Farmers' Preferences Selecting Agricultural Consulting Services

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ABSTRACT

The Lithuanian farmers face with a huge need for information and counselling services to increase the competitiveness of farms and to increase farmers' ability to use the EU and Lithuanian government support funds for them. Farmers need to meet their needs of specific consulting services provided by various organizations and individual consultants in Lithuania. This raises the question: *what are the most important factors for farmers choosing consulting services*. Those are important for implications for consulting service business strategy and regulatory policies. *Hypothesis* - the most important factors of farmers' selecting agricultural consulting services are the counselling content, the counselling technique and the length of counselling. The aim of the paper - to identify and investigate the factors influencing farmers' preferences selecting agricultural consulting services. The analysis of these issues was a basis for empirical research in Lithuania. For the research completion, the methods of questionnaire survey were applied. The results of the study showed that the most significant factors forming farmers' preferences selecting agricultural consulting services are consulting content and length of consulting. The regressive analysis enabled the research in causality of connections and revealed that there is present linear and statistically strong or very strong impact among these variables. Also there are present direct and meaningful impacts: between counselling content and farmers' age, between length of counselling and farmers' the level of education and the type of farming..

INTRODUCTION

Farmers' counselling and education are state supported and considered one of the priorities in the EU countries. The provision for consulting Lithuanian agriculture is enshrined in the strategic documents of agriculture and rural development. Consultation of agricultural entities, as a public policy instrument, seeks to increase the ability of farmers and other rural residents to benefit from

the EU structural funds subsidies, and to improve environmental conditions. The goals and priorities of the counselling activity are determined by the EU as well as are national agricultural policies, rural development objectives, economic situation and needs of farmers related to these processes.

Sociological study of the consulting system performance, using the EU support to the states, which during the consultation, information is provided to the farmers. It can help to determine the real situation of the economy, understand the essence of the problems, and choose the right solution for the development of the farm, investment, participation in support programs, environmental protection, and animal welfare, and to meet other requirements. In consultation, the skills of the beneficiaries are being developed for more efficient activity; consultation helps to meet the established farming standards in agriculture (The effectiveness of..., 2006)

The largest consulting service network is provided by the Lithuanian Agricultural Consulting Service. Its functions and counselling activities are integrated in the agricultural sector and its specialists work in all 46 districts of Lithuania (Lietuvos žemės..., 2017).

In order to encourage farmers to develop competitive business, its development is supported under the Rural Development Program of various measures for farms. Support is given to livestock, horticulture, horticulture, horticulture and mixed farms. Supporting the development of small farms, modernizing farms, increasing their competitiveness, farmers and other operators are encouraged to connect to the direct chain of producer and consumer and to facilitate the realization of production. Small farms rather than large adapts to the market and changes in the environment, create jobs, not only their families, but also for other rural residents, so this activity contributes to greater production efficiency and higher revenues as well as make it easier to integrate into the market and to participate effectively in all markets (Lietuvos kaimo...).

Counselling activities are supported by the EU funds and national funds, which partially offset the farmer's funds, which they should use to obtain the necessary advice. The delivery of consulting services for agricultural infrastructure companies and farmers, is provided by: Agricultural Science and Education (Education) Institutions, the Ministry of Agriculture of the Republic of Lithuania and the institutions established by the Ministry of Agriculture, county and district agricultural divisions testing stations, technological parks, regional business development agencies, specialized and accredited consultancy firms, agricultural activities and servicing companies and other organizations, related to agriculture (for example, the Chamber of Agriculture of the Republic of Lithuania, the Association of Agricultural Companies), Leaders and farmers' training centre. The listed counselling companies and organizations organize farmer training, provide information on other counselling services, carry out research on farms, organize outdoor days, promote innovation, organize exhibitions and seminars, finance agricultural and rural businesses.

Lithuanian Rural Development Program for 2014-2020 support measures for agricultural business to the implementation of agricultural development in the new agrarian policy conditions. Agribusiness is expanding its field by precision farming opportunities, and the bio-economy (also called circular economy) is the foundation of new information technologies, which appear in various areas of farming, and farmers' training turns to be of particular interest. Lithuanian agricultural enterprises and farmers are actively involved in the AGRI European Innovation Partnership programme - the Office of Agricultural Productivity and Sustainability. The functioning European Innovation Partnership (EIP) working groups (network) are interested in rapid rural development. Farmers, applying for support under the measures of the Lithuanian Rural Development Program for 2014-2020, face the lack of knowledge as to properly prepare and implement business development projects that meet the requirements set forth in the implementation rules. Accredited advisory bodies and consultants work in Lithuania to solve this problem. The farmers, who have integrated into Lithuania, face with a huge need for information and counselling services. Only quality consulting services can ensure their successful adaptation to new market conditions. However, a consulting service organization is not paid enough attention due to the lack of research, and there are no known agricultural entities, providing consulting services in the selection of priorities.

