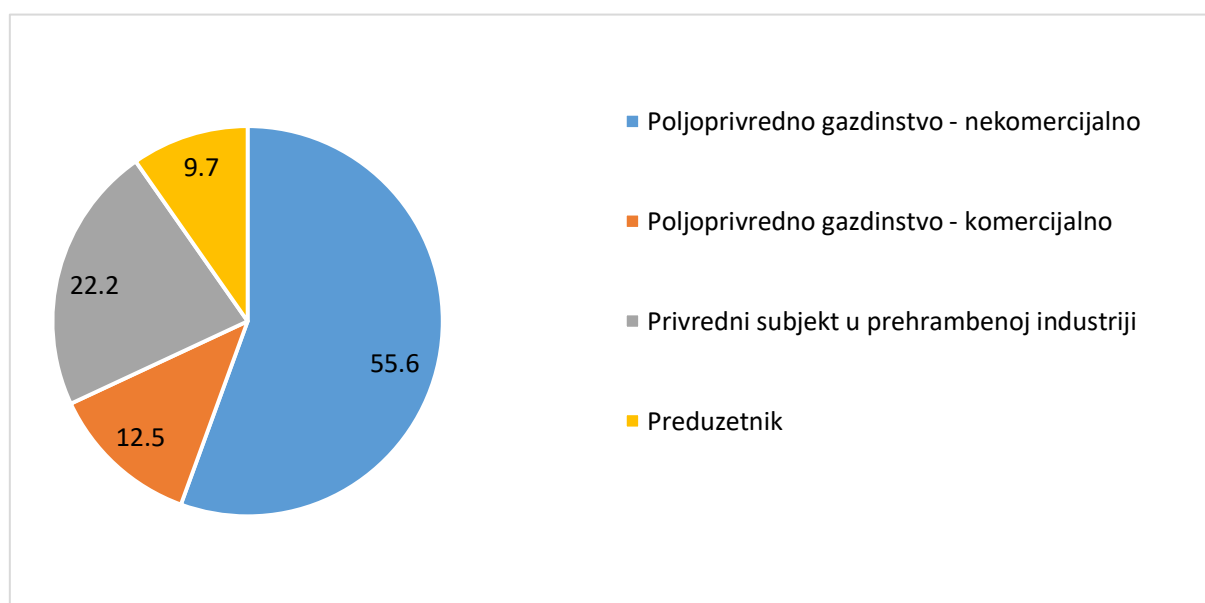
- structures of agricultural producers,
- structure of agricultural producers' production program in the sample,
- structure of age of the surveyed agricultural producers,

- structure of technology level applied by the surveyed producers,
- structure of labor engaged in agricultural production,
- structure of technical resources available to agricultural producers,
- structure of acquiring inputs for production,
- structure of income,

which is further discussed below.

#### *Structure of agricultural producers in the sample*

The structure of the surveyed producers in the sample, from an organizational standpoint, was as follows: most represented were non-commercial agricultural households (55.6%), and then respectively: food industry companies (limited liability companies – LTD) (22.2%), then commercial agricultural households (12.5%), while entrepreneurs were least represented (9.7%), which is shown in Chart 5.6.

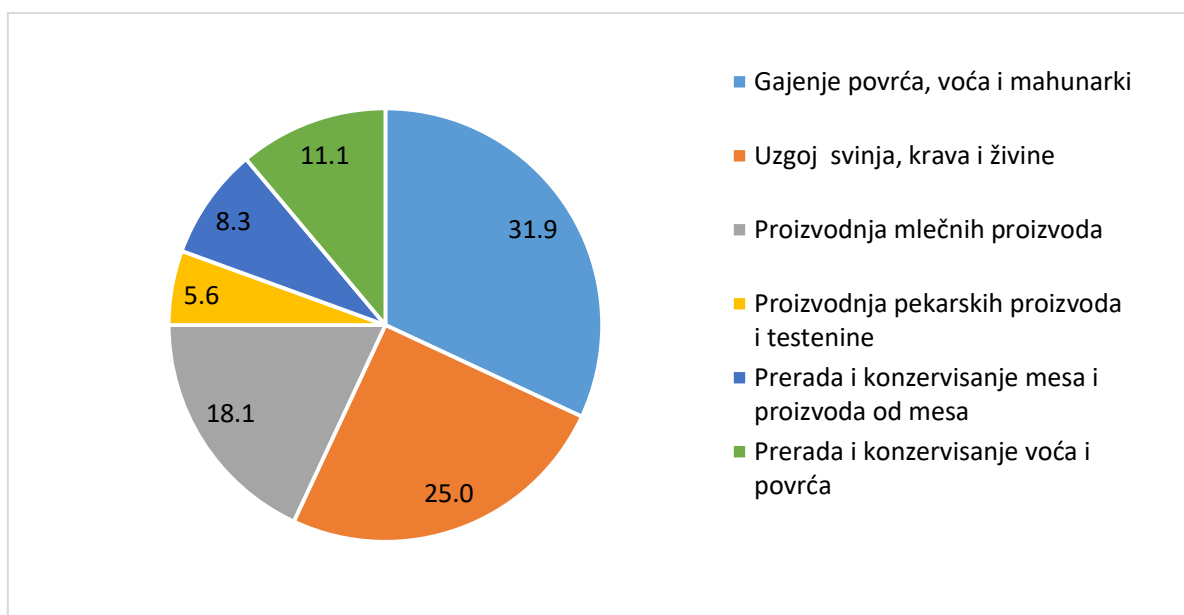


**Chart 5.6** Structure of agricultural producers in terms of organization /Source: author/

#### *Structure of agricultural producers' production program in the sample*

The agricultural producers' production program is primarily conditioned by natural factors (such as the the soil structure, fruitfulness, climate, the existence of vegetation periods in crop and livestock production, etc.) and then only by adapting the product to market needs.

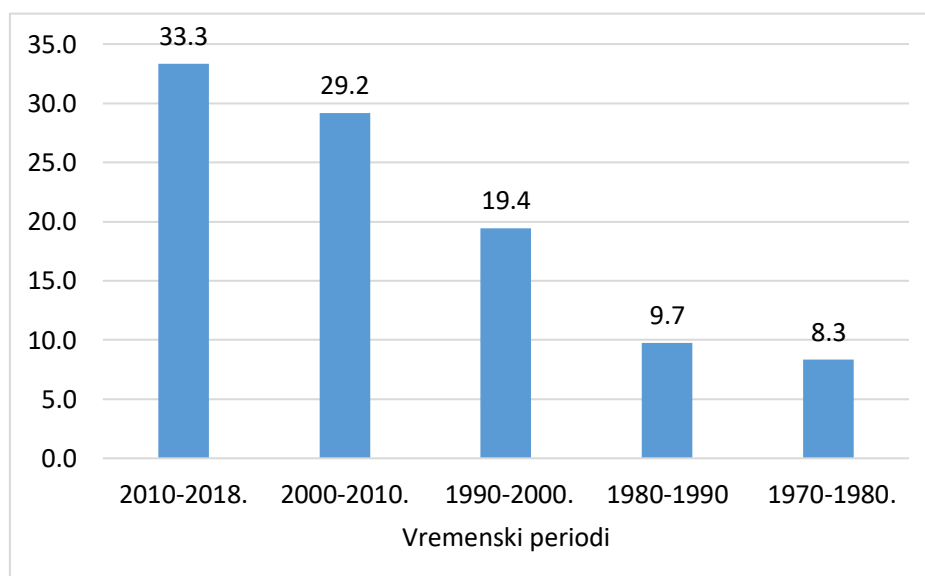
The structure of the production program of the surveyed producers, in terms of percentage representation of product types in the sample, included the following products: growing vegetables, fruits and legumes (31.9%), breeding pigs, cows and poultry (25.0%), production of dairy products (18.1%), processing and preserving of fruits and vegetables (11.1%), processing and preserving of meat and meat products (8.3%), and finally the production of bakery products and pasta (5.6%), which can be seen in Chart 5.7.



**Chart 7** Sample structure with regard to agricultural producers' production program /Source: author/

#### *Structure of age of producers surveyed*

The producers surveyed were created at different times. The youngest manufacturers are from 2018, while the oldest are from 1970. The structure of the producers in the sample from the standpoint of age, or their establishment, was as follows: most were from 2010-2018 (33.3%), followed by those from 2000-2010 (29.2%), then from 1990-2000 (19.4%), then 1980-1990 (9.7%) and lastly from 1970-1980 (8.3%), which is represented in Chart 5.8.

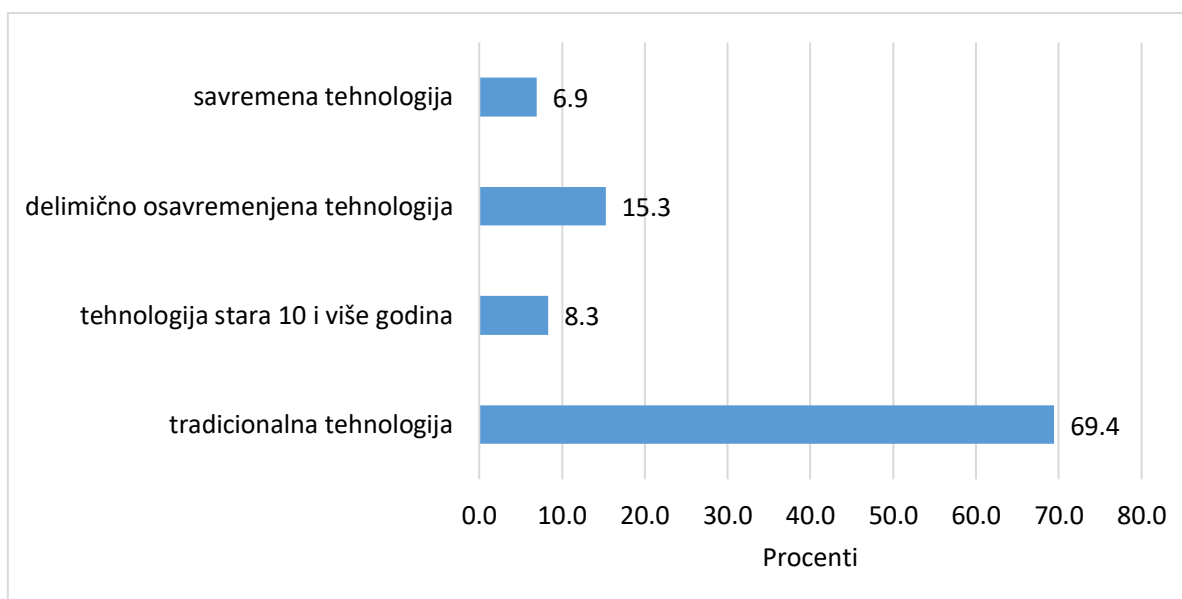


**Chart 8** Structure of the producers surveyed regarding their origin /Source: author/

#### *Structure of technology level applied by the surveyed producers*

In terms of the level of modernity of available technology, the surveyed producers apply the following levels of technology: most of them had traditional technology (69.4%), then respectively partially modernized technology (15.3%), technology that is 10 and more years old (8.3%), and lastly modern technology (6.9%), which is represented in Chart 9.

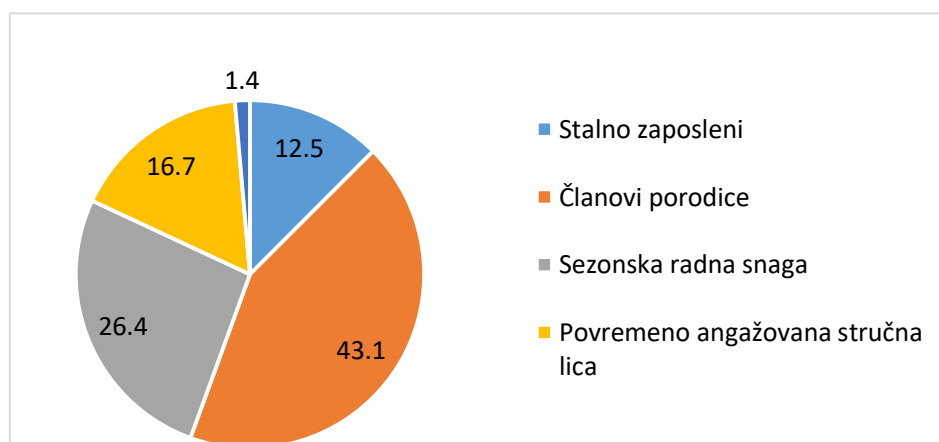




**Chart 9** Sample structure with respect to the level of technology applied by the producer  
/Source: author/

#### *Structure of labor engaged in agricultural production*

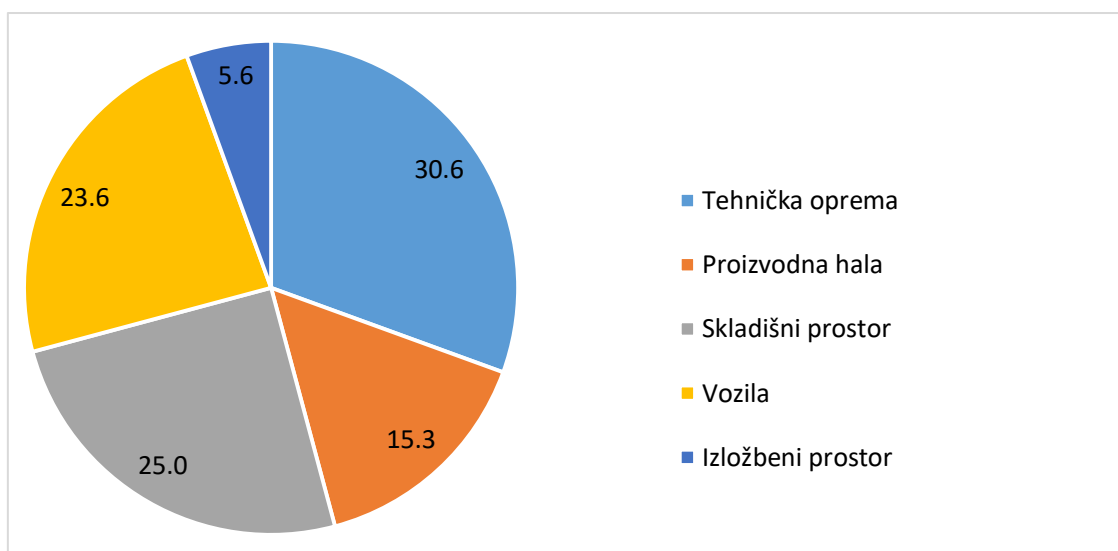
In terms of engaged labor, the surveyed producers were represented as follows: the most engaged are the family members (43.1%), then the seasonal workforce (26.4%), occasionally engaged professionals (16.7%), permanently employed (12.5%), and the least represented were other employment categories such as veterinarians, technologists, agronomists and others (1.4%), shown in Chart 10.



**Chart 10** Structure with regard to those engaged in agricultural production /Source: author/

#### *Structure of technical resources available to agricultural producers*

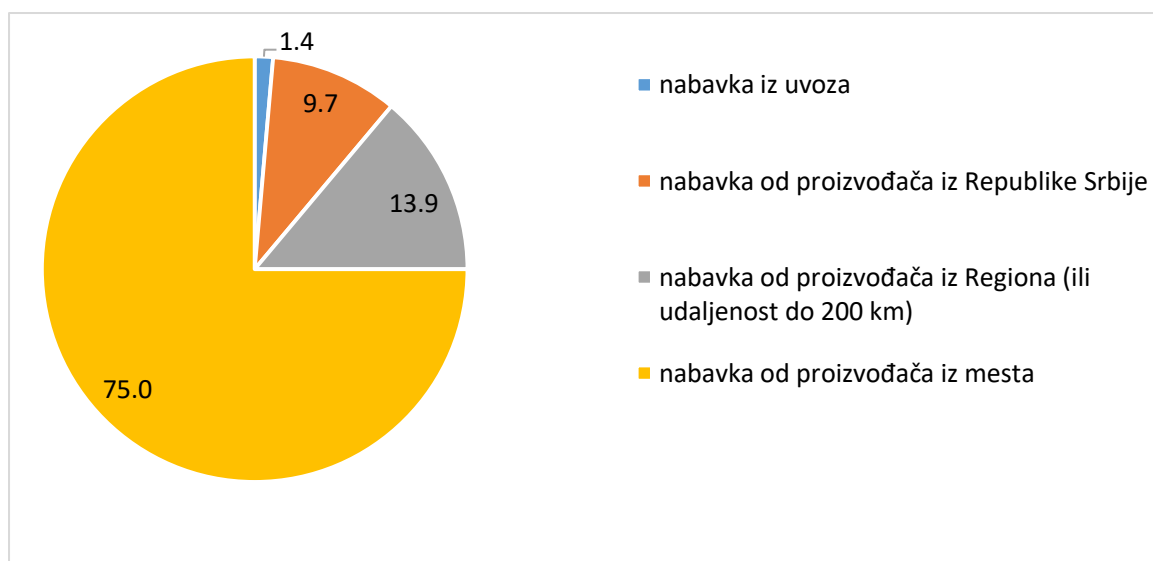
The structure of the technical resources available to the sample producers is as follows: most manufacturers have technical equipment (30.6%), followed by storage space (25.0%), vehicles (23.6%), production hall (15.3%), and showroom (5.6%), which can be seen in Chart 5.11.



**Chart 11** Sample structure in terms of manufacturer technical resources /Source: author/

#### *Structure of acquiring inputs for production*

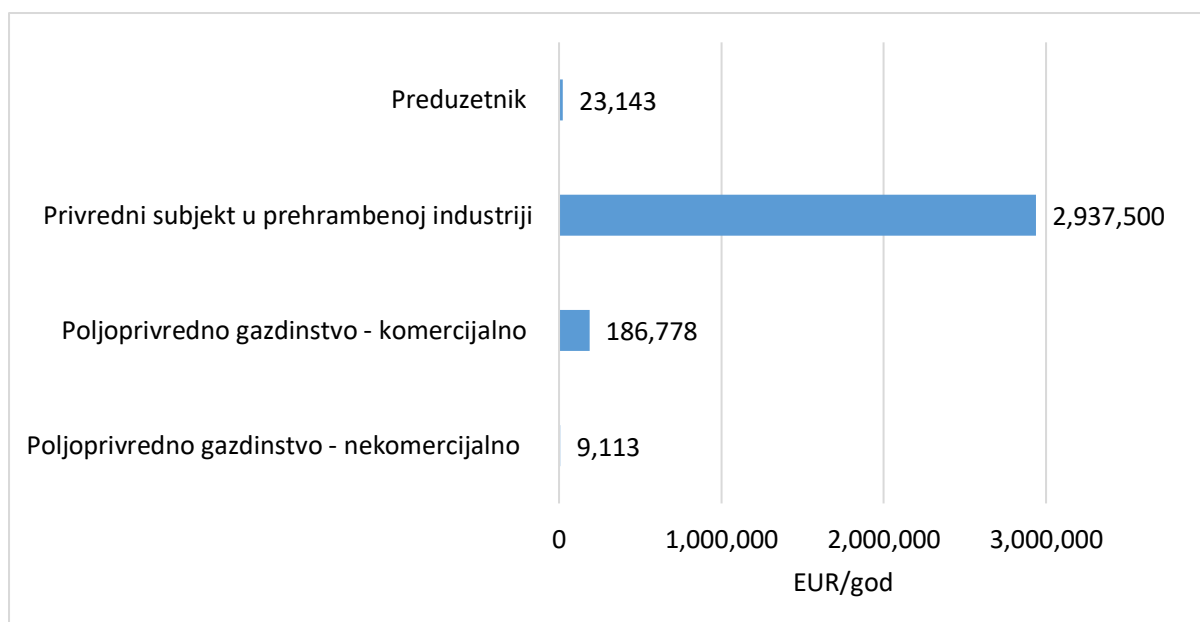
The surveyed agricultural producers mostly purchase inputs / raw materials for their production from Serbia (99.1%), that is, they mostly procure from producers from their place including from their own production capacities or from nature (75.0%), then from suppliers from the region, up to 200 km away (13.2%), followed by suppliers from the Republic of Serbia (10.3%), and least from imports (0.9%), as shown in Graph 12.



**Chart 5.12** Sample structure in terms of procurement of inputs for production /Source: author/

#### *Structure of annual revenue of producers from the sample*

The largest annual income of the surveyed producers in 2018 was from the food industry (2937500 €), followed by commercial agricultural holdings (186778 €), entrepreneurs (23143 €) and non-commercial agricultural holdings (9113 €), as can be seen in Chart 5.13.



**Chart 13** Sample structure in terms of gross income /Source: author/

## Results of empirical research

After the data were processed, the results of the analysis of the producers' marketing and strategic profile, which is presented below, were made.

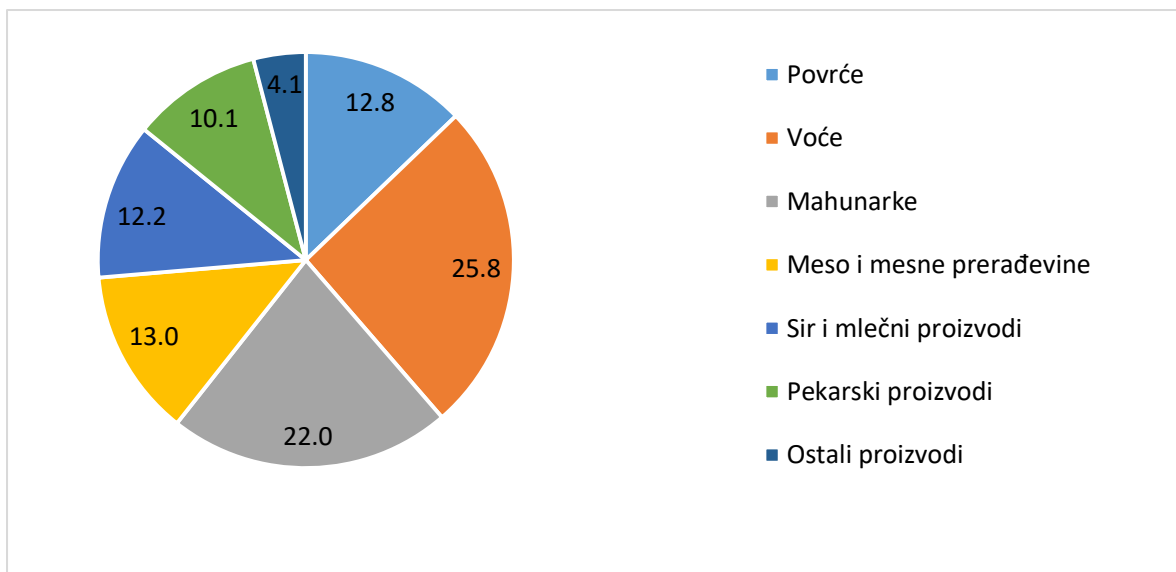
### Marketing profile of the sample producers

The marketing profile of the sample producers included an analysis of the following structures:

- producers' predominant product range,
- producers' prevailing marketing activities,
- producers' approach to customer conversation,
- producers' implementation of marketing and promotion of products,
- producers' method of selling products to customers,
- producers' prevailing sales channels,
- producers' way to promote sales,
- producers' relationship with customers,
- producers' applications of modern information technology in marketing,
- producers' quality and food safety controls.

### Evaluation structure of the prevailing production program of the sample producers

The structure of the prevailing producers' production program is evaluated in percentages of the elements of the producers' production program. Ratings of producers are as follows: when it comes to their product range, most deal with fruit growing (25.8%), followed by cultivation of legumes (22.0%), production of meat and meat products (13.0%), growing vegetables (12.8%), production of cheese and dairy products (12.2%), bakery products (10.1%), and finally other agricultural products (4.1%), as shown in Chart 5.14.

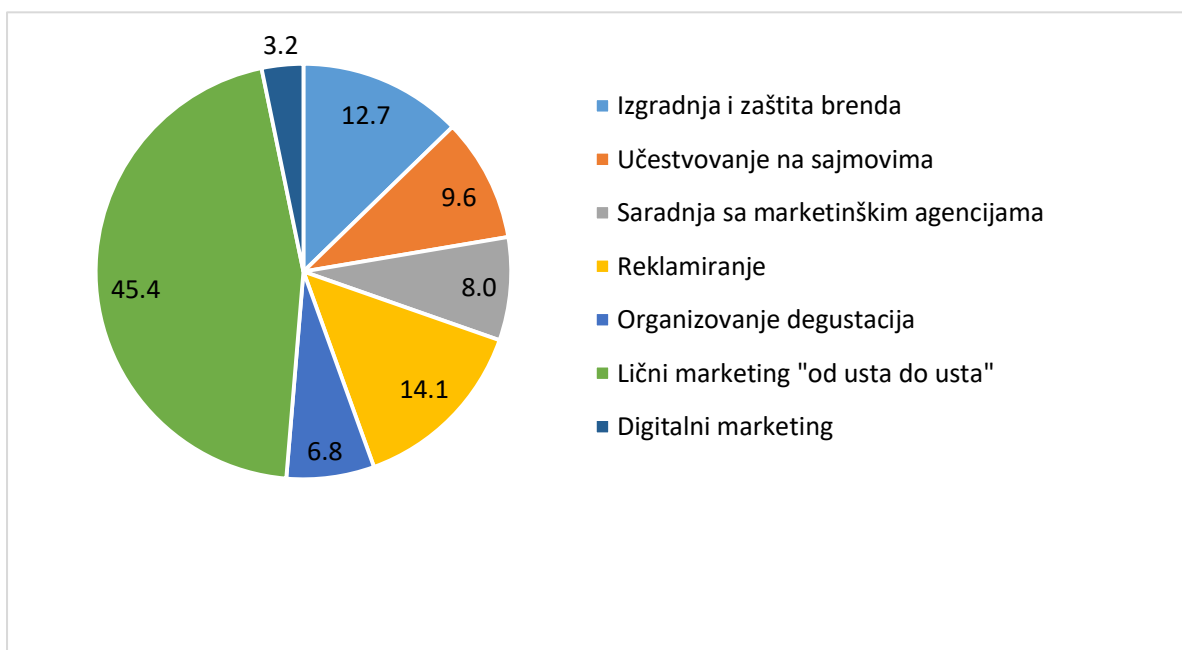


**Chart 14** Structure of the sample producers' prevailing production program /Source: author/

From the presented structure of the prevailing production program of the sample producers, it can be concluded that the elements of the production program are dominated by fruits and legumes, while the other elements are represented evenly. This structure of the elements of the production program is in line with the geographical characteristics of the agricultural production area.