According to Wegrzyn (2010), the service sector became considered as a sort of development index for economy, society and general civilization level. The development level of service sector affects not only the economic growth rate and the competitive edge of national economies, but also secures a high standard of living and social security for nations.

Agricultural counselling is one of the tools to support agricultural development. The main provision of the agricultural policy is the consultation of farmers. Farmer counselling is a professional service provided to farmers in terms of rural development issues.

Consulting - specialized services, the supply of which depends on the practice of technical skills, education, analytical work, experience, knowledge in the application of the consultation process (AICPA, 2015).

Consultation on the implementation of the program for the realization of the Lithuanian Rural Development Program for the period 2014-2020, is considered as a separate professional activity, which is carried out by specially trained, experienced, and accredited consultants. A professional consultant has mastered the theoretical knowledge of law, agricultural technology, IT management, logistics, marketing, and economics and has practical work skills.

The aim concerning the provision of consultancy services to farmers is to increase the competitiveness of farms and to increase farmers' ability to use the support funds. The farmers submitting projects for support, faced with the problem of whether the applicant and the submitted project meets the requirements laid down in the program implementation rules. It was established to solve the problem related to the accredited counselling agencies and consultants, who have registered individual activities.

Farmers' counselling is dependent on several aspects: a lack of relevant information, the complexity of the problem and the way to find the solution to be used, independently (one of which is the purchase of counselling care).

According to Melnikas and Stazdas (1998), the following forms of counselling are provided - expert and procedural. Expert advice applies when: a) the client needs some specific knowledge or solutions (for example, agricultural investment management) that will improve the efficiency of the operation; b) helping the customer solve long-term problems in implementing innovations; b) provides a meaningful, newly emerging information or recommendation. Expert counselling is based on the expertise of a consultant, his/her experience, consistent analysis of data and examples of good practice. Procedural counselling is important for solving long-term farming problems using specialized decision-making techniques, implementing known or duplicate decisions or helping the client to analyse the problem, and at the same time seeking to find a quick solution or plan for its effectiveness. The forms of counselling are grouped according to the role of the counsellor and the nature of the activity. The priorities for each form of advice depend on the customer (farmer) needs of .It is difficult to identify the possibility to evaluate the quality of counselling services; therefore, objective and subjective indicators are used. Providing counselling services to agricultural entities, it is important to assess the length of the consultation process, the counsellor's consistency and professionalism, and the methods of counselling and information management tools used.

Farmers experience the need for new knowledge in their economic activity. New knowledge is widely explored in the concept of knowledge economy. A considerable amount of current research is devoted to solving problems concerning the knowledge economy. For example, in investigating the relationship between the development of knowledge and economic growth (Lever, 2002; Buenstorf, et al., 2012), and evaluating the state's influence on the development of the innovation system (Miethling, 2014) and the development of rules of social activity in the formation of regional innovation systems (Fiore et al., 2011).

F. Machlup based the construction of his typology of knowledge on the possibility of using new knowledge in various spheres of economic activity. Because economic activity can only rely on formal knowledge, the constructed typology considers only the distinct area of new knowledge that is

comprised by explicit knowledge. Taking tacit knowledge into account for the first time, I. Nonaka proposed distinguishing types of new knowledge according to their degree of formality. All new knowledge can be divided into explicit and implicit (or tacit) knowledge (Nonaka & Takeuchi, 2003). Institutions of explicit and tacit knowledge generation provide information on optimal customer service, helping to overcome financial crises (Cuesta, 2010) (op.cit. Popov et al., 2016).

Farmers preferences selecting agricultural consulting services arising from new knowledge to rapidly changing business conditions, business development, quality requirements for agricultural products or the need for innovation. We have found only one study reflect Lithuanian market about farmers' attitudes about counselling services by Development and Information Centre (The effectiveness…, 2006).

The research showed that the services provided by counselling did not fully meet the farmers' needs and expectations in Lithuania. This study also has limitations because it evaluates only farmers' attitudes about counselling services, but did not examine the factors that influence the choice of counselling services.

Research problem: What are factors influencing farmers' preferences selecting agricultural consulting services. Although none of this research problem has been conducted in Lithuania. An empirical study of factors influencing farmers' preferences selecting agricultural consulting services is not developed in Lithuania.

The purpose of this study –to identify and investigate the factors affecting farmers' preferences selecting agricultural consulting services in Lithuania.