#### *Structure of evaluation of prevailing marketing activities of the sample producers*

Structure of evaluation of prevailing marketing activities of the sample producers is estimated in percentage based on the evaluation of their key marketing activities. Producer ratings are as follows: most marketers engage in personal word-of-mouth marketing (45.4%), followed by marketing activity of advertising (14.1%), then brand building and protection (12.7), participation in fairs (9.6%), cooperation with marketing agencies (8.0%), organization of tastings (6.8%), and finally digital marketing (3.2%), which can be seen in Chart 15.

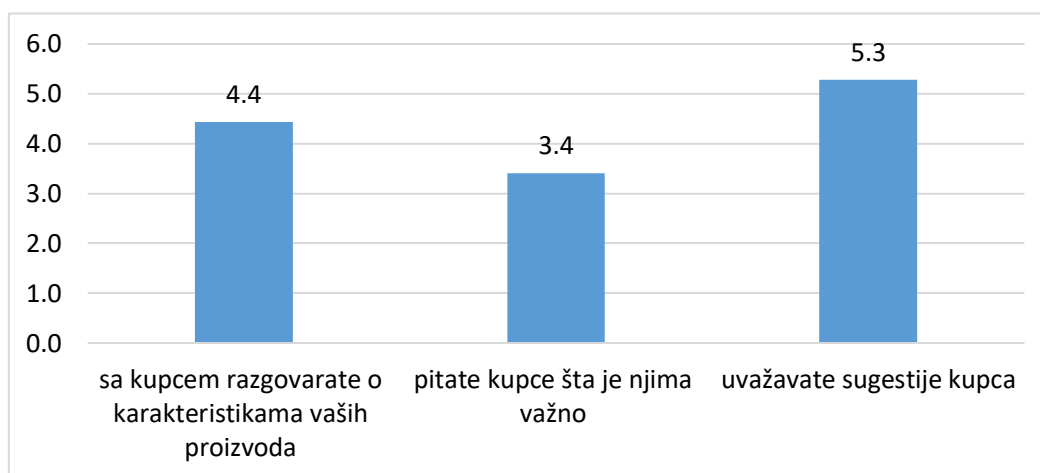


**Chart 15** Structure of sample producers' prevailing marketing activities /Source: author/

From the presented structure of marketing activities of the sample producers, it can be concluded that dominant marketing activity is personal word-of-mouth marketing, while individually all other marketing activities are way less represented.

#### *Structure of the sample producers' approach to talking to customers*

The producers' approach to customers was evaluated based on the respondents' agreement with the offered statement in the questionnaire with a score of (0 – not at all to 9 - greatly). As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.6242, which, according to (WikiCA, 2019) may also be considered "questionable" but certainly acceptable consistency. The evaluation results are as follows: the highest score was given to the acceptance of customers' suggestions (average score 5.3), then the matter of talking to the customer about the product features (average score 4.4), and finally asking the customer what is important to them (average score 3.4%), as shown in Chart 16.

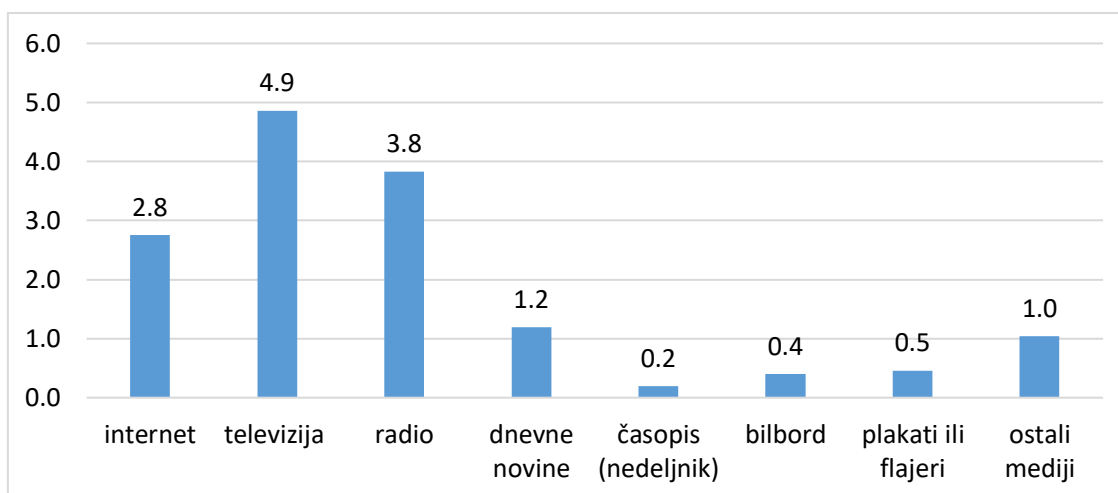


**Chart 16** The structure of the sample producers' approach to customers /Source: author/

From the presented structure of approach to talking with customers, it is evident that producers are most considerate when it comes to customer suggestions, but at the same time they are least interested in what is important to them. It is clear that in the coming period, in order to improve their marketing results, more attention should be paid to customer issues.

#### *Structure of the sample producers' application of marketing and product promotion*

The producers' application of marketing and promotion of the products, based on the respondents' agreement with the offered statement in the questionnaire, was evaluated with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.9782, which, according to (WikiCA, 2019) may be considered "excellent", i.e. more than satisfactory consistency. The evaluation results are as follows: the highest rating in marketing and product promotion was related to television (average score 4.9), followed by radio (average score 3.8), the Internet (average score 2.8), daily newspapers (average score 1.3), posters and flyers (average score 1.2), billboard (average score 0.4) and finally magazines (average score 0.2), as shown in Chart 17.

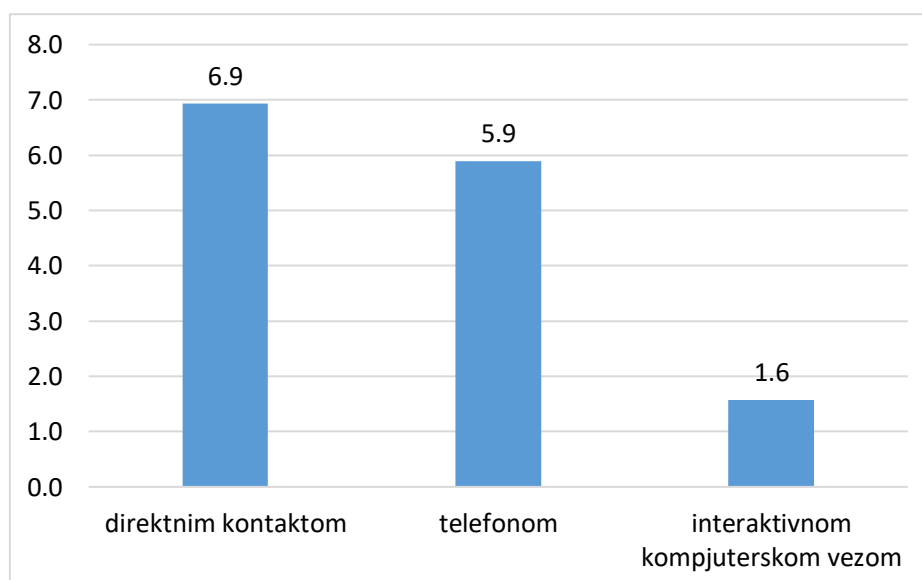


**Chart 17** Evaluation structure of marketing implementation & product promotion /Source: author/

From the presented structure of evaluation of marketing application and product promotion, it is evident that producers still attach the greatest importance to traditional means of product marketing promotion (television and radio), but the modern internet based method has already taken a high third place in the ranking of application methods. All other methods are significantly lower rated.

#### *Structure of the method the sample producers use to sell a product to a customer*

The structure of how the product is sold to the buyer was evaluated based on the respondents' agreement with the offered statement in the questionnaire with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.2089, which, according to (WikiCA, 2019), may be considered "unacceptable", that is, extremely insufficient consistency, meaning that in the subsequent research the questions (claims) should be asked in a different way. The evaluation results are as follows: the highest rating had direct sales (average score 6.9), followed by sales done over the phone (average score 5.9), and finally sales done by interactive online connection (average score 1.6 %), as shown in Chart 18.

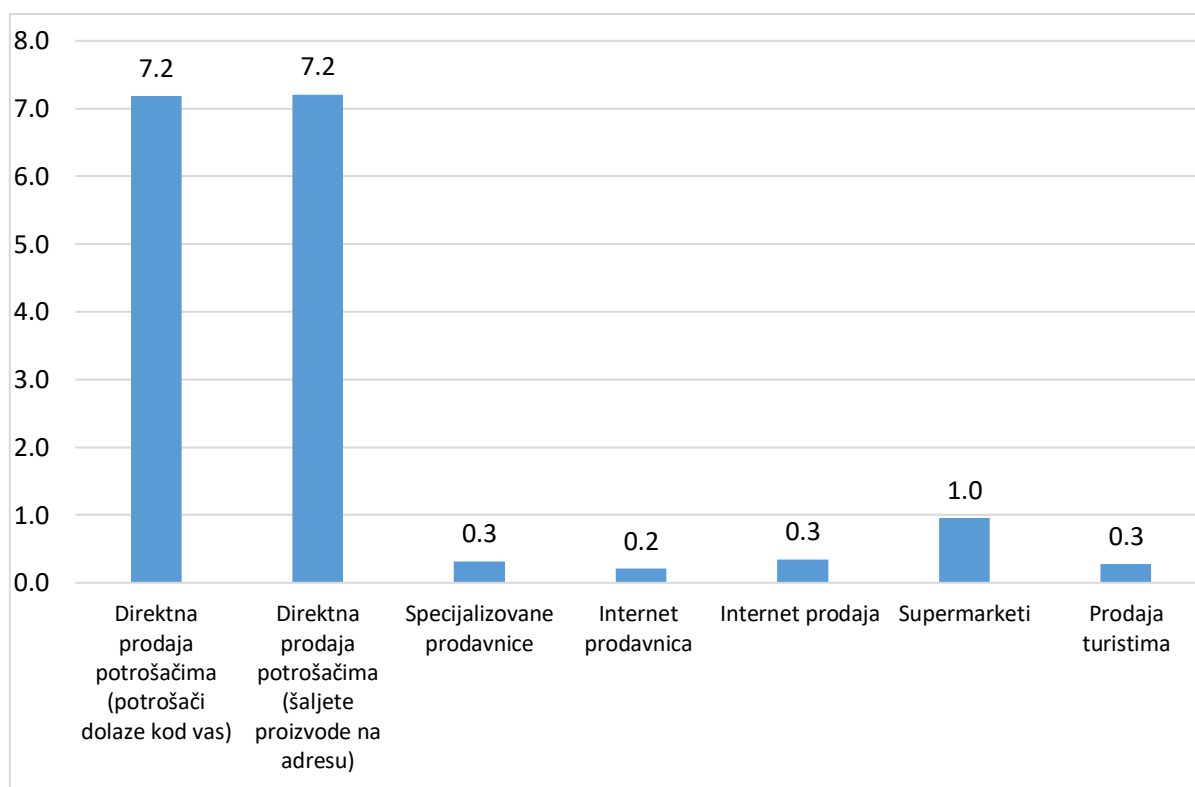


**Chart 18** The structure of how sample producers sell a product to a customer /Source: author/

From the presented structure of how products are sold, regardless of the issue of consistency of scores, it is evident that manufacturers still prefer the most traditional ways of contacting customers (by direct contact or telephone) compared to modes based on an interactive computer connection.

### *Structure of prevailing sales channels of the sample producers*

The structure of the way the product is sold to the buyer was evaluated on the basis of the respondents' agreement with the offered statement in the questionnaire - yes / no, i.e. whether they practice or not the specified sales channels. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.3156, which, according to (WikiCA, 2019), may be considered "unacceptable", that is, extremely insufficient consistency, meaning that in the subsequent research the questions (claims) should be asked in a different way. The evaluation results are as follows: most respondents stated that they practiced direct selling to consumers, where consumers came to them for products (average score 7.2) as well as the case where they ship products to a customer address (average score 7.2), followed by a supermarket sale (average score 1.0), sales through specialized stores (average score 0.3) and online sales (average score 0.3), and finally sales through online stores (average score 0.2), as can be seen in Chart 19.

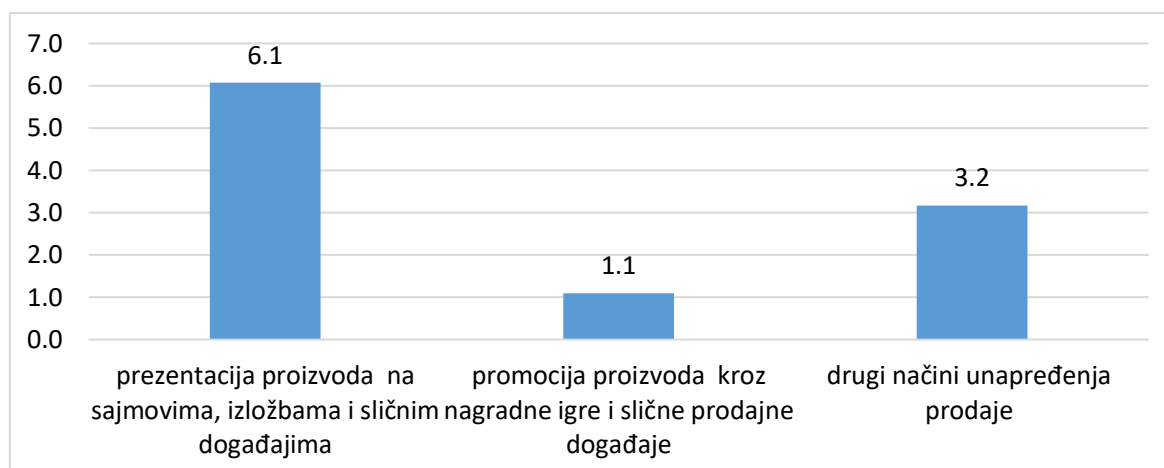


**Chart 19** Structure of prevailing sales channels of the sample producers /Source: author/

From the presented structure of the evaluation of prevailing sales channels, regardless of the question of consistency of the score, it is evident that direct sales channels to consumers are dominant, with consumers coming to them for products, as well as the case where they send products to customers, while the other sales channels mentioned are of minor importance for the time being.

### *Structure of the evaluation of the way sample producers promote their sales*

The manner of sales promotion was evaluated on the basis of the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.5748, which, according to (WikiCA, 2019), may also be considered "questionable" but certainly acceptable consistency. The evaluation results are as follows: most respondents present their products at fairs, exhibitions and similar events (average score 6.1), followed by other ways of sales promotion (average score 3.2), and finally product promotion through sweepstakes and similar sales events (average score 1.1), as can be seen in Chart 20.

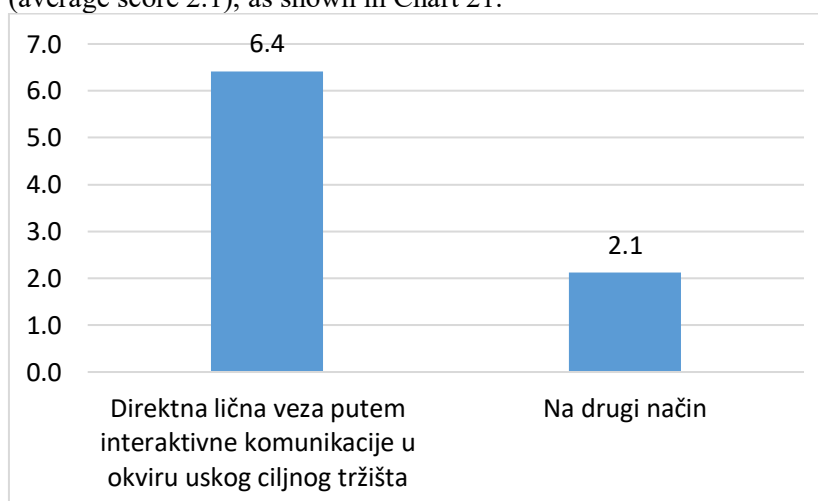


**Chart 20** Structure of the evaluation of how sales are promoted /Source: author/

From the presented structure of evaluation of sales promotion, it is evident that the way of presenting products at fairs, exhibitions and similar events is dominant, while the other mentioned ways of sales promotion are still of far less importance.

#### *Structure of the assessment of the sample producers' relationship with the customer*

The structure of the customer relationship was evaluated on the basis of the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.8429, which, according to (WikiCA, 2019), may be considered a "good", or quite consistent consistency. The evaluation results are as follows: most respondents stated that they were using a direct personal connection through interactive communication within a narrow target market (average score 6.4), and then other ways (average score 2.1), as shown in Chart 21.



**Chart 21** Structure of the assessment of the sample producers' relationship with the customer /Source: author/

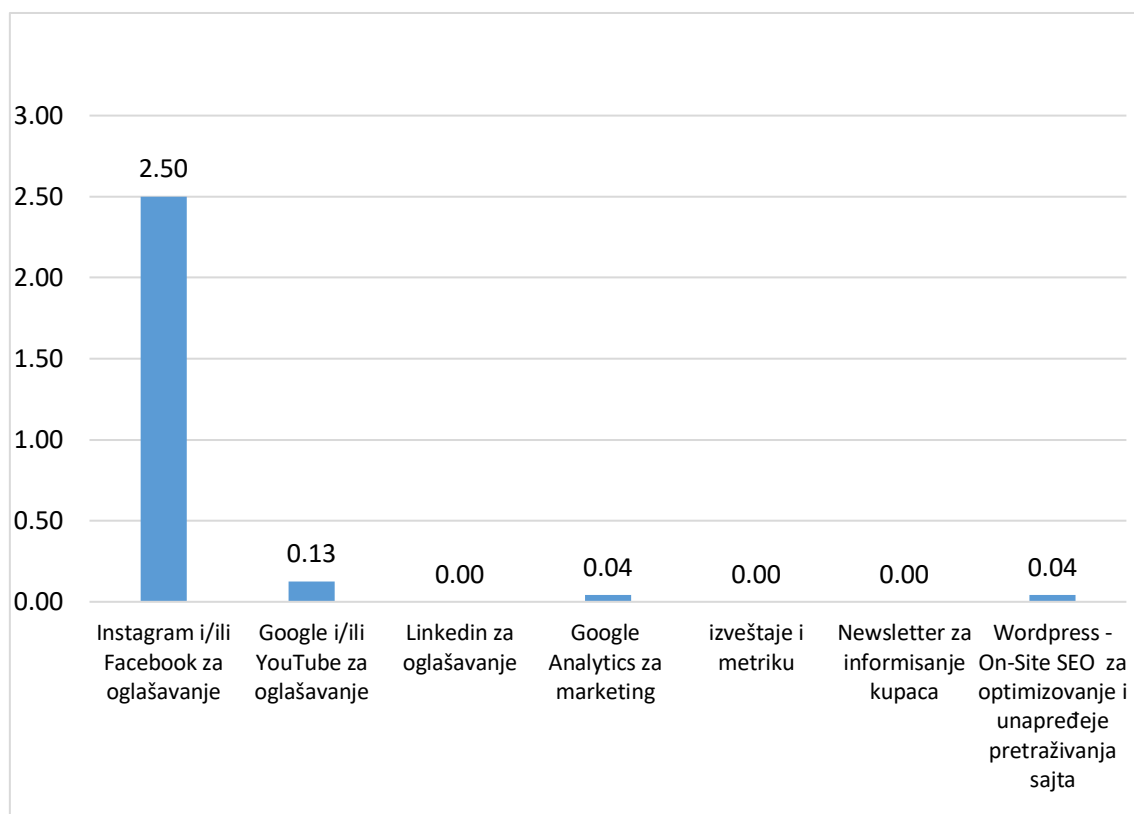
From the presented structure of the relationship with the customer, it is evident that the relationship with the customer through direct personal connection through interactive communication within the narrow target market is dominant, while other relationships are of minor importance.

#### *Structure of evaluation of sample producers' application of modern information technology in marketing*

The application of modern information technology in marketing was evaluated based on the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.7688, which, according to (WikiCA, 2019), may be considered as "acceptable", that is, a fairly satisfying consistency. The evaluation results are as follows: of the offered IT applications in marketing,



most respondents use Facebook and / or Instagram for advertising (average score 2.5), followed by Google and / or YouTube (average score 0.13), then Wordpress - On-Site SEO, to optimize and refine website search, without implementing LinkedIn, Reporting and Metrics, as well as a Newsletter to inform customers, as can be seen in Chart 22.

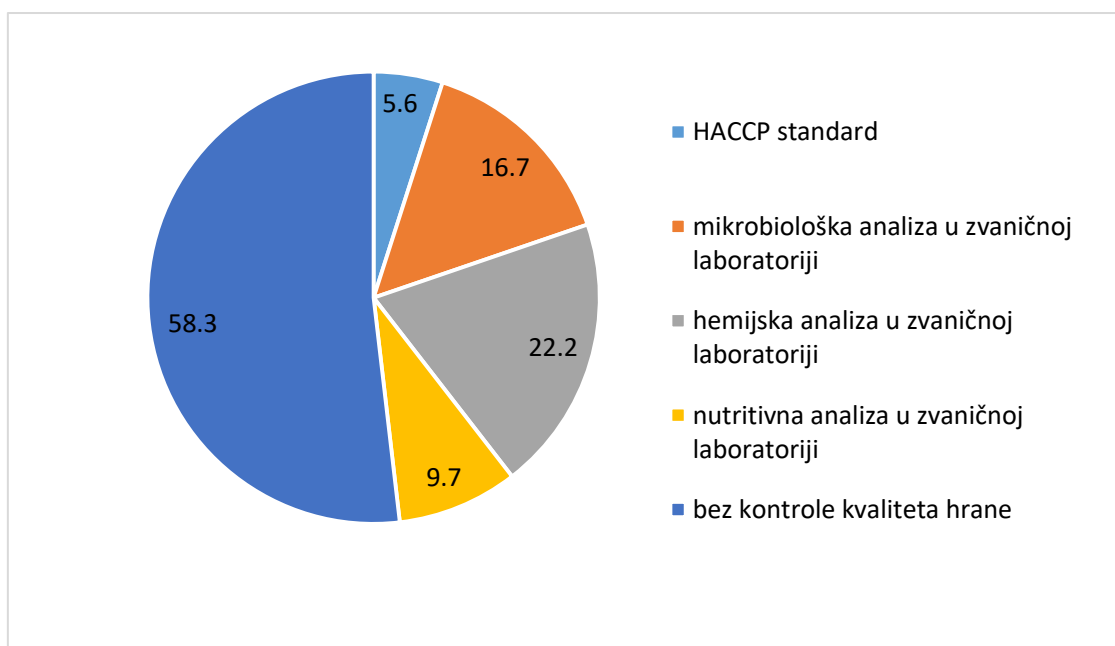


**Chart 22** Structure of evaluation of sample producers' application of modern information technology in marketing /Source: author/

From the presented structure of evaluation of the application of modern information technology in marketing, it is evident that manufacturers, apart from Instagram / Facebook, apply other types of application of information technology only in traces. This is certainly an area where significant improvement of the producers' business is possible.

#### *Structure of sample producers' implementation of quality control and food safety*

The application of quality control and food safety was evaluated by the percentage representation of certain types of control and food safety in the sample. The evaluation results are as follows: the majority of respondents have no food quality control (58.3%), followed by producers who have food control, where most represented are those who apply chemical analysis in an official laboratory (22.2%), then those who apply microbiological analysis in an official laboratory, those who apply nutritional analysis in an official laboratory, and finally those who apply the HACCP standard (5.6), as can be seen in Chart 23.



**Chart 23** Structure of sample producers' implementation of quality control and food safety /Source: author/

From the presented structure of the assessment of the application of quality control and food safety, it is evident that the majority of producers do not have quality control and food safety, while those who practice it are in the minority. This is certainly another area where a significant improvement of the producers' business is possible, where a campaign to increase the food quality and safety should be conducted.

#### Strategic profile of sample producers

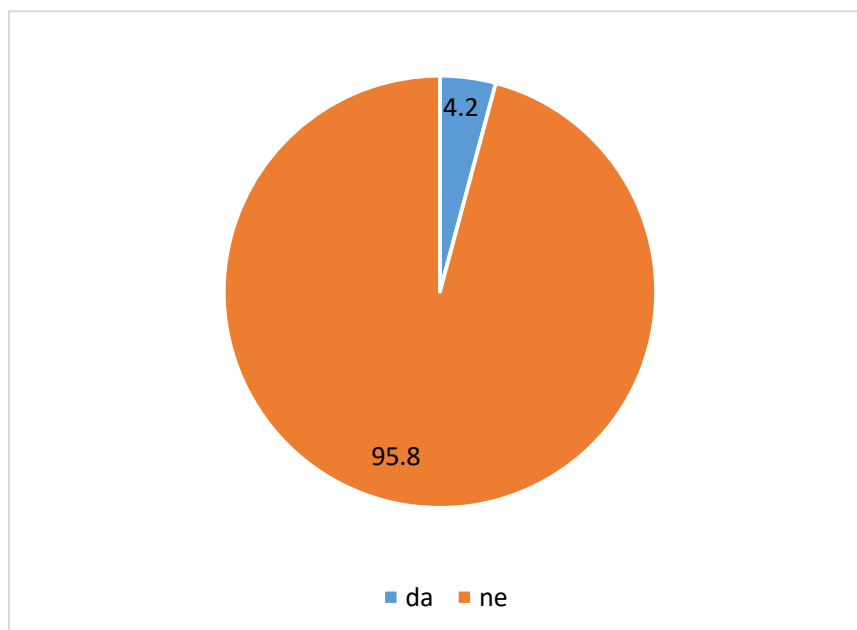
The strategic profile of the sample producers included the analysis of the following structures:

- Strategic evaluation of sample producers (creating an ideal customer profile, and creating a SWOT analysis),
- Defined strategic guidelines of sample producers,
- Strategies for sample producers to penetrate new markets
- Influence of marketing on the increase of economic activities in agriculture and the food industry,
- Digital technologies are changing the immediate form of marketing communication with customers,
- Hypotheses - to what extent they are met by the sample producers,
- Structure of sales skills of those employed with the sample producers,
- Sales and marketing training,
- Significance of the factors on which the success of the sales function depends.