The hypotheses are as follows:

H1: There is present direct and meaningful impact between a counselling content and farmers' age.

H2: There is present direct meaningful impact between a counselling content and farmers' the level of education..

H3: There is present direct meaningful impact between a counselling content and farmers' type of farming.

H4: There is present direct meaningful impact between Counselling technique and farmers'age, the level of education and type of farming.

H5: There is present direct meaningful impact between length of counselling and farmers'age, the level of education and type of farming.

Research methodology. There has been chosen the quantitative, questionnaire-survey method for the research of the empirical research problem. The scope of the research sample is 384. The data were analysed and administrated with a statistical package for social sciences (SPSS Statistic 17.0 version). There was applied Cronbach's alpha coefficient for the assessment of data credibility. There was also performed regression analyses.

1. THE AGRICULTURAL CONSULTING SERVICES IN LITHUANIA

The agricultural consulting services in Lithuania belong to small and medium enterprises. The role of small and medium enterprises (SMEs) is very important in every European country.

According to Koisova et al., 2017 SMEs contribute to the economic development, and government recognises that supporting of SMEs is the key issue, which determines the future direction of the economy. Small businesses, particularly micro-enterprises (enterprises with 0-9 employments) are a driver of national economies because of job creation, innovation and their contribution to the creation of an appropriate social environment in the regions.

However, this sector was analysed by numerous authors and very different aspects of SME sector were covered. Typically, the main set of issues is related to SME strategies, competitiveness and some vulnerability, but it was not considered as the agricultural consulting sector.
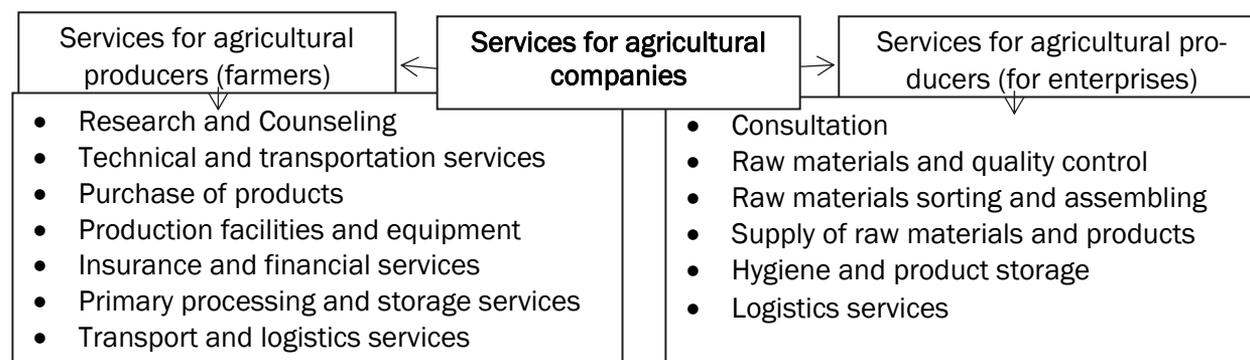
According to Urbonavicius and Dikcius (2005), there are many methods how business consulting (advice) services may be classified. However, none of them is entirely precise, since many consulting projects include few types of advice. In other instances, some parts of a larger project can be considered as separate projects of more specialised content. The most typical example is development of strategic plans that often involve extensive market research, engineering developments, financial forecasts, process engineering, etc. In other cases, feasibility studies serve not just as a tool to attract financial resources, but also to some extent play a role of development plans. Because of this, classification of consulting projects is partially based on managerial judgements about priorities between elements of a consulting project.

The usage of business consulting services in SME sector has not been researched extensively yet. There are some surveys about more general outside assistance (Chrisman, McMullan, 2004), but they do not explore the use of various types of business advice for agricultural services.

Quite often, researchers see some possibilities in training (Storey, 2004) or possibilities to adjust managerial models that are typically used by larger companies (Naylor, 2001; McLarty, 2003). This also forces to analyse factors that influence formation of SME strategies (Gibbons, O'Connor, 2005).

Provided consulting services to agricultural enterprises and farms is related to their activity specialization. The common agricultural services combine all areas of farming (Figure 1).

Figure 1. Forms of consulting services for agricultural producers

Services for agricultural producers (farmers)	Services for agricultural companies	Services for agricultural producers (for enterprises)
• Research and Counseling • Technical and transportation services • Purchase of products • Production facilities and equipment • Insurance and financial services • Primary processing and storage services • Transport and logistics services		• Consultation • Raw materials and quality control • Raw materials sorting and assembling • Supply of raw materials and products • Hygiene and product storage • Logistics services

Sources: own elaboration based on Ramanauskas, 2007; Kiseliova & Budanova, 2008.