#### Assessment of strategic behavior of sample producers

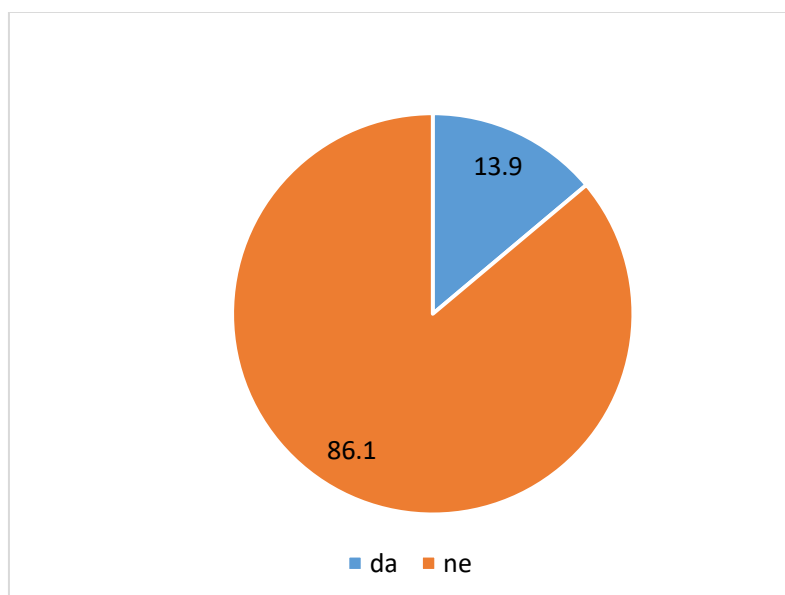
The strategic behavior of the sample producers was evaluated with yes / no, that is, the presence / absence of strategic action.

When it comes to creating the profile of the ideal customer who is completely satisfied with the products, the results are as follows: 4.2% of sample producers make the ideal customer profile, while the remaining 95.8% do not, as seen in Chart 24.a.



**Chart 24a** Structure of assessment of the sample producers' ideal customer profile creation  
/Source: author/

When it comes to developing a SWOT analysis of a business entity, the results are as follows: 13.9% of sample producers do a SWOT analysis, while the remaining 86.1% do not, as seen in Chart 24.b.



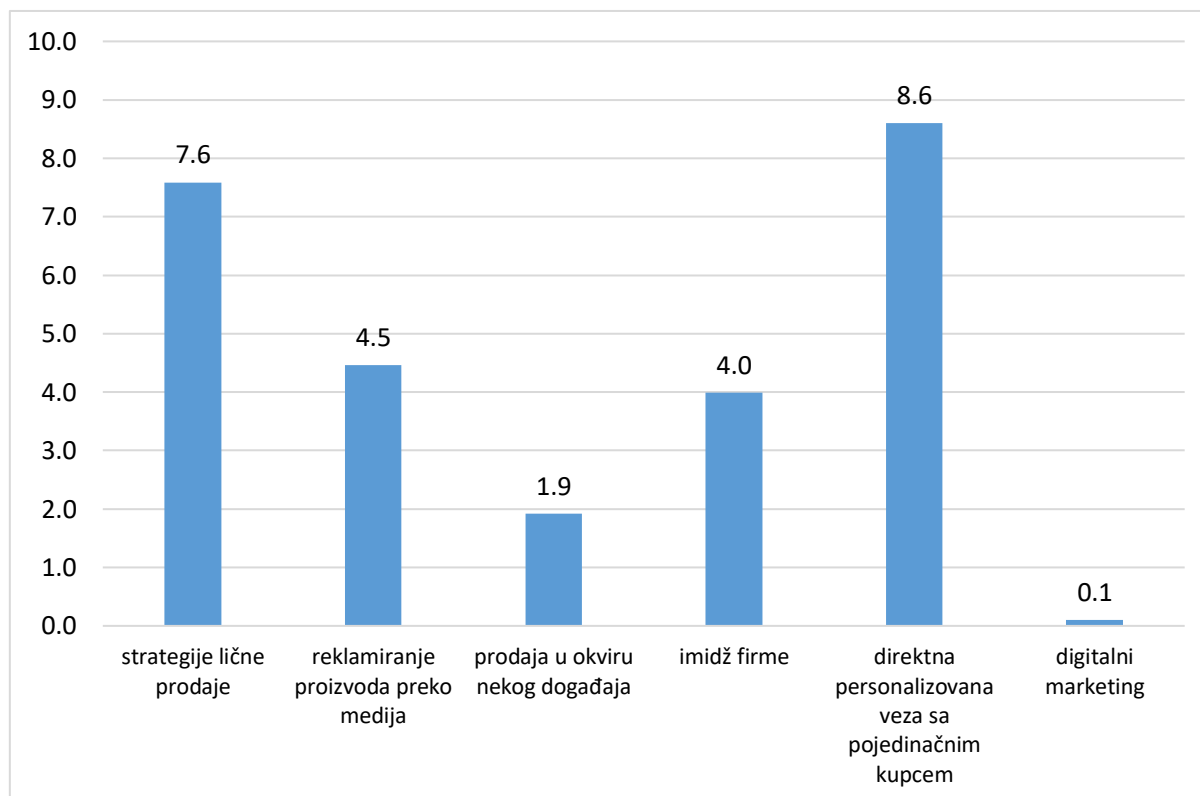
**Chart 24b** Structure of evaluation of sample producers' SWOT analysis design  
/Source: author/

From the presented structure of strategic behavior, it is evident that the majority of producers neither make an ideal customer profile nor do a SWOT analysis. This is also an area where significant improvement of the producers' business is possible, where the mentioned activities should be introduced with the producers.

#### *Structure of evaluation of the sample producers' strategy for penetrating new markets*

Strategies for penetrating new markets were evaluated based on the respondents' agreement with

the proposed statements in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.5307, which, according to (WikiCA, 2019), may be considered "bad" but with a still acceptable consistency. The evaluation results are as follows: when it comes to the strategies of penetrating new markets, most respondents apply a direct personalized connection with an individual customer (average score 8.6), followed by personal selling strategies (average score 7.6), advertising of products through media (average score 4.5%), building a company image (average score 4.0), selling within an event (average score 1.9%) and finally digital marketing (average score 0.1%), as shown in Chart 25.

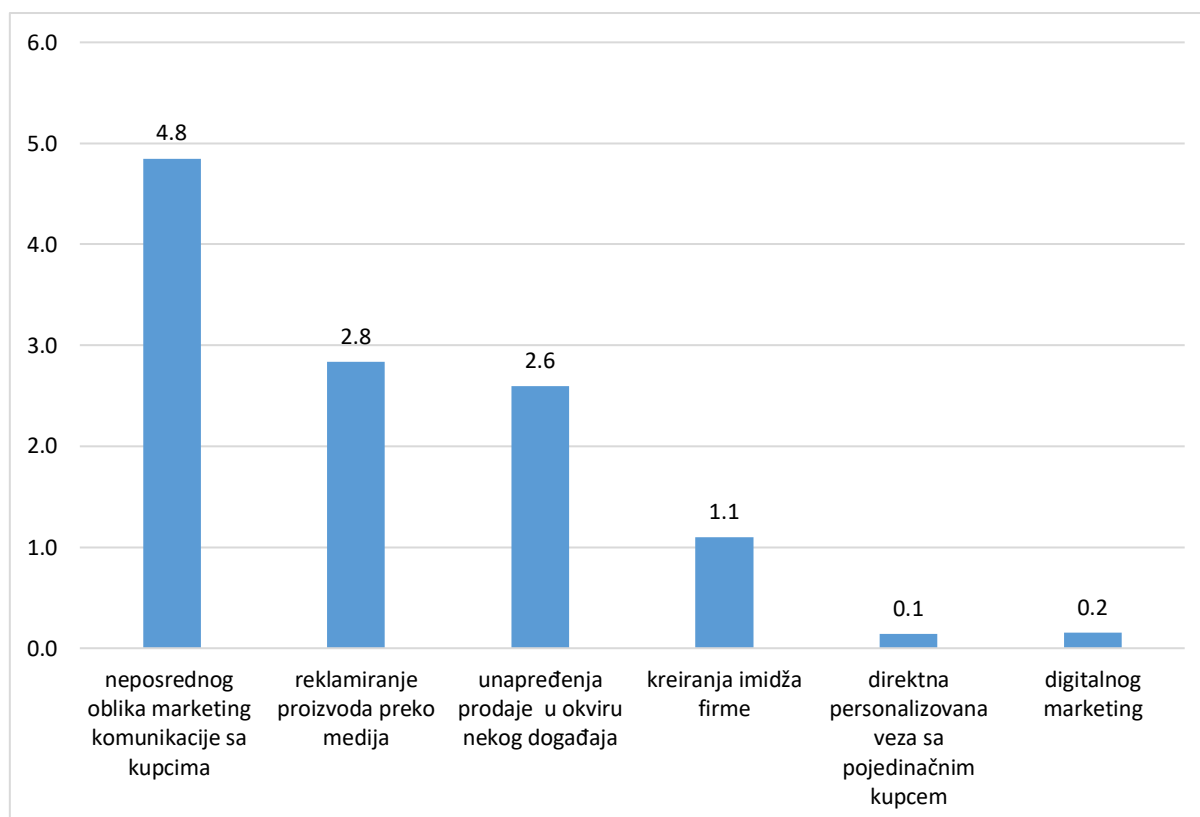


**Chart 25** Structure of evaluation of the sample producers' strategy for penetrating new markets  
/Source: author/

From the presented structure of evaluation of the strategy of penetration into new markets, it is evident that producers apply all strategies of penetration into new markets, but that digital marketing is applied only in traces. Therefore, from the standpoint of improving the producers' business, digital marketing could be a suitable area for improvement.

#### *Structure of impact assessment of marketing on the increase of economic activities in agriculture and food industry*

The influence of marketing on the increase of economic activities in agriculture and food industry was evaluated based on the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.6013, which, according to (WikiCA, 2019), may be considered "questionable", that is, still a satisfactory consistency. The evaluation results are as follows: respondents believe that the greatest influence on the increase of economic activities in agriculture and food industry has a direct form of marketing communication with customers (average score 4.8), then advertising the product through the media (average score 2.8), sales promotion within an event (average score 2.6), building a company image (average score 1.1%), digital marketing (average score 0.2) and finally a direct personalized connection with an individual customer (average score 0.1%), as shown in Chart 26.

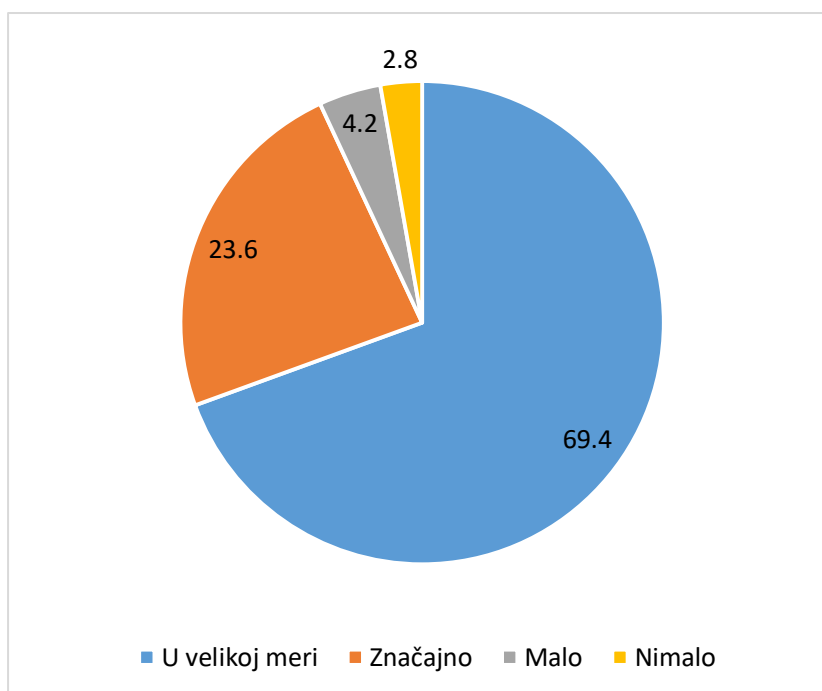


**Chart 26** Impact assessment of marketing on increase of economic activities in agriculture and food industry by sample producers /Source: author/

From the presented structure of the impact assessment of marketing on the increase of economic activities in agriculture and food industry of the sample producers, it is evident that producers believe that the direct form of marketing communication with customers has the greatest impact.

#### *Assessing the impact of digital technology on the direct form of marketing communication with customers*

The impact of digital technology on the direct form of marketing communication with customers was evaluated on the basis of the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 3 - greatly. The evaluation results are as follows: most respondents rated the impact of digital technology on the direct form of marketing communication with customers as 3 – greatly (69.4%), followed by those who rated it as 2 - significantly (23.6%), and those who rated it as 1 - slightly (4.2 %), and finally those who rated it as 0 – not at all (2.8 %), as can be seen in Chart 27.

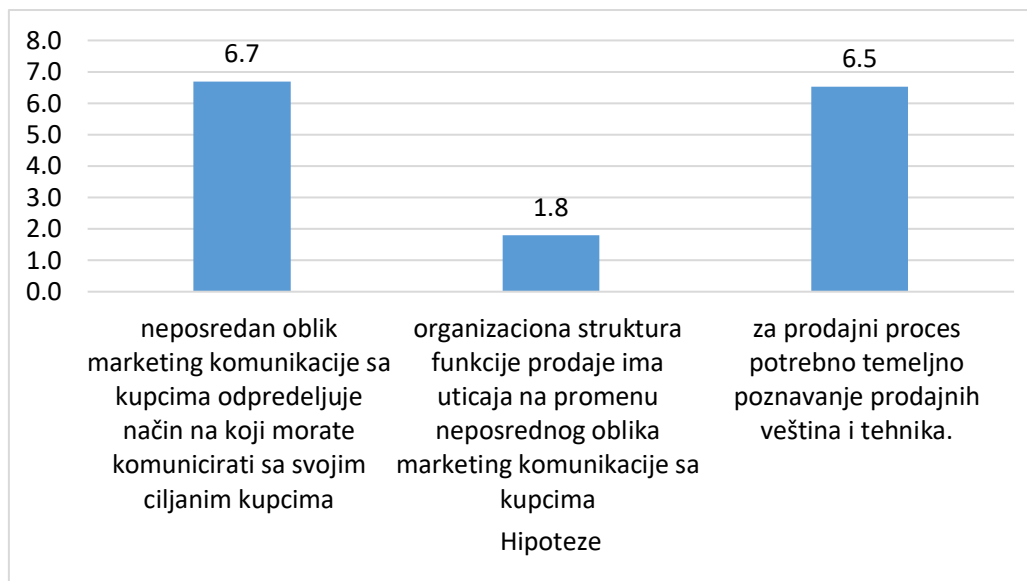


**Chart 27** Assessment of the impact of digital technology on the direct form of marketing communication by sample producers /Source: author/

From the presented structure of the assessment of the impact of digital technology on the direct form of marketing communication, it is evident that the largest number of manufacturers evaluated the impact as great.

#### *Structure of evaluation of sample producers' hypotheses*

Confirmation of the hypotheses was evaluated based on the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.6602, which, according to (WikiCA, 2019), may be considered "bad" but with a still acceptable consistency. The evaluation results are as follows: respondents rated, with the highest average score, that the direct form of marketing communication with customers determines how they should communicate with their target customers (average score 6.7), they then assessed that the sales process required a thorough knowledge of sales skills and techniques of advertising products through the media (average score 6.5), and finally they assessed that the organizational structure of the sales function had the impact on change of the direct form of marketing communication with customers (average score 1.8%), as shown in Chart 28.

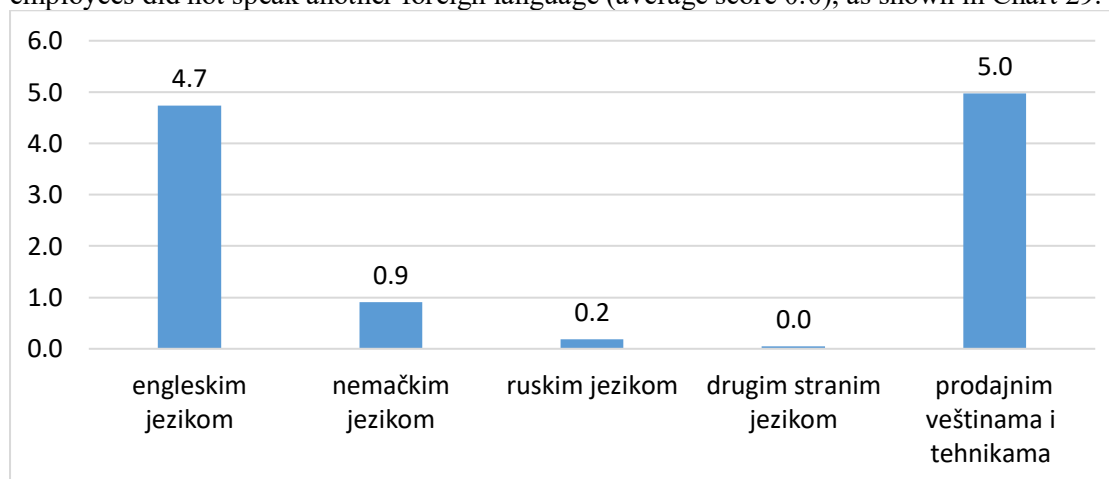


**Chart 28** Structure of evaluation of sample producers' hypotheses /Source: author/

The presented structure of hypothesis assessments will help to make a judgment in the next chapter on the fulfillment and / or refutation of the introduced hypotheses.

#### *Structure of evaluation of sales skills of the sample producers' employees*

Sales skills of employees within the sample producers were evaluated based on the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.5620, which, according to (WikiCA, 2019), may be considered "bad" but with a still acceptable consistency. The evaluation results are as follows: respondents rated, with the highest average score, that employees had great sales skills and techniques (average score 5.0), they then assessed that the employees were fluent in English (average score 4.7), then that the employees were fluent in German (average score 0.9), they then assessed that the employees were fluent in Russian (average score 0.2), and finally assessed that employees did not speak another foreign language (average score 0.0), as shown in Chart 29.



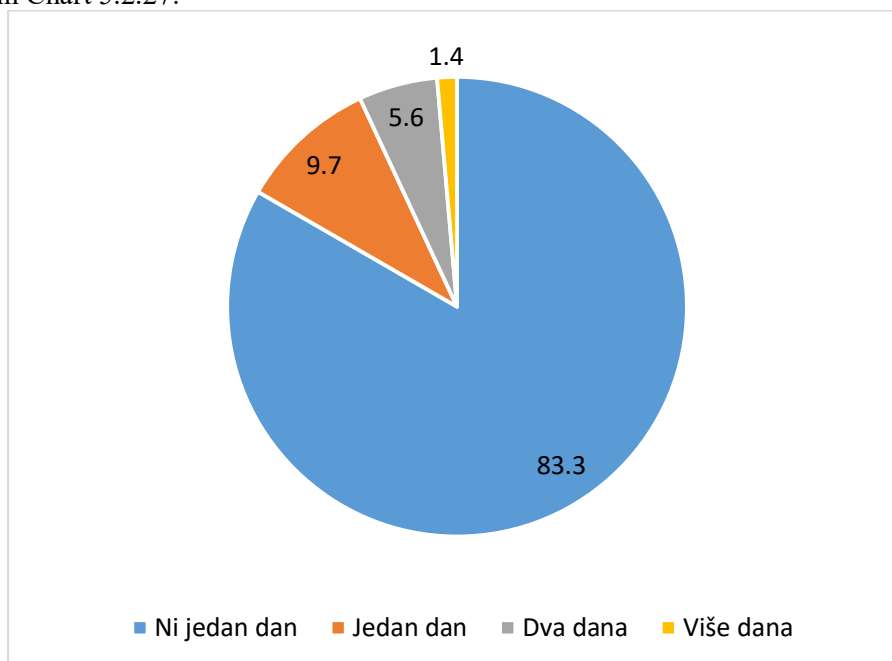
**Chart 29** Structure of evaluation of sales skills of the sample producers' employees /Source: author/

From the presented structure of assessment of sales skills of employees of the sample producers, it is evident that the largest number of employees speaks English, has good sales skills and techniques.

#### *Structure of evaluation of sales and marketing training*

The sales-and-marketing training consists of answering the question of whether the sales employees in the last three years have had (or currently have) sales or marketing training (seminar, training, workshop, etc.). The sample producers evaluated sales-and-marketing training by its duration, e.g. zero days, one day, two days or more. The evaluation results are as follows: most respondents did not have any training at all (83.3%), followed by those who had training for one day (9.7%), then those

who had training for two days (5.6 %), and finally those who had training for several days (1.4%), as shown in Chart 5.2.27.



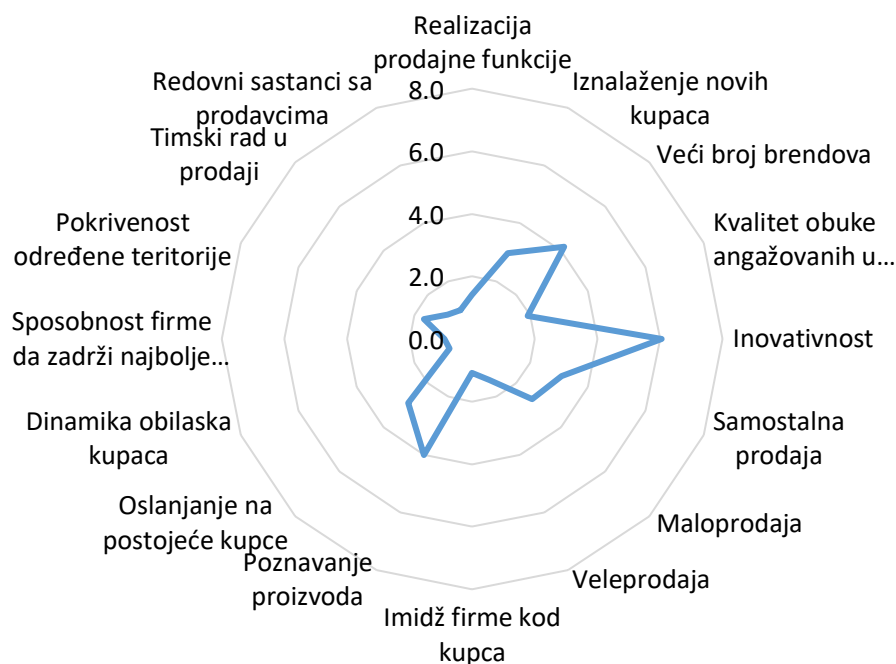
**Chart 30** Structure of sales and marketing training evaluation by sample producers /Source: author/

From the presented structure of sales and marketing training evaluation, it is evident that the largest number of producers' employees did not have any type of training at all. Therefore, this is an area where business improvement can be significantly achieved through the organization of the aforementioned training.

#### *5.2.2.18 Structure of evaluation of the significance of the factors on which the success of the sales function within the sample producers depends*

The structure of the evaluation of the significance of the factors on which the success of the sales function depends is evaluated on the basis of the respondents' agreement with the offered statement in the questionnaire, with a score of 0 – not at all to 9 - greatly. As a measure of consistency, the Cronbach's alpha coefficient of the examined score is 0.5518, which, according to (WikiCA, 2019), may be considered "bad" but with a still acceptable consistency. The evaluation results are as follows: respondents rated the factor of innovation with the highest average score (average score 6.1), followed by a greater number of brands (average score 4.2), then the product knowledge (average score 4.0), independent sales (average score 3.1), finding new customers (average score 3.0), relying on existing customers (average score 2.9), retail (average score 2.7), the quality of training of those engaged in sales and marketing (average score 1.9), coverage of a specific territory (average score 1.7), wholesale and sales function realization (average score 1.4), teamwork in sales (average score 1.1), regular meetings with vendors (average score 1.0), the company's ability to retain the best sales representatives (average score 0.9), and finally the dynamics of customer visits (average score 0.8), as shown in Chart 31.





**Chart 31** Structure of evaluation of the significance of the factors on which the success of the sales function of the sample producers depends /Source: author/

From the presented structure of evaluation of the significance of the factors on which the success of the sales function of the sample producers depends, it is evident that the producers evaluate certain factors of influence differently. The good thing is that the greatest number of producers consider innovation as the most important factor. Other relatively low-valued factors are also a big area where business can be improved.

## DISCUSSION OF THE EMPIRICAL RESEARCH RESULTS

Based on the results of the empirical research presented in the previous chapter, the following **findings** can be made:

1. The empirical research was carried out on a sample of 72 producers in the field of agriculture and food industry in the Moravica District of the Republic of Serbia, and it provided relevant results.
2. The empirical research covered a total of 3 significant research areas (sample, marketing profile and strategic profile of the producers), within which 26 dimensions were analyzed with a total of 197 variables).
3. The results of this empirical research revealed the following:

### From a marketing profile standpoint:

— When it comes to the elements that are part of the production program of the sample producers, fruits and legumes are predominant,

— When it comes to marketing activities of the sample producers, personal word-of-mouth marketing prevails.

— When talking to customers, the sample producers are most appreciative of customer suggestions.

— When marketing and promoting a product, sample producers mostly use traditional ways of contacting customers (directly or by telephone).

— When it comes to the way products are sold, the sample producers mostly apply direct sales channels, where consumers come to them for products, but also send products to customers.

— The most popular way the sample producers use to promote sales is through the presentation of products at fairs, exhibitions and similar events.

— The sample producers are most engaged in customer relationship through direct personal connection achieved via interactive communication within a narrow target market.

— When it comes to the application of modern information technology in marketing, sample producers only use Facebook / Instagram.

— The sample producers do not implement food quality and safety controls as sufficiently and extensively as they should.

From a strategic profile standpoint:

— A very small number of sample producers make a strategic assessment regarding the creation of the ideal customer profile.

— A very small number of sample producers carry out the strategic evaluation regarding the SWOT analysis.

— Of the defined strategic determinants of the sample producers, digital marketing is the least applicable.

— In the sample producers' strategy of penetrating new markets, digital marketing rarely applies.

— In the sample producers' opinion, the direct form of marketing communication with customers has the greatest influence on the increase of economic activities in agriculture and food industry.