Agribusinesses and machinery companies provide technical and transportation services to agricultural sector entities, supply equipment; equipment for crop and livestock farms, provides with warranty service, introduces technological innovations and the training on the use of modern technology (e.g. the use of precision ploughing technology. Lithuanian food production companies purchase agricultural produce from farmers, provide primary processing and production storage services. Insurance and financial institutions provide loans and insurance to farmers. Services of agricultural infrastructure companies to procurers - to producers: consulting, quality control of raw materials delivered, sorting of raw materials and ordering of the desired quantity, supply of raw materials for production, supply of the processed products to collectors, warehousing of raw materials and products, logistics - transportation services. Due to the wide range of consulting services, it is necessary to apply flexible methods of working with clients depending on the specialized in-

formation provided during the consultation process. The Lithuanian market for agricultural advisory services has not formed. With the growing number of consultants, newly emerging agricultural enti-ties have a greater choice of consultants, which means that their advice or formulated decisions are relevant to the changes in agricultural activity, knowledge of new markets or agricultural in-vestment management. Since 2014, the focus is on the efforts of farmers to implement agricultur-al innovation solutions and to prepare farm modernization projects.

The performance of a company depends on its input into innovation, technology and new ideas that gives it an advantage over competitors; financial and managerial investment into knowledge of processes and employees' knowledge (Sedziuviene and Vveinhardt, 2010).

Consultancy services task is to ensure that the Lithuanian agricultural produce, produced on smaller farms is competitive and meets the requirements for information and knowledges required in an economically viable farmers business. For example, iIntelligent agricultural technology, inno-vative agricultural enterprise management methods and significant indicators of production and trade make it necessary to analyse farmers' options for choosing advisory services. In 2015, the system of information, consulting and training for agricultural enterprises and farmers was launched in Lithuania (Figure 2).

Figure 2. Forms of Lithuanian agricultural consulting services
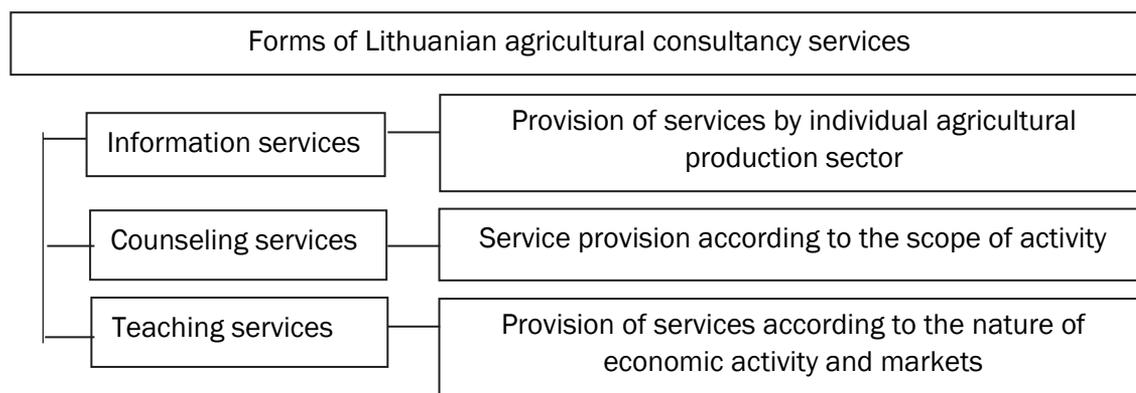
Integration of three dimensions of counselling activity: information - communication (knowledge transfer), technology consulting and education training. All the parts of the knowledge system that are available for the agricultural entities are functioning. Integrated consulting activi-ties include those of the agricultural sector to maintain the viability of important areas: organic farming; rural development; agricultural markets; farm management; an economy based on bio-technology; Informational communication technologies in agriculture. Operating consulting ser-vices, market consultants have provided service specialization, (namely they help farmers deal with narrow-profile problems).

2. RESEARCH ANALYSE AND FINDINGS

Reliability of questionnaire questions. *Cronbach's alpha* coefficient that is based on separate questions, those complete the questionnaire, and assessed if all scale questions reflect the re-searched measurement sufficiently and enables the specification of the requested questions in the scale. Cronbach's alfa coefficient as shown in Table 1.

Table 1. Cronbach's Alpha test results

Provided statements/ questions	Quantity of questions	Cronbach's Alpha
Counselling content	8	0,724
Counselling technique	9	0,779
Length of counselling	6	0,734

Source: own work.