— In the opinion of the sample producers, digital technologies have the greatest influence on the change of the direct form of marketing communication with customers.

— In terms of sales skills, the largest number of employees of the sample producers are proficient in English and have great sales skills and techniques.

— There is insufficient sales and marketing training with the sample producers' employees.

— Of the 16 factors on which the success of a sales function depends, the largest number of sample producers consider innovation to be the most important one.

— The results of this empirical research are comparable, to the extent that they match the objectives of the research, with similar research, such as the research presented in the literature (SEA, 2015), (Radić-Jean I, Mihailović B, 2019), and others.

4. The results of this empirical research have indicated that there are areas where producers could significantly improve their business from marketing and strategic standpoints.

Possible improvements from the standpoint of the marketing profile are as follows:

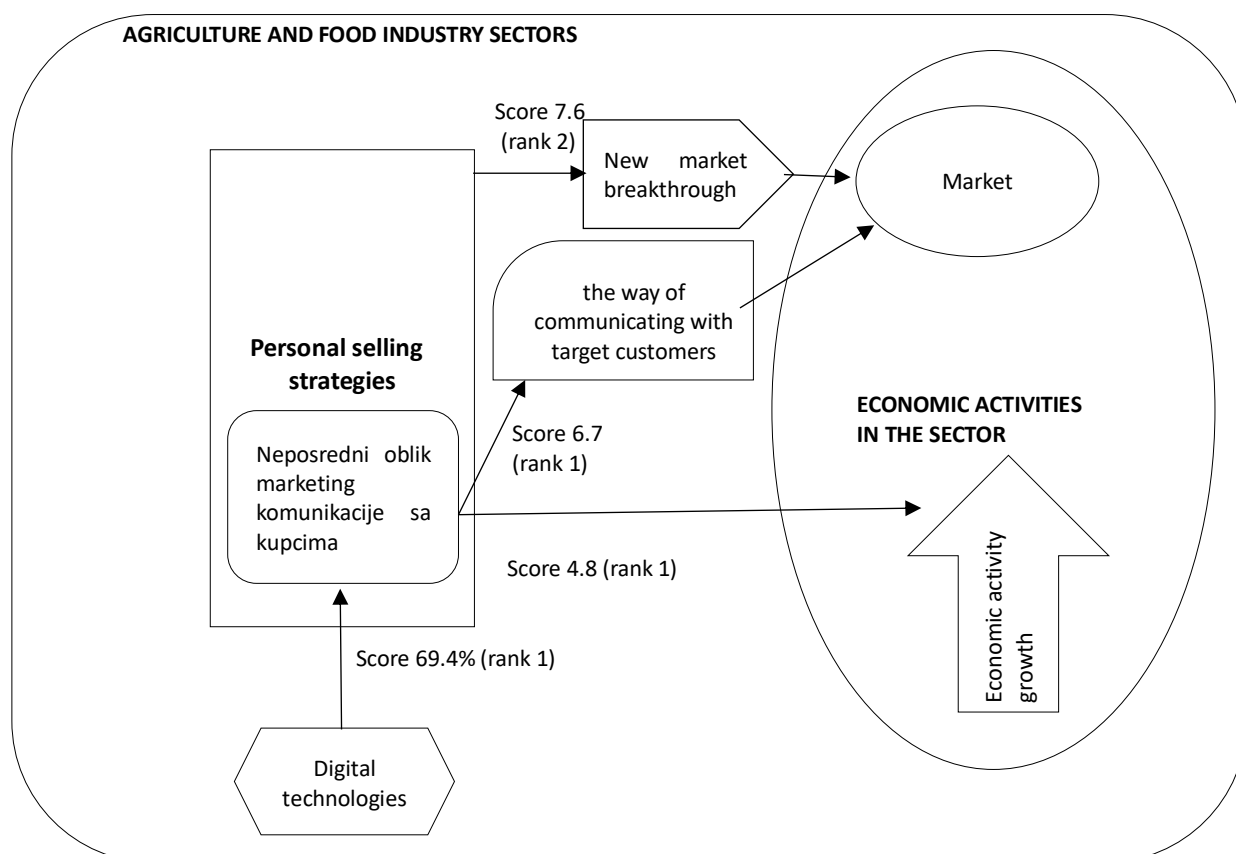
— application of modern information technology in marketing,

— implementation of quality control and food safety.

Possible improvements from the standpoint of the strategic profile are as follows:

- creating the ideal customer profile,
- making a SWOT analysis of the business entity,
- applying digital marketing as an effective strategy for penetrating new markets,
- sales and marketing training.

5. The research results made it possible to test the *hypotheses* introduced, leading to the following answers:



**Figure 5.3** Model of the impact of personal selling strategy on the development of agriculture and food industry /Source: author/

— (H1): When (sample) producers penetrate new markets, then personal selling strategies are significant; in the research rated 0-9, rated with a high score of 7.6 (rank 2), thus confirming the hypothesis.

— (H2): An increase in economic activities in agriculture and the food industry can be achieved through the application of a direct form of marketing communication with customers, that is, within a personal selling strategy; in the research rated 0-9, rated with a high score of 4.8 (rank 1), thus confirming the hypothesis.

— (H3): Digital technologies significantly change the direct form of marketing communication with customers; in the research rated in percentages, rated with the highest percentage of 69.4% (rank 1), thus confirming the hypothesis.

— (H4): The direct form of marketing communication with customers significantly determines the way respondents have to communicate with their target customers; in the research rated 0-9, rated with a high score of 6.7 (rank 1), thus confirming the hypothesis.

— (H5): The organizational structure of the sales function influences the change in the direct form of marketing communication with customers; in the research rated 0-9, rated with a low score of 1.8 (rank 3), thus refuting the hypothesis.

— (H6): The sales process requires a thorough knowledge of sales skills and techniques; in the research rated with a high score of 4.7 (rank 2), thus confirming the hypothesis.

— The results of hypotheses testing (H1 to H6) enabled the design of a Model of the impact of the personal selling strategy on the development of the agriculture and food industry, presented in Figure 5.3

6. The results of hypotheses testing (H<sub>1</sub> to H<sub>6</sub>) and the Model of the impact of personal selling strategy on the development of agriculture and food industry in Serbia, which was based thereon, enabled a judgment to be reached on whether or not the general hypothesis (H<sub>0</sub>) was confirmed.

The general statement is that the general hypothesis (H<sub>0</sub>), based on everything presented, can be confirmed, i.e. that “Personal sales strategy is a marketing strategy that has a dominant influence on the development of the agriculture and food industry of Serbia, which is reflected in the intensification of economic activities in increasing the sales of agricultural and food products, increase of innovations in the sector and improvement of business efficiency.”

## CONCLUSIONS

Based on everything realized in this thesis, the following can be **concluded**:

1. The thesis highlights the importance of agriculture and the food industry in overall economic activities.
2. The thesis presents the results of the realized theoretical (desktop) research regarding the state of the economy of agriculture and food industry in the world, then in the EU, with special reference to the situation in the Republic of Serbia at the end.

The research results regarding the situation in the agriculture and food industry in the Republic of Serbia have been analyzed from the following points of view:

— from the standpoint of the state of agricultural production in the Republic of Serbia, an analysis of key indicators was carried out and it included: available agricultural land, conditions for agricultural development (scope and structure of available agricultural land, climate, vegetation and microfauna, possession of sources and watercourses, irrigation of agricultural land, most important agricultural products, available human resources, scientific research in agriculture), land use, agricultural land use, structure of agricultural production, employment in agriculture, agricultural holdings in agriculture, and assessments of agricultural production.

— from the standpoint of the state of the food industry in the Republic of Serbia, an analysis of key indicators was conducted and it included: share of the food industry in the total turnover, total employment and total number of business entities in the Republic of Serbia; income, gross value added, employment and number of business entities, average gross earnings per employee in the food industry; business entities by number of employees and representation of large business entities in the food industry; representation of large business entities in the food industry branches, representation of business entities from the sector by net profit in the Republic of Serbia, business entities from the sector in terms of registration.

The results of the analysis confirmed the importance of the above theoretical research, which is clearly confirmed by the following research data: the share of agriculture in the GDP of the Republic of Serbia is 17% (Chart 2.24); the share of food industry in total turnover of the Republic of Serbia is 8.2% (Table 2.10).

Regarding the relevant data related to agriculture and the food industry in the Republic of Serbia, it is important to emphasize here that this is a particular problem that the author faced during the collection thereof. While global and EU data are available, relevant data from the Republic of Serbia

have not been structured in the same way, and it has therefore taken a great deal of effort to obtain them, as was the case with the Statistical Office of the Republic of Serbia where special searches on the available database had to be applied.

3. The thesis highlights the sales strategies and marketing mix of business entities.

Sales strategies were examined as a phenomenon both from the standpoint of strategy and standpoint of sales strategy.

The marketing mix strategy of business entities was examined from the standpoint of specificity of marketing communication system and marketing mix, in function of sales strategy of business entities from the agriculture and food industry.

Particular emphasis was placed on directing the future marketing and sales efforts of companies from the agricultural and food sectors.

4. The thesis sheds light on the Personal selling of business entities of the agriculture and food industry of Serbia from multiple perspectives, namely:

- the way companies from the sector concerned should interact with their target customers,
- modern ways of communicating, with special emphasis on digital marketing, as well as
- opportunities for personal sales promotion.

5. The thesis implemented an Empirical research on the impact of personal selling strategy on the development of the agriculture and food industry in the Moravica District of the Republic of Serbia, the results of which are presented in Chapter 5.4 DISCUSSION OF THE EMPIRICAL RESEARCH RESULTS, within which the following are presented in an abridged form:

- Realized empirical research results,
- Judgement on confirmation / refutation the hypotheses introduced by the aforementioned empirical research, as well as
- Model of the impact of the personal selling strategy on the development of the agriculture and food industry, made on the basis of the results presented.

6. Based on the research carried out and the results obtained (items 2 and 5), the scientific contribution of this dissertation can be presumed.

The key scientific contribution of this thesis is reflected in the designed “Model of the impact of personal selling strategy on the development of the agriculture and food industry in the Republic of Serbia”.

7. On the basis of everything that has been realized within this thesis, future research in this field can be traced:

— When it comes to future research in this field, adjustments should be made for all variables (questions) within the scores of the Research Questionnaire, where the realized Cronbach's alpha values, according to (WikiCA, 2019), are found to be less than 0.5.

— Future research in this area should be carried out in several other districts in the Republic of Serbia, and especially for the purpose of comparing data, it would be useful to conduct it within the Autonomous Province of Vojvodina, which is highly agricultural oriented, or in one of its administrative districts (North Bačka, Central Banat, North Banat, South Banat, West Bačka, Srem, South Bačka).

— Suggest to the Statistical Office of the Republic of Serbia to supplement the methodology for presenting data in terms of their structuring, especially when it comes to the agriculture and food industry.

## Publications

Title:	Publication date:	Autors:	Journal:	Volume:	Pages:
Research on the influence Integrated Marketing Communications at Enterprises business in the Republic of Serbia	2017	Maja C Cogoljevic, Ljiljana Dimitrijević , <b>Vladan Cogoljević</b>	<i>EuroEconomica, Vol 36, No 2 (2017)</i>	36	53-59
IMPORTANCE OF MODERN INFORMATION AND COMMUNICATION TECHNOLOGY FOR THE IMPROVEMENT OF ORGANIZATIONAL CHARACTERISTICS OF THE COMPANY	2017	Ljiljana Stosic Mihajlovic, <b>Vladan Cogoljević</b>	<i>EEE vol.1, 2017</i>	1	68-77
The Effect of Marketing Activities on the Profitability of Commercial Banks in the Republic of Serbia	2018	Maja Cogoljevic, Tamara Vesic, Ljiljana Dimitrijevic , <b>Vladan Cogoljevic</b>	<i>Economic and Social Development, 41st International Conference on Economic and Social Development, Book of Proceedings - Financing and Manufacturing Organic Food as the consequence of the Holy Trinity GMO</i>	41	36-41
STRATEGIJSKI PRISTUP PLANIRANJU PROPAGANDNIH AKTIVNOSTI	2019	<b>Vladan Cogoljević</b>	<i>TRENDOVI U POSLOVANJU, vol.4, 2019</i>	4	55-61
ECONOMIC ASPECTS OF NEW GLOBALIZATION AND INTERNATIONAL MIGRATION	2019	Milan Beslac, <b>Vladan Cogoljevic,</b> Jovica Beslac	<i>EEE vol.1, 2019</i>	1	29-36
THE IMPORTANCE OF MEASURING MAIN PERFORMANCES OF THE COMPANY TO MAKE BASIC DECISIONS IN MARKETING	2019	Ljiljana Dimitrijevic , Maja Cogoljevic, <b>Vladan Cogoljevic</b>	<i>EEE vol.1, 2019</i>	1	21-29
STAVOVI TURISTIČKIH RADNIKA O ZNAČAJU PROMOCIJE ZA RAZVOJ TURIZMA VOJVODINE	2019	Ivana Čuru vija, Miloš Čuru vija, <b>Vladan Cog oljevic</b>	ZBORNIK RADOVA, Kruševac, 16. maj 2019.	1	88-92

## Резюме

Прогнози на годишен растеж на потреблението в световен мащаб на земеделски и хранителни продукти до 2050 г. показват, че тя може да бъде около 1,1%. Основните фактори, които генерират растеж в търсенето на земеделски и хранителни продукти са нарастването на населението, както и средният растеж на доходите, особено в развиващите се страни. Въпреки нарастването на световното население се очаква да се забави, се очаква тенденцията на бързото увеличаване на населението да продължи в някои части на света, особено в Африка, където те все още не са имали адекватно хранене, както и недостига на налични ресурси за селскостопанско производство ( земя, вода) става все по-изразено, отколкото преди. Смята се, че в световен мащаб, хранителни продукти представляват 10% от общата САЩ 5000 милиарда \$ на потреблението, и че около 40% от общия брой на работниците и служителите са ангажирани в реализацията им. Най-новите проучвания на околната среда показват, че секторите на храните и селското стопанство също имат значително въздействие върху околната среда (особено по отношение на емисиите на парникови газове).