Pukenas (2009) suggested that minimum alpha of 0,7 is sufficed for research. As the Cronbach's alpha in this research were all higher than 0,7, the constructs were assessed as adequately reliable.

Analysis of regression There was carried out a simple linear regressive analysis (one independent variable) due to which there was done testing of hypotheses. As it is stated in the literature, during the performance of the linear regressive analysis attention is paid to three key indexes: coefficient of determination (R^2), coefficient of impact (Non-standard β) and relevance of the model (p). Thus, the key data, enabling the solution related to impact and its meaningfulness are provided in Table 2.

Table 2. Main influence on variable

Independent variable	β	R2	p	Dependent variable
Counselling content	0.51	0.38	0.016	Age
Counselling content	0.65	0.05	0.045	The level of education
Counselling content	0.54	0.3	0.06	Type of farming
Counselling technique	0.81	0.53	0.2	Age
Counselling technique	0.12	0.03	0.06	The level of education
Counselling technique	0.11	0.12	0.09	Type of farming
Length of counselling	0.14	0.01	0.06	Age
Length of counselling	0.96	0.5	0.01	The level of education
Length of counselling	0.11	0.315	0.01	Type of farming

Source: own work.

All $R^2 > 0.20$, thus it can be concluded that the coefficient of determination is sufficiently high and the regression model can be refused as irrelevant one. p meaning of ANOVA criterion is less than 0.05 (0.000), thus it can be stated that there is present linear dependence between variables. I.e. during the bettering of a higher school image there will increase students' loyalty, perceived value and satisfaction.

It is also seen that the signs of all coefficients are positive, as it had to be under the correlative connection analysis. Besides, coefficients are statistically meaningful, i.e. have some independent impact on the level of dependent variable.

Testing of hypotheses H1: There is present direct and meaningful impact between a counselling content and farmers' age. As it can be seen in Table 2, during the testing of the hypothesis: H1 it was found out that during bettering of a counselling content there increases farmers' ages (accepted Ha, $p<\alpha$), i.e. there is present linear regression. Besides, regression is statistically meaningful, the coefficient of determination is Be to, $R^2 = 0.38 > 0.20$. Counselling content on farmers' age is equal 0.51. *Thus, the first hypothesis is tested and approved: a counselling content has impact on farmers' age.*

H2: there is present direct meaningful impact between a counselling content and farmers' the level of education. In Table 2it can be noticed that there is not present linear regression between a counselling content and farmers' the level of education because the regression is not statistically meaningful, because $R^2 = 0,05 > 0.20$. *Thus, there is made a conclusion that the hypothesis is not tested and approved and a counselling content* does not *affect farmers' the level of education.*

H3: there is present direct meaningful impact between a counselling content and farmers' type of farming. The regressive analyses revealed that there is not present linear regression between these variables ($p<0.06$). *Thus, it is stated that the hypothesis is not approved and a counselling content is not impact of type of farming by farmers.*

H4: there is present direct meaningful impact between Counselling technique and farmers'age, the level of education and type of farming. It was researched that there are not present linear regression between variables as $p>0.05$ (Table). *Thus, it can be stated that the hypothesis is not approved.*

H5: there is present direct meaningful impact between length of counselling and farmers'age, the level of education and type of farming. It was indicated that there is present linear regression between length of counselling and farmers', the level of education and type of farming as $p<0.05$. The regression is statistically meaningful as the coefficient is $R^2 = 0.5$, $0.315 > 0.20$. However, between length of counselling and farmers 'age are not present linear regression $R2 = 0.01 > 0.20$. *Thus, there is made a conclusion that the hypothesis is tested only and approved –* length of counselling and the level of education and type of farming.

Farmers' preferences when choosing consulting services according to their quality depends on two parameters - consulting content and length of consulting. Consulting technique was not statistically significant for farmers' services quality value.

CONCLUSION

Consultancy service seeks: to increase the ability of farmers and other rural residents to benefit from the EU structural funds subsidies; to ensure that the Lithuanian agricultural produce, produced on smaller farms is competitive and meets the requirements for information and knowledges required in dynamic market and an economically viable farmers business.

Provided consulting services to agricultural enterprises and farms is related to their activity specialization. There are three forms of consultation for agricultural enterprises and farmers for the acquisition of new knowledge in Lithuania: information service as provision of services by individual agricultural production sector, consulting services as service provision according to the scope of activity, and training as provision of services according to the nature of economic activity and markets.

Factors influencing farmers' preferences selecting agricultural consulting services in Lithuania - having summarized the findings of the quantitative research – questionnaire survey, there are the consulting content and the length of consultations. The regressive analysis enabled the research in causality of connections and revealed that there is present linear and statistically strong or very strong impact among these variables.

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