В такава ситуация, въпросът за производство в секторите на земеделието и храните (храненето на човека) излиза на преден план. Селско стопанство и хранително-вкусовата промишленост се превръщат в значим фактор. Ето защо, проучване в областта на селското стопанство и хранително-вкусовата промишленост е все по-важни.

В Република Сърбия, повече от 630,000 земеделски домакинства са замесени в продажбата на селскостопански продукти, а почти 4000 компании работят в хранително-вкусовата промишленост, в които работят над 70000 служители. В същото време, в секторите на земеделието и храните предоставя номер на входа, което отново представлява значителен пазар за други отрасли, като например машини и дървен материал, пластмаси и каучук, стъкло производство, строителство и други подобни. В допълнение, селското стопанство и хранително-вкусовата промишленост, като доставчик на хранителни продукти, има пряко въздействие върху услугите на сектора на едро и дребно, туризъм, настаняване и храна, докато за текстилната, химическата и фармацевтичната промишленост представлява значителна купувач и доставчик. По този начин, на селското стопанство и хранително-вкусовата промишленост в Република Сърбия са не само от голямо икономическо, но и от обществено значение.

Следователно, тази теза има за цел да хвърли светлина върху някои въпроси, отнасящи се до селското стопанство и хранителните сектори в Република Сърбия от стратегическия аспект на личните продажби. В този смисъл изследването започва от предположението, че стратегията на личната продажба е (или може да има) влияние върху подобряване на развитието на селското стопанство и хранително-вкусовата промишленост на Република Сърбия. По този начин по-добре изработени стратегии за продажби се превръща в генератор на икономически прогрес.

Споменатите по-горе изследване е описан по-подробно по-долу.

### Предмет на изследването

Стратегически маркетинг е модерен подход за управление на маркетинга, което предполага непрекъснат процес на адаптация на пазара, и се реализира като активен изпълнение на следните основни маркетингови дейности:

- анализ на фактори на околната среда,
- анализ на силните и слабите страни на фирмите,
- планира маркетингови дейности,
- дефиниране на маркетингови стратегии,
- прилагане на стратегии и
- контрол и преглед на пазарните резултати,

и насочване и насочване към него маркетингови цели или промени в околната среда.

За селското стопанство и хранително-вкусовата промишленост в Сърбия, когато става въпрос за маркетингови стратегии, стратегията на личните продажби е от особено значение, и по този начин всеотдайност към изследването на влиянието му върху развитието на селското стопанство и хранително-вкусовата промишленост на Сърбия е значителен. Това означава, че стопанските субекти на селското стопанство и хранително-вкусовата промишленост на Сърбия трябва да бъдат обект на анализ от две гледни точки, а именно:

— от гледна точка на маркетинга начини, по които на селското стопанство и хранително-вкусовата промишленост компании на Сърбия може да се подобри бизнеса си чрез тяхното стратегическо позициониране на пазара и към клиентите чрез лична продажба, така че те да могат да спечелят някои сравнителни предимства пред конкурентите,

— от гледна точка на това, дали (и до каква степен) препозициониране към личната продажба може (и до каква степен) да има никакъв ефект върху развитието на селското стопанство и хранително-вкусовата промишленост на самата Сърбия.

### **Целта на изследването**

Докторантски изследвания теза е педантичен и аналитичен подход, проведено на два икономически йерархични нива - национално макроикономическо ниво и на стратегическо ниво на стопанска единица. От националната макроикономическо равнище изследването разглежда проблемите на икономиката на селското стопанство и хранително-вкусовата промишленост на територията на Република Сърбия. На стратегическо ниво на бизнес предприятието проучва стратегии за продажби и маркетинг микс, както и съвременното разбиране за използването на лични продажби като иманентна част от цялостни маркетингови комуникации, включително и влиянието им върху развитието на посочения сектор. Въз основа на проучванията, представен по този начин, като целта на изследването може да се определи.

Целта на изследването в рамките на тази докторска дисертация може да се обобщи по следния начин:

— за да се определи, от икономическа гледна точка, на място, роля, обхват и значение на селското стопанство и хранително-вкусовата промишленост в сръбската икономика,

— за да се определи, от стратегическа гледна точка (мисия, цели, стратегия, задачи), личната продажба на юридически лица от селското стопанство и хранително-вкусовата промишленост на Сърбия,

— за теоретично и практически да разследва какво е влиянието, (количествено и качествено) стратегията за лични продажби е (или може да има) за подобряване на развитието на селското стопанство и хранително-вкусовата промишленост на Сърбия.

селското стопанство и хранително-вкусовата промишленост на Сърбия е от особено значение за сръбската икономика, тъй като тя представлява един от генераторите на икономическото развитие на Република Сърбия, от което следва, че целта на изследването може да се класифицира като и двете научни и социално -икономически.

Научната цел на изследването е съсредоточена основно върху систематизирането на икономически знания в селското стопанство и хранително-вкусовата промишленост на Сърбия и създаването на модели на въздействието на личната продажба на стопански субекти в селското стопанство и хранително-вкусовата промишленост на Сърбия за неговото развитие.

Социално-икономическата цел на изследването е насочен към идентифициране на съответните фактори, които, от маркетингова гледна точка на личните продажби, могат да подобрят дейността на дружествата в посочения по-горе селското стопанство и хранително-вкусовата промишленост на Сърбия.

### **Обща хипотеза**

Общата хипотеза (H0) на научните изследвания в рамките на тази теза може да се определи от изявлението следният.

Лично стратегия продажба е маркетингова стратегия, която има доминиращо влияние върху развитието на селското стопанство и хранително-вкусовата промишленост на Сърбия, което е отразено в засилването на икономическите дейности, най-вече в следните области на дейност на посочения индустрия, а именно:

- увеличаване на продажбите на земеделски и хранителни продукти,
- увеличаване на иновациите в сектора,
- подобряване на ефективността на бизнеса.

### **Специални хипотези**

Специални хипотези, получени от гореспоменатата обща хипотеза (H0) на докторска дисертация, могат да бъдат обобщени чрез следните шест отчети, а именно:



H1: Основното предизвикателство на текущите стопански субекти в селското стопанство и хранително-вкусовата промишленост на Сърбия е в липсата на прилагане на ефективни и проникващи лични стратегии за продажби.

H2: Изпълнение на лични стратегии за продажба на търговско дружество, в селското стопанство и хранително-вкусовата сектор на Сърбия може да доведе до увеличаване на икономическите дейности.

H3: Цифрови технологии не се променят значително стратегията на личната продажба на сръбските селското стопанство и хранително-вкусовата промишленост компании.

H4: личен продажба на стратегия определя как компаниите трябва да комуникират със своите целеви клиенти.

H5: Организационна структура на функцията на продажбите на сръбските селското стопанство и хранително-вкусовата промишленост компании не оказва значително влияние върху промяната на лична стратегия продажба.

H6: Процесът на продажбите става все по-сложен и изисква компаниите да имат задълбочени познания по продажби умения и техники.

### **Научните изследователски методи**

В реализацията на тази теза, няколко различни научни изследователски методи, прилагани в областта на социалните науки, са били приложени, от които следните може да се открие, а именно:

*Методът на теоретични изследвания на десктоп* (Бюро изследвания), където изследванията се основава на литературни източници, като например:

- научни източници (монографии, научни и професионални публикации, на хартиен или електронен носител, и т.н.),

- Интернет източници (търсене на съответните данни от доклади и проучвания на различни експертни държавни органи),

- национални източници (като например статистическите отчети и бюлетини на съответните министерства, институти, национални агенции и т.н.)

която е приложена при изследването на състоянието на селското стопанство и хранително-вкусовата промишленост в света и Сърбия.

*Емпирични методи на изследване*, Въз основа на теренни проучвания, които събират необходимите данни (чрез лице в лице комуникация, електронна поща, телефон и т.н.)

*Методите на математическата статистика* използвани за проектиране и обработка на резултатите от емпирични изследвания са били използвани:

- за да изберете статистически правилно извадка от избрани респонденти (земеделието и хранителната промишленост дружества в Сърбия).

- да се изработи въпросник, който служи за операционализиране емпирични изследвания.

- за описателни статистики за осредняване, показване и групиране на данните, както и за обобщаващи резултати.

- като статистически инструменти на Excel.

*Логически методи разсъждения*, които включват последици, индуктивни и дедуктивни разсъждения, са били използвани за сравнение предмет на научни изследвания, определяне на изследователски функции, да идентифицират функционални връзки и влиянието на личните продажби маркетингова стратегия за развитието на сръбската селското стопанство и хранително-вкусовата промишленост, в обсъждането на резултатите и заключителна съображения,

*В исторически Метод* се използва за определяне и настояще исторически факти и данни,

*Методи за анализ, сравнителен анализ и синтез* бяха приложени, за да обсъдят и сравни предмет на научни изследвания, за да се идентифицират нейните характеристики, и да се сравни исторически данни,

*Информационната Метод* се използва за представяне на резултатите от научните изследвания,

*Методът аналогия* се използва за да докаже, хипотези, се правят заключения, и да се обсъдят

постигнатите резултати.

### **Структурата на дисертацията**

Съдържанието на тезата е структурирана в осем раздела, които се представят и за кратко обяснени по-долу.

В първата част, т.е. Съображенията глава уводната, изтъква значението на проучването, представя накратко концепцията за научни изследвания, което означава, че в научно изследване, обективни, хипотези (обща и специални), както и методологията на научните изследвания и теза структура или обобщение.

Във втората част, което е в главата Икономика на селското стопанство и хранително-вкусовата промишленост на Сърбия, икономика на селското стопанство и хранително-вкусовата промишленост в света е първият обсъдени. След това фокусът се обръща към икономиката на селското стопанство и хранително-вкусовата промишленост в Сърбия. В този смисъл, първо идва мнение кратък от историческото развитие на селското стопанство в Сърбия, следвана от областта на научните изследвания, което означава, че секторът на селското стопанство и хранително-вкусовата промишленост на Сърбия, от гледна точка на определение, както и от юридическите, стратегическо и институционални гледни точки. На последно място, ситуацията в селското стопанство и хранително-вкусовата промишленост на Сърбия се обсъжда и резултатите от теоретичен (бюро горна част), проучване на ключови икономически показатели на селското стопанство и хранително-вкусовата промишленост на Сърбия са представени.

В третата част, в рамките на глава Продажби стратегии и маркетинг микса на фирми, фокусът на изследването вече е на маркетинга. В тази връзка, търговските стратегии се разглеждат първо, т.е. стратегията се разглежда като явление, а след това специално внимание се отделя на търговските стратегии. След това, в рамките на маркетинговия микс, стратегиите на стопанските субекти да посочат особеностите на системата за маркетингова комуникация и маркетинговия микс във функцията на стратегията за продажби на стопанските субекти от посочения сектор. И накрая, тази глава сочи посоката, в която стопанска единица в споменатия сектор следва да се съсредоточат своето бъдеще маркетинг и усилията за продажба.

В четвъртата част, което означава, че глава на личните продажба на дружества на селското стопанство и хранително-вкусовата промишленост на Сърбия, е обяснено подробно и от различни аспекти на личната продажба на стопански субекти и начина, по който те трябва да общуват със своите целеви клиенти, както и модерна начини за комуникация (дигитален маркетинг), включително начини за насърчаване на личната продажба.

В петата част, което е, в глава емпирични изследвания на въздействието на лична стратегия за продажба на развитието на селското стопанство и хранително-вкусовата промишленост в област Moravica на Република Сърбия, модел на въздействието е построен, за да се установи връзката между лична стратегия за продажба, от една страна и развитието на селското стопанство и хранително-вкусовата промишленост на Сърбия, от друга страна. В тази връзка, на дизайн на емпирично изследване е накратко представен за първи път. След това резултатите от емпирични изследвания са представени, включително и обсъждане на резултатите. И накрая, модел на въздействието на стратегията за лична продажба на развитието на селското стопанство и хранително-вкусовата промишленост на Сърбия е построен.

В шестата част, което е, в наблюденията заключителните, резултатите от изследването са обобщени накратко, мнението на автора за това дали и до каква степен хипотези, въведени бяха потвърдени са представени, се дава личната оценка на научния принос на тезата на автора, както и възможности за по-нататъшни изследвания в тази област.

В седмата част, което е, в главата литература, препратки, използвани в дисертацията са представени.

Осмата част, което е, в главата Приложения, подаръци оригинални оправдателни материали, получени от предишни изследвания, като е създаден емпирично изследване въпросник и други подходящи документи.